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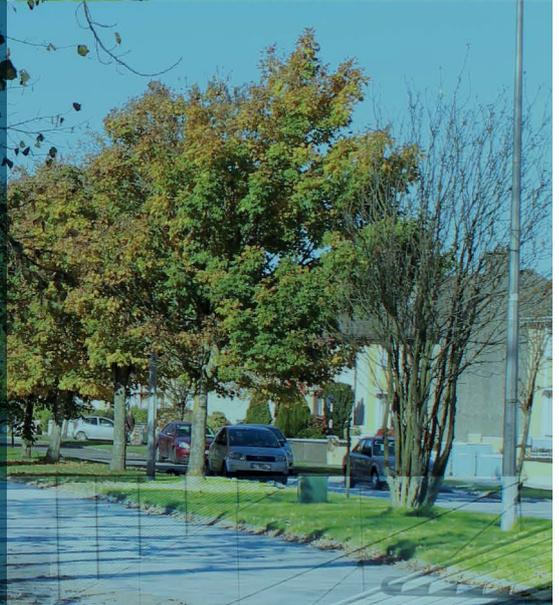
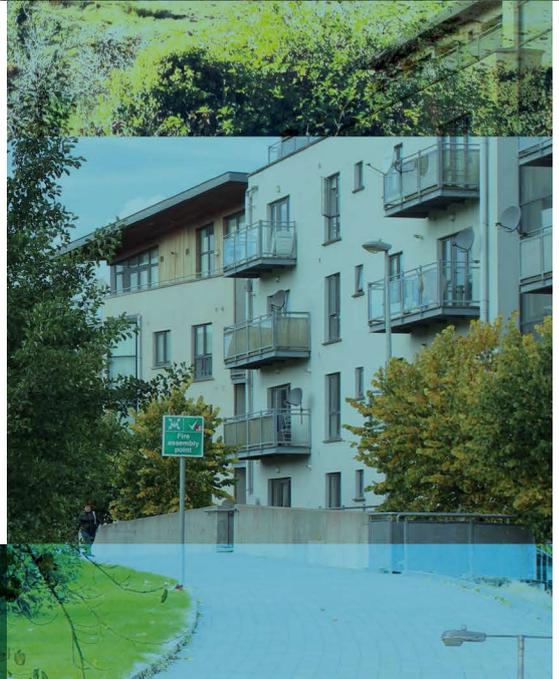
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Comhairle Contae an Chláir
Clare County Council

Shannon Town and Environs Local Area Plan 2012–2018

Strategic Environmental Assessment Part I: Environmental Report



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Abbreviations

List of Abbreviations

ACA	<i>Architectural Conservation Area</i>
C&D	<i>Construction and Demolition</i>
CBP	<i>Customs and Border Protection</i>
CCDP	<i>Clare County Development Plan</i>
cSAC	<i>Candidate Special Area of Conservation</i>
CSO	<i>Central Statistics Office</i>
DoCMNR	<i>Department of Communications, Marine & Natural Resources</i>
DoEHLG	<i>Department of the Environment, Heritage and Local Government</i>
EDEN	<i>Environmental Data Exchange Network</i>
EEA	<i>European Environmental Agency</i>
EIA	<i>Environmental Impact Assessment</i>
EPA	<i>Environmental Protection Agency</i>
ER	<i>Environmental Report</i>
EU	<i>European Union</i>
GHG	<i>Green House Gas Emissions</i>
GIS	<i>Geographical Information Systems</i>
GSI	<i>Geological Survey of Ireland</i>
HDA	<i>Habitats Directive Assessment</i>
IGHP	<i>Irish Geological Heritage Programme</i>
IPCC	<i>Integrated Pollution Prevention and Control</i>
LAP	<i>Local Area Plan</i>
LCEA	<i>Limerick Clare Energy Agency</i>
MWRA	<i>Mid West Regional Authority</i>
MWRPG's	<i>Mid West Regional Planning Guidelines</i>
NDP	<i>National Development Plan</i>
NGO	<i>Non Governmental Organisation</i>
NHA	<i>Natural Heritage Area</i>
NIAH	<i>National Inventory of Architectural Heritage</i>
NO ₂	<i>Nitrogen dioxide</i>
NPWS	<i>National Parks and Wildlife Service</i>
NRA	<i>National Roads Authority</i>
NREAP	<i>National Renewable Energy Action Plan</i>
NSS	<i>National Spatial Strategy</i>
NTS	<i>Non Technical Summary</i>
O ₃	<i>Ozone</i>
OPW	<i>Office of Public Works</i>
P/P	<i>Plan/Programme</i>
PE	<i>Population Equivalent</i>
Pm10	<i>Particulate matter with diameter less than ten microns</i>
pNHA	<i>Proposed Natural Heritage Area</i>
POMS	<i>Programme of Measures</i>
PPP	<i>Public Private Partnership</i>
PRP	<i>Pollution Reduction Programmes</i>
RBD	<i>River Basin District</i>
RBMP	<i>River Basin Management Plans</i>
RMP	<i>Record of Monuments and Places</i>
RPGs	<i>Regional Planning Guidelines</i>
RPS	<i>Record of Protected Structures</i>
RWP	<i>The Rural Water Programme</i>
S.I. No.	<i>Statutory Instrument Number</i>
SAA	<i>Shannon Airport Authority</i>
SAC	<i>Special Area of Conservation</i>
SDZ	<i>Strategic Development Zone</i>
SEA	<i>Strategic Environmental Assessment</i>

<i>SEO</i>	<i>Strategic Environmental Objective</i>
<i>SFRA</i>	<i>Strategic Flood Risk Assessment</i>
<i>SIRBD</i>	<i>Shannon International River Basin District</i>
<i>SO₂</i>	<i>Sulphur dioxide</i>
<i>SPA</i>	<i>Special Protection Area</i>
<i>SuDS</i>	<i>Sustainable Drainage Systems</i>
<i>WFD</i>	<i>Water Framework Directive</i>
<i>WMU</i>	<i>Water Management Units</i>
<i>WRBD</i>	<i>Western River Basin District</i>
<i>WSIP</i>	<i>The Water Services Investment Programme</i>
<i>WWTP</i>	<i>Waste Water Treatment Plant</i>

Glossary

Alternatives (Reasonable)	Alternatives should take into account the objectives and geographical scope of the 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, Flora and Fauna	Biodiversity is the variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems' (United Nations Convention on Biological Diversity 1992). Flora is all of the plants found in a given area. Fauna is all of the animals found in a given area.
Biotic Index Values (Q Values)	The Biotic Index Values, or Q values, are assigned to rivers in accordance with biological monitoring of surface waters - low Q ratings, as low as Q1, are indicative of low biodiversity and polluted waters, and high Q ratings, as high as Q5, are indicative of high biodiversity and unpolluted waters. Good status as defined by the Water Framework Directive equates to approximately Q4 in the national scheme of biological classification of rivers as set out by the Environmental Protection Agency.
Birds Directive	Council Directive of 2nd April 1979 on the conservation of wild birds (79/409/EEC).
Built Environment	Refers to both architectural heritage and archaeological heritage.
Cumulative Effects	Effects on the environment that result from incremental changes caused by the strategic action together with other past, present, and reasonably foreseeable future actions. These effects can result from individually minor but collectively significant actions taking place over time or space
Data	Includes environmental data, proxy data, any other relevant statistical data.
Designated Environmental Authority	An organisation that must be consulted in accordance with the SEA Regulations. For Ireland these are the Environmental Protection Agency (EPA), the Department of the Environment, Heritage and Local Government (DoEHLG) and the Department of Communications, Energy and Natural Resources (DCENR).

Ecology	The study of relationships between living organisms and between organisms and their environment (especially animal and plant communities), their energy flows and their interactions with their surroundings.
Environmental Assessment	The preparation of an environmental report, the carrying out of consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision (in accordance with Articles 4 to 9 of the SEA Directive).
Environmental 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 Thresholds	Insert details

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.
Invasive alien species	Plants or animals which did not originally occur in Ireland before human colonisation of the country and which are expanding their numbers and distribution so as to cause a competitive threat to such native fauna and flora.
Key environmental issues	Those significant environmental issues, which are of particular relevance and significance within a P/P area and/or the zone of influence of that P/P. These issues should be identified during SEA Scoping process.
Key environmental receptors	Aspects of the environment likely to be significantly impacted by the proposed P/P.
Material Assets	Critical infrastructure essential for the functioning of society such as: electricity generation and distribution, water supply, wastewater treatment transportation etc.
Member States	Those countries that belong to the European Union.
Mitigate	To make or become less severe or harsh

Mitigation Measures	Mitigation measures are measures envisaged to prevent, 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 that can be readily understood by decision-makers and by the general public. It should accurately reflect the findings of the ER.
Plan or Programme	Including those co-financed by the European Community, as well as any modifications to them: - which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and - which are required by legislative, regulatory or administrative provisions. In accordance with the SEA Directive, P/P that require SEA are those that 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 taken into account - the reasons for choosing the P/P as adopted in the light of other reasonable alternatives.
Secondary effect	Effects that are not a direct result of the P/P, same as indirect effect.
Sensitivity	Potential for significant change to any element in the environment that is subject to impacts.

Short-term effects	These are typical of those effects that may occur during construction stage of a development, for example, the increased traffic going to and from a site during construction, or, the noise associated with construction activities.
Significant effects	Effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.
SPA	Special Protection Area under Birds Directive (79/409/EEC), designated for bird species listed in Annex I of the Directive, in particular internationally important concentrations of migratory and wetland birds. Designation is focused on habitats of these species.
Statutory Authority	The authority by which or on whose behalf the plan or programme is prepared.
Statutory Instrument	Any order, regulation, rule, scheme or bye-law made in exercise of a power conferred by statute.
Strategic Actions	Strategic actions include: Policies, which may be considered as inspiration and guidance for action and which set the framework for plans and programmes; Plans, sets of co-ordinated and timed objectives for the implementation of the policy; and Programmes, sets of projects in a particular area.
Strategic Environmental Assessment (SEA)	Strategic Environmental Assessment (SEA) is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt it. The objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment
Strategic 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 in order to help identify areas in which significant adverse impacts are likely to occur, if not mitigated.
Synergistic effect	Effects that, when totalled, result in a greater or lesser effect than the sum of the individual effects.
Threshold	Magnitude of a project, which if exceeded, will trigger the requirement for an Environmental Impact Assessment.

Transboundary Consultation	If a plan or programme is being prepared that is likely to have significant effects on the environment in another Member State, or where a Member State likely to be significantly affected so requests, the Member State in whose territory the plan or programme is being prepared shall, before the plan or programmes adoption or submission to the legislative procedure, forward a copy of the draft 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.

Chapter One – Introduction and Background

1.1 Introduction

This document is the Strategic Environmental Assessment (SEA) Environmental Report of the Shannon Town & Environs Local Area Plan (ST&E LAP) 2012-2018. The purpose of this Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of development and growth within the Plan area. This Report has been prepared by Clare County Council Planning, Landuse and Transportation Department.

The purpose of this SEA Environmental Report is to identify, evaluate and describe the likely significant effects on the environment of implementing the ST&E LAP 2012-2018 and to ensure that environmental factors are taken into consideration at an early stage of the plan process, and kept to the forefront at each stage of the Plan's preparation. It is paramount that environmental consequences are considered on a par with social and economic considerations.

This SEA Environmental Report has been prepared in tandem with the progression of the Shannon Town & Environs Local Area Plan 2012-2018 and the Habitats Directive Assessment.

1.2 SEA Directive 2001/42/EC

Strategic Environmental Assessment (SEA) is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme. It is undertaken during the preparation period of the plan/programme and therefore will inform the decision-making process as to whether to adopt the Shannon Town & Environs Local Area Plan 2012-2018. The SEA process thereby assists in, and improves the quality of the plan making process by facilitating the identification and appraisal of alternative plan strategies, raising awareness of the environmental impacts of the Plan, and encouraging the inclusion of measurable objectives, targets and indicators to aid monitoring.

Legislative and Guidelines Context

The European Community Strategic Environmental Assessment (SEA) Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment was issued in July 2001. This introduced the requirement that SEA be carried out on plans and programmes, including those of land use planning. Article 1 of the SEA Directive states:

'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'.

The SEA Directive was transposed into Irish Law in 2004 coming into effect on the 21st July 2004, through the following Regulations:

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

DoCELG SEA Circular PSSP/6 2011 gave notice that these were amended by:

- *European Communities (Environmental Assessment of Certain Plans and Programmes)(Amendment) Regulations, 2011, S.I. No. 200 of 2011; and*
- *European Communities (Strategic Environmental Assessment) Regulations, 2001, S.I. No. 201 of 2011.*

The SEA of the Shannon Town & Environs Local Area Plan had regard to other relevant SEA documentation such as;

- *Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment – Guidelines for Regional Authorities and Planning Authorities, published by the Department of the Environment, Heritage and Local Government (2004) and,*
- *Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland – Synthesis Report, published by the EPA (2003).*

These documents together with the above legislation have been used to guide this environmental assessment process. It may also be noted that the EPA *SEA Process Draft Checklist* (2008) has been considered in the preparation of this Report and is included as Appendix A.

Legislative Compliance

Pursuant to Part II, Section 20 of the Planning and Development Act 2000 (as amended) Clare County Council on 22nd July 2011 gave notice that it intended to prepare a Shannon Town & Environs LAP 2012-2018. Furthermore, pursuant to Article 14B of the Planning and Development (SEA) Regulations 2004 (S.I. No. 436 of 2004)(as amended) and Articles 6(3) and 6(4) of the Habitats Directive, Clare County Council also proposed to carry out a Strategic Environmental Assessment (SEA) and Habitats Directive Assessment (HDA) respectively, as part of and in tandem with the preparation of the ST&E LAP 2012-2018.

Article 14A (1) of the Planning and Development (SEA) Regulations 2004 (as amended by S.I. No. 201 of 2011) requires the preparation of an SEA Environmental Report where the population of the area of a Local Area Plan is 5,000 persons or more or where that area covered by the Local Area Plan is greater than 50 square kilometers. Thus, the above mentioned Regulations require that SEA forms a mandatory part of the preparation of the ST&E LAP 2012-2018 (therefore screening was not required).

Article 14C of the Planning and Development (SEA) Regulations 2004 (S.I. No. 436 of 2004)(as amended) requires the planning authority, prior to giving notice under Section 20(3) of the Act, to give notice in accordance with sub-article (2) to the Statutory Environmental Authorities, namely

- the Environmental Protection Agency,
- Minister for Environment, Community and Local Government
- Minister for Agriculture, Marine and Food
- Minister for Communications, Energy and Natural Resources, and

- Minister for Arts, Heritage and the Gaeltacht, and
- Any adjoining planning authorities whose area is contiguous to the area of a planning authority which prepared a plan, proposed variation or local area plan.

However, noting that Circular PSSP/6 2011 (26th July 2011) was issued after the date of correspondence with the Statutory Environmental Authorities (15th July 2011), cognisance was taken at the time to the existing 2004 Regulations and notice given to;

- Environmental Protection Agency,
- The Minister for Communications, Marine and Natural Resources.
- Development Applications Unit at the Department of Arts, Heritage & the Gaeltacht.

SEA and Environmental Report Deliverables

SEA is an important mechanism in promoting sustainable development and in raising awareness of significant environmental issues in Shannon and in ensuring that such issues are addressed within the capacity of the planning system.

The overall **aims** of SEA are to:

- Provide a high level of protection to the environment;
- To integrate environmental considerations into the preparation and adoption of the Plan;
- To promote sustainable development; and
- To increase public participation in environmental decision-making.

While the overall process includes:

- Preparing an Environmental Report where the likely significant environmental effects are identified and evaluated;
- Consulting the public, environmental authorities, and any other interested parties on the Environmental Report, Local Area Plan and Habitats Directive Assessment;
- Taking account of the findings of the Environmental Report (and Habitats Directive Assessment) and the outcome of these consultations in deciding whether to adopt or modify the Local Area Plan;
- Informing the decision on adoption of the Local Area Plan and how the SEA and HDA influenced this outcome.

The main **deliverables** of the SEA process include:

- Establishment of a baseline database subject to available information;
- Identification of data gaps/ inconsistencies;
- Identification (and assessment) of significant environmental impacts;
- An outline of the alternatives dealt with, and 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;
- Consultation at all stages throughout the SEA process;
- Recommendation of mitigation measures to avoid, reduce or offset any significant adverse effects on the environment;
- A ST&E LAP (2012-2018) GIS database for all spatial data utilised and generated for future monitoring, and reviews;

- Environmental Report, Non-Technical Summary and a concluding Environmental Statement on how the environmental assessment was taken into consideration in the Shannon Town & Environs LAP 2012-2018.

The **structure** of this Environmental Report (from hence referred to as “the Report”), which is the result of the Strategic Environmental Assessment, is in accordance with the SEA Directive and Regulations (as amended) which provides a broad basis for the content of an Environmental Report. In accordance with the Directive and Regulations this Environmental Report provides details on the following information:

- An outline of the content and main objectives of the Shannon Town & Environs Local Area Plan 2012-2018 and the relationship between this and other relevant plans or programmes;
- The environmental characteristics of the area affected by the plan;
- Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC (Directive for the Conservation of Wild Birds) and 92/43/EEC (Conservation of Natural Habitats and of Wild Fauna and Flora);
- The environmental protection objectives, established at International, national and regional level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation;
- The likely significant effects on the environment, including issues such as biodiversity, fauna, flora population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage and landscape;
- The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan;
- An outline of the alternatives considered, and 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;
- A description of the measures envisaged concerning monitoring in accordance with Article 10;
- A Non-Technical summary of the information provided under the above headings.

The concluding Environmental Statement outlines how environmental considerations were integrated into the Plan; how the Environmental Report, the opinions of the public and statutory authorities, and the results of transboundary consultations have been taken into account, and the reasons for choosing the Plan as adopted in the light of other reasonable alternatives.

1.3 Shannon Town & Environs Local Area Plan Area

Shannon is located on the River Shannon, which forms part of the southern boundary of County Clare. The settlement is defined by a number of component parts, namely Shannon Airport, Shannon Free Zone and Smithstown Industrial Estates, Shannon town, Hurlers Cross and agricultural lands to the east, west and north. Shannon developed from the 1960’s in response to the growth of Shannon International Airport and the Shannon Free Zone. Its strategic importance is recognised in its designation in the National Spatial Strategy 2002-2020 as part of a linked gateway with Limerick. Shannon Town and Environs is of critical importance to the future economic development of the Mid-West Region. Figure 1.1 shows its location in a regional context. It occupies a strategic position along the Atlantic corridor and has excellent

road connectivity to the Gateway cities of Limerick, Cork and Galway. This designation, together with the significant population and employment base, has necessitated that Shannon town be subject to its own local area plan and is therefore separated from the South Clare Local Area Plan 2012-2018, which deals with the other settlements in the South Clare area.

The population of the Plan area is 9,222 (Census 2006). The Plan area is illustrated in Figure 1.2 below and covers the existing urban area, Shannon Airport, Shannon Free Zone, Westpark, Smithstown, Hurlers Cross, Shannon estuary and surrounding countryside to the west, east and north.

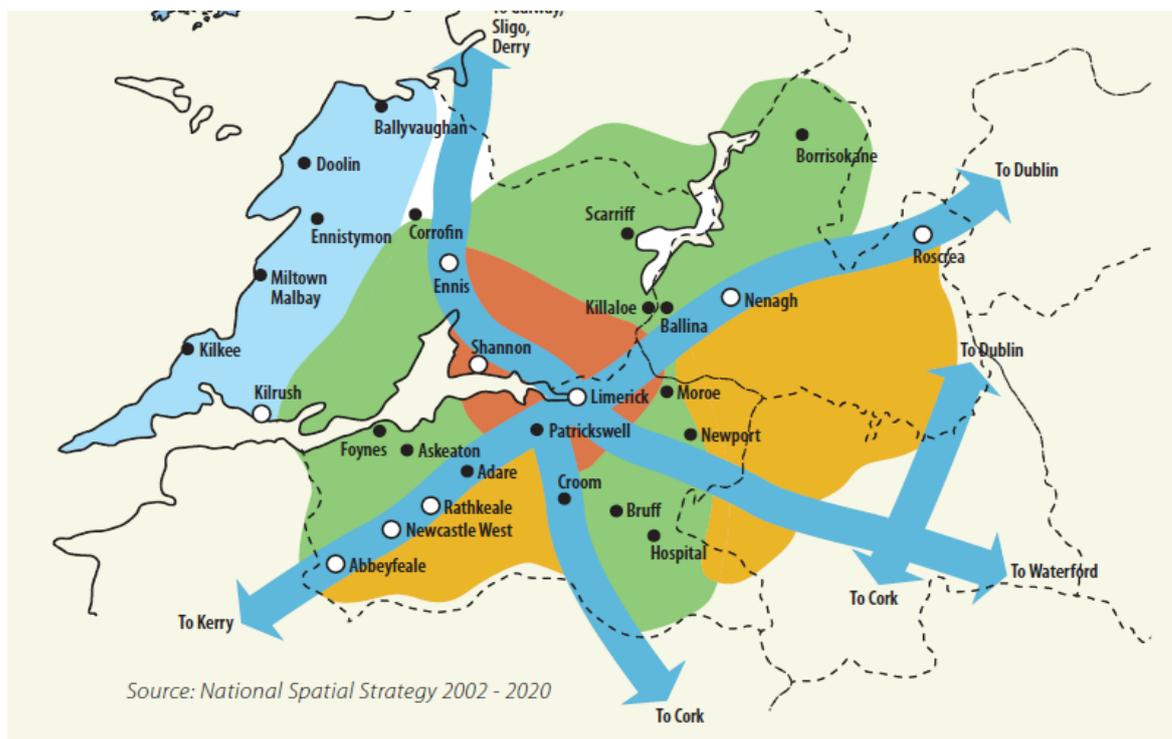


Figure 1.1: Location of Shannon within a regional context

Source: National Spatial Strategy 2002-2020

1.4 Shannon Town & Environs Local Area Plan 2012-2018

The Planning and Development Act, 2000 (as amended) introduced a tiered and planned system, setting out the framework for the provision of local area plans to give more detailed and localised effect to the policies and objectives of the County Development Plan.

There has previously been no Local Area Plan for the Shannon Area, Shannon was part of a larger South Clare Local Area Plan. However, in light of a significant population base and employment location and in accordance with Section 19 (1)(b) of the Planning and Development Act 2000 (as amended), as it is being made in respect of an area which:

- Is designated as a town in the most recent census of population, other than a town designated as a suburb or environs in that census;
- Has a population in excess of 5,000; and

- Is situated within the functional area of a planning authority which is a county council.

Clare County Council also proposed to prepare a new Shannon Town & Environs Local Area Plan 2012-2018, as is its entitlement in accordance with Section 18 (1). Clare County Council stated the objective 'to prepare and implement a Local Area Plan for Shannon & Environs, within the lifetime of the development Plan' as CDP Objective 21.2 of the Clare County Development Plan 2011-2017.

The Shannon Town & Environs Local Area Plan 2012-2018 is prepared in accordance with the provisions of the Planning and Development Act, 2000 (as amended), adhering to the requirements of Section 19(2), which sets out that:

'a local area plan shall be consistent with the objectives of the development plan, its core strategy and any Regional Planning Guidelines that apply to the area of the Plan and shall consist of a written statement and a plan or plans which may include –

- a) Objectives for the zoning of land for the use solely or primarily of particular areas for particular purpose,
- Or
- b) Such other objectives in such detail as may be determined by the planning authority for the proper planning and sustainable development of the area to which it applies, including the objective of development of land on a phased basis and detail on community facilities and amenities and on standards for the design of developments and structures".

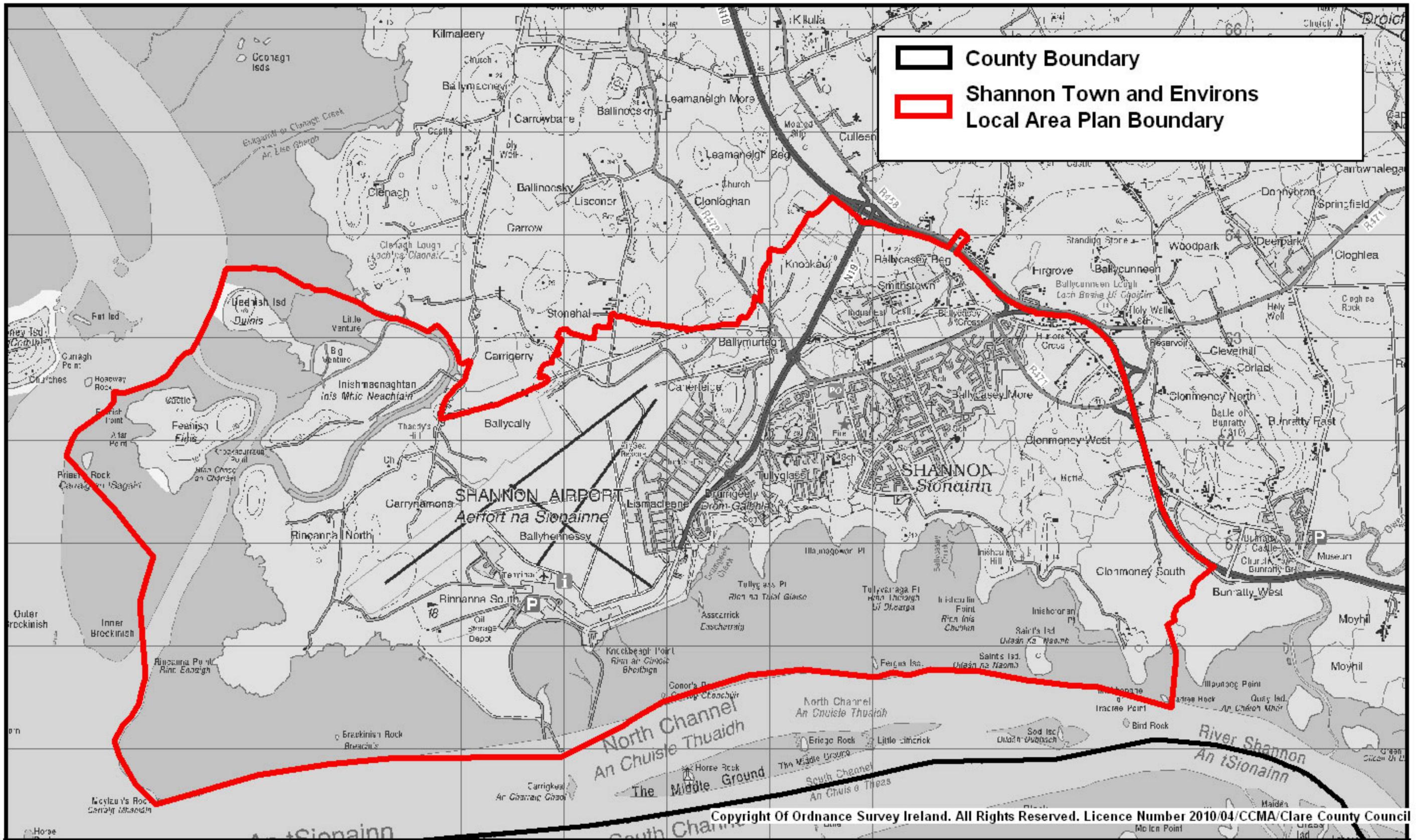
In this instance the Clare County Development Plan 2011-2017 (CCDP) is the 'parent' document for the Shannon Town & Environs Local Area Plan 2012-2018. The County Development Plan transposed National and Regional policies and set the strategic context for local area plans, thus the Shannon Town & Environs Local Area Plan 2012-2018 was prepared in accordance with objectives as set out in the Clare County Development Plan 2011-2017. The Shannon Town & Environs Local Area Plan 2012-2018, and any subsequent amendments, will remain in force until 2018 unless otherwise revoked or the preparation of a new Shannon Town & Environs Local Area Plan is deferred under the provisions of the above mentioned section of the Act. The Plan will act as the guiding statutory document for the planning and development of the Plan area for a period of six years from the date of its adoption.

The ST&E LAP 2012-2018 has two main functions, first, to provide a framework of acceptable land-uses within the Plan Area, defining acceptable forms of development and where they should be directed, and second to provide a detailed basis for the promotion and management of development in such a way as to provide adequate residential accommodation, services and infrastructure while ensuring maximum environmental protection.

To avoid duplication and the potential for conflicting statements, the ST&E LAP 2012-2018 corresponds to all policies particularly the environmental protection policies and objectives contained within the Clare County Development Plan 2011-2017. These objectives and policies apply to the Shannon Town & Environs Local Area Plan 2012-2018 area. In addition, these policies and objectives have been assessed through the SEA process and deemed to be sufficient to protect environmental resources throughout the County. However, please refer to the CCDP 2011-2017 SEA Environmental Statement for any further detail. The relationship between the Shannon Town & Environs Local Area Plan 2012-2018 and legislation and policy documents from the higher tiers are discussed in Chapter 3 of this Environmental Report as well as the CCDP 2011-2017 SEA Environmental Report.

The Shannon Town & Environs Local Area Plan 2012-2018 consists of the following documents:

- Volume 1 - Written statement including a land use map for the Plan area;
- Volume 2 - Strategic Environmental Assessment Environmental Report (Part I) and Non-Technical Summary (Part II);
- Volume 3 - Habitats Directive Assessment Report (Natura Impact Statement)



**Clare
County
Council**

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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018

TITLE: Map 1.2 - Shannon Town And Environs Local Area Plan 2012 - 2018

SCALE: NOT TO SCALE

DATE:
OCTOBER 2012

PROJECT NO.

DRAWN BY:
P. McMANUS

DRAWING NO.

CHECKED:
B. MCCARTHY

Chapter Two – Methodology

2.1 Introduction

This Chapter intends to outline the Strategic Environmental Assessment (SEA) process methodology. Strategic Environmental Assessment (SEA) is a key mechanism for promoting sustainable development, raising awareness of significant environmental issues, and in ensuring that such issues are addressed within the capacity of the planning system. The methodology used to carry out the SEA of the Town & Environs Local Area Plan 2012-2018 reflects the requirements of the SEA Directive, Regulations (as amended) and other SEA guidance documentation as specified in Section 1.2 'SEA Directive 2001/42/EEC'.

2.2 SEA Stages

The preparation of the Shannon Town & Environs Local Area Plan 2012-2018 requires a full Strategic Environmental Assessment as outlined in Section 1.1. The SEA process can be categorised into a number of stages as summarised in Table 2.1.

Table 2.1: Summary of the Strategic Environmental Assessment Process

Stage	Comments
Screening	An Environmental Report is mandatory for the ST&E LAP 2012-2018. No Screening was undertaken.
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 were incorporated into the Environmental Report.
Consultation with the Environmental Authorities	Consultation conducted throughout the SEA process.
<ul style="list-style-type: none"> • Preparation of ER & LAP • Environmental Objectives established • Development Objectives established • Consultation with EPA, etc. • Assessment of Alternative Scenarios • Mitigation measures detailed • Monitoring measures detailed 	<p>A multi disciplinary team was established to create policy consistent documents and to examine the effects on the environment of implementing the Plan.</p> <p>Objectives created in LAP were assessed & alternative options examined and chosen.</p> <p>Feedback from on-going Plan preparation process & Environmental Report preparation</p> <p>Mitigation measures were discussed and chosen.</p> <p>Monitoring will be incorporated with any existing methods.</p>
Environmental Statement	The ES will outline how environmental considerations were integrated into the Plan; how the Environmental Report, the opinions of the public and statutory authorities, and the results of transboundary consultations have been taken into account, and the reasons for choosing the Plan as adopted in the light of other reasonable alternatives.
Non-Technical Statement	A summary of the findings of the ER, summarised under the headings listed in Annex 1 of the SEA Directive that can be readily understood by decision-makers and by the general public. It should accurately reflect the findings of the ER.
Monitoring the Plan	Monitoring significant environmental effects over the lifetime of the Plan

2.2.1 Screening

Screening is the process for deciding whether a particular plan or programme, other than those for which SEA is mandatory, would be likely to have significant environmental effects, and thus would warrant SEA. In accordance with Article 14B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (as amended), it is a requirement to prepare an Environmental Report for the Shannon Town & Environs Local Area Plan 2012-2018 as the population of the area is greater than 5,000 persons.

2.2.2 Scoping

Scoping is the procedure whereby the range of environmental issues and the level of detail to be included in the Environmental Report are decided upon in conjunction with the prescribed environmental authorities after preliminary data collection. The scoping exercise for the ST&E LAP 2012-2018 was undertaken in July/August 2011 in response to observations received from environmental bodies. Scoping helps to focus the SEA on important issues such as those relating to existing and potential environmental issues and problems, therefore minimising the waste of resources on unnecessary data collection. This scoping facilitated the selection of issues relevant to the environmental components which are specified under the SEA Directive and Regulations, namely; biodiversity, flora and fauna, population and human health, soil, water, air and climatic factors, material assets, cultural heritage including architectural and archaeological heritage, and landscape.

Environmental Issues highlighted during the Scoping Process

The Scoping Report highlighted a number of issues which are of concern and are critical to sustainable development within the Plan area, namely,

Biodiversity – Shannon Estuary	The Plan area contains significant natural heritage including 2 Natura 2000 sites, 1 proposed Natural Heritage Area, extensive green infrastructure, wetlands and wildlife corridors. The Shannon Estuary is a significant part of the Shannon Town & Environs Plan area and its status as the most important site in Ireland for over-wintering wildfowl and waders, and an important breeding site in the summer season. It is noted that there are no definite negative concerns but an overarching acknowledgement that the Shannon Estuary forms an important aspect to the plan area and thus an enhancement of such a resource is a key element of the plan.
Groundwater Protection -	The plan area has intermittent areas of groundwater vulnerability classified as being of 'low', 'moderate', and 'high' vulnerability. There are also areas to the periphery of the plan area and airport lands which are categorised as having 'extreme' groundwater vulnerability.
Flooding -	Much of Shannon consists of low-lying coastal flatlands and the majority of the plan area is within a Flood Zone. The current embankments act as protection from tidal flooding but the future suitability of these embankments to act as flood defence barriers is unclear. Shannon has also been highlighted as an area for further study as part of the Catchment Flood Risk Assessment and Management Study (CFRAM) Study for the Shannon River Basin District (SIRBD).
Wastewater -	The treatment of wastewater in the Plan area is of concern. The Shannon Treatment Plant at Tradere serves Shannon town but

	also serves Bunratty and the surrounding environs. This plant is currently not capable of complying with EPA discharge licence requirements and thus requires upgrading.
Landscape & Visual Amenity -	The landscape within the ST&E LAP is open with large fields with many ditches and embankments as boundaries. The flat ground allows for long views and compared to the eastern part of County Clare, the land is less robust. Also the Shannon and Fergus estuaries are among those areas of vulnerable landscape in the Plan area.

2.2.3 Baseline Data

The baseline data assists in assessing the current state of the environment, facilitating the identification, evaluation and subsequent monitoring of the effects of the Plan. Thus, this information creates a platform whereby existing problems relevant to the Plan area can be quantified (where possible) or qualified thereby ensuring that the implementation of the Plan does not exacerbate these problems.

Baseline data has been collected based on the various broad environmental topics described in the SEA Directive and Regulations, i.e. population, biodiversity, fauna, flora, soil and geology, water, air, climate factors, material assets, cultural heritage including architectural and archaeological heritage and landscape.

The Directive and Regulations requires that information be focused upon relevant aspects of the environmental characteristics of the area likely to be significantly affected by the Plan and the likely change, both in positive and negative terms, where applicable. The baseline data was collated from currently available, relevant data sources.

2.2.4 Environmental Assessment of the Local Area Plan

The principal component of the SEA involves a broad environmental assessment of the objectives of the Local Area Plan. A methodology that utilises the concept of expert judgement, public consultation, GIS, and matrices, both to assess the environmental impact and to present the conclusions has been employed in this SEA. Key to assessing the objectives of the Plan is setting a specific set of environmental objectives for each of the environmental parameters listed in the SEA Directive and Regulations. These Strategic Environmental Objectives (SEOs) are outlined in Chapter 5. The objectives of the Local Area Plan zonings are then assessed against the SEOs (Appendix G) and a discussion is provided, where relevant, on the significance (profound, moderate, imperceptible) of the identified impact; the duration (short, medium, long term, permanent or temporary) of the identified impact; the type (cumulative, irreversible, synergistic) of the identified impact, in accordance with current guidelines (Section 7.5).

2.2.5 Consultations Planning Authority Team

A multi-disciplinary team has been established in order to prepare a consistent Plan, SEA and HDA and to examine the significant environmental impacts which may result from the implementation of the Plan. Consultations are ongoing with a number of internal Departments within Clare County Council, including; Environment, Community and Enterprise, Infrastructure, and Water Services. This enhanced the identification of environmental issues.

Consultation

Article 13A(4)(a) of the SEA Regulations (as amended) requires that the following prescribed Environmental Authorities be consulted:

- **Environmental Protection Agency (EPA).**
- **Minister for the Environment, Community & Local Government (DoECLG)**
- Where it appears to the planning authority that the plan or programme, or modification of the plan or programme, might have significant effects on fisheries or the marine environment, the **Minister for Agriculture, Marine and Food** and the **Minister for Communications, Energy and Natural Resources.**
- Where it appears to the competent authority that the plan or programme, or amendment to a plan or programme, might have significant effects in relation to the architectural or archaeological heritage or to nature conservation, the **Minister for Arts, Heritage and Gaeltacht Affairs.**
- Any adjoining planning authority whose area is contiguous to the area of a planning authority which prepared a plan, proposed variation, or local area plan.

As part of this SEA process, the statutory Environmental Authorities (See Appendix C: 'Letter to Environmental Authorities' and Appendix D: Summary of Responses) were consulted at the Scoping stage. Prescribed non-statutory bodies, elected members, other interested parties and neighbouring Local Authorities were consulted with throughout this process. In addition to this statutory consultation and to ensure transparency and an opportunity for all interested parties to participate in the process from the outset, stakeholders and the general public were invited to submit comments or observations on the Plan, Environmental Report, HDA and associated environmental assessments to Clare County Council from 12th December 2011 to 1st February 2012 (inclusive). The final Plan, SEA Environmental Report, SEA Statement, and HDA provide a chronological account of the consultation undertaken and submissions received throughout the Plan Review.

Cognisance of trans-boundary environmental issues in the Plan area is noted and as such consultation with neighbouring local authorities was undertaken throughout the plan process.

All submissions received from the environmental authorities in relation to previous development plans and local area plans for County Clare as well as those received at pre-draft stage for the ST&E LAP 2012-2018 have been collated, considered and incorporated where necessary throughout the text of this document.

Consultation and Timeframe of the Plan, SEA and HDA

The SEA Regulations provide for extensive public consultation with respect to the Shannon Town & Environs Local Area Plan for which the SEA and HDA are undertaken. The consultation process ensures that individuals and organisations that wish to participate have an opportunity to do so. The Plan, Environmental Report and HDA was put on public display to allow the general public to make submissions. The submissions were reviewed through the SEA and HDA processes and where necessary changes or amendments were made to the Local Area Plan.

The SEA legislation and guidelines also indicate that there should be complete integration between the preparation of the Plan, the SEA process and Habitats Directive Assessment (HDA). This Environmental Report outlines the SEA process carried out in tandem with the preparation of the ST&E LAP 2012-2018 and the HDA. The SEA process ensured that the Plan was informed by environmental considerations from the outset. The SEA team were fully involved in the analysis of development

options and were in a position to make suggestions throughout the review process to ensure that environmental considerations and environmental effects were considered in the formulation of policies and general and specific zoning objectives. Table 2.2 summarises the proposed Plan making process, SEA and HDA processes. The Habitats Directive Assessment was prepared as a separate document even though it was carried out in parallel with the Plan Review and SEA process.

Table 2.2: An Outline of the Integrated ST&E LAP 2012-2018, the SEA and HDA Processes, Consultation and Timeframe

Shannon Town & Environs LAP 2012-2018	SEA (& HDA)
Commence preparation of ST&E LAP Pre Draft Consultation Period 22nd July 2011 – 19th August 2011	Commence preparation of ST&E LAP SEA Scoping Process Pre Draft Consultation Period 15th July 2011 – 15th August 2011
Consideration of pre-draft submissions taking into account environmental SEA/HDA comments – drafting of Plan, SEA & HDA 15th August 2011 to 12th December 2011	
Public Display of Draft ST&E LAP and consultation period 12th December 2011 to 1st February 2012 (inclusive)	Public Display of Environmental Report & HDA and consultation period 12th December 2011 to 1st February 2012 (inclusive)
Manager’s Report on Submissions received to preliminary Draft LAP, SEA & HDA (for Elected Members) 9th March 2012	
Consideration of Managers Report by Elected Members (resolve to alter or make, amend or revoke draft ST&E LAP, ER and HDA) 17th April 2012	
	Determination of Requirement for SEA/HDA in accordance with S.20 (3)g of the Planning & Development Act (within 2 weeks of resolution) ¹ 30th April 2012 (Ad. under para. (e))
Public Display of Amendments to ST&E LAP and consultation period 15th June 2012 – 13th July 2012	Public Display of Amendments to Environmental Reports and consultation period 15th June 2012 – 13th July 2012
Submission of Manager’s Report to Members on submissions on the proposed material alterations to the Draft ST&E LAP, ER & HDA 7th August 2012²	
Consideration of Managers Report by Elected Members (resolve to make, amend or revoke draft ST&E LAP, ER and HDA) 10th Sept 2012	
Shannon Town & Environs Local Area Plan 2012-2018, SEA (ER & Statement) & HDA comes into effect 4 weeks after adoption 8th Oct 2012	
Note ¹ – The Planning & Development Act 2010 allows for Manager to allocate an additional discretionary time period to allow for the carrying out of SEA/AA in respect of any proposed material alterations to the Draft LAP.	

2.2.6 Consideration of Alternatives

Article 5 of the SEA Directive specifies that the Environmental Report should consider 'reasonable alternatives taking into account the objectives and geographical scope of the plan or programme'.

The Strategic Environmental Assessment Regulations 2004 (S.I. No. 436 of 2004) (as amended) also require the environmental report to include 'an outline of the reasons for selecting the alternatives dealt with, and 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 (Schedule 2B)'.

The issue of alternatives is a critical function of the SEA process and is necessary to evaluate the likely environmental consequences of a range of alternative development strategies for the LAP area within the constraints imposed by environmental conditions. The Plan is based on the principles of sustainable development and in applying these principles the following development scenarios were considered:

1. Business as Usual' Approach
2. Gateway Approach
3. Demand Led Development
4. Ad- Hoc Development
5. Economic Development Approach
6. Strong Environment led Approach
7. Sustainable Planning & Development

Option 7 is the development scenario adopted by the local authority as a planned approach to the further development of the area incorporating the principles of sustainable development and is the option best suited to Shannon. Therefore, the above proposed alternatives which are 'realistic and reasonable' and capable of being implemented were rejected in favour of this chosen, more sustainable approach.

2.2.7 GIS

Clare County Council's GIS system was utilised to collate the data into an operational database allowing the development of individual and/or combined environmental parameter maps and variations of these maps for the Plan area at various stages and scales. This baseline information and existing environmental data together with the SEOs, which are outlined in Chapter 5, helped identify, describe and evaluate the likely significant environmental effects of implementing the ST&E LAP 2012-2018 and determine appropriate mitigation and monitoring measures.

2.3 Technical Difficulties Encountered

This Section outlines the technical and/or other difficulties encountered during the SEA review process; areas where data was not readily available and/or in an appropriate format are also highlighted and where possible recommendations are made in the relevant Chapter or Section.

Census 2011 occurred on the night of April 10th 2011. Comprehensive data statistics are not yet available in sufficient detail to enable inclusion in this SEA process and Environmental Report. However it is envisaged that as the plan progresses and relevant data becomes available, the Environmental Report will be updated accordingly. However, at this stage, the lack of up-to-date data can be seen as an

obstacle to a comprehensive overview of the demographics of Shannon. Also, human health data for the Plan area is not easily available.

The availability of information in relation to various environmental parameters also posed some issues including;

- Clare County Council does not currently have a Renewable Energy Strategy; however it is an objective of the Council to develop this Strategy during the lifetime of the County Development Plan 2011-2017.
- A comprehensive and analytical GIS database is currently being addressed and was refined throughout the Planning-making process and it is envisaged that this will be further refined during future monitoring stages.

Furthermore, it should be noted that the strict timelines applied due to legislative requirements are constraining in terms of quality assessment including, for example, on-site investigations and assessments, data collation and GIS analysis.

Chapter Three – Relationship to Other Plans

3.1 Introduction

The Shannon Town & Environs Local Area Plan 2012-2018 is located within a clear hierarchy of International, National, Regional and County level policy guidelines, which feed progressively down to the Local Area Plan. In line with Paragraph (e) of Schedule 2B of the Planning and Development (SEA) Regulations 2004(as amended), this Environmental Report must contain: 'the environmental protection objectives, established at International, European Union or National level, which are relevant to the plan, and the way those objectives and any environmental considerations have been taken into account during its preparation'.

It is important in terms of the development of Shannon, that the Local Area Plan adheres to policy and strategic options which are pre-determined by higher level plans and guidelines, particularly the CCDP 2011-2017 and a wider range of relevant plans and programmes. Therefore this chapter identifies and summarises the relevant International, European Union and National legislation and policy documents, strategies and guidelines that set the context for this SEA process and the Shannon Town & Environs Local Area Plan 2012-2018. Concurrently, it is highlighted how due consideration was given to each document in the plan making and SEA processes. It should be noted that the Shannon Town & Environs Local Area Plan 2012-2018 contains details on higher level plans or strategies which direct plan policy and these are discussed in the Local Area Plan document.

From the onset a distinction must be made between the different sets of objectives, which have an influence on the preparation of the Shannon Plan. The International and National strategies and policies have a strong role to play in establishing higher level agendas such as climate change, while the County level plan objectives are more specific and localised in their orientation. Additionally, a third set of objectives, i.e. environmental objectives (see Chapter 5 on 'Strategic Environmental Objectives, Targets and Indicators') must also be taken into account. These are categorised as per the environmental parameters set out in Schedule 2B 'Information to be Contained in an Environmental Report' of the SEA Regulations, namely; Biodiversity, Flora and Fauna, Population, Soil and Geology, Air and Climatic Factors, Water, Cultural Heritage, Material Assets and Landscapes. Other areas include; Sustainable Development, Strategic Development, SEA, EIA and the environment. Please note that this list is comprehensive but not exhaustive and was amended throughout the plan process as new plans and programmes are adopted. Appendix B also outlines relevant International, National & Other Policy Documents, Strategies and Guidelines which were referred to in the preparation of the SEA to the Shannon Local Area Plan 2012-2018.

NOTE:

Please note Appendix B of this Environmental Report 'Relevant international, national and other policy documents, strategies and guidance' which tabulates and highlights the relevant legislation and policy documents, ongoing key strategies, plans and programmes, and their interaction with the existing Plan. However, the SEA can strengthen their inclusion in the main body of this Environmental Report.

Kilrush Development Plan 2008-2014 is currently being reviewed and a new plan prepared. The Ennis and Environs Development Plan 2008-2014 which has had two variations in its lifetime will commence review and the preparation of a new plan at the end of 2012. As of August 2011, the preliminary flood risk assessment for Shannon

was completed. Shannon will be subject to a probable AFA (area for further assessment). The study area of the AFA will be the LAP plan area plus an additional 500m. The next stage will be the preparation of detailed flood maps by Jacobs Consulting (2013). This will be followed by the preparation of a flood risk management plan, which will provide a definitive view on flooding and flood risk for Shannon (2015). The significance of the SIFP is acknowledged. This Strategic Plan is currently in the early stages of preparation. It is envisaged that this document, upon completion, will be incorporated into the County Development Plan by means of a variation which will be assessed through the SEA and HDA processes. In this regard, the Shannon Town and Environs Plan, being a local area plan, will be required to be consistent with the SIFP and all objectives within it, when finally adopted. At this stage, a draft has not yet been prepared, and is unlikely to be prepared prior to the adoption of the subject Plan. Clare County Council is the lead authority on the SIFP and will work towards the delivery of the CDP objectives.

3.2 Population, Human Health & Quality of Life

National Spatial Strategy 2002-2020

The Irish Government published the National Spatial Strategy (NSS) in November 2002 with its main objective being the achievement of more balanced Regional development. The Strategy is a twenty-year planning framework designed to achieve a better balance of social, economic and physical development, and population growth between the regions

Within the NSS, Limerick/Shannon is designated as a 'Gateway'. Therefore, the lands within the LAP area are identified as 'Areas with Strategic Rural Assets within a Metropolitan Hinterland'. The NSS states that Local Authorities for these areas should 'develop and implement frameworks for spatial planning in the cities and catchments through the regional planning guideline process as well as local land use and transport strategies'. To this end the objectives of the Shannon Local Area Plan 2012-2018 are broadly consistent with this Strategy.

National Development Plan, 2007-2013: Transforming Ireland – A Better Quality of Life for All

The National Development Plan *Transforming Ireland – A Better Quality of Life for All* sets out the development objectives for Ireland over the period 2007 - 2013. This Plan proposes to invest some €184 billion in economic and social infrastructure, the enterprise, science and agriculture sectors, the education, training and skills sector, environmental services and in the social fabric of society. The five 'Investment Priorities' of the plan are; Economic Infrastructure; Enterprise, Science and Innovation; Human Capital; Social Infrastructure; and Social Inclusion. The Plan's investment in programmes which will provide a direct and positive impact on environmental sustainability will be complemented by the Plan's Regional Development Strategy based on the framework of the National Spatial Strategy, including land use policy that is environmentally sustainable. The objectives of the Shannon Town & Environs Local Area Plan 2012-2018 are broadly consistent with the National Development Plan.

Clare County Development Plan 2011-2017

The Clare County Development Plan 2011-2017 was adopted on 10th January 2011 and subsequently came into effect on 7th February 2011. Some of the goals of the Development Plan include the realisation of:

'A County Clare whereby the sustainable growth of the County is developed and integrated with the timely delivery of a wide range of community, educational and cultural facilities and where through a commitment to equality, accessibility and social inclusion, the County develops as a unique location with an enhanced quality of life for its citizens and visitor'.

'A County Clare in which jobs and people are brought together and where the growth of employment, indigenous enterprise and economic activity is pursued proactively across all economic sectors throughout the County'.

The Clare County Development Plan 2011-2017 states that the objective for Shannon is to ensure that Shannon, as a linked Gateway with Limerick in the NSS, is a driver of County and regional prosperity by harnessing its strategic location and access on the Atlantic Corridor, in addition to its employment base, international airport and other competitive advantages. The Clare County Development Plan 2011-2017 is the 'parent' document to which the Shannon Town & Environs Local Area Plan 2012-2018 is made in accordance with.

Sustainable Development - A Strategy for Ireland, 1997

This 1997 policy document established the first overall national level policy framework addressing sustainable development in Ireland. The central aim of the Sustainable Development Strategy is to systematically apply principles of sustainability to policy-making and to integrate them into the decision-making process. It addresses all areas of Government policy and of economic and societal activity which impact on the environment. The overall goal of the strategy is therefore to ensure that the country can develop to its full potential, without compromising the quality of the environment for present and future generations. The strategy provides a comprehensive analysis and framework to allow sustainable development to be taken forward more systematically in Ireland. It reflects Ireland's commitment to the principles and agenda for sustainable development agreed at the Earth Summit in Rio in 1992. It also puts in place mechanisms for monitoring and reviewing progress. It was framed to *'ensure that economy and society in Ireland can develop to their full potential within a well protected environment'*. The objectives of the Shannon Town & Environs Local Area Plan 2012-2018 are broadly consistent with the objectives of this Strategy.

Guidelines on Sustainable Residential Development in Urban Areas 2009

The Guidelines on Sustainable Residential Development in Urban Areas set out a number of aims for successful and sustainable residential development in urban areas. There is a need for future urban residential development to:

- Prioritise walking, cycling and public transport, and minimise the need to use cars;
- Deliver a quality of life which residents and visitors are entitled to expect, in terms of amenity, safety and convenience;
- Provide a good range of community and support facilities, where and when they are needed;
- Present an attractive, well-maintained appearance, with a distinct sense of place and a quality public realm;
- Facilitate ease of access and finding one's way around;
- Promote the efficient use of land and of energy, and minimize greenhouse gas emissions;
- Provide a mix of land uses to minimise transport demand;

- Promote social integration and provide accommodation for a diverse range of household types and age groups; and
- Enhance and protect the built and natural heritage.

The Guidelines set out the key planning principles which should be included in statutory plans in order to achieve these aims. The objectives of the Shannon Town & Environs Local Area Plan 2012-2018 relating to development within the defined settlements are generally in line with these Guidelines.

Sustainable Rural Housing Guidelines 2005

The guidelines, published by the Department of the Environment, Heritage and Local Government, have identified a number of key policy requirements to be considered in the making of a statutory plan, including:

- Preserving the quality and character of urban or rural areas;
- Protecting and preserving the quality of the environment; including the prevention, limitation, elimination, abatement or reduction of environmental pollution and the protection of waters, groundwater, the seashore and the atmosphere;
- Protecting features of the landscape which are of major importance for wild fauna and flora;
- Preserving the character of the landscape, including views and prospects, and the amenities of places and features of natural beauty or interest. In dealing with the issue of housing in rural areas, the Guidelines also identify that the statutory plan is required to detail:
 - Links to the housing strategy as the overarching policy context in relation to future housing needs;
 - Overall objectives and associated policies for rural settlement;
 - Objectives in relation to the various aspects of the natural and cultural heritage;
 - Objectives in relation to the identification and protection of key natural assets such as surface and ground water resources, minerals and aggregates;
 - Objectives in relation to the future development and safe operation of transport infrastructure.

The objectives of the Shannon Town & Environs Local Area Plan 2012-2018 relating to development in rural areas are consistent with these Guidelines.

The Mid-West Regional Planning Guidelines, 2010-2022

The Mid West Regional Planning Guidelines (MWRPG's) 2010-2022 give effect, at a Regional level, to the National Planning Framework put forward in the National Spatial Strategy (NSS) and National Development Plan (NDP). The MWRPG's provide a Regional framework for the formulation of policies and strategy in the County Development Plan and seek to ensure the proper balance between the different settlements in the region with regard to development, population and services. The Guidelines present an updated Regional settlement strategy. They also set out 'Population Targets' for the region and for each County, including County Clare, which have been formulated having regard to the January 2009 'population targets' issued by the Department of Environment, Heritage and Local Government and supplementary guidance of August and October 2009. Furthermore, the Guidelines outline a range of criteria for Development Plans in the context of population and settlement and identify strategic infrastructure investments for the region. This Regional guidance has influenced the development of the settlement strategy for

County Clare. The MWRPG's 2010-2022 continue the 'Zone' based strategy (Zone 1 – Zone 8) that was employed in the 2004 Guidelines, outlining the development potential and needs of each zone in turn.

Shannon falls into Zone 1 in the Mid West Regional Planning Guidelines. Zone 1 encompasses Limerick, Shannon & Ennis. It contains a little over half of the Region's population and more than two thirds of the Region's employment. The zone incorporates the city as well as parts of all three counties making up the Region. About a fifth of the jobs are held by people commuting in from other parts of the Region. Only about a seventh of the land area is subject to some environmental designation such as SAC, SPA or NHA. However, the zone borders the Shannon and Fergus estuaries and is bisected by the River Shannon which is itself designated as SAC.

Limerick/Clare Joint Housing Strategy 2010-2017

Part V of the Planning and Development Act 2000 (as amended) places an onus on all Local Authorities to prepare a Housing Strategy in respect of the area of the development plan. The Housing Strategy is the vehicle to address overall housing needs and continue to focus on housing affordability, the provision of private, social and affordable housing and the implementation of Part V of the Planning and Development Act, 2000 (as amended). Clare County Council, in conjunction with Limerick County Council and Limerick City Council, has prepared a Joint Housing Strategy for 2010-2017 as provided for in Section 94 (e) of the Planning and Development Act 2000 (as amended). This Housing Strategy replaces the County Clare Housing Strategy 2007-2011. In accordance with Section 95 1(a) of the Act the Councils must ensure that sufficient and suitable land is zoned to meet the requirements of the Housing Strategy over the lifetime of the Development Plan. This Strategy is included in *the Clare County Development Plan 2011-2017 as Volume 7 which comprises the Joint Housing Strategy for Clare Local Authorities and Limerick City & County Councils*, it is given effect by objectives contained in Chapter 4 – 'Housing and Sustainable Communities' of the CCDP 2011-2017. The Joint Housing Strategy is consistent with the National Spatial Strategy and takes into account the Mid West Regional Planning Guidelines 2010-2022 and the County and City level population targets. It also details housing demand analysis. The policies of the Housing Strategy are consistent with those outlined in the Shannon Town & Environs Local Area 2012-2018.

County Clare Enterprise Strategy

The County Clare Enterprise Strategy creates a framework within which the County can address the challenges and opportunities which exist for the continued growth and development of enterprise in Clare.

The strategy sets out six high-level strategic enterprise goals:

1. Increase the quantity and quality of Research and Development
2. Increase the scale of enterprises
3. Increase the quality and adaptability of the labour force
4. Increase competitiveness
5. Increase innovation
6. Achieving spatially balanced enterprise development as an over-arching strategic goal.

The policies and objectives of the Shannon Town & Environs Local Area 2012-2018 are broadly consistent with this Strategy.

County Clare Social Inclusion Strategy 2010-2012

Shaping the Future – Integrated Strategy for the Social, Economic and Cultural Development of County Clare, prepared by the County Development Board, was published in 2002. The Strategy provides a comprehensive framework of how County Clare should develop over the period 2002-2012. The report details the need for the strategy, the challenges facing the Mid-West Region as a whole and the values and needs that shaped the objectives and aims of the strategy. Furthermore it provided work programmes in the areas of agriculture, economic development, community development, health, infrastructure and tourism (including culture and heritage) and methodology for implementation, monitoring and review of the Integrated Strategy. In the report, areas of the west, north and north-east of Clare are recognised as the most disadvantaged. Furthermore the north and west of the county have the largest proportion of population that are living alone and are elderly. Challenges to the social infrastructure of the county are apparent. Similarly there are challenges in the preservation and sustainable use of the natural resources in both the coastal and lake areas of the County.

In 2009, a review was carried out to identify priority areas for the period 2010-2012. A range of areas including social inclusion, environment, rural development, tourism, quality of life, climate change and energy were highlighted as topics that warranted focused strategies. This Social Inclusion Strategy 2010-2012 focuses on addressing the particular needs of individuals and groups who experience poverty and exclusion.

Clare Local Authorities Social Inclusion & Accessibility Strategy 2011-2014

This is the first Clare Local Authorities Social Inclusion & Accessibility Strategy. Inclusion and access are implicit in the work of local authorities, but this strategy aims to identify social inclusion and accessibility as fundamental to the manner in which council services and facilities are planned and delivered. Social Inclusion is embedded as one of 6 objectives in the Strategy: 'To promote social inclusion and participation of all communities and combat marginalisation'. Where applicable the Shannon Town & Environs Local Area 2012-2018 reflects the aims and objectives of the Social Inclusion & Accessibility Strategy 2011-2014.

County Clare Recreation and Sports Strategy, 2009-2011

The County Clare Recreation and Sports Strategy was launched in January 2009 as a joint initiative between Clare County Council and Clare Sports Partnership under the aegis of the Clare County Development Board. The aim of the Strategy is '*the cultivation and fostering of a culture of wellbeing, and a balanced healthy lifestyle by and for everyone in the county throughout their lives through participation in recreational, sporting and physical activities*'. The strategy recognises the central role that participation in recreation and sports activities has on the '*continued development and integration of local communities*'. Key issues that emerged during preparation of the strategy were those of lack of accessibility of information, facilities and transport to facilities. The action plan of the strategy identifies many objectives towards the improvement of the Recreation and Sports culture of the whole County, including Shannon. Where applicable the Shannon Town & Environs Local Area 2012-2018 reflects the aims and objectives of the County Clare Recreation and Sports Strategy 2009-2011.

3.3 Biodiversity, Fauna and Flora

UN Convention on Biodiversity, 1992

This United Nations Convention on Biological Diversity introduced an obligation for states to adopt measures via plans and programmes that act as incentives for the conservation and sustainable use of biological diversity and to ensure that the benefits arising from the use of genetic resources are shared in an equitable manner.

The Habitats Directive, 1992

The Habitats Directive (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora aims to contribute towards ensuring bio-diversity through the conservation of natural habitats and of wild fauna and flora in Europe. The Habitats Directive establishes a network of internationally important sites designated for their ecological status, which are known in Ireland as Natura 2000 sites. These comprise of; Special Areas of Conservation (SACs) designated under the Habitats Directive including candidate SACs (cSAC) and Special Protection Areas (SPAs) designated under Council Directive (79/409/EEC) on the conservation of wild birds including proposed SPAs (pSPAs). The Birds and Habitats Directive collectively, set out various procedures and obligations in relation to nature conservation management, a key mechanism is the requirement to consider possible nature conservation implications of any plan or project on the Natura 2000 site network before any decision is made to allow that plan or project to proceed. The key difference between the SEA Directive and the Habitats Directive can be summarised as follows; the SEA Directive requires the planning authorities to assess the likely significant environmental effects of plan on the environment at a strategic level, while HDA is more focused and requires more rigorous tests, with the conservation and protection of Natura 2000 sites at its core. The recent DoECLG Circular PSSP/5/2011 'Compliance of existing land use plans with the EU Habitats Directive' issued on 1st July 2011 reiterates the compliance to undertake a Habitats Directive Assessment on land use plans. Clare County Council is in accordance with this direction in conducting a HDA for the ST&E LAP 2012-2018; as mentioned previously it is considered in parallel with the SEA but is a separate document. The Habitats Directive Assessment was carried out with reference to the National Parks and Wildlife Service Report 'The Status of EU Protected Habitats and Species in Ireland 2008' and having regard to 'Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities' (2009).

Birds Directive, 1979

Birds Directive (79/409/EEC - on the Conservation of Wild Birds) is the EU's oldest piece of nature legislation and one of the most important, creating a comprehensive scheme of protection for all wild bird species naturally occurring in the Union. It was adopted unanimously by the Member States including Ireland in 1979 as a response to increasing concern about the declines in Europe's wild bird populations resulting from pollution, loss of habitats as well as unsustainable use. It was also in recognition that wild birds, many of which are migratory, are a shared heritage of the Member States and that their effective conservation required international co-operation. (Directive 2009/147/EC is the codified version of Directive 79/409/EEC as amended).

European Communities (Bird and Natural Habitats) Regulations

The European Communities (Bird and Natural Habitats) Regulations 2011 consolidate the European Communities (Natural Habitats) Regulations 1997-2005 and the European Communities (Bird and Natural Habitats) (Controls of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in the Court of Justice of the European Union (CJEU) judgements.

National Biodiversity Plans

The National Biodiversity Plan 2002 sets out the framework through which Ireland is to provide for the conservation and sustainable use of biodiversity over a five-year period. Under 15 themes and sectors it details actions that are to be pursued to achieve this objective. The National Biodiversity Plan has been developed to coincide with the National Heritage Plan 2002, which sets out the framework for the protection and enhancement of all aspects of Ireland's heritage, which includes our natural heritage over five years from 2002. While the National Biodiversity Plan focuses solely on biological diversity, the two plans are complementary. The integration of the plan into the different government departments involves the development of specific sectoral action plans such as action plans on the conservation of natural resources, agriculture, fisheries, forestry and economic development.

Ireland's second National Biodiversity Plan - Actions for Biodiversity 2011-2016 builds on the progress achieved since 2002. The objectives of the Shannon Town & Environs LAP 2012-2018 are consistent with the National Biodiversity Plan 2002 and Ireland's National Biodiversity Plan - Actions for Biodiversity 2011-2016.

National Heritage Plan, 2002

The National Heritage Plan was published by the Department of Arts, Heritage and the Islands in 2002. The purpose of the National Heritage Plan is to set out a clear and coherent strategy and framework for the protection and enhancement of Ireland's heritage. The goals of the Plan are in line with the principles underlying the Government's Policy Statement on Heritage. The Plan is published in fulfillment of a commitment in the Government's Action Programme for the Millennium. A review of the National Heritage Plan by the Department of the Environment, Community and Local Government is proposed, but a timeframe for the review has not yet been established. However, the objectives of the Shannon Town & Environs LAP 2012-2018 are broadly consistent with the current National Heritage Plan.

The Wildlife Act, 1976

The Wildlife Act, 1976, which came into effect on 1 June 1977, was the principal national legislation providing for the protection of wildlife and the control of some activities that may adversely affect wildlife, prior to being amended in 2000. It was the only major legislation concerned with wildlife that was passed in the previous 45 years. It replaced the Game Preservation Act, 1930, and the Wild Birds (Protection) Act, 1930. The aims of the Wildlife Act, 1976, are to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims.

Wildlife (Amendment) Act, 2000

Wildlife (Amendment) Act, 2000 supersedes the Wildlife Act of 1976. Natural Heritage Areas are designated and protected due to their national conservation value for ecological and/or their geological/geomorphological heritage under the Wildlife (Amendment) Act 2000. They cover nationally important semi-natural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes. The objectives of the Shannon Town & Environs LAP 2012-2018 take the provisions of this Act into consideration.

County Clare Heritage Plan 2011-2017

The main aim of the County Clare Heritage Plan is to increase stakeholder knowledge of the heritage of County Clare and to ensure that any decisions on the future development of the County are made, keeping in mind the protection of the County's heritage assets. Its aim is to ensure that legitimate change can take place in the

County while retaining the character, quality and integrity of its heritage. The aims and objectives of the Shannon Town & Environs LAP 2012-2018 are consistent with this Plan.

Clare Local Biodiversity Action Plan 2003

The National Biodiversity Plan 2002 requires each County to produce a Local Biodiversity Action Plan, County Clare was one of the first local authorities to do so. The main functions of a Local Biodiversity Action Plan are to translate International and National policies and legislation into effective local action on the ground and to raise public awareness of and involvement in the conservation of biodiversity. The LBAP process will identify all the habitats and species present in Clare and prioritise the vital actions necessary to conserve biodiversity of both National and local importance. Clare hosts a wide range of animal and plant species as well as some of the best examples of threatened habitats in Europe. The Clare LBAP highlights just a small number of the thousands of animal and plant species living in Clare. There are about 55 mammals (land and sea), 780 higher plant species, 400 seaweed species and 21 freshwater fish species (10 native, 11 introduced) which occur in the wild in County Clare. The Shannon estuary is the most important sites in Ireland for over-wintering wildfowl and waders and home to the only known resident group of Bottlenose dolphins in Ireland. Clare is also internationally noted for many species such as Pine martens, Butterflies, Moths and Lesser Horseshoe bats. The aims and objectives of the Shannon Town & Environs LAP 2012-2018 are consistent with this Plan.

3.4 Soil & Geology

Proposed EU Soil Framework Directive

At present, there no legislation which specifically deals with the protection of soil resources. The European Commission has proposed a strategy to ensure that Europe's soils remain healthy and capable of supporting human activities and ecosystems. The Framework Directive sets out common principles, objectives and actions which require Member States to adopt a systematic approach to identifying and combating soil degradation, to introduce precautionary measures and to integrate soil protection into other policies.

3.5 Water

The Water Framework Directive, 2000

The Water Framework Directive (WFD), European Directive 2000/60/EC sets a framework for the comprehensive management of water resources in the European Community. It addresses inland surface waters, estuarine and coastal waters and groundwater. The WFD has been transposed into Irish legislation by the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003). The fundamental objective of the WFD is to maintain a "high status" of waters where it exists, preventing any deterioration in the existing status of waters and achieving at least "good status" in relation to all waters by 2027. Member States will have to ensure that a co-ordinated approach is adopted for the achievement of the objectives of the WFD and for the implementation of programmes of measures for this purpose. Irrespective of political boundaries, the river basin is the natural unit for water management; Ireland is divided into 8 River Basin Districts. The Shannon plan area is located entirely within the Shannon International River Basin District, which is the largest of the Irish River Basin Districts with an area of 18,000km².

The Shannon River Basin Management Plan 2009-2015, entitled *Water Matters: Our Plan!* published in 2010 details the water courses in the management plan area, identifies the quality status and issues relating to the water regime of the area. The plan also outlines the objectives for the area which are principally concerned with reducing pollution of water bodies and improving water quality generally to achieve “good status”.

EU Directive 2007/60/EC on the Assessment and Management of Flood Risks

Directive 2007/60/EC of the European Parliament and of the Council on the assessment and management of flood risks, more commonly known as the ‘Floods Directive’ came into force on the 26th of November 2007. The Directive adopted by Council and Parliament requires that Member States take a long-term planning approach to reducing flood risks in three stages:

- Member States will by 2011 undertake a preliminary flood risk assessment of their river basins and associated coastal zones.
- Where real risks of flood damage exist, they must by 2013 develop flood hazard maps and flood risk maps.
- Finally, by 2015 flood risk management plans must be drawn up for these zones. These plans are to include measures to reduce the probability of flooding and its potential consequences.

All stakeholders must be given the opportunity to participate actively in the development and updating of the flood risk management plans. Furthermore, risk assessments, maps, and plans must be made available to the public. The Directive creates an EU framework for flood risk management that builds on and is closely coordinated and synchronised with the 2000 Water Framework Directive, the cornerstone of EU water protection policy. Certain areas of the ST&E LAP functional area have been identified as liable to flooding therefore the objectives of the Shannon Town & Environs LAP 2012-2018 are generally consistent with the Directive.

The Planning System and Flood Risk Management – Guidelines for Planning Authorities 2009

These guidelines were published by the Department of Environment, Heritage and Local Government and the Office of Public Works in November 2009. The Guidelines are aimed at ensuring a more consistent, rigorous and systematic approach to fully incorporating flood risk assessment and management into the planning system. The guidelines which have been prepared in response to the recommendations of the National Flood Policy Review Group are focused on providing for comprehensive consideration of flood risk, both in preparing regional plans, development plans and local area plans, and in determining applications for planning permission in line with the principles of proper planning and sustainable development. They also take account of environmental considerations including; the need to manage the inevitable impacts of climate change, biodiversity, etc., and the EU Directives on Flooding and the Water Framework Directive which established the concept of river basin management.

The guidelines will require the planning system at National, Regional and Local levels to:

1. Avoid development in areas at risk of flooding, such as floodplains, unless there are wider sustainability grounds that justify appropriate development; and where the flood risk can be reduced or managed to an acceptable level without increasing flood risk elsewhere;

2. Adopt a sequential approach to flood risk management and guide development away from areas that have been identified as being at risk through flood risk assessment, in areas of high risk, for example, you should see water-compatible developments such as docks and marinas, amenity open space, outdoor sports and recreation, while other more vulnerable development should be directed towards areas of minimal or no flood risk.
3. Incorporate flood risk assessment into the process of making decisions on planning applications and planning appeals.

An important context for these Guidelines is the need to adapt to inevitable impacts of climate change. Future impacts are likely to be felt in every sector of the economy and may include both persistent long-term changes and acute short-term events. Increased frequency and magnitude of flooding due to heavier rainfall, sea level rises and storm surges are among the most serious threats for Ireland. Addressing flood risk management through the planning system is a key response and these Guidelines represent an important step in the process of National adaptation to climate change. These Guidelines have statutory force under Section 28 of the Planning and Development Act 2000 (as amended). Local Authorities are requested to take full account of the recommended flood risk identification, assessment and management process, when preparing or varying development plans and local area plans, and in regard to applications for planning permission. Certain areas of the Shannon Town & Environs LAP functional area are susceptible to flooding therefore it is acknowledged that the objectives of the Shannon Town & Environs LAP 2012 -2018 be generally consistent with the Guidelines.

3.6 Air and Climatic Factors

National Climate Change Strategy, 2007-2012

The National Climate Change Strategy 2007-2012 was published in April 2007 and builds on the commitment for sustainable development as set out in *Towards 2016* and the National Development Plan 2007-2013. The Strategy provides a framework for the achievement of reductions in greenhouse gas emissions as an essential step in achieving the targets agreed under the Kyoto Protocol. In broad terms the purpose of the Strategy is to:

- show clearly the measures by which Ireland will meet its 2008-2012 commitment;
- show how the measures position us for the post 2012 period, and identify the areas in which further measures are being researched and developed to enable us to meet our 2020 commitment.

The Strategy recognises that, while progress in emissions reductions has been made, significant further advances are required. The objectives of the Shannon Town & Environs LAP 2012-2018 are broadly consistent with this Strategy.

3.7 Material Assets

Urban Waste Water Treatment Directive (91/271/EEC)

The treatment of wastewater is governed by the Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC) was transposed into Irish law by the Urban Waste Water Treatment Regulations 2001 (S.I. 254 of 2001). The Directive aims to protect the environment from the adverse effects of the wastewater discharges by ensuring that wastewater is appropriately treated before it is discharged to the environment. Also the treatment of waste water is relevant to the Water Framework Directive which requires all public bodies, including Clare County Council, to coordinate their policies and operations so as to maintain the good status of water

bodies which are currently unpolluted and bring polluted water bodies up to good status by 2015.

Replacement Waste Management Plan for Limerick/Clare/Kerry Region 2006-2011

The Waste Management Plan for the Mid West Region has been jointly prepared by Clare County Council, Limerick City Council, Limerick County Council, and Kerry County Council. The Waste Management Plan sets out the proposed policy for integrated waste management within the Region and places an emphasis on waste prevention and minimisation through source reduction, producer responsibility and public awareness and the management of recovery/recycling/disposal of regional waste. Specifically the Waste Management Plan aims to achieve the following objectives:

- To implement EU policy on waste including the waste management hierarchy;
- To implement National Policy on Waste Management;
- To achieve targets set in the EU Landfill Directive; and
- To implement targets set out in National Biodegradable Waste Strategy.

The objectives of the Shannon Local Area Plan 2012-2018 are consistent with the Waste Management Plan for the Region. A Replacement Waste Management Plan for Limerick/Clare/Kerry Region 2011-2016 is being prepared.

Clare Wind Energy Strategy, 2011-2017

The Clare Wind Energy Strategy forms part of the Clare County Development Plan 2011 – 2017. It was prepared to reflect the changing economic environment and to respond to anticipated commercial demands for wind energy developments. The Wind Energy Strategy will facilitate development of wind farms by maximising the wind resource of the County having regard to recent technological advances in turbine design, updated information on wind speeds, proximity and availability to grid connections and to changing energy and grid connection regulations, while minimising any environmental and visual impacts. The Clare County Development Plan 2011-2017 is the 'parent' document to which the Shannon Local Area Plan 2012-2018 is made in accordance with. Therefore, the objectives of the Shannon Town & Environs LAP 2012-2018 are also consistent with the Clare Wind Energy Strategy.

Shannon Estuary Strategic Integrated Framework Plan

Clare County Council, together with Limerick City Council and Limerick and Kerry County Councils has initiated the preparation of an inter-jurisdictional Strategic Integrated Framework Plan (SIFP) for the Shannon Estuary and its immediate environs. The key objective is to research and develop an integrated approach to facilitating economic growth and promoting environmental management within and adjacent to the Shannon Estuary. Upon completion, it is envisaged that the Plan will be integrated into the Clare County Development Plan 2011-2017 by means of a variation.

3.8 Cultural Heritage

European Convention on the Protection of the Archaeological Heritage, 1992 (the 'Valletta Convention')

This convention was ratified by Ireland in 1997. Its aim is to '*protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study*'. It requires that appropriate consideration be given to archaeological issues at all stages of the planning and development process.

Architectural Heritage Protection – Guidelines for Planning Authorities 2004

These guidelines were first published by the Department of the Environment, Heritage and Local Government in 2004. They outline the guidelines concerning development objectives for protecting structures, or parts of structures, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social, or technical interest and for preserving the character of architectural conservation areas. These guidelines are issued under Section 28 and Section 52 of the Planning and Development Act 2000 as amended by Section 20 of the Planning and Development Act 2010.

Planning authorities are empowered to protect the architectural heritage, in the interest of the proper planning and sustainable development within their respective functional areas, and to prevent its deterioration, loss or damage. This will be reflected in the adoption of suitable policies for protecting the architectural heritage in their development plans and giving practical effect to them through their development control decisions, generally by liaison between planning officers and conservation officers. The objectives of the Shannon Town & Environs LAP 2012-2018 are broadly consistent with the Guidelines.

Record of Monuments and Places, County Clare, 1996

The Record of Monument and Places (RMP) is a statutory list of all known archaeological monuments provided for in the National Monuments Acts. The RMP consists of a published county-by-county set of Ordnance Survey maps on which monuments are marked by a circle and an accompanying book which specifies the type of monuments. There are more than 120,000 monuments on the Record of Monuments and Places for Ireland. There are approximately 7,500 identified monuments in County Clare. There are 37 monument sites in County Clare which are managed by the National Monument Service (OPW). The County Clare Inventory of Archaeology is ongoing. County Clare is recognised nationally for its archaeological significance, with many large and well-recognised sites. The County Council's objectives with regard to the Record of Monuments and Places for County Clare are broadly reflected in the Shannon Town & Environs LAP 2012-2018

The Heritage Plan for County Clare, 2011-2017

The Clare Heritage Plan sets out how Clare County Council, in association with other stakeholders, will identify, manage and conserve heritage for the benefit of all. The Clare Heritage Plan will collect and make available heritage information and raise awareness through education initiatives, surveys and research. It will inform public policy on heritage and support the strategic and integrated management of heritage at a local level. The Shannon Town & Environs LAP 2012-2018 was prepared in accordance with the Clare Heritage Plan which was formally adopted in May 2011.

3.9 Landscape

European Landscape Convention

This convention was signed and ratified by the Irish Government in March 2002 and came into effect in Ireland in 2004. It aims to promote the protection, management and planning of landscapes. The Convention outlines specific measures to be implemented namely relating to awareness raising, training and education, identification and assessment, landscape quality objectives and implementation.

A National Landscape Strategy for Ireland 2011

A 'National Landscape Strategy for Ireland: Strategy Issues Paper for Consultation' was issued in September 2011 for public consultation. The Issues Paper set out Ireland's aims and objectives with regard to landscape and sets it in the context of existing strategies, policies and objectives as well as the framework of the European Landscape Convention. Further details on this will be included as appropriate as the preparation process evolves.

Draft Landscape and Landscape Assessment Guidelines 2000

These Guidelines set out a methodology, called Landscape Character Assessment, which Planning Authorities should use to underpin the provisions related to landscape matters in their statutory plans. The Guidelines favour a method of characterisation of the landscape based initially on landcover – trees, vegetation, settlement, water, etc., and landform which results from geological and geomorphological history. Furthermore, the value of the landscape is assessed in terms of historical, cultural, religious and other understandings of the landscape. The benefit of Landscape Character Assessment is that it allows for a proactive approach to landscape management. It aids the development management process as it indicates development types that would suit certain locations using certain design criteria, which then result in the character of the landscape remaining intact.

Clare Landscape Character Assessment 2003

The objective of the Clare Landscape Character Assessment is to analyse the character, value and sensitivity of County Clare, and provide a baseline against which change to the landscape can be gauged and monitored. The Landscape Character Assessment is from the viewpoint of the natural environment, its social perspective and its management. For this study the landscape of County Clare was recorded and categorised, with reference to settlement patterns, ecology, archaeology and geology, all of which were contributing factors to its evolution over time. The identification of seascape character areas was also undertaken. Consultation with the public provided a further layer of information to the landscape characterisation. In the assessment report the county is divided up into the various landscape characterisation types. The report details each landscape character type and habitat type in the county, along with the 'forces for change' that affect the landscape / habitat. Finally the forces for change and trends that will impact the landscape are identified, as well as guidance on how change can be managed '*to ensure it has a positive, sustainable influence on landscape character*'.

The Shannon Local Area Plan Area comprises of a diverse range of landscape character areas namely:

- Sixmilebridge Farmland
- Fergus Estuary

Chapter Four – Environmental Baseline

4.1 Introduction

The purpose of this Chapter of the Environmental Report is to establish the existing environmental conditions and to establish the issues of importance within the Plan area. The aim is therefore to identify the following parameters;

- The key environmental resources and sensitivities;
- The key environmental threats and trends;
- Information gaps and/or technical difficulties encountered; and
- The effect(s) of not reviewing the plan or 'do-nothing scenario'.

The collation of baseline data allows for the "state" of the environment to be identified in objective terms. In general, all relevant data, tables and graphs as appropriate to illustrate the state of the existing environment and to reveal and examine current trends and existing problems will be utilised in this Strategic Environmental Assessment. Where possible and where data exists a quantitative measurement of the environmental conditions is provided, however, where such information is absent, qualitative descriptions of environmental themes are provided instead. Where important information deficits or technical difficulties are noted, recommendations are provided in the relevant Section of this Chapter under the heading 'information gaps/technical difficulties', and Chapters 8 and 9 to ensure that any absence of critical information will be addressed as part of mitigation and ongoing monitoring and review of the Local Area Plan respectively. Furthermore, the monitoring programme will incorporate these recommendations directly or by proxy, if and where possible.

A considerable amount of data was gathered and collated in preparing this SEA Environmental Report. However, there were a number of areas where data did not exist, was not freely available and/or not in GIS format. Whilst certain information is readily and easily accessible, such as data relating to water quality, other information is more difficult to ascertain or is not yet available, such as complete ecological coverage, e.g. habitats, trees and hedgerows.

Significant gaps in the environmental parameters data are discussed under each parameter section below. However, key technical difficulties encountered include:

1. Ecological designation conservation plans –these plans are currently unavailable
2. Detailed information on health problems and issues in the County are not available
3. Lack of landslide or soil erosion data
4. Noise Maps for the County/Plan Area are not available
5. CSO 2011 Census data is as yet largely unavailable

However, it is envisaged that as new information becomes available, it will be integrated, where possible, into the ST&E LAP 2012-2018 and GIS database.

The headings provided are in accordance with the SEA Directive 2001/42/EC and the SEA Regulations (S.I. No. 436 of 2000)(as amended). An emphasis is placed on the specific strategic elements of each parameter and where relevant to the Plan policies. The topics addressed are:

- Population – Demographics *
- Biodiversity, Flora and Fauna
- Soil and Geology
- Water

- Air Quality and Climatic Factors
- Material Assets
- Cultural Heritage including Architectural and Archaeological Heritage
- Landscape
 - & their interrelationships.

* Human health is not considered directly in this Report, but is instead dealt with through consideration of other environmental issues such as air quality, water quality, etc.

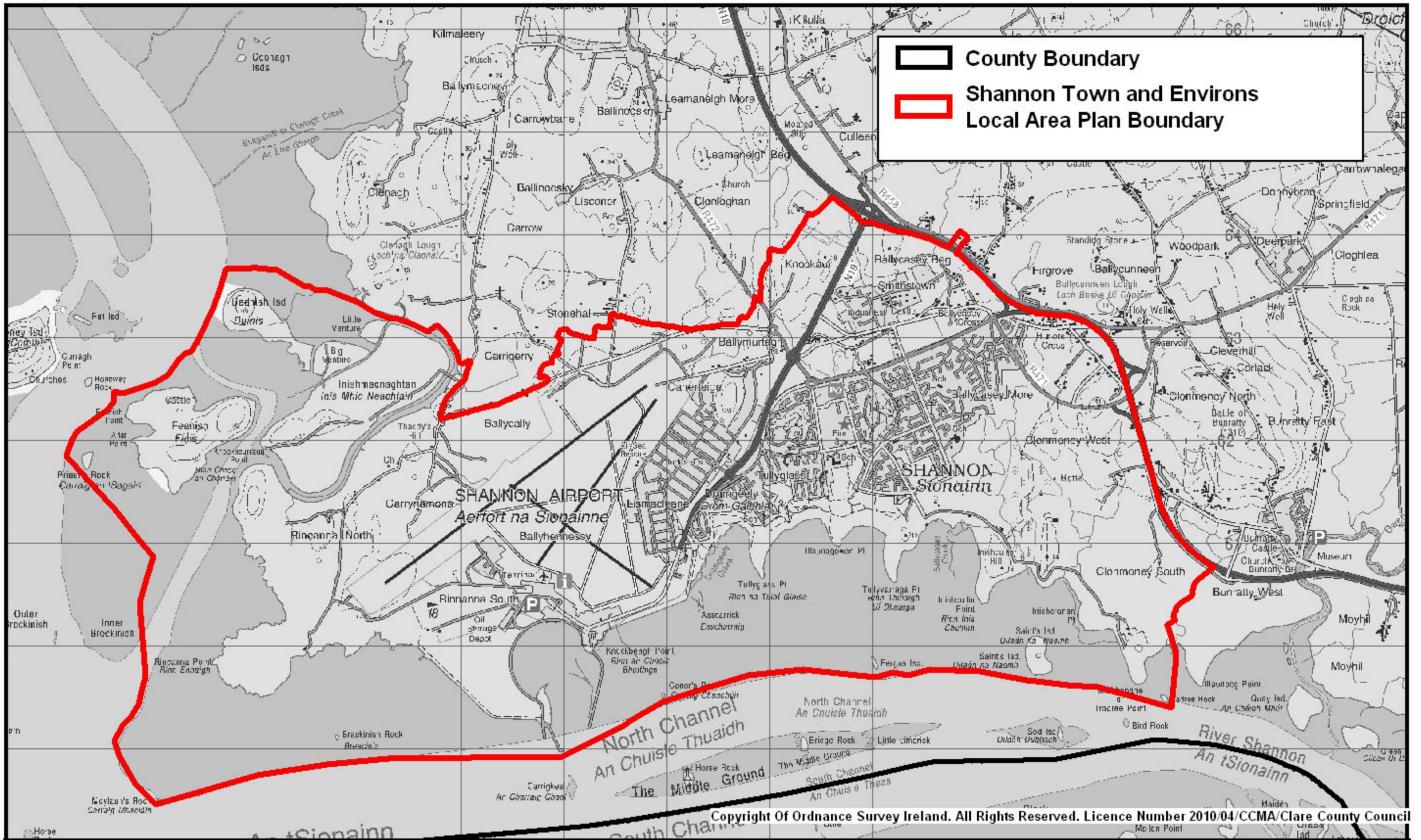
These topics will be considered predominantly in relation to the Shannon Plan Area, however, a zone of influence outside the Plan area is also considered to be important, e.g. possible effects on air quality, water, habitats, etc.

4.1.1 Study Area

Shannon town is located on the River Shannon, which forms part of the southern boundary of County Clare in the Mid-West Region of Ireland.

The LAP area comprises Shannon Town, the airport lands and Shannon Free Zone Industrial Estate to the west, industrial and rural lands to the north, the N18 and surrounding clusters to the east and the Shannon Estuary to the south. The town itself developed in the 1960's in response to the growth of Shannon International Airport and the Shannon Free Zone. Its strategic importance is recognised in its designation in the National Spatial Strategy 2002-2020 as part of a linked gateway with Limerick. This designation, together with its significant population base and employment location, has necessitated that the Shannon area be subject to its own local area plan and is therefore separated from the South Clare Local Area Plan 2011-2017, which deals with the other settlements within the South Clare area.

The population of the Plan area is 9,222 (Census 2006).



**Clare
County
Council**

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 Áras Contae An Chláir,
 New Road,
 Ennis.

PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018

TITLE: Map 4.1 - Shannon Town And Environs Local Area Plan 2012 - 2018

SCALE: NOT TO SCALE

DATE:
OCTOBER 2012

PROJECT NO.

DRAWN BY:
P. McMANUS

DRAWING NO.

CHECKED:
B. MCCARTHY

4.2 Population

4.2.1 Existing Environment

This Section discusses the existing situation, trends and future impact of the Shannon Local Area Plan 2012-2018 on the population of the plan area.

The National Spatial Strategy recognises Limerick/Shannon area as a Gateway zone whose further development is a key component of the NSS. Gateways are centres with a strategic location, nationally and relative to their surrounding areas, providing national-scale social and economic infrastructure and support services. The Mid West Regional Planning Guidelines also envisage that this zone is developed in a coordinated way as a single integrated urban agglomeration that acts as the core driver of the Region and a principal mechanism for attracting investment into the area.



Source: Mid West Regional Authority (2010)

Figure 4.2.1 – Mid West Regional Development Zones

The Shannon Town & Environs Local Area Plan area is situated within Zone 1 in the Settlement Strategy of the Mid-West Regional Planning Guidelines 2010-2022 (Figure 4.2.1). Zone 1 encompasses Limerick, Shannon & Ennis. It contains a little over half of the Region’s population and more than two thirds of the Region’s employment. The zone incorporates Limerick city as well as parts of all three counties making up the Region (Clare, Limerick & North Tipperary). About a fifth of the jobs are held by people commuting in from other parts of the Region. The target population increase for Shannon is 2,750 giving a population of 11,972 in 2017.

The DoEHLG’s report on the State of the Regions (2009) requires the Limerick/Shannon Gateway to play a crucial role in shaping a new growth dynamic for the Mid West Region. The report emphasises that growth in the Gateway will need to be complemented by strong growth in the larger of the lower order towns, and therefore Shannon should play an important role.

Clare County Council has directly transposed the target populations from the DoEHLG and Mid-West Regional Authority into the preparation of the Clare County Development Plan 2011 – 2017 and subsequently the Shannon Local Area Plan 2012-

2018. Table 4.2.1 contains the breakdown of the population targets within County Clare and the various allocations to different zones and Service Towns. Table 4.2.5 (located at the end of this section) is transposed from the Core Strategy of the Clare County Development Plan 2011-2017 and outlines the population targets and the consequent land-use zoning requirements for the Plan area. Table 4.2.5 also outlines the amount of land that has been zoned for Residential purposes in the Shannon Town & Environs Local Area Plan 2012-2018 in response to the Core Strategy requirements.

Table 4.2.1: Population Targets Breakdown 2002 -2017

	Population 2002	Population 2006	Service Towns 2017	Gateway 2017 ¹	Hub ² 2017	Remainder of Zone ⁶	Targets 2017
Zone 1	69,341	75,985		+1,753	+5,981	+7,219	90,938
SW Clare 2	16,230	16,736	+894 ³			+1,767	19,397
NW Clare 3	13,200	13,706	+1031 ⁴			+ 1,409	16,146
NE Clare 7	4,506	4,523	+481 ⁵			+ 537	5,541
Total	103,277	110,950	+2,406	+1,753	+5,981	+10,932	132,022

1 – Shannon/2 – Ennis/3 – Kilrush/4 – Ennistymon/Lahinch/5 – Scarriff/Tuamgraney/6 – Remainder of Zone includes total population of settlements and rural area

Source: MWRA (2010)

Population

According to data derived from the census of population, Shannon Town had a population of 9,673¹ in April 2011 (C.S.O 2011). This population has grown by 14% over the 9 year inter censal period between 2002 and 2011. This is a significant increase when compared to other areas in Munster. Table 4.2.2 outlines the growth in population in Shannon Town from 1990; from this it is evident that growth levels have been consistent over time, however, much slower than originally predicted.

Table 4.2.3 below shows the population growth within the Plan area compared to the rest of County Clare, other counties in Munster and nationally.

Table 4.2.2: CSO Population Data for Shannon 1986 – 2011

	1986	1991	1996	2002	2006	2011
Population of Shannon Town (CSO)	8,005	7,920	7,939	8,561	9,222	9,673
Cumulative % growth	0	- 1.06 %	+0. 24 %	+ 7.8 %	+ 7.7 %	+ 4.9 %

¹ This population figure is the CSO data relating to Shannon Town and taken to be appropriate for the entire Plan area. The additional lands to the west of the plan area are within the Clenagh E.D. but these lands are predominantly characterised by enterprise development with minimal residential dwellings (maximum. 40 dwellings x 2.62 persons per dwelling = 104.8 additional persons). There is no specific population data reflecting the lands within Hurlers Cross (Drumline E.D.) to the east of the plan area, however it is accommodated for within the Clare County Development Plan 2011-2017.

Table 4.2.3 - Population growth within the Plan area compared to regional and National areas 2006-2011

	2006 Population Figure (CSO)	2011 Population Figure (CSO)	% Population Growth 2006 - 2011
State	4,239,848	4,588,252	8.2%
Munster	1,173,340	1,246,088	6.2%
Clare	110,950	117,196	5.6%
Limerick	184,055	191,809	4.2%
South Tipperary	83,221	88,432	6.2%
North Tipperary	66,023	70,322	6.5%
Waterford	107,961	113,795	5.4%
Kerry	139,835	145,502	4%
Shannon & Environs	9,222	9,673	4.9%

Many of the services in the area, including water and wastewater services serve Shannon and the wider population. Demand on these services has increased in recent years in line with the growing population in the peripheral areas. Table 4.2.4 outlines the towns and villages within a 15km radius of Shannon which have grown considerably in the 2006-2011 intercensal period. This does not include the open countryside or clusters.

Table 4.2.4 - Percentage Population Growth, 2006-2011 within 15km radius of Shannon Local Area Plan*

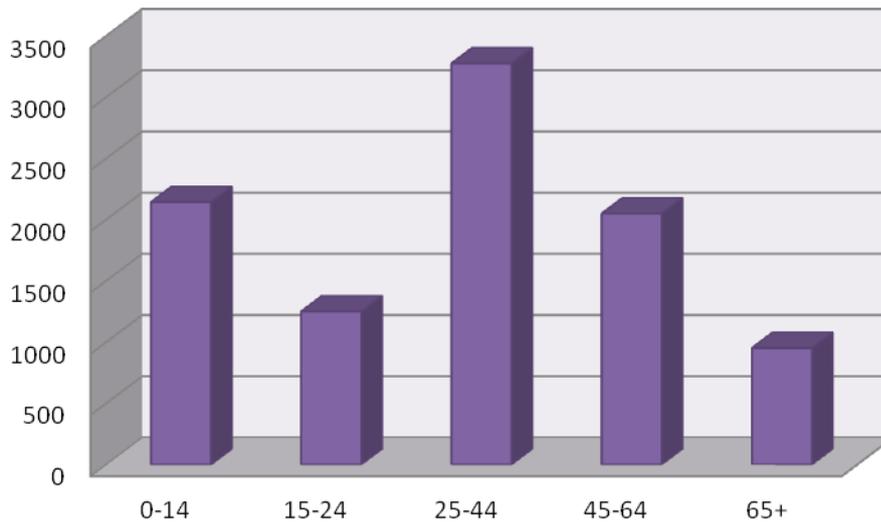
Settlement	Population 2006 (CSO)	Population 2011 (CSO)	% Population Growth between 2006-2011	Population Target 2017 (RPGs)
Shannon	9,222	9,673	4.9	11972
Bunratty	-	219	-	332
Newmarket Fergus	1,542	1,773	15	1991
Sixmilebridge	1,659	2,507	51	2192
Quin	565	935	65.5	789
Cratloe	643	674	4.8	933
Ardnacrusha	1,169	1,414	21	1312

Age Profile

Shannon is Clare's newest town and the only planned 20th century town in Ireland, making it unique. Accordingly the demographic composition was unusual 'when the first residents settled there were no grandparents and no grandchildren among them'

(Sweeney 2004: 355). This has been redressed in the intervening period. The age profile of Shannon Town and Environs, as demonstrated in Figure 4.2.2, shows that the 25-44 age cohort dominates the population. The challenge to the Shannon Plan is to provide opportunities to all age cohorts, from education facilities for the young, employment for adults and housing for all.

Figure 4.2.2: Age Profile Shannon Town & Environs (CSO, 2011)



Cultural Diversity

Shannon has always been a focus of immigration and therefore has a diverse range of ethnic minorities and nationalities residing there. '24% of residents lived in Britain before coming to Shannon in 1975' (Shannon Development 1975:6). 668 residents in Shannon Town and environs are from Poland and Lithuania and 282 residents are from other E.U 27 countries and 602 individuals are from 'The Rest of the World' (C.S.O 2011). From this data, it is evident that provision for diverse ranges of cultural backgrounds is catered for within the plan area.

Employment

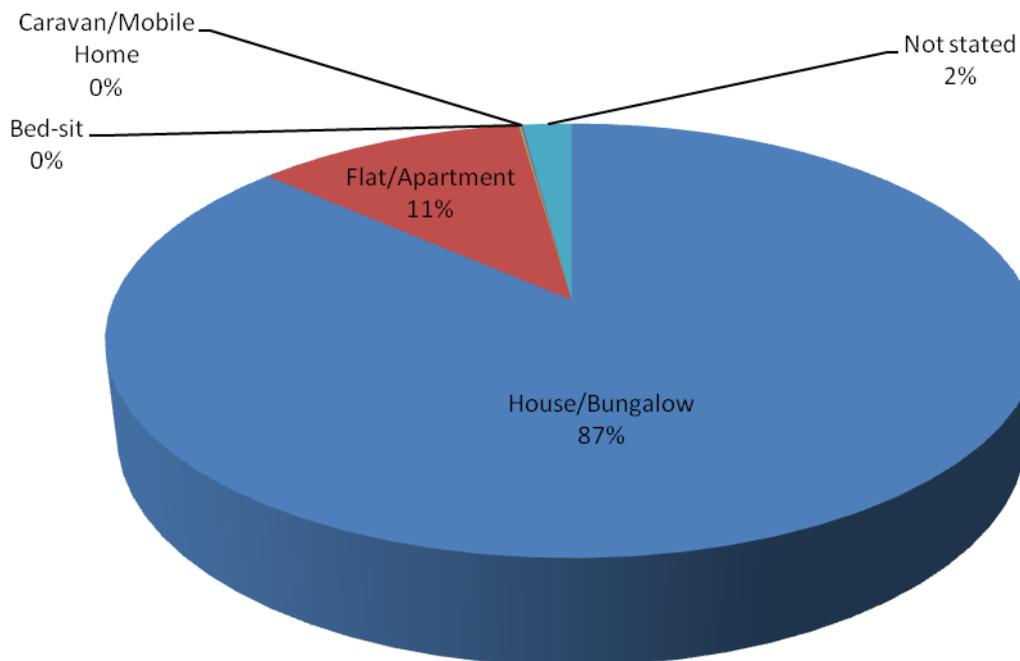
Shannon has always been a significant employment base for a broad range of economic sectors which encompass varying skill levels. 21.6% of the people living in Shannon are classified as employers or managers and technical workers; this is consistent with the business nature of many of the companies. 19% of workers were considered as skilled manual, and further 20% comprised of semi-skilled and unskilled workers combined, (C.S.O 2011) who predominantly work in manufacturing.

The unemployment rate for the Mid-West (classified by Regional Authority) was 15.8% in June 2012. This is above the 14.8% standardised national unemployment rate for the state. Therefore it is evident that specific employment initiatives are required within the region.

Housing

Figure 4.2.3 highlights the different types of accommodation being used in Shannon Town & Environs revealing houses/bungalows as the most popular choice in 2011. It should also be noted that within the town and environs boundary there are 3 caravans/mobile homes and 3 bed-sits.

Figure 4.2.3 Shannon Town & Environs Housing



Average household sizes in Shannon Town and Environs have been falling over the past number of years, from 2.93 persons per household (average) in 2002 to 2.75 in 2006 and 2.68 in 2011. This figure is slightly below the national average household size which was 2.73 in 2011. The rising population, coupled with falling average household sizes will put further pressure on the existing housing stock in the area and is likely to give rise to increased demand for accommodation during the lifetime of the Plan.

Results from CSO Census 2011 indicate that there are a percentage of unoccupied houses in the Shannon town, 11.4%. It is considered that the percentage of unoccupied houses may accommodate some of the future housing requirements in the Shannon Local Area Plan area.

Results from CSO Census 2011 also indicate that there is a vacancy rate of 9.26% in the Shannon area (Clenagh ED) and it is considered that the percentage of unoccupied houses may accommodate some of the future housing requirements in the Shannon Local Area Plan area.

Travel to Work

3,623 people travel by car to work and 3,903 people live within 15 minutes of their workplace (C.S.O 2006). 1,792 households have one car and 1,013 have two cars which highlights car dependency. It is an objective of the plan to promote smarter travel and reduce dependency on the car.

4.2.2 Human Health and Quality of Life

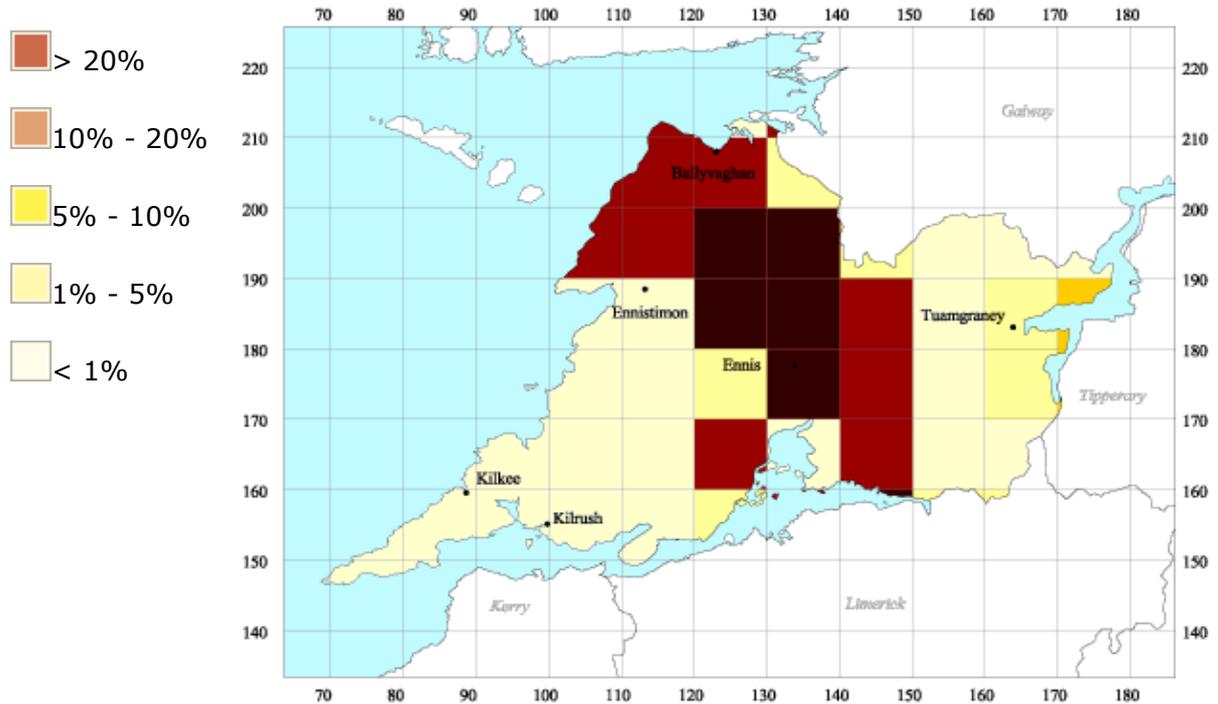
The cumulative effects of population change can impact on human health and quality of life. Direct effects relate to matters such as water and air quality, noise, and landscape change. Indirect effects relate to such matters as flora and fauna. Issues relating to radon and noise are mentioned here and associated effects of transport, material assets, air quality and climate change are discussed in more detail in the

relevant sections.

Radon

Radon levels in the County have been collated from the Radiological Protection Institute of Ireland. The estimated percentage of homes above the Reference Level is indicated on Figure 4.2.4 as per the associated legend. As evidenced, the ST&E LAP 2012-2018 plan area has a band of high reference level (>20%) evident through the plan area.

Figure 4.2.4: Estimated Percentage of Homes above the Reference Level in Co. Clare



Noise

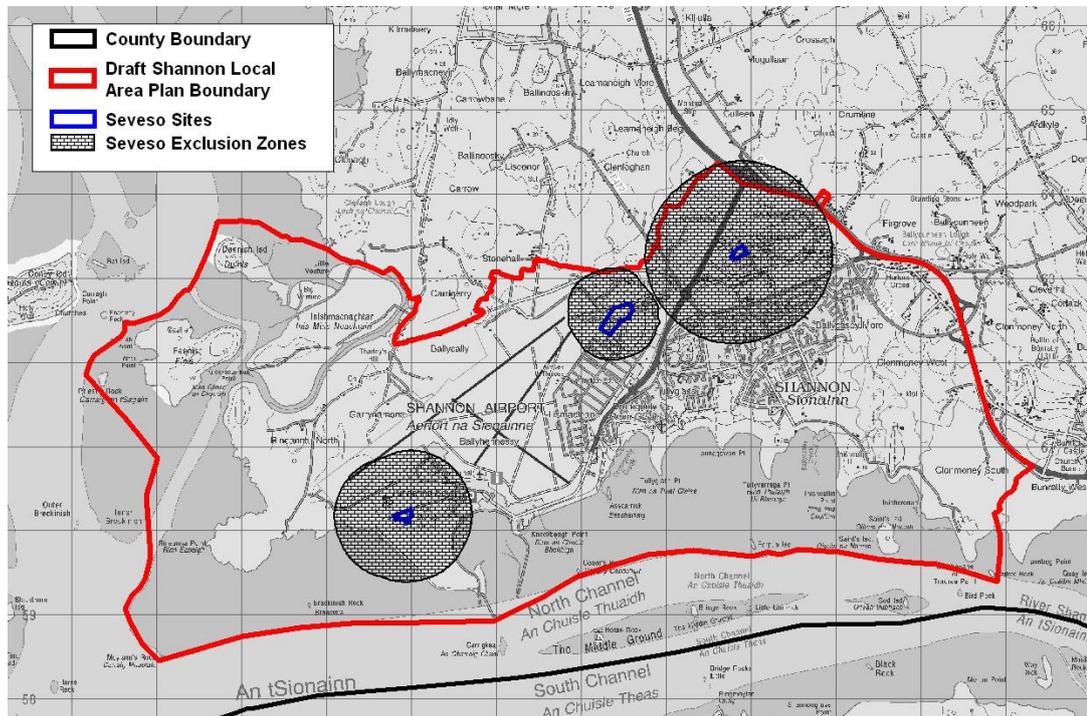
Measures to deal with noise pollution associated with major noise sources such as transportation and infrastructure in County Clare have been taken into consideration by the Council by the adoption of a Noise Action Plan. The "Clare Noise Action Plan" was published in October 2008 and is a five year strategic document published under the Environmental Noise Directive 2002/49/EC, in accordance with Environmental Noise Regulations (S.I No. 140 of 2006), to address noise from major transport sources to which individuals are exposed. From the associated Strategic Noise Maps accompanying the Noise Action Plan, it is evident that the north eastern section of the Shannon Town & Environs LAP area is within an area prone to noise with 55-59 dB band. The Directive does not include noise caused by an individual, noise from domestic activities, noise caused by neighbours or noise at places of work.

SEVESO

SEVESO relates to the Control of Major Accident Hazards Involving Dangerous Substances Regulations and associated sites (SEVESO Site). The Regulations often referred to as 'COMAH Regulations' or 'Seveso Regulations' give effect to European Directive 96/82/EC. They apply only to locations where significant quantities of dangerous substances are stored. About 85 such establishments have been identified in Ireland, 3 being within the Shannon Town & Environs Plan area. Existing developments on sites in Shannon comprise chemical manufacturing, waste disposal and oil storage facilities. Developments on these sites and on neighbouring

properties are subject to the provisions of the SEVESO Directive. Figure 4.2.5 illustrates the 3 SEVESO sites and exclusion zones within the ST&E LAP area.

Figure 4.2.5: SEVESO sites and Exclusion Zones within Plan area



4.2.3 Threats and Trends

The Shannon Town & Environs Local Area Plan area, along with the remainder of the country, has experienced ever increasing development pressures. Challenges for the future include the retention of the younger age cohorts within the area and encouraging those who work within the area to live within it also.

The population growth experienced over the past number of years has been significant and if this rate of increase is sustained, the new Plan must address this issue, and ultimately how to develop in a manner which is sustainable and desirable.

The current national seasonally adjusted unemployment rate stands at 14.8% (September 2012). The ESRI (2011), in their Quarterly Economic Commentary, have estimated that the rate of unemployment is expected to average 14 per cent in 2012 and 13.7 per cent in 2013 with the declines from current levels reflecting migration. These figures present serious challenges for the future of both the national and local economy.

It is a challenge for the Local Authority to encourage the existing population of the area to remain by providing employment opportunities, services and resources within the Plan area. It is important that the Council endeavours to provide sustainable alternative employment options for the people of Shannon & Environs.

4.2.4 Information Gaps/Technical Difficulties

It must be noted at this stage that specific data relating to spatial analysis of the Plan area could not be mapped as there is a deficiency in available data information, for example, Census 2011 (April 10th 2011) data statistics are not fully available in sufficient detail at this stage to enable inclusion in this SEA process and Environmental Report. Therefore, the lack of up-to-date data can be seen as an obstacle to a

comprehensive overview of the demographics of Shannon.

Human health data for the Plan area is not easily available. However, impacts on human health and quality of life may derive from any of the environmental parameters. Ultimately, all of the effects of a development on the environment impinge upon human beings and their quality of life, both positively and negatively. Direct effects relate to matters such as water and air quality, noise, and landscape change. Indirect effects relate to such matters as flora and fauna. Accordingly, the topic of human beings and their quality of life are addressed in this Environmental Report by means of an appraisal of the indirect effects, etc. of the Plan on the other environment parameters, of which human beings and their quality of life are an integral part. Where appropriate, mitigation measures to reduce/avoid adverse impacts are identified and incorporated into this Report and the Plan under the other environmental parameters.

4.2.5 Effects of Not Implementing the Plan

In the absence of the ST&E LAP 2012-2018 there would not be a localised framework within which to regulate, aid and/or control development whether economic, social or environmental. A lack of controlled development could lead to pressure on adequate service provisions and infrastructural facilities, thus affecting the natural environment in which the population lives leading to human health and quality of life issues. In the absence of an agreed target population and appropriate zoning of settlement land all of the environmental parameters would be adversely affected to varying degrees.

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

In order to properly plan for the sustainable development of the Plan area, it is essential to be aware of the population for whom the Plan area will cater. The assigned target population of 11,972 to 2017 must be taken into account when formulating objectives and policies for the settlements in the Plan area. In assessing demographic projections, cognisance has been taken of the impact of population projections on housing, education and workforce. In the absence of the Plan, Core Strategy and population targets; infrastructure, including services and housing provision would not be catered for accurately. Issues affecting the current population in addition to the population increase may not be realised and could result in deterioration of the environment and mismanaged resources.

However, considerable environmental protection would remain due to the implementation of the Clare County Development Plan 2011-2017 and its policies and objectives relating to the environment.

Table 4.2.5 – Population Targets by Zone - Zone 1

	Local Plan Area	Population 2006	Population Target 2017	Population Increase 2006 - 2017	Required Area of Residentially Zoned Land (Ha) *1	Available Residentially Zoned Land (Ha) *3	Available Low Density Residentially Zoned Land (Ha) *3	Anticipated Services Available 2011-2017	
								Water	Wastewater
Zone 1									
Hub									
Ennis	Ennis & Environs	24,253	30,234	5981	115.5	376.0		Yes	Yes
Gateway									
Shannon*2	Shannon	9,222	11,972	2750	53.1	47.11 ²		Yes	Yes
Small Towns									
Sixmilebridge	South	1,840	2,192	352	10.2	4.2	11.8	Yes	Yes
Newmarket on Fergus	South	1,671	1,991	320	9.3	3.1	12.4	Yes	Yes
Large Villages									
Bridgetown	South	168	247	79	4.6	1.5	5.8	Yes	No
Cratloe	South	744	933	189	11.0	0	11.6	Yes	No
Quin	South	623	789	166	9.6	9.1	1.2	Yes	Yes
Bunratty	South	239	332	93	5.4	4.4	2.6	Yes	Yes
Clonlara	South	536	686	150	8.7	2.7	12.8	Yes	Yes
O'Briensbridge	South	425	553	128	7.4	4.8	4.2	Yes	No
Ardnacrusha	South	1197	1,312	115	6.7	0	13.6	Yes	No
Ballycannon North (Meelick)	South	984	1,099	115	6.8	0	11.4	Yes	No
Athlunkard	South	2,613	2,863	250	7.2	5.3	2.4	Yes	Yes
Parteen	South	1,075	1,281	206	6.0	0	10.0	Yes	Yes
Total settlements in South Clare Plan area		12,115	14,278	2,163	92.90	35.10	99.80		
Total for entirety of Zone 1		75,985	90,938	14,953					

¹ This calculation has been arrived at based on the following assumptions:

a) A density of 12 to the acre (29.7 to the hectare) for residentially zoned land and 6 to the acre (14.8 to the hectare) for low density residentially zoned land for Ennis and Shannon. A density of 8 to the acre (19.8 to the hectare) and 4 to the acre (9.9 to the hectare) respectively for both service towns and small towns and also Parteen & Athlunkard. A density of 4 to the acre (9.9 to the hectare) for residentially zoned land and 2 to the acre (4.9 to the hectare) for low density residentially zoned land for large

² * - This figure has been updated due to a calculation error

villages. A density of 2 to the acre (4.9 to the hectare) for small villages. These are average figures for calculating supplies of zoned land. Individual planning applications on low density/residentially zoned land will be considered on their own merits.

b) A household size of 2.62 persons

c) 1 Ha residentially zoned land equates to 2 Ha of low density residential except for small villages

d) A headroom of an additional 50% to allow for choice and in anticipation of not all lands being made available.

*² Please note that these figures include both residential and low density residential zoned land and that 1 Ha residentially zoned land equates to 2 Ha of low density residential except for small villages and relate to the North Clare Local Area Plan 2011 – 2017, East Clare Local Area Plan 2011 – 2017, South Clare Local Area Plan 2012-2018, West Clare Local Area Plan 2012-2018, Shannon Town & Environs Local Area Plan 2012-2018, Ennis and Environs Development Plan 2008-2014 and Kilrush Town Development Plan 2008-2014.

*³ In recognition of its Gateway status the population target for Shannon includes 997 extra persons. This has been added to the initial Mid-West Regional Planning Guidelines target for Shannon from the population target available to Zone 1 as a whole

4.3 Biodiversity - Flora and Fauna

4.3.1: Introduction

'Biological diversity', or biodiversity, means 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 part; this includes diversity within species, between species and of ecosystems' (The United Nations Convention on Biodiversity, 1992).

In general terms, biodiversity refers to different habitats such as woodlands, wetlands, grasslands and estuarine habitats, and the range of flora and fauna species they support, such as plants, mammals, birds, insects, fish, microbes, mosses and fungi, and their interrelationships such as food chains and cohabitation. It also refers to the genetic diversity within species which is vital for healthy populations of individual species to survive. Of equal importance, green infrastructure refers to those features of the landscape, which by virtue of their linear and continuous structure (such as hedgerows or streams) or their function as stepping stones (such as ponds or small woods) are essential for the migration, dispersal and genetic exchange of wild species. 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 Shannon, the wildlife areas include the estuary, woodlands, scrub, wetlands, parks, streams, hedgerows, tree lines, roadside verges, housing estate open spaces and gardens. Gardens and housing estate open spaces in particular provide suitable conditions (a combination of heat and food supply), which offers opportunities for many species, and particularly small birds.

The landscape surrounding Shannon town, Shannon Freezone and Shannon Airport is predominantly agricultural land, interspersed with pockets of woodland and scrub, small lakes (Ballycunneen Lough), rivers and streams, extensive hedgerows and field boundaries, and various types of grasslands, particularly wet grassland.

By connecting the wildlife areas within the town centre, free zone and airport, to the wider countryside, it allows the inward and outward migration, dispersal and genetic exchange of wild species, and therefore allows biodiversity to co-exist and even thrive within the urban environment, rather than merely survive.

Rare and protected habitats and species cannot survive independently of their surroundings. The ordinary features of our landscape can be of high natural value in their own right, as well as providing the vital links and corridors to allow the movement of plants and animals between protected sites. They are a critical component of a functioning ecological network. Protecting and conserving these habitats is critically important, not just to the residents of the County but also in a National and International context. Considering the expanse of this section the following relevant data sources were consulted; NPWS, National Biodiversity Data Centre, various in-house expertise including environment, roads and water sections of Clare County Council, Heritage and Biodiversity Officers in the County and all associated studies.

4.3.2 Legislation

An established legal basis exists to protect, conserve and enhance biodiversity. The predominant legal instruments relating to the protection of rare or threatened habitats is

the EU Birds and Habitats Directives and the Wildlife Acts 1976-2000 which provides for the designation and protection of sites that support annexed habitats and species by requiring, among other things, their favourable conservation status to be maintained or restored. The conservation of biodiversity in Ireland has been strengthened and expanded by EU law, including the EU Birds Directive and EU Habitats Directive and also by the EIA Directive (85/337/EEC). The Environmental Liability Directive and the EC (Environmental Liability) Regulations 2008 (S.I. No. 547 of 2008) also provide legislation to prevent and remedy water damage, land damage and damage to natural habitats and protected species as defined in the Regulations by reinforcing the 'polluter pays' principle.

Habitats Directive

The EU Habitats Directive, (92/43/EEC - on the Conservation of Natural Habitats and of Wild Fauna and Flora) was transposed into Irish national law in 1997 in conjunction with the relevant Regulations European Communities (Natural Habitats) Regulations, SI 94 of 1997 which were subsequently amended by SI 233/1998 & SI 378/2005.

The approach and focus of the accompanying Habitats Directive Assessment has been to influence the Shannon Local Area Plan land use zonings and policies in order to adequately protect the Natura 2000 site network. The requirements of the Habitats Directive Assessment must be incorporated into all stages of the Shannon Town & Environs Local Area Plan 2018 – 2018.

Birds Directive

Birds Directive (79/409/EEC - on the Conservation of Wild Birds) was adopted by Ireland in 1979 and implemented in Ireland through the Conservation of Wild Birds Regulations (S.I. No. 291 of 1985 and S.I. No. 94 of 1997 – the European Communities (Natural Habitats) Regulations 1997). These Regulations have now been superseded by the European Communities (Birds and Natural Habitats) Regulations 2011. The Birds Directive is now referred to as the codified Directive 2009/147/EC.

European Communities (Birds and Natural Habitats) Regulations 2011

The European Communities (Birds and Natural Habitats) Regulations 2011 consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats)(Control of Recreational Activities) Regulations 2010. The Regulations were prepared to address several judgments of the Court of Justice of the European Union (CJEU) against Ireland, in respect of failure to transpose elements of the Birds Directive and the Habitats Directive into Irish law. In 2010, the Minister also published regulations on the Control of Recreational Activities under the Habitats Directive (SI 293 of 2010).

Departmental Circulars

The following Circulars have been issued as guidance on implementation of the Regulations. These Circulars refer to various nature conservation matters, particularly appropriate assessment and species licensing, and are not specific to the legislation which was published in September 2011.

- Circular Letter NPWS 1/10
- Circular Letter L8/08
- Circular Letter NPWS 2/08

- Circular Letter SEA 1/08 & NPWS 1/08
- Circular Letter PD 2/07 & NPWS 1/07
- Circular Letter NPWS 2-07 - Guidance on Compliance with Regulation

Wildlife (Amendment) Act 2000

Natural Heritage Areas were established under the Wildlife (Amendment) Act, 2000, but their statutory protection derives from the Wildlife Acts, 1976–2000. Proposed Sites are designated and legally protected from damage from the date they are formally proposed for designation due to their national conservation value for ecological and/or their geological/geomorphological heritage. They cover nationally important semi-natural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes.

Summary

The most important legislation underpinning biodiversity and nature conservation in Ireland is the European Communities (Bird and Natural Habitats) Regulations, 2011 and the Wildlife Acts, 1976-2000.

4.3.3: Designations

The Shannon Town & Environs Local Area Plan area contains significant natural heritage including 2 Natura 2000 sites, 1 proposed Natural Heritage Area, extensive green infrastructure, and wildlife corridors, however, sites and species benefiting from statutory protection do not alone represent the full extent of the natural heritage of the Plan area. In fact most of our biodiversity occurs in the ordinary landscapes, including woodlands, hedgerows, earthbanks, grassy verges, ditches, rivers, streams, drains, lakes, bogs, fens, heaths, unimproved grasslands and wetlands, as well as the plant and animal species that occur in these wild spaces. The Status of EU Protected habitats and Species in Ireland (NPWS, 2008) has been assessed at national level, both inside and outside protected sites.

European - Natura 2000 Network

Areas of International importance for habitats and species are mainly protected as Special Areas of Conservation (SACs) while Special Protection Areas (SPAs) are internationally important for the species and populations of birds and the wetlands they support. These are collectively known as Natura 2000 sites.

The Natura 2000 network includes sites designated as Special Areas of Conservation (SACs), under the EU Habitats Directive and Special Protection Areas (SPAs) designated under the EU Birds Directive. In general terms, these sites are considered to be of exceptional importance in terms of rare, endangered or vulnerable habitats and species within the European Community. Natura 2000 sites also include candidate and proposed sites. These are sites of international importance for nature conservation and form part of Ireland's contribution to the Natura 2000 network within the EU. Information about these sites, including their locations, site synopses, and qualifying or conservation interests, is available from www.npws.ie and are also discussed below.

<p><u>Special Areas of Conservation (SAC)</u></p>	<p>These have been selected for the conservation of a range of Habitats Directive (92/43/EEC) Annex I (habitats) and Annex II Species. The conservation objectives for the SAC are:</p> <p>i) maintaining or restoring the area and structure and function of relevant Annex I habitats, and populations of typical species of these habitats, and</p> <p>ii) maintaining or restoring the population and range of Annex II species, and their habitats.</p> <p>SACs support a diversity of habitats including priority habitats such as lagoons, limestone pavement, turloughs, active raised and blanket bogs, petrifying springs and orchid rich grasslands among others.</p>
<p><u>Special Protection Area (SPA)</u></p>	<p>These are established under the EU (Birds) Directive (97/409/EEC). These sites have been selected for the conservation of a range of Birds Directive Annex I species (rare and threatened bird species), and regularly-occurring migratory species, and their habitats, particularly wetlands. SPAs are of particular ornithological interest and in County Clare can be generally categorised into sites for seabirds, sites for wildfowl and waders, and sites for birds of prey. The overarching conservation objective for each SPA is to ensure that target bird populations (i.e. the special conservation interests) and their habitats are maintained at, or restored to favourable conservation condition. This includes, as an integral part, the need to avoid deterioration of habitats and significant disturbance such that site integrity is maintained. The long term population trend for each relevant species should be stable or increasing.</p>

Conservation Objectives for Natura 2000 Sites

At this time, specific conservation management plans are unavailable for the majority of the sites occurring within the Habitat Directive Assessment area. For such sites, generic Conservation Objectives (COs) are available (from the NPWS website).

The Conservation Objectives for SACs include: -

- To maintain the Annex I habitats for which the SAC has been selected at favourable conservation status;
- To maintain the Annex II species for which the SAC has been selected at favourable conservation status;
- To maintain the extent, species richness and biodiversity of the entire site; and
- To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

The Conservation Objectives for SPAs include: -

To maintain the bird species of special conservation interest, for which the SPA has been designated, at favourable conservation status.

The EC guidance document *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites* states that the Habitat Directive Assessment should consider the impact of the plan, either alone or in-combination with other plans or projects, on the integrity of the Natura 2000 sites with respect to the conservation objectives of

the site and to its structure and function. Integrity depends on the site being able to sustain its qualifying features and ensure their continued viability. A high degree of integrity is considered to exist where the potential to meet a site’s conservation objectives is realised and where the site is capable of self-repair and renewal with a minimum of external management support. The Habitat Directive Assessment therefore needs to focus on those impacts judged likely to have an effect on the qualifying interests of a Natura 2000 site, or where insufficient certainty regarding this remains. This involves a consideration of whether the predicted impacts of the plan / project, either alone or in-combination have the potential to:

- delay the achievement of conservation objectives for the site
- interrupt progress towards the achievement of conservation objectives for the site
- disrupt factors that help to maintain the favorable status of the site.
- interfere with the balance, distribution and density of key species that are the indicators of the favorable status of the site.

Information regarding the main threats to SACs was sourced from Ireland’s Article 17 Report to the European Commission “Status of EU Protected Habitats and Species in Ireland” (NPWS, 2008). However, this report assesses the conservation status and associated threats to Annex habitats and species on a countrywide basis and therefore, the status and threats to specific sites were not available. There is no similar information collated for SPAs.

Table 4.3.1 lists the Natura 2000 sites within the Shannon Town & Environs Local Area Plan 2012-2018. A site synopsis of designations is described at the end of the Section and also represented in Map 4.3.1.

Table 4.3.1 Natura 2000 sites in the Shannon Plan Area

Site Name	Site Code	Designation
River Shannon and River Fergus Estuaries	004077	SPA
Lower River Shannon	002165	SAC

There are also a significant number of Natura 2000 Sites within 15km that may have a cumulative effect on development within the plan area. These are predominantly hydrological or bat related sites. These are outlined in Table 4.3.2 and illustrated in Map 4.3.2.

Table 4.3.2 Natura 2000 sites within 15km of the Shannon Plan Area (including transboundary)

Site Name	Site Code	Designation	County
River Shannon and River Fergus Estuaries	004077	SPA	Clare/Limerick/Kerry
Lower River Shannon	002165	SAC	Clare/Limerick
Lough Gash Turlough	000051	SAC	Clare
Poulnagordon Cave (Quin)	000064	SAC	Clare
Ratty River Cave	002316	SAC	Clare
Danes Hole, Poulnalecka	000030	SAC	Clare

Kilkishen House	0002319	SAC	Clare
Old Domestic Building (Keevagh)	002010	SAC	Clare
Knockanira House	002318	SAC	Clare
Pouladatig Cave	000037	SAC	Clare
Newhall and Edenvale Complex	002091	SAC	Clare
Curraghchase Woods	000174	SAC	Limerick
Askeaton Fen Complex	002279	SAC	Limerick
Barrigone	00432	SAC	Limerick

Conservation Management Plans

At this time, specific conservation management plans are unavailable for Natura 2000 Sites occurring within the Shannon Plan area; however, generic Conservation Objectives (Cos) are available from the website of the National Parks and Wildlife Service (www.npws.ie). These include:

- To maintain the favourable conservation status of the Qualifying Interests of the SAC, or the Special Conservation Interests of the SPA.
- To maintain the extent, species richness and biodiversity of the entire site.
- To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

The Qualifying Interests of an SAC refers to the habitats and species for which the site is protected. The Special Conservation Interests of an SPA refers to the habitats and species (usually wetlands and birds) for which the site is designated.

The favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, is stable or increasing, and
- the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population data on the species concerned indicate that it is maintaining itself,
- the natural range of the species is neither being reduced or likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Shannon Estuary

The Shannon Estuary is a significant part of the Shannon Town & Environs Plan area and its status as the most important site in Ireland for over-wintering wildfowl and waders, and an important breeding site in the summer season is noted. It is internationally important for the number and species of overwintering wildfowl and waders, including Annex 1 species such as Whooper Swan, Golden Plover and Bar-tailed Godwit. It also hosts internationally important numbers of Light-bellied Brent Goose, Dunlin, Black-tailed Godwit and Redshank, and nationally important numbers of 17 wintering species. The main macro-invertebrate community present in the vast expanses of intertidal flats is a *Macoma-Scrobicularia-Nereis* community which provides a rich food resource for the

wintering birds. In June 2011, the Department of Arts, Heritage and the Gaeltacht issued a notice of intention to extend the boundary of the River Shannon and River Fergus Estuaries SPA (Site Code 004077), which will approximately overlap with the existing Lower River Shannon SAC designation.

The Lower River Shannon SAC is also designated for a range of coastal, estuarine and riparian habitats including Estuaries, Mudflats, Sandflats, Coastal lagoons, Sea cliffs, Salicornia and other annuals colonizing mud and sand, Atlantic and Mediterranean salt meadows, Alluvial forests, Sandbanks, Large shallow inlets and bays, Reefs, Perennial vegetation of stony banks, Spartina swards and Molinia meadows. It also supports species such as River, Brook and Sea Lamprey, Atlantic Salmon, Bottlenose Dolphin, Otter and Freshwater Pearl Mussel.

Natural Heritage Areas and Proposed Natural Heritage Areas

Areas of National importance are designated as Natural Heritage Areas (NHAs) or proposed Natural Heritage Areas (pNHAs).

Natural Heritage Areas (NHAs) are sites that are considered important for the habitats present, or which holds species of plants and animals whose habitat needs protection. There are no Natural Heritage Area within the ST&E LAP area and as yet no designated geological NHAs.

Proposed Natural Heritage Areas (pNHAs) are sites that are known to be of importance for biodiversity but have yet to be evaluated. They have been identified through various sources, including early inventories, in areas of biodiversity importance or conservation interest. As such their potential importance is recognised and acknowledged through proper planning and sustainable development. Any new or modified sites that are notified or designated in the lifetime of the Plan will also be recognised and protected. There is 1 proposed Natural Heritage Area within the functional area of the Shannon Town & Environs Local Area Plan 2012-2018, as illustrated in Map 4.3.1

Table 4.3.3 - Natural Heritage Areas and Proposed Natural Heritage Areas in Plan Area

Site Name	Site Code	Designation
None in plan area		NHA
Fergus Estuary and Inner Shannon, North Shore	002048	pNHA

There are also a significant number of NHAs and pNHAs within 15km of the plan area. These are predominantly water bodies, wetlands or bat related sites. These are outlined in Table 4.3.4 and illustrated in Map 4.3.2

Table 4.3.4 - Natural Heritage Areas and Proposed Natural Heritage Areas within 15km of Plan Area

Site Name	Site Code	Designation	Local Area Plan
Newhall & Edenvale Complex	002091	pNHA	Ennis & Environs
Old Domestic Building (Keevagh)	002010	pNHA	Ennis & Environs
Cahircalla Wood	001001	pNHA	Ennis & Environs
Pouladatig Cave	000037	pNHA	Ennis & Environs
Dromoland Lough	001008	pNHA	South Clare
Lough Gash Turlough	000051	pNHA	South Clare

Poulnagordon Cave	000064	pNHA	South Clare
Ballycar Lough	000015	pNHA	South Clare
Fin Lough (Clare)	001010	pNHA	South Clare
Woodcock Hill Bog	002402	NHA	South Clare
Garrannon Wood	001012	pNHA	South Clare
Knockalisheen Marsh	002001	pNHA	South Clare
Gortglass Lough	001015	pNHA	West Clare
Cahiracon Wood	001000	pNHA	West Clare
Lough Acrow Bogs	002421	NHA	West Clare
Fort Fergus (Ballynacally)	000035	pNHA	West Clare
Paradise House (Ballynacally)	000062	pNHA	West Clare
Cloonsnaghta Lough	001001	pNHA	West Clare
Gortacullin Bog	002401	NHA	East Clare
Castle Lake	000239	pNHA	East Clare
Lough Cullaunyeeda	001017	pNHA	East Clare
Doon Lough	000337	NHA	East Clare
Danes Hole, Poulnalecka	000030	pNHA	East Clare
Rosroe Lough	002054	pNHA	East /South Clare
Loughmore Common Turlough	000438	pNHA	Limerick
Inner Shannon Estuary – South Shore	000435	pNHA	Limerick
Dromore and Bleach Loughs	001030	pNHA	Limerick
Curraghchase Woods	000174	pNHA	Limerick
Barrigone	00432	pNHA	Limerick
Ballymorrisheen Marsh	001425	pNHA	Limerick

Other Areas of Importance

These areas of importance include:

- Certain species of flora and fauna, and their key habitats (i.e. breeding and resting places), which are strictly protected under national wildlife legislation wherever they occur, whether inside or outside the above sites.
- ‘Protected species and natural habitats’ as defined in the European Liability Directive (2004/35/EC) and European Communities (Environmental Liability) Regulations, 2008, including:
 - Birds Directive – Annex I species and other regularly occurring migratory species, and their habitats (wherever they occur)
 - Habitats Directive – Annex I habitats, Annex II species and their habitats, and Annex IV species and their breeding sites and resting places (wherever they occur)
 - Stepping stones and ecological corridors including nature conservation sites (other than Natura 2000 sites), habitat areas and species locations covered by Article 10³ of the Habitats Directive.

These areas are hugely important for the protection of biodiversity at a local level and also in the provision of a vital amenity and educational resource in the County. In addition, the Shannon area contains numerous species of flora and fauna, and their key habitats (i.e. breeding and resting places), which are beneficial for wildlife and

³ ‘Member States shall endeavour, where they consider it necessary, in their land-use planning and development policies and, in particular, with a view to improving the ecological coherence of the Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems for marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species.’

biodiversity, play a significant role in the natural environment and which are strictly protected under national wildlife legislation wherever they occur, whether inside or outside the above designated sites. Article 10 of the Habitats Directive acknowledge these by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems for marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species.

In Shannon, the wildlife areas include the estuary, woodlands, scrub, wetlands, parks, streams, hedgerows, tree lines, roadside verges, housing estate open spaces and gardens. Gardens and housing estate open spaces in particular provide suitable conditions (a combination of heat and food supply), which offers opportunities for many species, and particularly small birds.

Also, within a 15km zone of influence features include;

- Upland blanket bog
- Dry calcareous and neutral grassland
- Montane heath
- Lakes and ponds
- Wet grassland

These habitats and others including hedgerows, treelines, wooded areas and ditches also have a function in providing shelter and a refuge to a host of animal and plant species alike. Some of these are incorporated into a Green Infrastructure assessment of the Plan Area.

A wetland survey has been carried out at a county level (Fossitt Level II) which includes GIS mapping. This survey has identified 2003 wetland habitat types in the county. Notification of these areas should aid in obviating against the threat of loss/fragmentation of (wetland) habitat. Clare County Council has also commissioned a number of specialist consultants to conduct habitat mapping surveys for the County including the Shannon Plan area creating an important record of biodiversity throughout the County. This practice is a necessity which will provide significant baseline data on the diverse array of habitats in the County and will provide an invaluable tool for Plan review assessment(s) and monitoring the implementation of the adopted Plan, amongst other functions. Habitat mapping is available for the plan area but is also an ongoing route of development at a National level and it is hoped that the experience and output of this will prove valuable at a county and local level going forward.

4.3.4: Integration of Strategic Environmental Assessment and Habitats Directive Assessment

The Local Authority is required to prepare a Habitats Directive Assessment (HDA) on the likely impacts of the Plan's implementation within or adjacent to Natura 2000 sites. HDA is a focused and detailed practical appraisal of the possible impacts that the adoption of the Plan, in this case the Shannon Town & Environs Local Area Plan 2012-2018 may have on the integrity of identified Natura 2000 sites within and adjoining the administrative boundaries of the Plan area. It details proposed measures which will be implemented to ensure that the long term conservation status of these sites is not adversely impacted upon and includes details of activities which may affect the conservation status of the designated sites. This Report is provided as a separate document titled 'Habitat Directive Assessment (Natura Impact Assessment) for the Shannon Town & Environs Local Area

Plan 2012-2018’.

Articles 6(3) and (4) of the Habitats Directive sets out the decision-making tests that will be applied to plans or projects that may impact on a Natura 2000 site. Article 6(3) is primarily concerned with safeguarding Natura 2000 sites from implementing plans and projects that will negatively impact on their qualifying features in an unsustainable manner and provides a set of strict mechanisms to allow for only plans and projects to proceed through the assistance of conservation objectives in the event that they will not adversely impact on the integrity of a Natura 2000 site. However, should the Plan result in having an adverse effect on a Natura 2000 site without putting in place mitigation measures, Article 6(4) states that amelioration measures must be put in place which will compensate for direct risk or damage likely to occur so as to ensure that the integrity of Natura 2000 sites are not compromised.

The Directive presumes against plans and projects that adversely affects the integrity of a Natura 2000 site from being allowed to proceed except in exceptional circumstances, i.e. where:

- (1) No reasonable alternatives exist, and
- (2) There are IROPI - Imperative Reasons of Overriding Public Interest (in the case of all Annex I habitats and Annex II species). In the case of priority habitats, the only IROPI that may be raised are matters of Human Health and Public Safety.

The Planning Authority acknowledge the importance of such designated sites and therefore will require any proposals for development on, or adjacent to, a Natura 2000 site to be accompanied by a Habitats Directive Assessment. It is an objective of the Council to require all planning applications for development within, adjacent to, or likely to impact on Natura 2000 sites, to carry out a Habitats Directive Assessment in accordance with the Habitats Directive (1992), including the following:

- Developments likely to give rise to downstream impacts on water sensitive Natura 2000 sites (including coastal sites).
- Developments likely to give rise to cumulative impacts on Natura 2000 sites, i.e. taking into account impacts from existing development and possible future development.
- Developments likely to give rise to in combination impacts on Natura 2000 sites, i.e. developments requiring master plans, ancillary developments.
- Developments likely to fragment destroy or encroach on Natura 2000 sites and their buffer zones.
- Developments likely to disrupt the flight paths, movements, feeding and breeding areas of annexed species.

4.3.5: Threats and Trends to Biodiversity in Shannon Plan area

Existing Environmental Problems

Biodiversity has become an integral part of the conservation of our wild areas and is a measure of the number, variety and variability of living organisms within a given area. However, certain issues exist which left untreated may impact negatively on the biodiversity of the plan area in the future.

Habitat loss, fragmentation, and disturbance to wildlife

Natural heritage is not confined to the statutory designated sites; it is found

throughout urban and rural areas. When development occurs on Greenfield sites in the County, natural and semi-natural habitats are replaced with artificial surfaces and there is inevitably an impact on existing flora and fauna. Developments on Greenfield sites often result in fragmentation and a loss of hedgerows which act as wildlife corridors, stepping stones and ecological networks. These corridors are essential in order for wildlife to move from one area to another for breeding, in search of food, etc. The significance of this potential loss is dependent on the scale of development and the cumulative and in-combination effects. Many habitats are considered semi-natural as they have been altered by human activity. For example, the vast majority of grasslands are grazed and/or mown; most deciduous woodlands are grazed and have been at least partially planted at some stage. Grasslands which are farmed intensively and which have been re-seeded and/or heavily fertilised support much fewer species than extensively or traditionally farmed grasslands. Drainage is damaging to wet grasslands, as is overgrazing. Specific objectives and restrictions must be provided for in the plan where such development is incompatible with long term protection and whereby the likely significant impact of the plan or development would result in over exploitation, pollution, or disturbance of habitats and species, e.g. the inclusion of a clear policy to encourage development of Brownfield sites over Greenfield sites. These objectives, where appropriate, should take into account the relevant NPWS "Major Pressures reported in the assessment of Habitats and Species" with a view to ensuring the implementation of the Plan does not increase the major pressures on habitats and species in the Plan area and adjoining areas.

Flooding

Many rivers have been modified to reduce flooding, leading to the loss of flood plains. Floodplains and wetlands are essential for flood control, pollution control, water supply, while peat lands also serve as vital carbon sinks that could help address climate change. Locating development in an area at risk from flooding can lead to property damage, human stress, hardship and ill-health, problems obtaining property insurance and consequential demands for the expenditure of Local Authority or Central Government resources on flood protection works. The construction of protection works at the time of the development, or at a later date, will incur significant additional costs and will not provide absolute immunity from the risk of flooding. Development located in an area prone to flooding can therefore increase flood risk and/or necessitate heavy expenditure on flood protection works. In times of flood, a river can flow not only through its normal channel but also along its floodplains. Any constriction of the natural flow path can restrict flow, 'back-up' the river and lead to increased flood levels upstream. The construction of buildings or houses, and particularly embankments for infrastructure or protection, in or across a floodplain or in areas at risk of flooding can therefore not only put the development itself at risk of flooding as described above, but can also increase the flood risk for land and properties upstream/downstream.

The plan area is at risk from several sources of flooding including river and estuarine flooding. Floodplains have, therefore, a valuable function both in attenuating or storing floodwater and through their ability to convey floodwater in a relatively controlled and safe way. Clare County Council conducted a Strategic Flood Risk Assessment (SFRA) which is included in Volume 3 of the Clare County Development Plan 2011-2017. Clare County Council also conducted a County wetland survey in 2008 to record and map significant areas of wetland in the County. There are 34 wetland types in County Clare (23,440 ha), 22 of which are listed in Annex I of the EU Habitats Directive. Areas of floodplain and wetlands should therefore be recognised and preserved as natural defenses against flood risk.

Climate Change

Climate change is a transboundary issue affecting the entire globe and is fundamental to social stability and sustainable development. 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. This is considered in more detail under Section 4.6 Air and Climate Change.

Management Plans

The National Parks and Wildlife Service is preparing management plans for the nation's natural assets which is likely to take some time to complete but will become a valuable tool in assessing the issues relevant to each site. The management plans will also provide mechanisms for their effective protection. Designated areas will form the basis of controlled development within the plan area and restrictions imposed on further development, which may adversely impact on the overall integrity of the protected area.

Responsibility

The primary mechanism for conserving, protecting and enhancing biodiversity is through the National Biodiversity Plan 2002, currently under review, of which a key concept is that local authorities (and indeed other agencies) share responsibility for the conservation and sustainable use of biodiversity.

Non-Designated Sites/Species

European and National policy protect designated areas from development thus ensuring their long term protection, however, the likely significant effects of the plan, any future development, supply of services and zoning of lands on biodiversity outside the Natura 2000 site network must be considered.

ARCs

Furthermore landowners within Specially Protected Areas (SPA) (not yet directly applicable to SACs) are required to consult with the Minister of Arts, Heritage and the Gaeltacht when considering carrying out certain activities. It should be noted that restrictions on exemptions are a planning matter and are therefore dealt with under planning legislation, and not by way of ministerial consent. These are known as Activities Requiring Consent (ARCs). ARCs are potentially damaging activities that are not regulated by other authorities.

Invasive Species

Invasive alien species are defined as plants or animals which did not originally occur in Ireland before human colonisation and which are expanding their numbers and distribution so as to cause a competitive threat to such native fauna and flora. Invasive alien species are rated globally as the second biggest threat to biodiversity after habitat loss. In Ireland the scale of impacts is immense not just on biodiversity but also on agriculture, forestry, fisheries, water quality, tourism, infrastructure, etc. A number of invasive, non native species of both flora and fauna are present throughout the County and plan area, for example, the Zebra Mussel which poses a direct threat to aquatic ecosystems and human activities by blocking water pipes and boat engines and affecting our native fish species. Clare County Council, in association with Clare Biodiversity Ltd. and The Heritage Council conducted a project aimed at providing a current review of the distribution and threats posed by Invasive Alien Species in the County, and to present a

draft strategy for a coordinated control programme.

Corridors/Stepping Stones

In addition, it should be noted that the protection of species such as bats, birds, fish and mammals can only be achieved by recognising and protecting breeding, feeding, and roosting/hibernation sites, and by protecting migration and flight paths in the form of wildlife corridors, hedgerows and riparian zones. Fragmentation or obstruction of these corridors will impact negatively on the protection of these species.

Future Environmental Problems

The most important threat to Biodiversity in the Shannon Plan area is the impacts on water quality and particularly the Shannon Estuary.

The lack of recognition and appreciation of biodiversity outside of Natura 2000 sites and their interconnection with Natura 2000 sites is also a significant threat. This is particularly relevant in relation to wildlife corridors and stepping stones and the role they play in the migration, dispersal and genetic exchange of wild species. Secondly, there is a danger of overreliance on using engineering solutions to environmental problems rather than identifying and assessing alternatives, which should be avoided where possible.

Various other treats include:

- Habitat loss and fragmentation occurs as a result of housing developments, wind farms and forestry monoculture.
- Disturbance to wildlife, and particularly birds, occur as a result of inappropriately sited development and increased recreational pressure.
- The spread of invasive alien species is a particularly important threat to local biodiversity as they compete for space and food.
- Soft landscapes and low lying lands such as those along the Shannon Estuary will be particularly at risk from sea level rise and erosion, and this may become exacerbated due to climate change.

In conclusion, the treat to biodiversity, flora and fauna throughout the plan area is a concern on a strategic level; to accommodate the rate of climate change versus the rate of adaptation to change to a more local level; whereby all stakeholders must collaborate to ensure the protection and support of our natural heritage,

4.3.6: Information Gaps/Technical Difficulties

The most up to date information has been utilised but it is accepted that this may change over the lifetime of the plan making process and thus will be updated accordingly.

It is acknowledged that further analysis may be required on the integration of biodiversity and climate change, this will be addressed as information becomes available throughout the plan process.

4.3.7: Effects of Not Implementing the 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 afforded protection under the Clare County Development Plan 2011-2017. The local authority does however have control over activities which may adversely impact the sites both directly and indirectly. Certain activities such as wastewater treatment facilities, increased runoff due to urbanisation, etc. are all factors which influence the Local Area Plan process. In the absence of the Plan and careful consideration of the potential outcomes, deterioration in at least some of the protected areas would result. Also, other important habitats, currently not listed or proposed for statutory designation would be susceptible to adverse changes through incompatible uses, resulting in a diminished natural environment and loss of biodiversity.

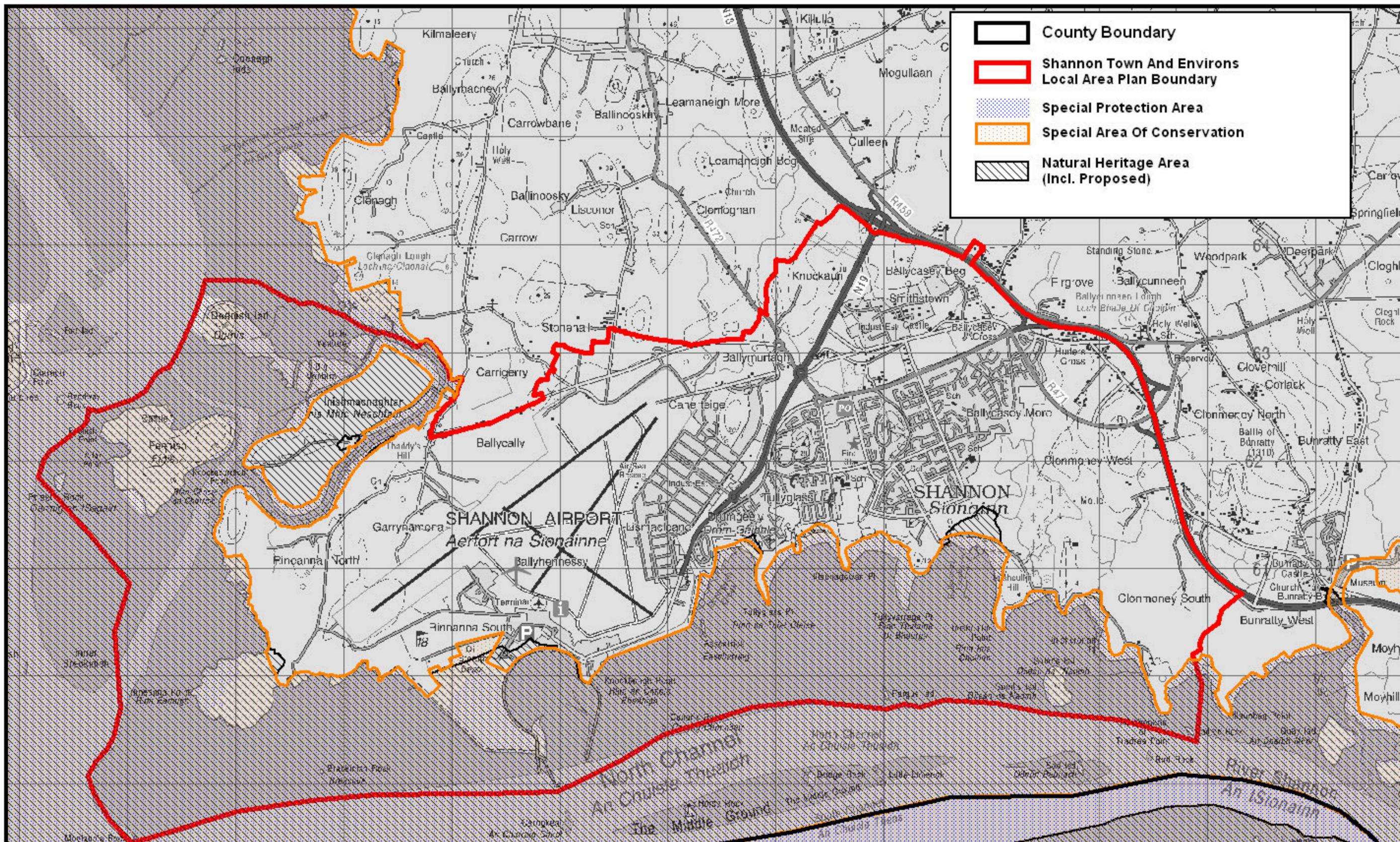
The Clare County Development Plan 2011-2017 is the overriding document controlling, directing and managing development within the County. It contains specific policies in relation to the natural environment and therefore in the absence of the Shannon Town & Environs LAP 2012-2018 considerable protection to habitats/wildlife will continue through the implementation of the Clare County Development Plan 2011-2017.

County Clare has a vast and diverse natural heritage and as such there are many plans and guidance documents at European, National and Local level, which aim to guide development in order to ensure that this natural heritage is protected. However, in the absence of the ST&E LAP 2012-2018 there would not be a localized framework within which to regulate, aid and/or control development whether economic, social or environmental. In the absence of the Plan pressures on biodiversity, flora and fauna would occur and possibly escalate even though designated habitats and species are protected under EU and National legislation. Loss, disturbance, deterioration and fragmentation of biodiversity, flora and fauna are the greatest threats for biodiversity as well as changes in land use (increase, decrease or change in agricultural activity or other land use – particularly energy crops). Also, other important habitats currently not listed or proposed for statutory designation and their ecological connectivity would be susceptible to adverse changes through incompatible uses, resulting in a diminished natural environment and loss of biodiversity, flora and fauna. Furthermore, the cumulative effects of individual developments would not be easily overseen or coordinated and assessed for their effects on habitats, species and their ecological connectivity. Activities which would lead to, for example, Greenfield site development, wastewater treatment facilities, increased runoff due to urbanisation, etc. are all factors which are influenced by the Plan process and can potentially impact adversely on habitats and species. The role that biodiversity plays cannot be reproduced synthetically as it is a process that has taken thousands of years to develop. Each element of biodiversity is dependent on or responsible for another element. If something is effected within the biodiversity system, it can have a 'ripple effect'. Due to the interrelationships of biodiversity, flora and fauna with the other environmental parameters they would also be adversely affected to varying degrees. For example, development of floodplains would result not only in direct loss of habitats and species, but would also disrupt the hydrological system which would have consequentially negative effects on others aquatic environments. Thus, under these circumstances the evolution of biodiversity, flora and fauna in the absence of the Plan would be highly dependent on the implementation of the parent document and the rate and extent of uncontrolled developments. Ultimately, the potential for fragmentation, loss, and/or deterioration of biodiversity, flora and fauna would occur.

Table 4.3.5: Designated Sites within the Shannon Local Area Plan 2012-2018

Site Name	Site Code	Designation	Description
River Shannon and River Fergus Estuaries	004077	SPA /pNHA	The Shannon Estuary is the most important site in Ireland for over-wintering wildfowl and waders, and is an important breeding bird's site in the summer season. It is internationally important for the number and species of overwintering wildfowl and waders, including Annex 1 species such as Whooper Swan, Golden Plover and Bar-tailed Godwit. It also hosts internationally important numbers of Light-bellied Brent Goose, Dunlin, Black-tailed Godwit and Redshank, and nationally important numbers of 17 wintering species. The main macro-invertebrate community present in the vast expanses of intertidal flats is a Macoma-Scrobicularia-Nereis community which provides a rich food resource for the wintering birds. In June 2011, the Department of Arts, Heritage and the Gaeltacht issued a notice of intention to extend the boundary of the River Shannon and River Fergus Estuaries SPA (Site Code 004077), which will approximately overlap with the existing Lower River Shannon SAC designation.
Lower River Shannon	002165	SAC	The Lower River Shannon SAC is designated for a range of coastal, estuarine and riparian habitats including Estuaries, Mudflats, Sandflats, Coastal lagoons, Sea cliffs, Salicornia and other annuals colonizing mud and sand, Atlantic and Mediterranean salt meadows, Alluvial forests, Sandbanks, Large shallow inlets and bays, Reefs, Perennial vegetation of stony banks, Spartina swards and Molinia meadows. It also supports species such as River, Brook and Sea Lamprey, Atlantic Salmon, Bottlenose Dolphin, Otter and Freshwater Pearl Mussel.

- Note: as site boundaries may be subject to change, the Council has endeavored to ensure that the most up-to-date boundaries available from the NPWS website have been included in the Plan, the SEA Environmental Report. This data will be verified at each stage of the Plan preparation and environment assessment process.



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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018

TITLE: Map 4.3.1 Ecological Network In Shannon Town and Environs Local Area Plan Area

SCALE: NOT TO SCALE

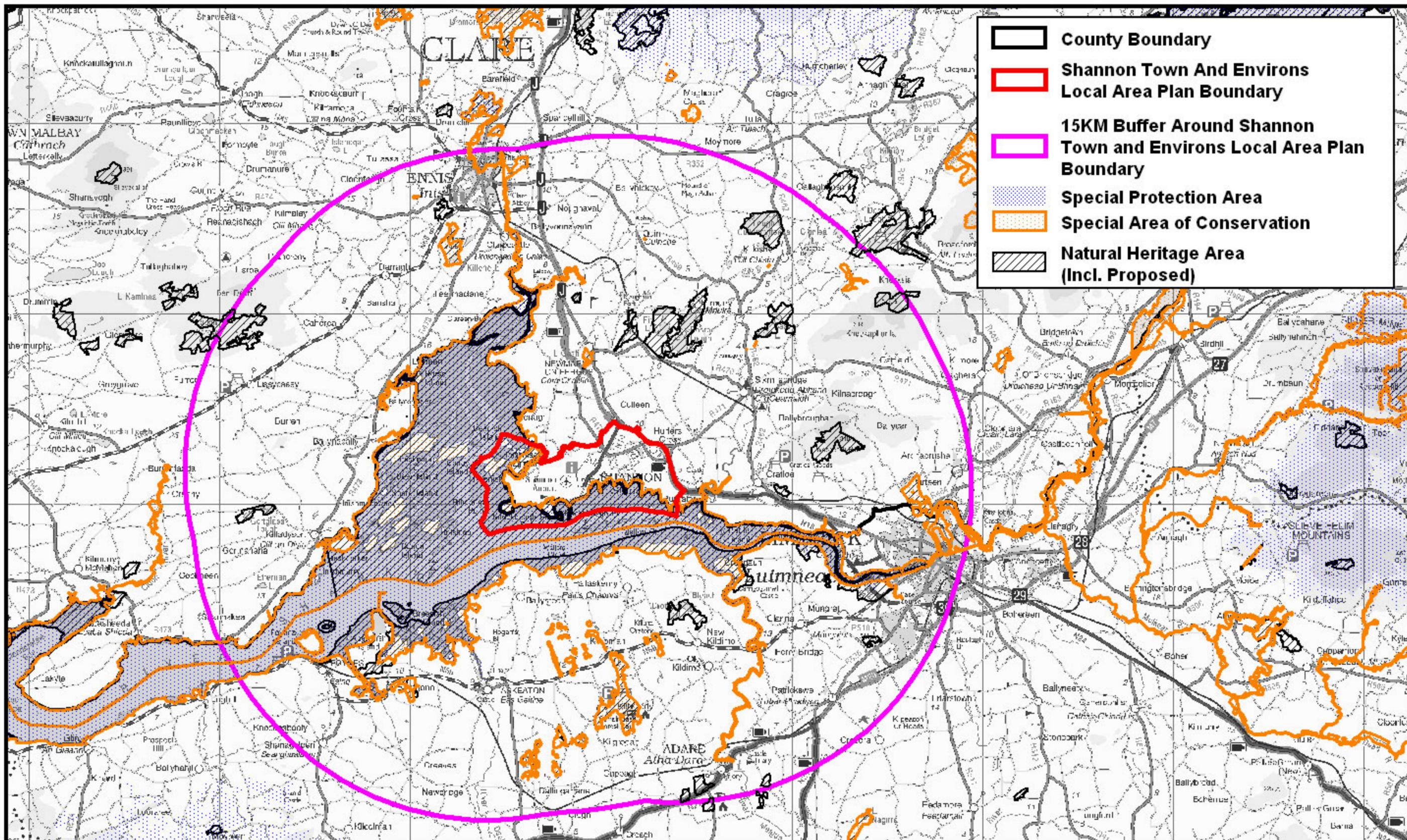
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DATE:
OCTOBER 2012

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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018

TITLE: Map 4.3.2 Ecological Designations Within 15KM Of Plan Area

SCALE: NOT TO SCALE

PROJECT NO.

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4.4 Soil and Geology

4.4.1 Soil

The upper most layer of the earth's surface is generally termed "Soil". It comprises for the most part organic matter, minerals and fine to coarse grained weathered rocks. The variability in the constituent parts and the percentage content of each in the soil matrix results in differing characteristics. This has implications for overall land use and the appropriateness for differing land use practices. The principal soil groupings and the bedrock formations in the Shannon LAP area are illustrated in Map 4.4.1

A large proportion of the plan area has no soil grouping however the main Great Soil Groups in the plan area are:

- **Gleys** - are soils in which the effects of drainage impedance dominate and which have developed under the influence of permanent or intermittent waterlogging. Waterlogging may be due to a high water table giving groundwater gleys, a perched water table due to impervious nature of the soils giving a surface water gley or from seepage or runoff from slopes. Most gleys have poor physical conditions and restricted growth seasons. Peaty gleys have organic horizons containing 20 to 50% organic matter on the surface and are found in wetter conditions.
- **Grey Brown Podzolics** - are usually formed from a calcareous parent material which counters the effects of leaching. This restricts the podzolisation process. Grey Brown Podzolics are good all purpose soils.
- **Brown Earths** - are evident in 2 small areas in the plan area. They are relatively mature well drained mineral soils processing a uniform soil horizon. Most Brown Earths occur on lime deficient parent materials and are therefore acid in nature i.e. Acid Brown Earths. Brown Earths can also occur on more lime-rich materials. Brown Earths possess medium soil texture and have good structure and drainage characteristics and are extensively cultivated. They have relatively low nutrient status.

Changes in soil result from natural processes and human activities, both contribute to their dynamic and evolving nature. Such changes are matters of concern if they result in the physical, biological or chemical degradation of soils. This can result in the impairment of ecologically essential soil processes, the reduction in productive capacity, the depletion of soil quality and biodiversity and the direct loss of soil. Many of the changes arise as a result of pressures from human activities. The main pressures on soil resources in Ireland arise from the following sectors:

- intensive agriculture and organic waste disposal;
- forestry;
- industry;
- peat extraction; and
- urbanisation and infrastructure development.

These activities can lead to soil degradation including loss of organic matter, decline in soil fertility, acidification, loss of soil stability, increasing soil erosion, soil compaction, contamination, loss of biodiversity and loss of soil to buildings and infrastructure, and flooding.

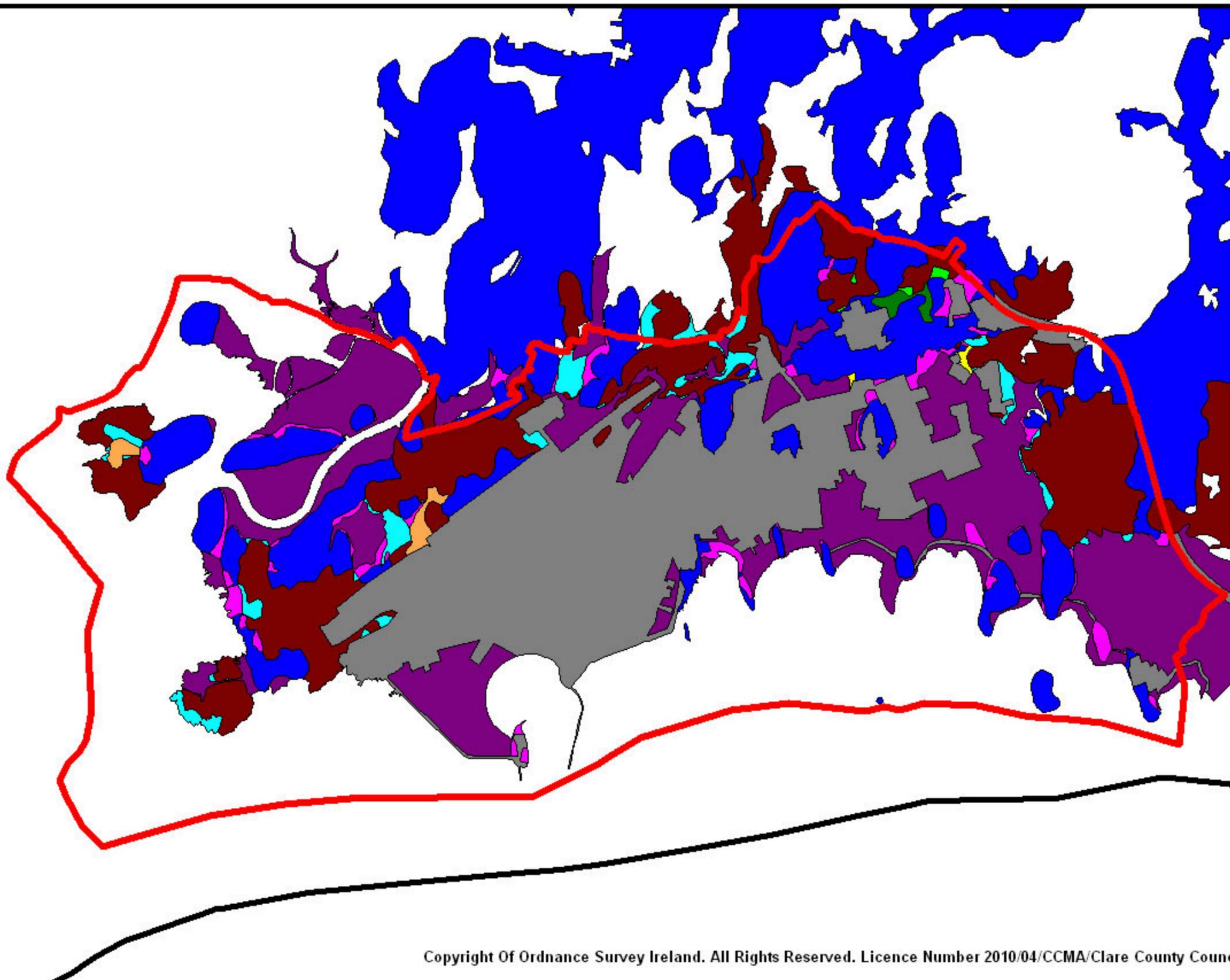
The following table can be read to accompany Map 4.4.1 – Soil Groups in Plan Area.

Map Code	Soil Description	Soil Type
AlluvMin –	Mineral Alluvium	Variable
AminSW	shallow well drained mineral derived from mainly non-calcareous parent materials	Lithosols, Regosols
BminDW	deep well drained mineral derived from mainly calcareous parent materials	Grey brown Podzolics, Brown Earths
BminPD	Deep poorly drained material derived from mainly calcareous parent material	Surface/ground water Gleys
BminPDPT	Poorly drained mineral soils with peaty topsoil derived from mainly calcareous parent materials	Peaty Gleys
BminSP	shallow poorly drained mineral derived from mainly calcareous parent materials	Surface/ground water Gleys
BminSW	shallow well drained mineral derived from mainly calcareous parent materials	Lithosols, Renzinas
Cut	Peats – Cutaway/cutover peat	Basin Peats, Blanket Peats (some)
Made	Made/Built Land	
Marsed	Marine/Estuarine Sediments	

 County Boundary
 Shannon Town
 And Environs Local
 Area Plan Boundary

Soil Types

-  AlluvMIN
-  AminSW
-  BminDW
-  BminPD
-  BminPDPT
-  BminSP
-  BminSW
-  Cut
-  Made
-  MarSed



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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018

TITLE: Map 4.4.1 - Soil Types In Shannon Town And Environs Plan Area

SCALE: NOT TO SCALE

PROJECT NO.

DRAWING NO.

DATE:
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DRAWN BY:
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4.4.2 Geology

Geology encompasses the understanding and study of the solid and liquid matter that constitutes the earth and the processes by which they are formed, moved and changed. Its understanding is necessary to fully appreciate the geological factors that shape and influence the world and its particular structure.

The geology of the landscape surrounding the Fergus Estuary is underlain predominantly by limestone; this includes the plan area which contains:

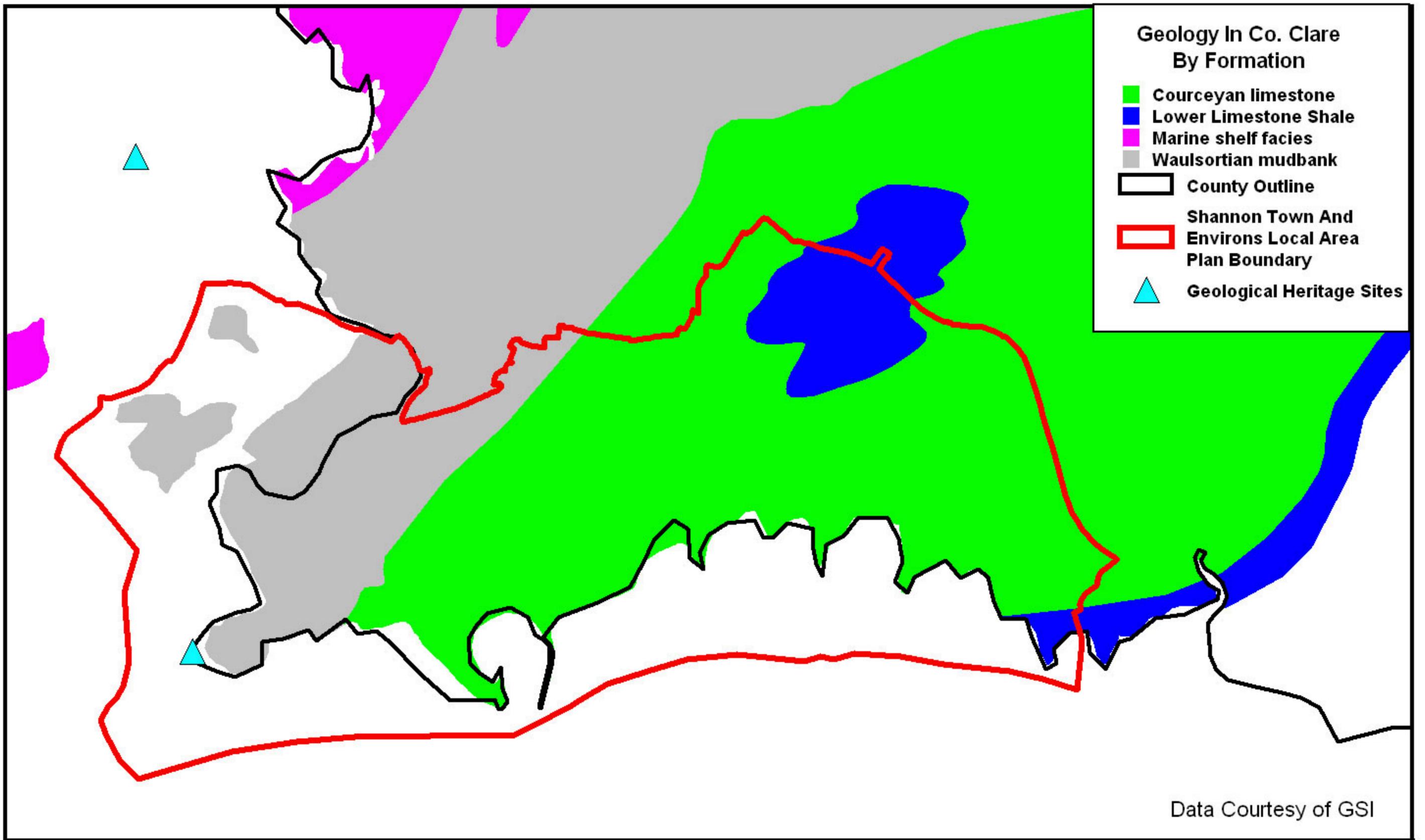
- Courceyan Limestone
- Lower Limestone Shale
- Marine Shelf Facies, and
- Waulsortian Mudbank.

Limestone dominates the geological makeup of the plan area as shown in Map 4.4.2. There are also areas of exposed limestone, or where the bedrock is within one metre of the surface and the majority of the area is overlain by limestone derived till or estuarine sediment.

There are 89 areas of geological importance within the county. These sites are considered to be of national importance as best representative examples of particular geological formations or features, for example, cave systems, limestone pavements and mushroom stones. The Geological Survey of Ireland (GSI) as part of their Irish Geological Heritage Programme has identified some of these areas as Geological Heritage Sites. There is one Geological Heritage Site in the Plan area at Rineanna Point. The programme aims to identify and select sites of geological heritage within Ireland for future designation as NHAs.

Quarrying

No quarrying in plan area, the nearest being at Bunratty which is discussed in the South Clare Local Area Plan 2012-2018.



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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018		
TITLE: Map 4.4.2 Geology Incl. Geological Heritage Sites Within Plan Area		
SCALE: NOT TO SCALE	PROJECT NO.	DRAWING NO.
DATE: OCTOBER 2012	DRAWN BY: P. McMANUS	CHECKED: B. McCARTHY

4.4.3 Threats and Trends

Soil is lost through the rezoning of agricultural land for development purposes. The number of hectares, which are rezoned annually on a countrywide basis is not known, nor is the quantity of soil loss through surface sealing. Urban environments have greatly changed in Ireland with the centre of cities and towns being subjected to depopulation with growth focused on the periphery of these areas. With urban expansion, agricultural land surrounding cities and towns as well as green areas within them are subjected to increasing pressures.

The type and depth of soil has direct implications on water movement which can lead to increased pollution threats if not properly considered. Land spreading of both organic and artificial fertilizers, the use of pesticides/herbicides/fungicides can, if inappropriately used, particularly when adverse weather conditions prevail, be carried from the point of use to rivers, lakes and ground water resources. The protection of the 'soil' environment is indirectly enforced through the Code of Good Agricultural Practice (2006).

Land spreading of farm effluent and application of fertilisers in agricultural areas is a delicate balance, particularly on low permeability soils with possible implications on water quality (discussed later). Also in certain areas the soil's poor percolation characteristics render them unsuitable for conventional septic tank methods of domestic effluent disposal. This has implications for rural housing.

The need to develop a more coherent approach to the protection of soils has been recognised at European level and has resulted in the establishment of such bodies as the European Soil Bureau (ESB), the European Soil Forum (ESF) and European Environment Agency (EEA) Topic Centre on the Terrestrial Environment (ETC/TE). There has been a shift in focus from policies relating mainly to the agricultural sector to policies based on environmental protection. The key soil issues, which have been identified at the European level, include erosion and desertification, industrial contamination, diffuse pollution including organic waste disposal and air deposition, soil loss through urbanisation, soils and climate change, soil biodiversity and salinisation. The result of this development and changing attitude will result in the publication of the European Soils Directive which is due later this year.

4.4.4 Information Gaps

It would be beneficial if information in relation to geological heritage was available in GIS format.

4.4.5 Effects of Not Implementing the Plan

The plan will be the guiding document for development within the plan area for the coming years and promotes sustainable development. In its absence development is likely to be sporadic and uncontrolled leading to a significant deterioration in the soil and geology environment i.e. soil loss and run-off, directly impacting on water and causing indirect impacts from potential contamination due to ancillary works associated with the development or lack of appropriate waste water facilities. Furthermore, the cumulative effects of individual developments would not be easily overseen or coordinated and assessed for their effects on soil and geology. Soil and geology is closely linked to biodiversity and landscape thus loss, fragmentation and/or deterioration of soils and geology would have a direct negative impact on biodiversity and the landscape. Also the process for assessing the issues which affects the soil and geological environment within the plan area will go unchecked, resulting in a general deterioration of this natural resource. Ultimately the result would be unsustainable

and undesirable.

4.5 Water

Introduction

For the purposes of this section of the Environmental Report the water environment is taken to include

- groundwater,
- natural surface water features such as lakes, rivers and streams,
- estuarine waters,
- flooding, and
- drinking water.

Wastewater Treatment may be referred to only in this section; it is discussed in more detail under the Material Assets section.

Since 2000, Water Management in the EU has been directed by the Water Framework Directive (WFD) which establishes a common framework for the sustainable and integrated management of all waters. It covers groundwater, inland surface waters, transitional waters and coastal waters. The key objective of the WFD is that all water bodies in a Member State must achieve (or retain) good status by 2015. In 2005, all water bodies were assessed and given a risk rating based on the likelihood of them achieving this environmental objective.

One of the conditions of this Directive is that Member States keep a register of all the water bodies that must have extra controls on their quality by virtue of how the water is used by people and by wildlife. The Shannon Plan area is located within the Shannon International River Basin District (SIRBD). Department of Environment, Heritage & Local Government Guidance; 'River Basin Management Planning–A Practical Guide for Planning Authorities' (2008), is also referred to in providing protection to water resources and their associated habitats and species.

Shannon International River Basin Management Plan

The Shannon International River Basin District is the largest RBD in the country, covering an area of 18,000km². It has been broken down into 'Water Management Units' (WMU), which each have their own individual Action Plans. The entire lands of Shannon Town & Environs LAP 2012-2018 are within the Fergus WMU. Water Management Units are at a smaller geographical scale than river basin districts, and allow for more focused planning and implementation. The Shannon Plan boundary falls within the Fergus WMU. The Fergus WMU has identified two river water bodies within and adjacent to the Shannon Town and Environs Plan area, namely Ballycasey Creek (SH_27_1161) and Drumgeely Creek (SH_27_1147). Both of these rivers have been identified as having 'high' water quality status.

WMU action plans:

- map the local geographical area showing key point sources of pollutants;
- describe, map and tabulate water status;
- estimate phosphorus loadings from various sources;
- summarise the risks in relation to key water management issues;
- identify the key measures to address these issues (drawn from the programme of measures);
- tabulate objectives, identifying protected area locations and cases where alternative objectives were chosen.

The WMU action plans are the basis for detailed implementation programmes, which will guide and monitor the progress of implementation between 2009 and 2015. The

principal measures identified to address the key issues in the Shannon IRBD include:

- wastewater treatment plant discharge licensing and prioritised upgrade and operational improvement of some plants;
- licence review and enforcement regarding industrial activities and trade discharges;
- farm inspections and enforcement under the *Good Agricultural Practice Regulations*;
- monitoring, inspection and enforcement of standards relating to the operation of un-sewered property wastewater treatment systems;
- compliance with codes of practice and Forest Service Protocol in the forestry sector;
- appropriate regulation of future activities such as abstraction schemes or physical modification schemes;
- coordination of public authority actions and education and awareness activities, where appropriate, to engage stakeholders and implement actions in a collaborative and proactive manner;
- an environmental research programme and investigations to include; verification of impacts on some waters and the identification and piloting of a number of new management measures.

Clare County Council is obliged to ensure the objectives identified in the action plans are achieved.

Existing Environment

Groundwater

Groundwater is defined as the water stored underground in formations of saturated rock, sand, gravel, and soil. Surface water and groundwater are intimately linked to each other within the hydrological cycle and is an important source of water for streams, rivers and lakes. Thus the protection of groundwater quality from the impact of human activities is a high priority as resources are susceptible to pollution with long term consequences both for humans and the natural environment.

The WFD groundwater status in the ST&E LAP plan area is determined to be of 'good' status. Complimentary to this is the Geological Survey of Ireland (GSI) groundwater vulnerability which rates aquifers according to their vulnerability to pollution. Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter underground water. The plan area has intermittent areas classified as being of 'low', 'moderate', and 'high' vulnerability. There are also areas to the periphery of the plan area and airport lands which are categorised as having 'extreme' groundwater vulnerability (including where rock is close to the surface). This is illustrated in Map 4.5.1.

Groundwater resources are an invaluable source of water supply for the public, industry and agriculture and also perform an important role in sustaining base flows in the rivers within the plan area and their tributaries. From a public health perspective, the two main widespread pollutants present in groundwater in Ireland are microbial pathogens and nitrate - Between 2007 and 2008; the Environmental Protection Agency (EPA) sampled untreated water from wells and springs as part of the National groundwater monitoring programme. During this reporting period, 67 percent of all EPA monitoring locations had faecal coliforms in at least one sample (samples are taken every three months). Approximately 34% of the 2,057 samples taken between 2007 and 2008 tested positively for faecal coliforms and 18% of the samples had greater than 10 faecal coliforms/100 ml. (The drinking water standard is zero.)

Human activity including farmyard activities and On-Site Wastewater Treatment Systems are considered to be equally responsible for pollution of wells and springs by

microbial pathogens. Compliance with the EPA Code of Practice (2010) will significantly aid in reducing pollution of groundwater. Faeces and urine from grazing animals and landspreading of inorganic fertilizers are considered to be the main source of nitrates in groundwater. Article 8 of the WFD requires the establishment of groundwater monitoring programmes. These programmes assess:

- Groundwater quality;
- Groundwater levels and flows;
- Drinking Water and Habitats Protected Area objectives.

The Shannon River Basin Management Plan establishes four core environmental objectives on water quality to be achieved generally by 2015:

- prevent deterioration;
- restore good status;
- reduce chemical pollution;
- achieve water related protected areas objectives

The Clare County Development Plan 2011-2017(CDP) recognises the importance of groundwater and groundwater protection and includes two objectives for the protection of this resource:

CDP 8.1 Protection of Groundwater Resources

It is an objective of Clare County Council:

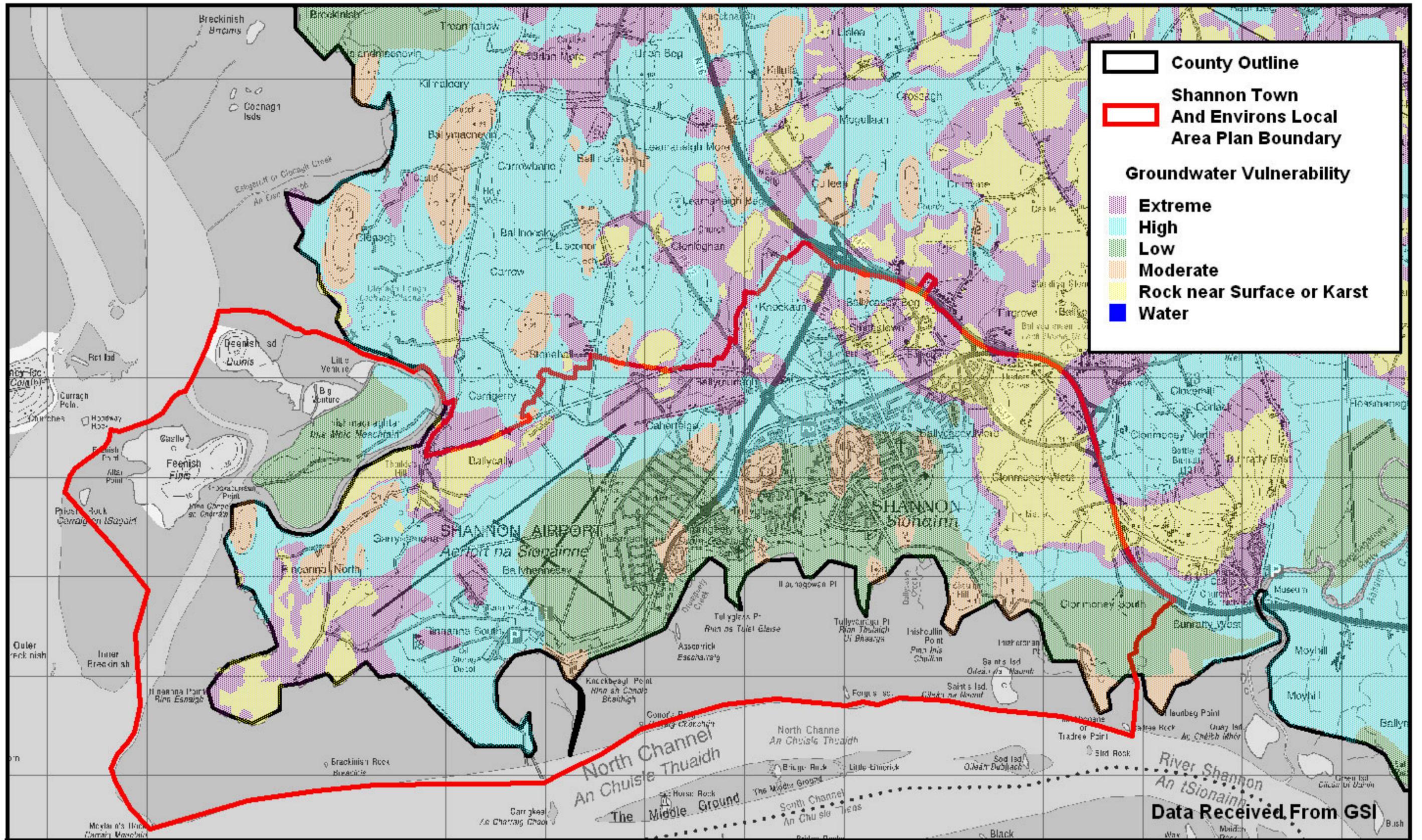
To protect groundwater resources, in accordance with statutory requirements and specific measures as set out in the Shannon and Western River Basin Management Plans.

CDP8.2 Protection of Water Resources

It is an objective of Clare County Council:

That development that would have an unacceptable impact on the water environment, including surface water and groundwater quality and quantity, designated source protection areas, estuarine, coastal transitional waters, river corridors and associated wetlands, will not be permitted.

The Clare County Development Plan 2011-2017 is the 'parent' document to the Shannon Town & Environs Local Area Plan 2012-2018 and therefore any proposals for development in the plan area must comply with the objectives outlined above.



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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018		
TITLE: Map 4.5.1 GSI Groundwater Vulnerability In Local Area PLAN Area		
SCALE: NOT TO SCALE	PROJECT NO.	DRAWING NO.
DATE: OCTOBER 2012	DRAWN BY P. McMANUS	CHECKED B. MCCARTHY

Surface Water

The most notable surface water features within the plan area are the Shannon Estuary and Fergus Estuary which together form the country's largest estuarine complex.

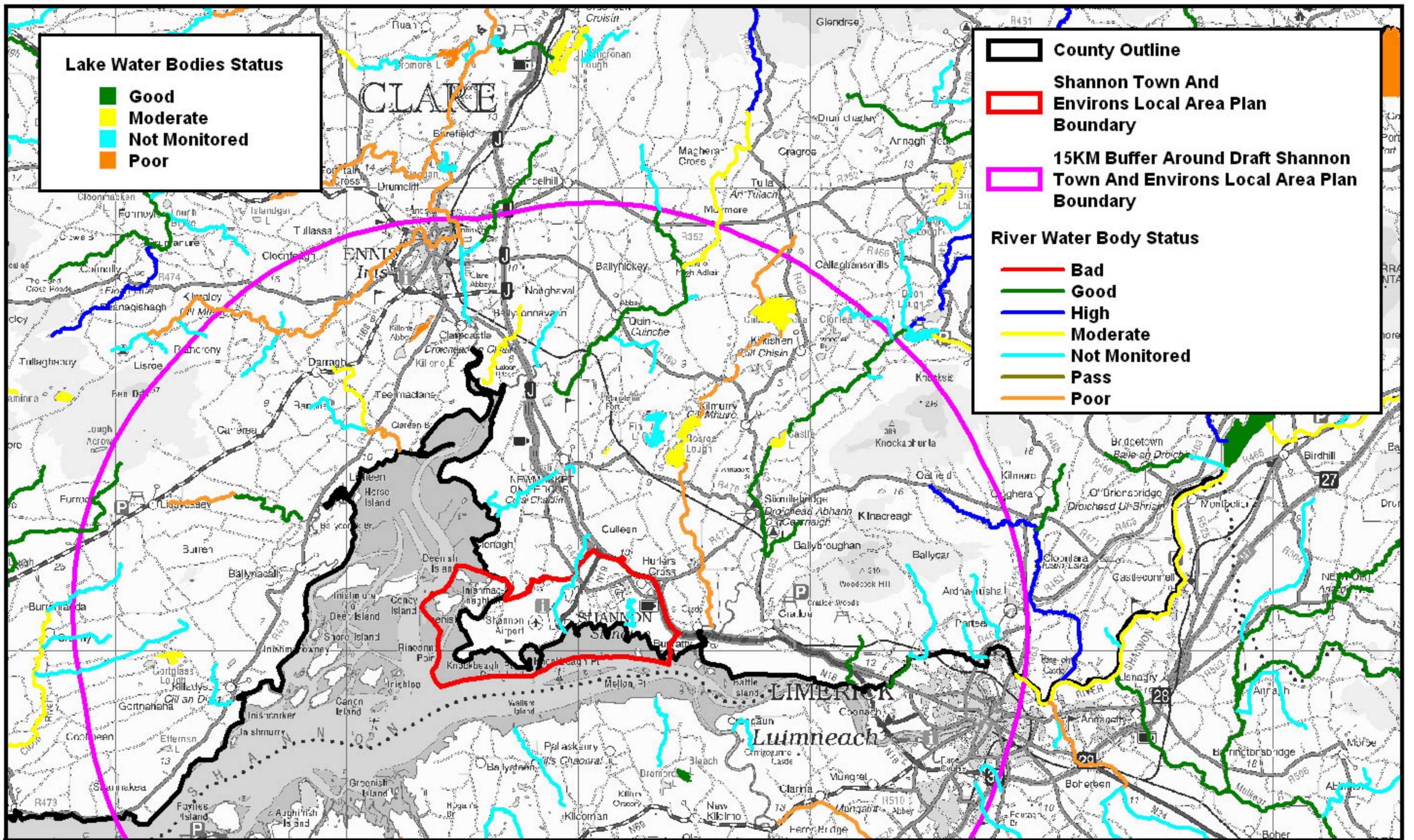
The Clare County Development Plan 2011-2017 includes objectives for the management and protection of water sources in the county, these were formulated in correlation with WFD objectives and significant water management issues identified in the Water Matters Consultation publications;

- Objective CDP8.2 Protection of Water Resources
- Objective CDP8.3 Protection of Surface Waters

The quality of surface water in Ireland is monitored by the EPA and local authorities. According to the most recent EPA Water Quality in Ireland Report published in 2008, general water quality within the Shannon RBD showed an increase in the unpolluted category in terms of water quality and a reduction in moderately polluted water. However, the categories for slight and seriously polluted are still above the national averages within the RBD. All rivers catchments within the county (as in the rest of the RBD) are sub-divided into smaller catchments called river waterbodies. These are available to view at the WFD website; www.wfdireland.ie/. These river water bodies are assigned water quality status based on any available water quality data or other status deriving elements. Where data is not available to assign status, a donor river water body is used which is similar in many characteristics. The river water body status throughout the Shannon Town & Environs LAP area is of 'High' status.

There are also a significant number of surface water bodies (rivers and lakes) within a 15km zone of influence which may have a cumulative effect on both the water quality and development within the plan area. These are illustrated on Map 4.5.2 including the WFD designated status.

Map 4.5.3 also illustrates the numerous rivers and streams within a zone of influence of the plan area indicating the Q Value, where available. The Q value rating attributes to ecological quality rating of the surface water body ranging in value from a bad/poor rating to high.



Lake Water Bodies Status

- Good
- Moderate
- Not Monitored
- Poor

- County Outline
- Shannon Town And Environs Local Area Plan Boundary
- 15KM Buffer Around Draft Shannon Town And Environs Local Area Plan Boundary

River Water Body Status

- Bad
- Good
- High
- Moderate
- Not Monitored
- Pass
- Poor



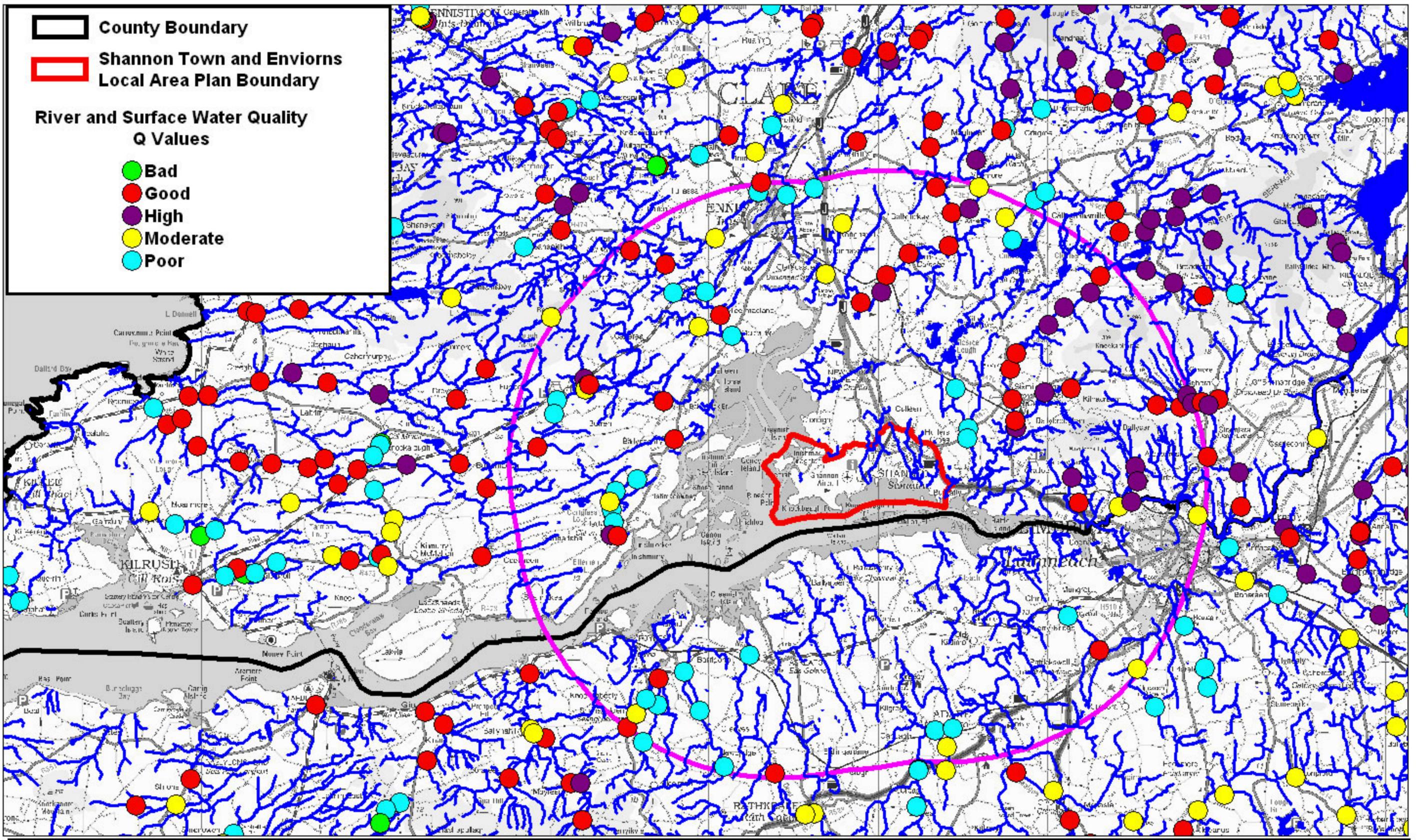
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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018		
TITLE: Map 4.5.2 WFD River / Lake Water Status Within 15KM Of Plan Area		
SCALE: NOT TO SCALE	PROJECT NO.	DRAWING NO.
DATE: OCTOBER 2012	DRAWN BY: P. McMANUS	CHECKED BY: B. Mc Carthy



County Boundary
 Shannon Town and Environs Local Area Plan Boundary

River and Surface Water Quality Q Values

- Bad
- Good
- High
- Moderate
- Poor

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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018		
TITLE: Map 4.5.3 Q Value Rating Of Surface Water Bodies Within 15KM Of Plan Area		
SCALE: NOT TO SCALE	PROJECT NO.	DRAWING NO.
DATE: OCTOBER 2012	DRAWN BY: P. McMANUS	CHECKED BY: B. Mc Carthy

Estuarine Waters

Since 2000, estuarine water management in the EU has been directed by the Water Framework Directive. The WFD has assigned the Shannon Estuary as being 'Good' status in its upper part changing to 'Moderate' status in the mid section and the mouth of the Shannon (after Kilrush) is 'High' Status. The Fergus Estuary is classified as 'Moderate' status. The Shannon River Basin Management Plan (SRBMP) and associated Programme of Measures (POMS) also consider the estuarine areas of the ST&E LAP 2012-2018. The EPA Water Quality in Ireland - Quality of Estuarine and Coastal Waters 2007-2009 Report highlights the improvements in the Fergus Estuary and the Lower River Shannon over the 2002-2006 and 2007-2009 periods whereby the summer Biological Oxygen Demand (BOD) concentration decreased significantly from 2-4 to 0-2(mg/l) in the Fergus Estuary and maintained a 0-2 mg/l concentration in the Lower River Shannon.

Shannon Estuary Strategic Integrated Framework Plan

Clare County Council, together with Limerick City Council and Limerick and Kerry County Councils has initiated the preparation of an inter-jurisdictional Strategic Integrated Framework Plan (SIFP) for the Shannon Estuary and its immediate environs. The key objective is to research and develop an integrated approach to facilitating economic growth and promoting environmental management within and adjacent to the Shannon Estuary. Upon completion, it is envisaged that the Plan will be integrated into the Clare County Development Plan 2011-2017 by means of a variation.

Flooding

The Planning System and Flood Risk Management Guidelines (OPW & DOEHLG, 2009) states that:

'Flooding is a natural process that can happen at any time in a wide variety of locations. Flooding from the sea and from rivers is probably best known but prolonged and intense rainfall can also cause sewer flooding, overland flow and groundwater flooding. When it impacts on human activities, it can threaten people, their property and the environment. Assets at risk can include housing, transport and public service infrastructure, and commercial, industrial and agricultural enterprises. The health, social, economic and environmental impacts of flooding can be significant and have a wide community impact'.

Thus, the underlying causes of flooding, heavy rain and high sea levels are, essentially uncontrollable. However, the factors affecting the extent and severity of the flood can be addressed. The most influential of these factors is development, in particular development in flood plains i.e. areas adjacent to rivers that tend to become flooded following periods of heavy rain. Historic records help to indicate which areas are prone to flooding, although it is always possible that areas not known to have flooded in the past or for which no records of flooding are available, might flood in the future due to changes in upstream or downstream conditions or the occurrence of a more extreme rainfall event. The Office of Public Works (OPW) monitors flooding throughout Ireland and records significant flood events, 1 of which is on the LAP boundary and many throughout the county.

A Strategic Flood Risk Assessment (SFRA) of the County was carried out as Volume 3 of the Clare County Development Plan 2011-2017. It provides a broad, county-wide assessment and reflects the broad and strategic nature of the Development Plan. It highlights that Clare County is vulnerable to flooding from a number of flood hazard sources:

- Fluvial flooding from rivers.
- Pluvial flooding resulting from rainfall that is unable to be absorbed by the ground or drainage system.
- Coastal flooding from tidal surge.
- Groundwater, particularly in Karst areas such as the Burren.
- Urban and suburban flooding caused by surcharge of sewers and drainage systems.
- Canal, reservoir or embankment breach.

The location of flood hazard in the County has been mapped through the specific investigation of two sources of flood hazard; coastal flood hazard from tidal surge and fluvial flood hazard from rivers. The sources should be viewed in isolation and do not account for joint probability issues.

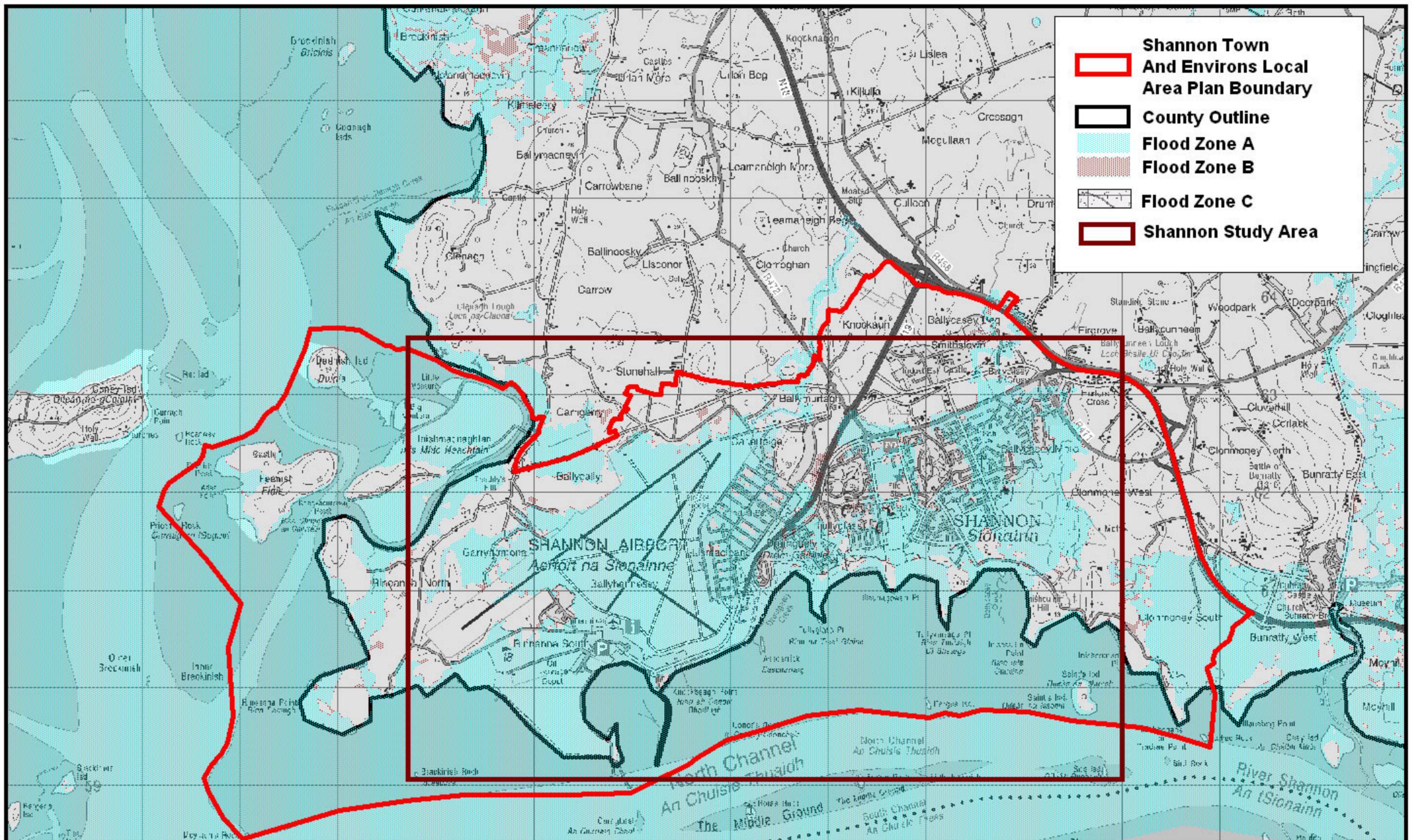
Map 4.5.4 identifies the extent of the Flood Risk Zones in relation to the ST&E LAP boundary. It is evident that the majority of the Shannon Town and Environs plan area is within a Flood Zone, it can also be noted that the zonings in the plan area were assessed to ensure the appropriateness of land-use in relation to flood risk and reiterated in Chapter 7.4 - Settlement Assessment Summary.

Much of Shannon consists of low-lying coastal flatlands, protected from tidal flooding by embankments at a level of approximately 7.3 metres O.D. The existing and future suitability of these embankments to act as flood defence barriers has already been the subject of a detailed flood risk assessment for the environs of Shannon Town and International Airport. The study assessed the benefits of the Shannon Estuary defences through the analysis of Extreme Still Water Sea Levels (ESWSL) and the modeling of defence overtopping, with the inclusion of climate change. A review of existing drainage information to inform the scope of further detailed flood modeling work in the Shannon Town area was also undertaken. The study provided a defended coastal flood outline for Shannon, which highlights the benefits of existing Shannon Flood Defences. Map 4.5.5 indicates the results of this detailed FRA.

The Flood Risk Areas are not an exhaustive measure and areas not illustrated here could still be at risk of flooding. Where potential risk of flooding exists, the OPW Flood Risk Management approach will be considered in consultation with the OPW. The effects of climate change resulting in increased rainfall and raised sea levels are likely to exacerbate the problem of flooding. Furthermore, inappropriate development in areas of flood plain can also exacerbate the problem of flooding. Further to the above, a preliminary flood risk assessment was completed in August 2011 for Shannon, as part of the Catchment Flood Risk Assessment and Management Study (CFRAM) Study for the Shannon River Basin District (SIRBD) in compliance with the requirements of the EU Floods Directive. The study will focus on areas known to have experienced flooding in the past and areas that may be subject to flooding in the future either due to development pressures or climate change. Shannon will be the focus of a further assessment and detailed flood mapping will be produced (2013), this will be followed by a flood risk management Plan (2015) which will define the current and future flood risk in the Shannon RBD and set out how this risk can be managed.

The Clare County Development Plan 2011-2017 also contains three specific objectives in relation to flooding and flood risk management and these objectives apply to the Plan area and to the preparation of the Shannon Town & Environs Local Area Plan 2012-2018.

- *Objective CDP9.15 Strategic Flood Risk Assessment*
- *Objective CDP9.16 Maintenance of Rivers and Waterways*
- *Objective CDP9.17 Monitoring*



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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018

TITLE: Map 4.5.4 Flood Extent In Local Area Plan Area

SCALE: NOT TO SCALE

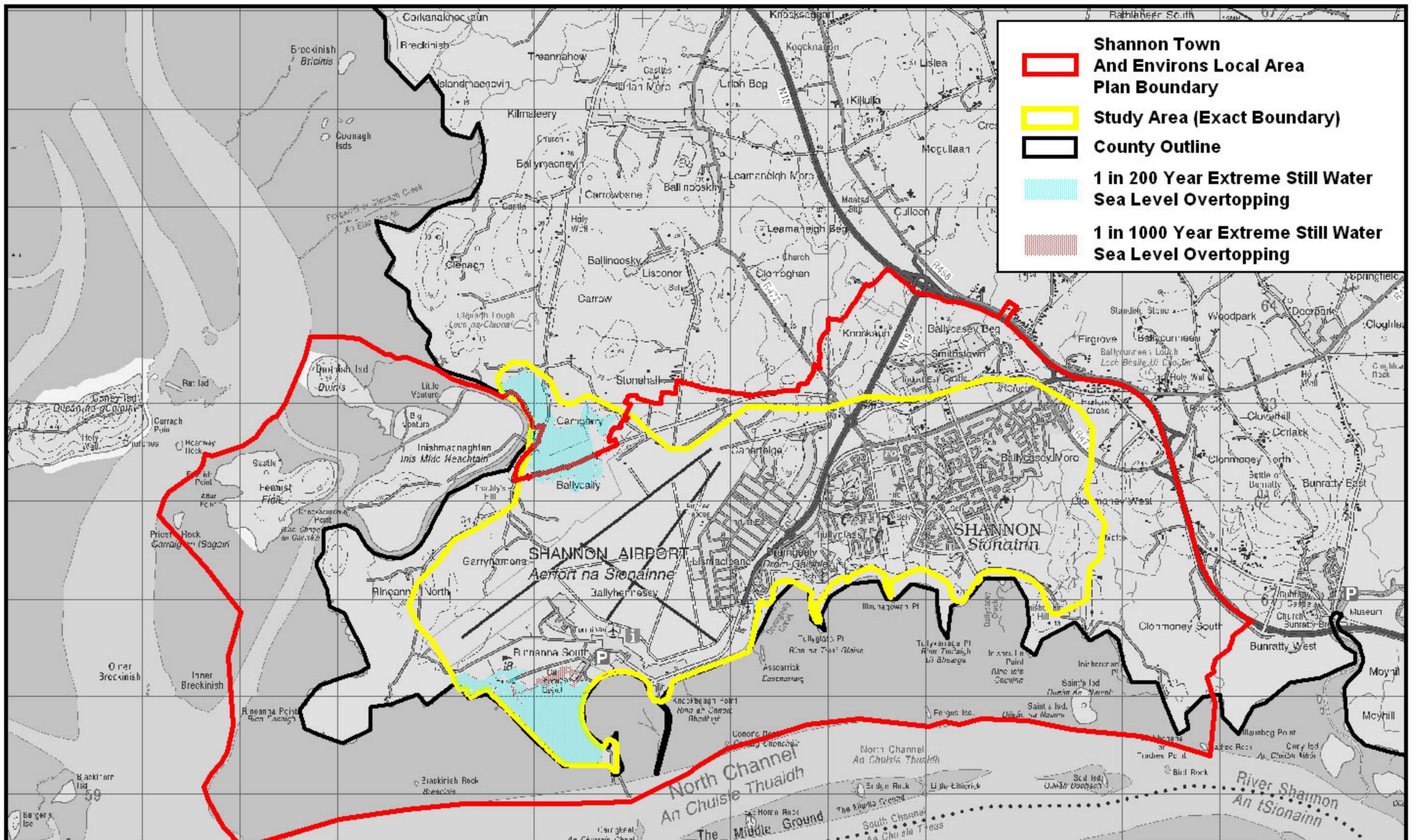
DATE:
OCTOBER 2012

PROJECT NO.

DRAWN BY:
P. McMANUS

DRAWING NO.

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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018		
TITLE: Map 4.5.5 Flood Risk Areas Of Shannon Study Area		
SCALE: NOT TO SCALE	PROJECT NO.	DRAWING NO.
DATE: OCTOBER 2012	DRAWN BY: P. McMANUS	CHECKED BY: B. McCARTHY

Drinking Water

Drinking water is monitored for microbiological, chemical and indicator parameters as part of an established monitoring programme in accordance with European Communities (Drinking Water) (No. 2) Regulations 2007. The following supplies are monitored:

- All public water supplies
- Public and private group water schemes supplying >10m³ per day
- Private supplies that supply <10m³ per day but is a commercial activity

The Environmental Protection Agency (EPA) is the supervisory authority for public water supplies and the local authority are in turn the supervisory authority for group water schemes. Samples of water at various stages on water schemes are taken on a regular basis. A report on the quality of water is produced monthly and is available from the County Council offices. Results of all monitoring are sent to the EPA for publication in their annual drinking water report. Guidance documents on the Implementation of the Regulations for Water Service Authorities for Public and Private Water Supplies (2007) is available.

As part of its supervisory role under the (Drinking Water) (No. 2) Regulations (2007), the EPA prepares a list of public water supplies (Remedial Action List for Public Drinking Water Supplies - RAL) where remedial action or management action is required to ensure compliance with the requirements of these Regulations into the future. The EPA uses the RAL to focus attention on resolving any deficiencies in public water supplies and to ensure that Water Services Authorities prepare and implement an action programme for each public water supply on the list. In 2009, Shannon along with 6 others PWS were removed from the Remedial Action List (Ardataggle, Broadford, Ennis, Ennistymon, Kildysert, Miltown Malbay) and none were added, currently leaving 3 supplies on the RAL from County Clare (EPA, 2010).

Microbiological compliance has increased in Public Water Supplies (PWSs) in Co. Clare from 99.7% in 2008 to 100% in 2009 whilst chemical compliance levels have decreased from 99.3% in 2008 to 99.0% in 2009. Two of twelve 12 total number of Private Group Water Schemes were contaminated with E. coli during 2009. According to the EPA report 'The Provision and Quality of Drinking Water in Ireland - a report for the Years 2006-2007 (2008), the overall rate of compliance in County Clare was 98.2%, a figure above the national average and an improvement from 97.7% in 2005. Although private group water schemes in Clare were generally of a higher quality than those in the majority of other local authorities, there were still a number of quality deficient schemes during 2006 with 3 of the 11 schemes monitored contaminated during the year (2 of which were also contaminated during 2005).

Within Clare County Council, an internal reporting system is in place that allows constant appraisal of all drinking water results. The Shannon Water supply is subject to check monitoring 34 times a year and 4 Audit Monitorings per year. Where non-compliance is detected it is reported to the relevant staff and action is taken to ensure that the water is compliant with the drinking water regulations. A protocol is in place between Clare County Council and the Health Service Executive (HSE). The report on the provision and quality of Drinking Water in Ireland (EPA, 2010) for the years 2008-2009 assesses the safety and security of drinking water supplies based on the results of local authority monitoring carried out and enforcement by the EPA in the same period.

Successive EPA reports on the quality of drinking water in Ireland since 2003 have recommended the following; "All treatment plants should have a continuous chlorine

residual monitor on the final water and such monitors should be alarmed and linked to a recording device to ensure that either a sudden increase or decrease in chlorine demand or a failure of the chlorine dosing system is immediately detected. The aim of such alarms is to ensure that corrective action is initiated as quickly as possible to prevent undisinfected water entering the distribution mains”.

The principal source supplying water to the Plan area is the Castle Lake scheme. Castle Lake is a proposed Natural Heritage Area within the East Clare Local Area Plan area which feeds the Owenogarney or Ratty River, which in turn forms part of the Ratty River Cave SAC and flows into the Shannon Estuary. This is an existing water abstraction source, and abstraction is not expected to significantly increase throughout the Plan period. As such, the Habitats Directive Assessment associated with the Shannon Town & Environs Local Area Plan 2012-2018 concludes that water abstraction from Castle Lake is not likely to have a significant negative impact on the Natura 2000 Site Network. It will be ensured that any proposed increase in the abstraction volumes from Castle Lake pNHA, to provide for the drinking water resource, will not significantly affect the biodiversity value of the site, and will take into account climate change and the risk of pollution to the Lake. The status assessment of the lake for the Shannon River Basin Management Plan 2010 takes account of the current abstraction volumes. The abstraction volumes must be benchmarked against this status assessment, to ensure appropriate management of abstraction volumes in the context of protection of the site. This information will be incorporated in the SEA monitoring programme.

Water Conservation

Clare County Council acknowledges the importance of water conservation and as such support and provide measures to promote conservation of water:

- Works involving the installation of a network of bulk flow meters in order to monitor flows and determine where leakage is worst.
- Works involving active leak detection, whereby specialist teams identify leaks to be repaired using the latest sounding and correlation equipment. This work is ongoing.
- Provides for replacement and rehabilitation of water mains

Water conservation measures also focus on reduction in water wastage and allow for greater capacity for additional development in areas with deficient supply without the need to abstract further water resources. The use of innovative approaches to achieve reduction in demand from the schemes will be encouraged, this may include rainwater harvesting with a view to its re-use in various non-potable high water use areas (gardening, car wash etc).

The Clare County Development Plan 2011-2017 contains a specific objective in relation to water conservation which will apply to the Plan area:

CDP8.5 Water Conservation

It is an objective of Clare County Council:

- a) To improve efficiency in the operation and demand management of the water supply infrastructure, promote water conservation and reduce the overall level of water loss in the public water supply.*
- b) To introduction water supply metering to all premises and to promote and support the use of rainwater harvesting (in new buildings and as retrofit) where viable.*

Threats and Trends

It is apparent that substantial measures will be needed in order for Ireland to comply with the objectives of the WFD. The WFD stipulates that, as well as operational and surveillance monitoring, investigative monitoring should be implemented to establish causes of failure of water bodies to reach or maintain good status. The EPA (2011) Report on Water Quality in Ireland 2007-2009 highlights some of the main issues in relation to water quality on a national level and discusses some of the main remedies available under the WFD programme of measures.

Areas within the Shannon IRBD have one of the highest proportions of water bodies across all water types at risk from pressures. The most significant pressures on these water bodies are; diffuse pollution sources particularly from urban and agricultural land use; and morphological alterations particularly channel drainage associated with rivers, impoundments on lakes and activities associated with ports in transitional and coastal waters.

Threats to surface and ground water are increased through one-off dwellings and their reliance on conventional septic tanks in certain areas. In certain areas the soil's poor percolation characteristics render them unsuitable for conventional septic tank methods of domestic effluent disposal.

Groundwater

Groundwater quality is protected under the requirements of the European Water Framework Directive (2000/60/EEC) and new legislation introduced in 2010, namely the European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. 9 of 2010). EU and Irish legislation require that all groundwater be protected. Groundwater Protection Schemes protect both the source and the resource of drinking water supplies. The main objective of the schemes is to control development so as to prevent contamination/pollution of drinking water resources.

Ground water resources are a precious asset and are susceptible to pollution with long term consequences. Groundwater quality is influenced by surrounding geology and as stated is prone to pollution from external sources. Once polluted it is extremely difficult to remedy so prevention is always advised.

It is essential that the population has access to clean and uncontaminated fresh drinking water and is imperative that water sources are protected from potential pollution. Continuous monitoring must be carried out and protocols put in place if any of the drinking water quality parameters levels contained in the European Communities Drinking Water No. 2 Regulations 2007 are breached to ensure the health and safety of the population. To this end an exclusion zone must be put in place around the source but also restrictions to avoid potential pollution within a wider catchment zone. Groundwater quality was highlighted as an area of concern in the scoping report for Shannon Town & Environs LAP, and in this regard a Groundwater source protection project for the plan area which aims to drive source protection and management from the local community level is welcomed. Any areas of high or extreme vulnerability should be identified, mapped and set out for enhanced protection from inappropriate development or use

Surface Water

Surface water is an important issue in the Plan area for both its inhabitants and its wildlife. It must be acknowledged and accepted that there is a need for improvement and this is supported by EU and National legislation. The Water Framework Directive requires that at least good status is achieved in all water bodies by 2015 and where good or high status is present, this status should be protected and maintained with no deteriorations in water quality permitted for any waterbody. The recently published Waste Water Discharge (Authorisation) Regulations 2007 has placed increased

obligations on Water Service Authorities relating to the licensing of discharge from waste water treatment plants, facilitating greater implementation of the Water Framework Directive and other relevant EU Directives.

The plan area is located within the Shannon River Basin District and work is on-going to determine water quality in areas where data is lacking and to further identify pressures on them. The River Basin Management Plan was adopted in July 2010 and sets the environmental objectives together with actions (known as the Programme of Measures) that will ensure these objectives are achieved in practice. Clare County Council will be obliged to ensure the objectives identified in the management plans are achieved.

Estuarine Waters

Estuarine waters are subject to a wide variety of environmental threats and pressures. These include inputs of organic matter, nutrients and contaminants from sources such as urban waste water, industrial discharges, riverine inputs and accidental spillages. Local impacts can also arise from marine-based activities such as dredging and aquaculture.

The Shannon Estuary SAC is a natural asset and valuable resource to the county and country which must be balanced positively and sustainably. The estuary is a habitat and breeding ground for many protected species especially the Sargasso salmon. The large expanses of salt marshes and mudflats along the estuary shoreline are annex habitats, and of critical importance for the large numbers of overwintering wildfowl and waders they support.

Flooding

Flooding in the Shannon Plan area has been an issue over recent years caused by a variety of factors including heavy rainfall/runoff, low lying land, tidal and wind factors as well as drain and channel maintenance, or through a combination of these factors. Development can exacerbate the problems of flooding by accelerating and increasing surface water runoff, altering watercourses and removing floodplain storage. It can also impact on human activities, their property and the environment. Assets at risk can include housing, transport and public service infrastructure, and commercial, industrial and agricultural enterprises. The health, social, economic and environmental impacts of flooding can be significant and have a wide community impact. It is now recognised that flood risk management must be treated as a central issue in the development of an area and therefore strict adherence to appropriate zoning of lands and restriction of use applied in the Shannon Town & Environs LAP 2012-2018 in areas liable to flooding must apply.

The Planning System and Flood Risk Management Guidelines (2009) require the planning system to:

- (1) Avoid development in areas at risk of flooding by not permitting development in flood risk areas, particularly floodplains, unless where it is fully justified that there are wider sustainability grounds for appropriate development and unless the flood risk can be managed to an acceptable level without increasing flood risk elsewhere and where possible, reducing flood risk overall;*
- (2) Adopt a sequential approach to flood risk management based on avoidance, reduction and then mitigation of flood risk as the overall framework for assessing the location of new development in the development planning processes; and*
- (3) Incorporate flood risk assessment into the process of making decisions on planning applications and planning appeals.*

The plan area is at risk from several sources of flooding including estuarine and fluvial flooding. Floodplains have, therefore, a valuable function both in attenuating or storing floodwater and through their ability to convey floodwater in a relatively controlled and safe way. Areas of floodplain and wetlands should therefore be recognised and preserved to the extent possible as natural defences against flood risk. Linkages to flooding and green corridors should also be recognised. Objectives for the protection of existing wetland habitats are dealt with in the Clare County Development Plan (Objective 9.2 and 9.15).

The OPW Flood Risk Management approach should also be considered in consultation with the OPW where there is potential risk of flooding in the ST&E LAP area. Clare County Council recognises that the prevention of flooding is a critical issue to the long-term development of Shannon and has incorporated measures to address this issue.

Drinking Water

Maintenance and management of the operation of Water Treatment Plants are continuously under review and are monitored in accordance with the requirements set down under the European Communities (Drinking Water) Regulations, 2000. Samples of water at various stages on water schemes are taken on a regular basis. A report on the quality of water is produced monthly and is available from the County Council offices.

In relation to the quality of the water supplied the most recent data available from the EPA on water quality analysis is from 2006. In that year Clare County Council carried out analysis on 529 check and 54 audit samples during.

The overall rate of compliance in County Clare was 98.2%, a figure above the national average and an improvement from 97.7% in 2005. Although private group water schemes in Clare were generally of a higher quality than those in the majority of other local authorities, there were still a number of quality deficient schemes during 2006 with 3 of the 11 schemes monitored contaminated during the year (2 of which were also contaminated during 2005).

The issue of water quality is critically important to the health and welfare of the resident population and measures will be required to address the basic issues of resource protection, water treatment and distribution

Water Conservation

Studies estimate that nationally, almost half the water being produced is Unaccounted for Water (UFW). This means that for every 10 litres of water produced 5 litres are wasted through consumer negligence, leaking pipes or lost through illegal or unknown connections. Reducing water usage and waste means savings in the cost of water treatment and pumping, more capacity in the existing treatment and pumping assets and reduced water bills for consumers. Water conservation measures such as tap aerators, low flow shower heads, cistern displacement devices, rainwater harvesting systems etc should be considered as alternative household water usage methods.

Information Gaps

Water Quality Records are continually being monitored. The most up to date information has been utilised but it is accepted that this may change over the lifetime of the plan making process and thus will be updated accordingly.

Hydrometric information on the LAP area is being addressed and it is envisaged that further analysis on this will be incorporated, as relevant and appropriate, into the Environmental Report and Plan, particularly in relation to water services and waste

water treatment as the plan process ensues.

Effects of Not Implementing the Plan

There is significant legislation which provides for the protection and enhancement of water resources and quality at European, National, Regional and County level. These include the Water Framework Directive and associated EU Directives, the Shannon River Basin Management Plan, and associated WMU action plans, the Planning Guidelines on Flooding and Risk Management and the Clare County Development Plan 2011-2017. In the absence of the ST&E LAP 2012-2018, these instruments will continue to provide universal protection to surface, groundwater and estuarine waters and their associated habitats and species. However, there would not be a localised settlement specific planning framework within which to regulate, aid and/or control development whether economic, social or environmental. The Local Area Plan sets out specific zoning objectives for Shannon Town and is adaptable to local issues, particularly in relation to potable water, wastewater treatment and land development. The combination of all approaches will yield the best approach to improving and safeguarding water resources.

If new and uncontrolled development is not accompanied by appropriate wastewater infrastructure/capacity then it is most likely that surface and groundwater bodies would fail to meet the objectives of the WFD; and there would be significant adverse direct and indirect impacts, etc. on water and the other environmental parameters to varying degrees. For example, human health would be directly adversely affected as a result of poor water quality. Furthermore, in the absence of the Plan, the issue of Sustainable Drainage Systems (SuDS) would not be implemented in site specific locations, thus surface water run-off due to uncontrolled development would be discharged directly into the groundwater system. The cumulative effects of such run-off have the potential if combined with other factors, e.g. severe rainfall, to result in flooding. Biodiversity would be exposed and vulnerable to a direct loss of species types and numbers, and tourism could indirectly suffer if water bodies in the surrounding plan area suffered reduction in their water quality status.

While EU and national legislation will apply, the primary issues affecting water quality and flood control such as population increase, loss of floodplain, increased run-off etc which can be controlled at the LAP level will not be addressed adequately at a local level. Ultimately the result would be unsustainable and undesirable.

4.6 Air and Climatic Factors

Air Quality

Air quality monitoring in Ireland is undertaken largely to implement EC Directives on smoke and sulphur dioxide (SO₂), lead, ozone and nitrogen dioxide (NO₂) and to assess compliance with national air quality standards.

Apart from the ozone network, established in 1994, virtually all sites used for these purposes are operated by Local Authorities, which are funded by the Department of the Environment, Community and Local Government. The vast majority of these sites monitor smoke and SO₂ only. A number of local or regional monitoring networks are also in operation where measurements by statutory bodies are also concentrated on smoke and SO₂. However in recent years, the Environmental Protection Agency has become involved in air quality monitoring and has installed a number of air quality monitoring stations throughout Ireland, including Shannon.

The Shannon site is located on Clare County Council premises within the town. There has only been one exceedance of the daily PM10 value of 50ug/m³ and no exceedances of the hourly limit value for NO₂ in the first ten months of

2011. Benzene, SO₂ and CO levels have all been low, below their respective lower assessment threshold levels, and are typical of Zone D town concentrations across the network. The Real-Time monitoring began in March 2011 and it expected to continue until 2012. The purpose of an air quality index is to express complex air quality information in simple terms. Five bands are used in the Irish index:

- Very good
- Good
- Fair
- Poor
- Very poor

The index is based on a maximum of four parameters; the one-hour average of SO₂ (sulphur dioxide), NO₂ (nitrogen dioxide) and O₃ (ozone), combined with the rolling 24-hour average of PM₁₀ (particulate matter with diameter less than ten microns). All figures are rounded to the nearest whole number. The index rating derived at Shannon is for overall air quality in Zone D which is made up of rural parts of the country, villages and towns. Currently the air quality there is 'Good'. Air quality is also tested at nearby Ennis, an area which is classified as in Zone C, which includes cities and large towns with a population of >15,000. Currently the air quality there is 'Very Good'.

The quality of air at Shannon airport is monitored at 6 monthly intervals in three strategic locations over continuous 10-day periods. The monitoring programme collects a range of data for a number of prescribed parameters, which are then compiled in a detailed report for review by the Safety & Environmental Department at Shannon Airport.

IPPC

The EPA has been licensing certain large-scale industrial and agriculture activities since 1994 under the remit of the Protection of the Environment Act (2003) which gave effect to the Integrated Pollution Prevention Control (IPPC) Directive 2008/1/EC. IPPC licences aim to prevent or reduce emissions to air, water and land, reduce waste and use energy/resources efficiently. There are 9 Integrated Pollution Prevention Control (IPPC) licensed activities within the boundary of the Shannon Town & Environs Local Area Plan; these are outlined in Map 4.6.1.

Facility	IPPC No.	Location	Principle Activity
UCB Manufacturing Ireland Ltd	P0020-02	Shannon Free Zone	5.16.0: Chemicals
Shannon Aerospace Limited	P0069-02	Shannon Airport	12.2.0 Surface Coatings
Devcon Limited	P0072-03	Shannon Ind. Est.	5.12.0 Chemicals
Chemifloc Limited	P0076-01	Smithstown Ind. Est.	5.4.0: Chemicals
Heraeus Metal Processing Limited	P0145-01	Shannon Ind. Est.	Metals
Molex Ireland Limited	P0288-02	Shannon Ind. Est.	Surface Coatings
Galvotech (International) Limited	P0292-01	Smithstown Ind. Est.	Surface Coatings
Lufthansa Technik Painting Shannon Limited	P0497-02	Shannon Airport	Surface Coatings
Element Six	P0533-01	Shannon Ind. Est.	Mineral Fibres and Glass

Climate Change

Climate change and the effects associated with it, presents a significant challenge to everyone. It is a transboundary issue affecting the entire globe and is fundamental to social stability and sustainable development. It is widely recognised that the build up of atmospheric Greenhouse Gases (GHG's) such as carbon dioxide is threatening global climate stability. It is also acknowledged that Global warming is associated with human activity with most GHG emissions are related to the energy generation, transport, and agriculture and industry sectors. Ireland ratified the UN Framework Convention on Climate change in 1994 and the Kyoto Protocol in 1997. Ireland has given an undertaking to limit the net growth of GHG to 13% above 1990 levels by the period 2008-2012. However the economic growth witnessed in Ireland over the past decade has resulted in GHG emissions being 29% above 1990 levels in 2002. Better use of energy and modal shifts in transportation will help to reduce Green House Gas generation.

In 2007, the European Union agreed new climate and energy targets- 20-20-20 by 2020- 20% reduction in greenhouse gas emissions; 20% energy efficiency and 20% of the EU's energy consumption to be from renewable sources all by 2020. Following on from this Ireland has given an undertaking to reduce net emissions by at least 80% by 2050 (on 1990 levels) and an emissions reduction trajectory of an average of 3% per year until 2020 as set out in the Climate Change Bill, 2010. 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 2011-2017

Alternative modes of transport for all ages will be encouraged within Shannon, including a cycle strategy and smarter travel initiatives, which will seek to address urban traffic generated air pollution by reducing car dependency.

Climate Change – Energy Related

It is acknowledged that global warming is contributing to climate change and that global warming is associated with human activity. An agreed target has been set by the Kyoto Protocol for the EU to reduce Green House Gases (GHG's) by 8% for the period 2008- 2012. Ireland has a specific target reduction within this limit that is set as 13% above the 1990 levels. Sir Nicholas Stern presented the Stern Review to the UK government on October 30th 2006. The review addressed the significant economic implications associated with a failure to address climate change issues:

"Climate change will affect the basic elements of life for people around the world – access to water, food production, health, and the environment. Hundreds of millions of people could suffer hunger, water shortages and coastal flooding as the world warms."

"Using the results from formal economic models, the Review estimates that if we don't act, the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year, now and forever. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20% of GDP or more."

"In contrast, the costs of action – reducing greenhouse gas emissions to avoid the worst impacts of climate change – can be limited to around 1% of global GDP each year."

A Limerick Clare Climate Change Strategy was published in 2006. The Strategy sets out to address the local delivery of national policy. The Council recognises that savings

must be made, that substantial changes are necessary to reduce CO₂ emissions and that alternatives need to be provided in order for Ireland to become a low-carbon generating economy and society.

Table 4.6.1 - Energy Related CO₂ Reductions Sought in County Clare

'000 Tonnes CO ₂	County Clare	
	2010	2020
Energy Production & Supply	204.9	339.9
Transport	60.8	78.7
Built Environment	22.2	39.1
Industry/Commercial Services	52.9	55.8
Agriculture	12.0	22.2
Waste	5.4	5.4
Total	358.2	541.1

Source: "Mid West Regional Climate Change Strategy" (2008) MWRA

As a whole, County Clare's energy consumption and CO₂ emissions are higher than the National average. To enable the County to develop a low carbon economy it is important that everybody in Clare reduces their CO₂ emissions by 5.2 tonnes per annum; this can be achieved through employing energy conservation methods and increased energy efficiency in buildings and utilizing alternative sources of energy. The challenge of addressing climate change can present many opportunities. The development of a low carbon economy and society has been identified as a significant opportunity to create many jobs in clean energy technologies.

Threats and Trends

Air Quality

Overall, road traffic has now become the greatest source of air pollution generally. In urban areas, concern has clearly shifted to a range of pollutants associated with this source which may be considered relatively new in the context of air quality control. The most important of these pollutants are NO₂, particulate matter less than 10 microns in diameter (PM₁₀), carbon monoxide (CO) and a wide variety of Volatile Organic Compounds (VOC), including carcinogens such as benzene.

Advances in engine technology and fuel development will, it is predicted, offset any rise in tail pipe emissions from increased car usage due to an increased population. The plan area is urban in nature where high traffic flows are common. Therefore it is important that a good quality public transport is provided and alternatives to the private car are encouraged where possible including sufficient cycle/pedestrian paths where suitable. The addition of tentative Electric Vehicle charge points within the plan area is also welcomed. According to the Limerick Clare Energy Agency, the transport sector has emerged as the sector with both the greatest share of energy consumption. Correspondingly, this sector also shows the highest increase in the level of emissions since 1990 with a 143% increase to 2005. This trend is set to continue unless greenhouse gas emissions are strongly targeted. In County Clare, CO₂ reductions per capita of 4.7 tonnes are required. The transport sector provides significant opportunities for greenhouse gas abatement, and it is imperative that sustainable mobility policies are devised and implemented in order to meet our commitments under the Kyoto Protocol. Such policies must be integrated as part of sustainable planning and development.

Climate Change

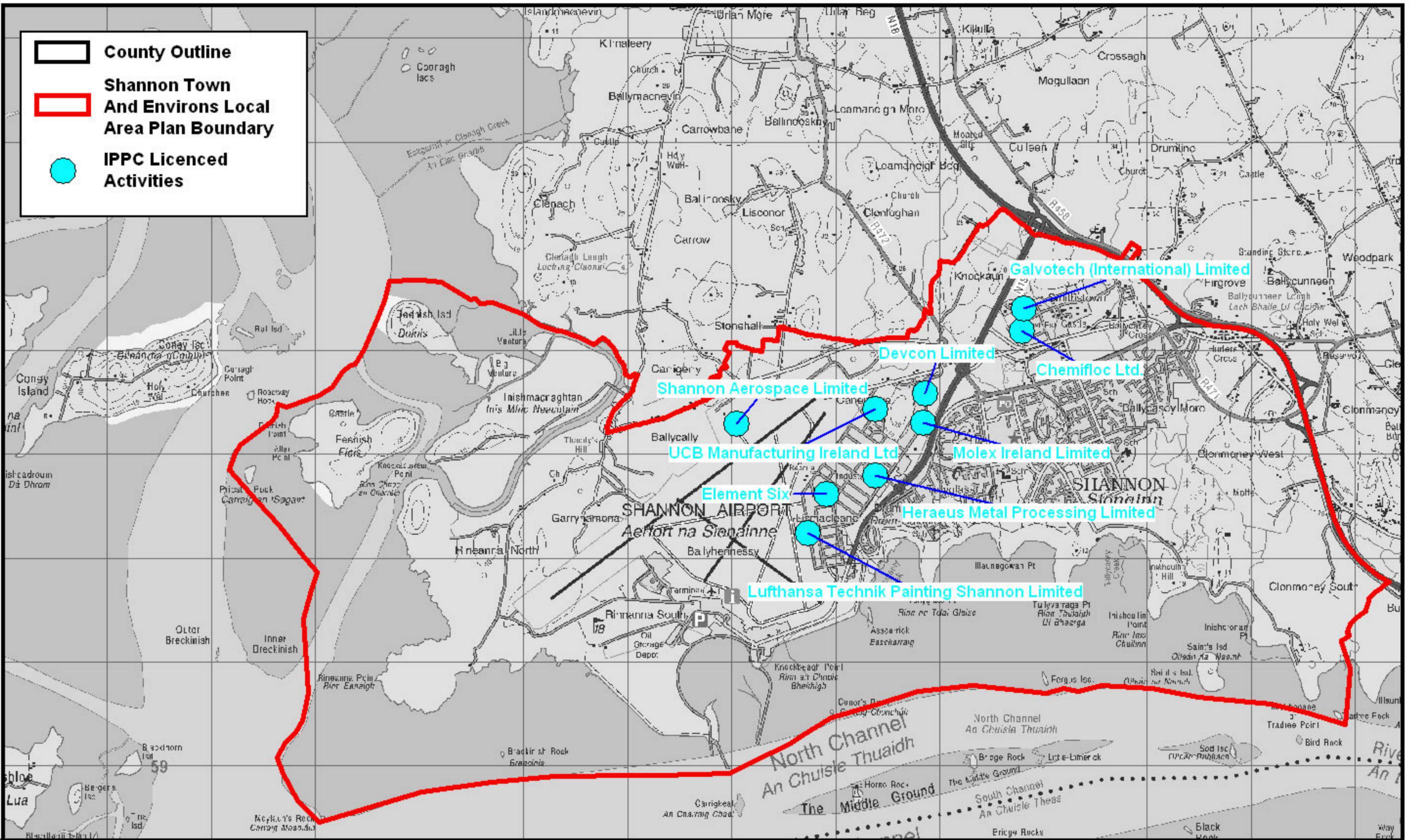
The issues relating to Climate Change are acknowledged through the implementation of Ireland's National Climate Strategy 2007-2012, the Council's participation in the Mid West Regional Climate Strategy and local implementation of the reductions of the Councils CO2 emissions. Planning will coordinate with the Environmental Department on this issue. The locational policies on Transport in the Clare County Development Plan 2011-2017 seek to address traffic generated air pollution by reducing car dependency and encouraging alternative modes of transport. County Clare has a long and proud tradition of producing reliable and secure energy resources for the nation. It is an objective of the Clare County Council to develop a Renewable Energy Strategy within the lifetime of the Clare County Development Plan 2011-2017. This will outline and encourage this tradition, making a significant contribution to reducing Ireland's energy related CO2 emissions and creating employment.

Information Gaps

The Limerick Clare Energy Agency together with Clare County Council are continually researching and publishing new data on the effects of climate change, it is envisaged that this new data will form part of the review process of the Clare County Development Plan 2011-2017 and in turn the ST&E AP 2012-2018 as well as forming the basis of the Renewable Energy Strategy for County Clare

Effects of Not Implementing the Plan

In the absence of the ST&E LAP 2012-2018 there would not be a localised settlement specific planning framework within which to regulate, aid and/or control development whether economic, social or environmental. Air pollution would impact on the health of sensitive populations or groups and eco systems. In the absence of the Plan sustainable mobility objectives may not be implemented thus the transport sector which is a great energy consumer could not be monitored. Specific issues associated with climate change such as sea-level rise, extreme flooding and drought, changes in species distribution would continue unchecked and lead to catastrophic consequences, for example, continued and increased flooding, significant risk to human quality of life, property, biodiversity, agriculture productivity and water quality.



County Outline

Shannon Town And Environs Local Area Plan Boundary

IPPC Licenced Activities

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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018		
TITLE: Map 4.6.1 IPPC Locations In Plan Area		
SCALE: NOT TO SCALE	PROJECT NO.	DRAWING NO.
DATE: OCTOBER 2012	DRAWN BY: P. McMANUS	CHECKED: B. Mc Carthy

4.7 Material Assets

The EPA SEA Process Draft Checklist (2008) defines material assets as the critical infrastructure essential for the functioning of society such as: electricity generation and distribution, water supply, wastewater treatment, transportation, etc. Thus this section will discuss the following:

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

1. Transportation

The Limerick/Shannon area is designated as a Gateway under the National Spatial Strategy. Gateways are strategically located both nationally and relative to their surrounding areas. Such centres provide national-scale social, economic infrastructure and support services. Further development of these Gateways is a key component of the National Spatial Strategy. This designation has brought forward improvements in transport infrastructure.

Road Network

Roads are considered the main transport infrastructure and are the main focus of funding. Car dependency is a major issue in the locality and from the 2006 census it can be seen that 3,523 people travel by car to work even though 3,369 people live within 4km, and 3,805 people live within 15 minutes of their workplace (C.S.O 2006). 1589 households had one car and 866 had two cars.

Shannon is located relative to two National Primary Roads, the N18/M18 Limerick to Galway road, and the N19 which links the N18 with Shannon Airport. There are no National Secondary Roads directly serving the Plan area.

The Plan area is also served by many regional roads which link important centres within the plan area and outside, these include:

- R471 - Shannon to Sixmilebridge
- R472 - Shannon to Newmarket on Fergus

These roads are illustrated on Map 4.7.1 and provide an important function in linking the smaller peripheral towns and villages to the larger Shannon urban centre. Recently completed road improvement works on the N18 and N19 have considerably shortened journey times and allow for easier movement between Limerick and Shannon and Ennis and Shannon. The Shannon Tunnel crossing project has also improved the linkages between these areas.

Air/Water

The NSS recognises the important transatlantic role of Shannon International Airport and its strategic location between Limerick and Galway and the wide catchment area that it facilitates in the West. It is a key infrastructural safeguard in the Mid-West Region having the second longest runway in Europe and preclearance facilities for entry to the US. This has rendered it a key hub for transport and communication between Asia and the Americas and the choice location for Lynx Cargo global air freight hub which will see a specialised facility designed to bring in new freight opportunities to Shannon from transport and logistics companies both in Ireland and

abroad.

Clare County Council recognises the importance of Shannon Airport as being essential for the future economic prospects of County Clare and the Mid West and Western Regions. This can be achieved through improved access to the airport in terms of public transport.

Rail

There is no existing rail service in Shannon however, an Infrastructure Safeguard for the Shannon – Limerick rail link is outlined in the land use map for the ST&E LAP, and there is also provision for a central station within the Town Centre. It is an objective within the Clare County Development Plan 2011-2017 'to permit developments within the selected proposed route of the Shannon Rail Link where it is demonstrated that such developments will not inhibit the future development of the selected route as a rail link' (CDP 11.11).

It can be noted however, that Transport 21 provided for a study to be undertaken by Shannon Rail Partnership (2007) to examine the viability of a rail link as part of a preliminary feasibility study; it did not provide for the link to be commissioned. The study (2007) highlighted among others, the significant capital costs of developing such a link.

Bus Network

Shannon is served by Bus Éireann daily intercity buses, with routes to Limerick, Ennis and Galway. However there is no local bus service, which negates travelling by bus as a viable option and accelerates car dependence.

Bus Éireann operates daily intercity services (No. 051 Cork –Galway /No. 055 Galway – Rosslare Harbour) which pass through the ST&E LAP area and stops at Shannon Airport.

There is a sparse regional bus service run by Bus Éireann within the peripheral rural area which stops within the ST&E LAP plan area, this includes;

- 343 Limerick - Shannon Airport
- 341 Shannon – Limerick-Newport- Cappamore
- 344 Ennis –Shannon

Routes between Shannon Airport and Sixmilebridge Rail Station are offered by local bus operators. Clare Accessible Transport also provides a community transport service to residents in County Clare, including a route between Shannon and Ennis. This service was set up under the Rural Transport Initiative. This lack of a regular and reliable public transport service within the town means that the private car is by far the predominant form of transport within the Shannon plan area.

Taxi

Shannon is well serviced by a number local taxi companies which operate from within the town centre, airport and offer a call out service.

Pedestrians & Cyclists

Shannon is strategically well equipped to cater for an increase in pedestrian and cycle paths. Improvement to the existing lanes/paths and linkages to service areas and open space are encouraged as set out in the following objectives within the ST&E LAP:

Objective 11.8: To outline and implement a walking strategy for the Plan area, based on a series of looped walking trails that seek to maximise the key green ways, open spaces and wooded areas.

Objective 11.9: To outline and implement a cycling strategy for the Plan area, which builds on and connects the existing cycle network, providing high amenity, accessible corridors linking the town centre with the Industrial Zone, Airport and residential neighbourhoods, and offering an alternative and efficient modal choice other than the private car.

The plan has selected various walking routes around the town which aid in the overall vision for accessibility, permeability and a sense of place. It is also envisaged that a cycle strategy for the town as discussed in the ST&E LAP will appropriately designate suitable routes and further promote cycling as an alternative mode of transport in line with smarter travel. These provisional routes are illustrated in Map 4.7.2.

This interrelationship between pedestrian access and biodiversity is also addressed in Chapter 11 Green Infrastructure of the Shannon Town & Environs Local Area Plan 2012-2018.

Improvement to the existing lands/paths and linkages to service areas and open space is encouraged as set out in the CDP objectives 11.18 of the CCDP 2011-2017: Promote and encourage sustainable, environmentally friendly modes of transport; and provide, where appropriate, the necessary physical infrastructure to make cycling and footpaths more user friendly. The SEA recommends that the final ST&E LAP 2012-2018 makes reference to the recently published National Cycling Policy Framework.

Transportation - Threats and Trends

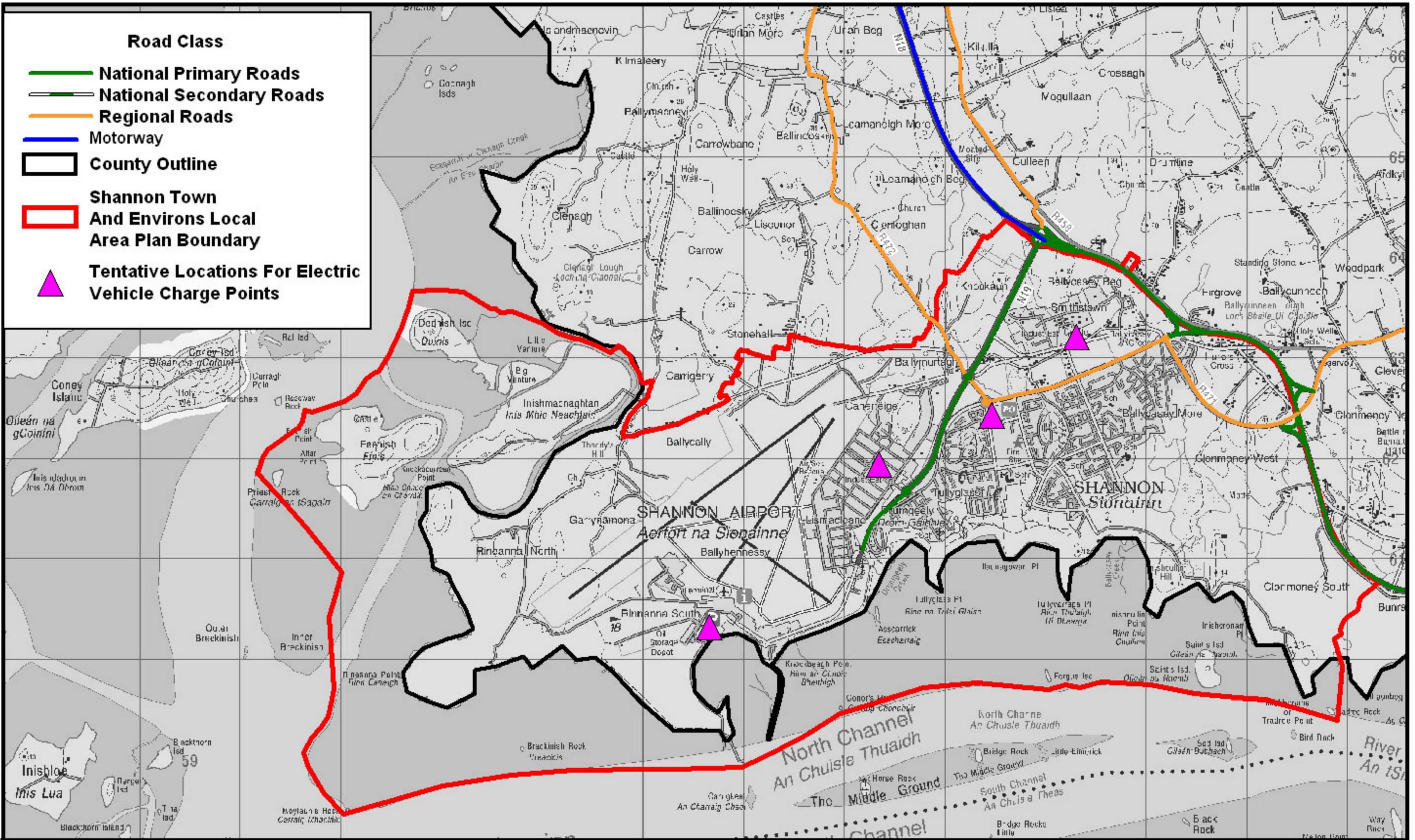
Transportation is one of the cornerstones of the Irish economy and will continue to be promoted as an essential component to the further sustainable development of Shannon.

The role of Clare County Council will be to encourage and facilitate the ongoing development potential of Shannon Airport and its surrounding environs and to safeguard the current and future operational, safety and technical development requirements of the airport (CDP 11.15).

However, the function of the Local Authority can be somewhat limited in that the National Roads Authority are directly responsible for the national roads network, funding for all Regional and Local roads comes principally from the Department of Transport, Iarnród Éireann are directly responsible for the rail network and Bus Éireann and other private operators are responsible for public bus services. However, the Local Authority will continue to liaise with the relevant authorities in enhancing service provision to the inhabitants of the Plan area taking into consideration the provisions of various instruments including the Department of Transport 2020 Vision – Sustainable Travel and Transport Public Consultation Document (Feb 2008), Spatial Planning and National Roads (2012) Guidelines for Planning Authorities, The National Roads Traffic Management Study (2011), the National Roads Secondary Roads Needs Study (March 2011) and the Policy on the Provision of Tourist and Leisure Signage on National Roads (March 2011). It is also a requirement of the National Roads Authority and an objective of Clare County Council to limit direct access onto National routes

which can directly impact on the transportation network. Appropriate lighting, signage and safety concerns will need to be assessed and developed in association with the walking and cycling routes.

It is apparent that the existing bus network in Shannon is irregular and incomprehensive and the car is the dependent form of transport. The ST&E LAP 2012-2018 aims to address this issue and encourage the growth of walkable communities, where residents can access services and facilities through the use of direct, safe and convenient pathways. The selection of specific walking routes and a cycle strategy for the town is welcomed. In addition to these measures, the promotion of more environmentally friendly transport initiatives including a bike scheme and a shuttle bus from the Enterprise Zonings to the Town Centre among others are required in order to address this and meet the social needs of the community. The introduction of ESB Charge Points at appropriate locations throughout the plan area in accordance with CDP Objective 10.14 to facilitate the provision of powering electric vehicles is also a welcome addition.



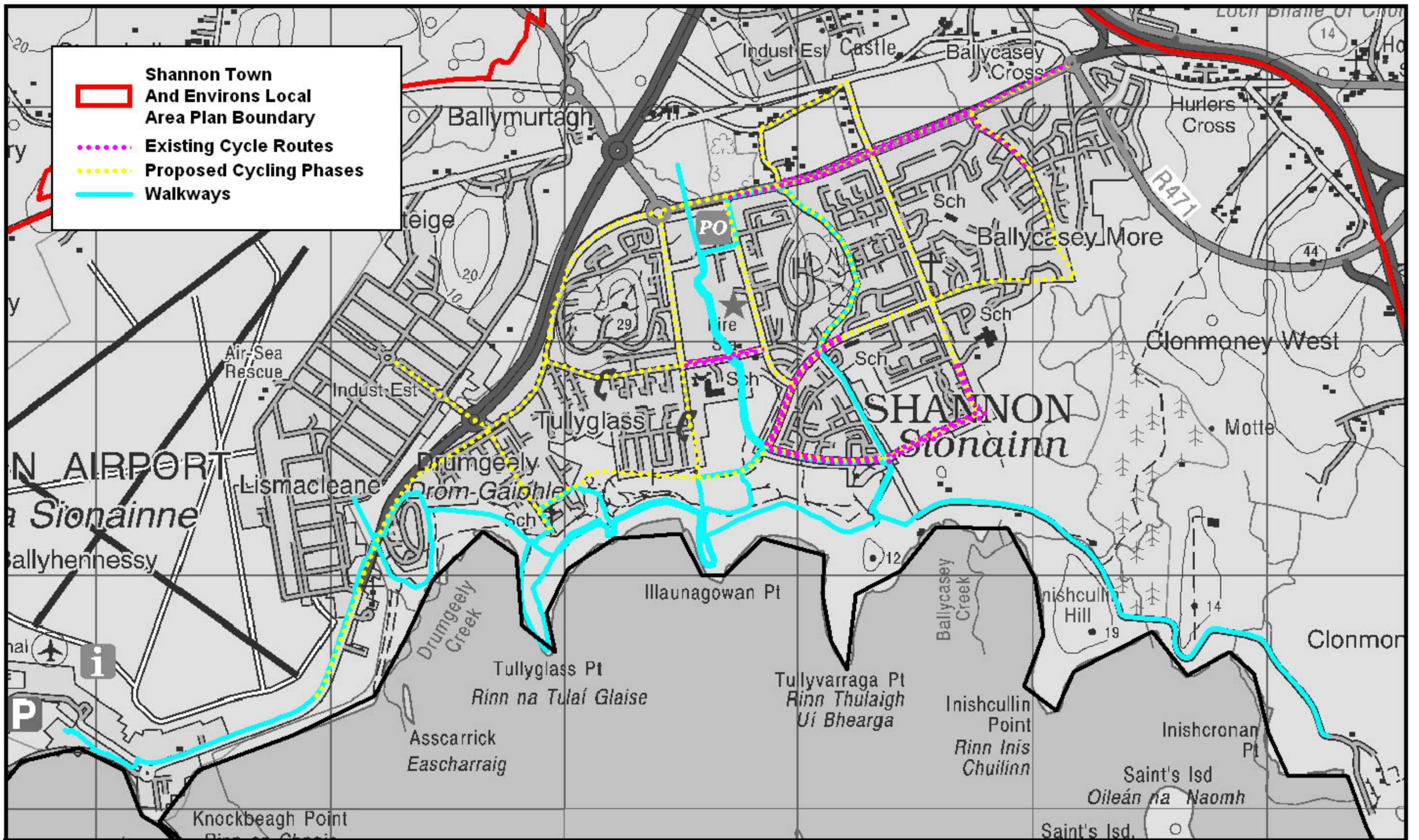
**Clare
County
Council**

Comhairle Contae An Chláir

Tel. (065) 6821616 Fax (065) 6828233 Web: www.clarecoco.ie

Planning and Enterprise Development,
Áras Contae an Chláir,
New Road,
Ennis.

PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018		
TITLE: Map 4.7.1 Road Network In Plan Area Incl. Electric Vehicle Charge Points		
SCALE: NOT TO SCALE	PROJECT NO.	DRAWING NO.
DATE: OCTOBER 2012	DRAWN BY: P. McMANUS	CHECKED: B. MCCARTHY



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Planning and Enterprise Development,
Áras Contae an Chláir,
New Road,
Ennis.

PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018

TITLE: Map 4.7.2 Walkways and Cycling Routes

SCALE: NOT TO SCALE

PROJECT NO.

DRAWING NO.

DATE:
OCTOBER 2012

DRAWN BY:
P. McMANUS

CHECKED:
B. McCARTHY

2. Waste Management

The EPA National Waste Report 2009 confirms that on average, approximately 65% of waste in Ireland is sent to landfill. This amount of waste can be reduced by prevention, minimisation, reuse and recycling. Recycling reduces the use of raw materials, lowers energy costs and results in less waste going to landfill. The disposal of waste material is an important issue. Limited landfill capacity means that an increasing amount of our household and commercial waste needs to be recycled.

There has been a National reduction in recent years of municipal waste going to landfill where quantities fell from 3.4 million tonnes in 2006 to just under 3 million tonnes in 2009, this is primarily due to the economic slowdown and cannot be attributed to long term accuracy.

Construction and Development (C&D) waste makes up the majority of the waste created in the county but this has substantially collapsed by 61% nationally, Co. Clare displayed a 47% decrease in C&D waste collected between 2008 and 2009.

In Clare County, the annual quantity of waste generated per person decreased by over 30% to 298kg between 2006 and 2009, this is below the national average of 365kg per person average (EPA National Waste Report, 2009). This reduction can be attributed to household recycling rates which have been growing from the period 2006 to 2009 which showed a recycling rate increase from 32.5%(2006) to 43.12%(2009) and particularly in 2010 where 45.84% of all collected household waste was recycled.

It is expected that these levels of recycling shall continue to improve in future years due to an increased awareness, and promotion of the need to segregate and divert organic/food waste from landfill, and implement more sustainable means of recovery and recycling of such waste.

The final target of 50% recycling rate by 2013 comes from a national target set down as part of the effort to divert waste from landfill in accordance with EU Directives relating to packaging and biodegradable waste.

The Replacement Waste Management Plan 2006-2011 is currently in effect in the Shannon Town & Environs LAP area, however, a replacement document is being prepared by the Local Authorities of Clare County Council, Kerry County Council, Limerick City Council and Limerick County Council which will be adopted within the lifetime of the plan and implemented in the ST&E LAP area.

The Waste Management Plan is aimed at securing the best environmental management of waste, including prevention and minimisation where possible and practical. The Plan aims to ensure that waste is used as a resource, resulting in a better solution for the people and the environment in the region.

In July 2007, a EUR1.2 million recycling centre was opened in Shannon. The facility caters for all major recycling streams in addition to waste oil, batteries, metal, textiles, W.E.E.E and timber. There are also recycling bring banks located on the grounds of Shannon Leisure Centre. Clare County Council also provide home composters and encourage the composting of household organic waste thus reducing need for landfill. Clare County Council no longer provide a waste collection service but do supply a list of permitted waste collection operators in the Clare region. The compost demonstration site in Shannon is a pioneering initiative supported by Clare County Council and the Stop Food Waste Initiative of the EPA which promotes composting of decomposable waste. The increased provision of allotments in Shannon is also encouraged.

A pioneering waste prevention project was undertaken in 2006/2007 at the Sky Court

Shopping Centre by the shopping centre’s traders with the assistance of Clare County Council and the Limerick Clare Kerry Regional Waste Management Office. Over a 30-month period, people’s consciousness of best practice in waste management was raised but also waste disposal and recycling costs was reduced by 33%.

Shannon is also involved in the Tidy Towns competition which raises environmental awareness and contributes to community life. The Town Council rates environmental issues highly as is evident from the range of policies including the ‘Litter Management Plan 2010-2013’ which it embraces.

Waste Licensing and Permitting

In 1996, the EPA began licensing certain activities in the waste sector. These include landfills, transfer stations, hazardous waste disposal and other significant waste disposal and recovery activities. All related waste operations connected to the activity are considered in determining a licence application. The EPA must be satisfied that the activity will not cause environmental pollution when carried on in accordance with the licence conditions. Detailed procedures on processing waste licence applications are set out in the Waste Management Acts 1996 to 2011 and associated regulations. The following Table 4.7.1 outlines the waste licenses within the Shannon Town & Environs LAP area.

Table 4.7.1 – Waste Licence Facilities in ST&E LAP area

Applicant Name	Reg. No.	Facility Name	Location Facility	Type of Facility	Description of Principal Class of Activity
Clare County Council	W0037-01	Tradaree Point E.T.P.	Shannon, (Clonmoney South), Co. Clare	Sludge Treatment Facility	Sludge Treatment
Shannon Environmental Services Ltd.	W0041-01	Enva Ireland Ltd Trading As Enva	Smithstown Industrial Estate, Shannon, Co. Clare	Hazardous Waste Facility	Hazardous Waste

Waste Management - Threats and Trends

Illegal dumping remains a problem in the plan area, and throughout the county, and the proposed increases in enforcement activity and staffing will assist greatly in tracking down unauthorised collectors of waste as well as the origins of the disposed material. It is recognised in the Replacement Waste Management Plan 2006-2011 that increased public awareness and education are fundamental to the achievement of these objectives.

Other threats which have been outlined in the joint waste management plan include;

- No security of supply for Thermal Treatment Facilities;
- No major Construction and Demolition waste recycling Facilities (Also a National issue);
- Alternatives processes and technologies for the Treatment of Biological Waste.

St. Tolas, St. Conaires & St.Senans primary schools & St. Caimins secondary school currently are the schools within the plan area among 93 schools in Clare to have achieved green flag status as part of the Green Schools Initiative in 2011. It is hoped that further education and awareness of waste management through, interalia, the Green Schools Initiative is promoted and encouraged.

3. Water Supply Existing Environment

Water supply in the Shannon LAP area is derived from the Castle Lake scheme at Sixmilebridge. The lake is currently classified as mesotrophic, meaning that it is of

intermediate productivity, and is within an area of 'extreme' groundwater vulnerability (GSI). This signifies its importance as a resource which requires increased protection.

Castle Lake is a proposed Natural Heritage Area within the East Clare Plan area which feeds the Owenogarney or Ratty River, which in turn forms part of the Ratty River Cave SAC and flows into the Shannon Estuary SAC. This is an existing water abstraction source, and abstraction is not expected to significantly increase throughout the Plan period. As such, water abstraction from Castle Lake is not likely to have a significant negative impact on the Natura 2000 Site Network.

The Castle Lake scheme supplies Newmarket-on-Fergus, Quin and Sixmilebridge in addition to Shannon and will eventually augment the Ennis supply. The water is stored in a reservoir in Moygalla, outside Sixmilebridge; from this a gravity pipe takes water to Clonmoney, Bunratty and on to surrounding settlements. This gravity pipe can only deliver at a certain rate and required upgrade. The Castle Lake scheme currently has excess capacity, but there are issues in relation to the supply of drinking water to the southern and eastern parts of South Clare. This area is currently dependant on group schemes and from supplies from Limerick Corporation which are approaching capacity. This issue may have the effect of restricting future development in the rural peripheral areas of Shannon.

Shannon Airport has its own water supply independent from the Castle Lake public supply which serves the majority of the plan area. This supply is derived from Rosroe Lough, which is a proposed Natural Heritage Area, has a WFD 'Moderate' lake water body status and is within an area of 'high' groundwater vulnerability (GSI). This supply is treated on site at Rosroe, stored in a reservoir at Hurlers Cross and finally utilised as required by the Airport. There is an interconnector between this and the public supply however, has not been put to use in recent years. This supply is monitored by Clare County Council.

Clare County Council is also responsible for the operation of 24 Public Water Supplies serving a population of 84,313. To protect the broader water resource from impacts caused by abstraction, the Clare County Development Plan 2011 – 2017 contains three objectives specific to water supply and protection, namely,

- Objective CDP 8.4: Water Supply,
- Objective CDP 8.5: Water Conservation, and
- Objective CDP 8.6: Water Abstraction.

Microbiological compliance has increased in Public Water Supplies in Co. Clare from 99.7% in 2008 to 100% in 2009 whilst chemical compliance levels have decreased from 99.3% in 2008 to 99.0% in 2009. This decrease can be accounted for because of poorer compliance with the new trihalomethane standard which changed from 150 µg/l to 100 µg/l on 25th December 2008. In 2009, Shannon along with 6 others PWS were removed from the Remedial Action List (Ardataggle, Broadford, Ennis, Ennistymon, Kildysert, Miltown Malbay) and none were added. Further relevant information on drinking water quality in the ST&E LAP area is located in Section 4.5.

Water Supply - Threats and Trends

The European Communities (Drinking Water) Regulations, 2000 took effect in Ireland on 1st Jan 2004 and set standards in relation to water quality. The issue is critically important to the health and welfare of the resident population and measures will be required to address the basic issues of resource protection, water treatment and distribution in compliance with these Regulations.

Clare County Council, as the Water Services Authority for the County, is responsible for providing and maintaining adequate public water supply infrastructure throughout

the plan area as well as the maintenance and management of the operation of Water Treatment Plants. This process is continually under review and monitored in accordance with the requirements set down under the Drinking Water Regulations. Samples of water at various stages on water schemes are taken on a regular basis. A report on the quality of water is produced monthly and is available from the County Council offices.

The main issues to the public water supply in Shannon are:

- 1 – Quality, and
- 2 – Water Conservation
- 3 – Infrastructure
- 4 – Environment Conservation

1. Quality

In relation to the quality of the water supplied the most recent data available from the EPA on water quality analysis is from 2006. In that year Clare County Council carried out analysis on 529 check and 54 audit samples during. The overall rate of compliance in County Clare was 98.2%, a figure above the national average and an improvement from 97.7% in 2005. Although private group water schemes in Clare were generally of a higher quality than those in the majority of other local authorities, there were still a number of quality deficient schemes during 2006 with 3 of the 11 schemes monitored contaminated during the year (2 of which were also contaminated during 2005). The overall rate of compliance in County Clare is, as stated 98.2%, an improvement on the previous year's findings. However the quality of the water supply to inhabitants is on occurrence problematic and requires future remediation.

2. Water Conservation

Water conservation is a key mechanism in achieving a quality water service into the future. Studies estimate that nationally, almost half the water being produced is Unaccounted for Water (UFW) through consumer negligence, leaking pipes or lost through illegal or unknown connections. Reducing water usage and waste means savings in the cost of water treatment and pumping, more capacity in the existing treatment and pumping assets and reduced water bills for consumers.

It is envisaged that fiscal measures will be introduced to incentive households to save water in response to an independent assessment of the establishment of a national water utility; however, domestic water conservation measures such as tap aerators, low flow shower heads, cistern displacement devices, rainwater harvesting systems, etc. should also be considered as alternative household water usage methods.

2. Infrastructure

The DoECLG provides capital funding through a number of programmes including The Water Services Investment Programme (WSIP) and The Rural Water Programme (RWP). The Water Services Authorities within Clare County Council are required to provide an 'Assessment of Water Services Needs' to ensure projects selected for funding are well aligned with National programme priorities. The Assessment of Needs for Clare for the period 2012-2015 is being prepared and further detail will be discussed on this when it becomes available. The Assessment of Water Services Needs is currently done every three years, and therefore further assessments will also be undertaken during the lifetime of the Plan. The WSIP Review (2011) allocated for the upgrade of the gravity pipe from Moygalla to Clonmoney to increase capacity. Phase 1 accommodates commencement of the upgrade in 2013.

Considering the pipe network in Shannon is over 60 years old and was originally laid in alluvial ground which is prone to sinking, it is showing signs of deterioration. The pipes are quite brittle in areas and a lack of long term maintenance has

significantly reduced its capability including maintaining sufficient water pressure throughout the catchment.

3. Environment Conservation

While the Castle Lake scheme currently has excess capacity, it supplies a large catchment and there are issues relating to the draining of the lake above the threshold, causing likely effects on the ecology of the surrounding area and difficulty in obtaining an abstraction licence. It should be noted also that any development proposals or expansion of existing abstractions by Clare County Council or any private group schemes will be assessed to address the risk to the hydrology regime in the source lake and a Habitats Directive Assessment will also be undertaken should development be within a 15km radius of a designated site in accordance with the Habitats Directive. It is also Council policy that any new development must meet the requirements of the European Water Framework Directive (2003) and the Council promotes the implementation of Water Quality Management Plans in accordance with this directive. Potential restriction of development may exist in certain areas unless it can be demonstrated by the appropriate assessment process that increased demand on the source will not give rise to reduction in the status of the source water body.

4. Wastewater Treatment Infrastructure Existing Environment

The safe treatment and disposal of sewerage is fundamental to the sustainable development of our society. The Plan area relies principally on wastewater treatment plants and individual septic tank units. There are implications however from the operation of both forms of treatment, principally the discharge to the receiving environment. Insufficient treatment has the potential to adversely affect the quality of the groundwater and surface water with significant potential adverse effects on biodiversity, human health and amenity. If wastewater treatment systems are not working properly, nutrients, organic material, chemicals and bacteria may seep from wastewater into groundwater, contaminating nearby drinking water wells or damaging the quality of receiving waters, lakes or marine waters.

Clare County Council has undertaken an assessment of needs to address those areas where there is a shortfall in wastewater treatment infrastructure or insufficient capacity in terms of hydraulic capacity or biological treatment. A number of wastewater upgrading projects (networks and treatment plants) are included in the Water Services Investment Programme (WSIP 2010-2012). The priority ordering of schemes in this assessment is aligned with the protection of Natura 2000 sites and the requirements of the Water Framework Directive and compliance with authorisations issued by the Environmental Protection Agency, under the Wastewater Discharge Authorisation Regulations 2007.

The treatment of wastewater in the Plan area is of concern. The Shannon Treatment Plant at Traderee caters for both domestic and industrial wastewater in Shannon town but also serves Bunratty and the surrounding environs. The industrial waste is treated using a chemical system while the domestic waste uses a standard aeration system. There is sufficient capacity in principle to accommodate additional development proposals over the plan period, however the plant is currently not capable of complying with EPA discharge licence requirements and thus requires upgrading. Plans for an upgrade were approved under WSIP 2010-2012 with construction likely to commence post 2013, and due to be operational by 2015.

Shannon Airport has a private WWTP at Duglish Island. This operation is not based on Population Equivalent (>pe) and therefore does not require a Discharge Authorisation Licence from the EPA, instead it comes under the remit of a Section 4 Licence from the Water Pollution Act, 1977 which is administered and monitored by Clare County

Council. It is currently compliant with terms of the licence and is under loaded relative to design and under loaded relative to projections.

Wastewater Treatment - Threats and Trends

The primary concern regarding wastewater treatment is the upgrade of the facility at Traderee. However, the cumulative effect of inefficient wastewater treatment in a surrounding zone of influence must also be considered. Table 4.7.2 outlines the status of WWTP within 15km of the plan area. In October 2007 the Waste Water Discharge (Authorisation) Regulations 2007 came into effect. The new licensing system is policed by the EPA who will set strict limits on discharges allowed from these plants into surface waters such as rivers, canals and lakes and groundwater. The Regulations have been made to implement outstanding aspects of the EU Dangerous Substances and Water Framework Directives and Water Framework Directives, 2003

Table 4.7.2: Status of WWTP within 15km of Plan area

Settlement	Wastewater Treatment Status
Shannon	Public WWTP - not capable of complying with EPA discharge licence requirements - requires upgrading
Ardnacrusha/Parkroe	Parkroe has a treatment plant that has not been taken in charge.
Athlunkard	Connected to Limerick Main Drainage Sewerage System
Ballycannon North	Public WWTP - currently at capacity
Bridgetown	Public WWTP (aeration system) with limited capacity - Upgrade required.
Bunratty	Connected to Shannon WWTP - not capable of complying with EPA discharge licence requirements - requires upgrading
Clonlara	The former public wastewater treatment plant has now been decommissioned and Clonlara is connected to Limerick Main Drainage Sewerage System
Cratloe	No public Wastewater system. Developments in the area are currently serviced by individual septic tanks/treatment systems
Newmarket-on- Fergus	Upgrade complete and operational, with adequate capacity to accommodate future development
O' Briensbridge	No serviced sewage infrastructure - served by individual treatment systems with limited capacity
Parteen	Connected to Limerick Main Drainage Sewerage System
Quin	Existing WWTP operating at capacity - upgrade is required. A Part 8 LA application is to be lodged for an upgrade to Quin WWTP in the near future.
Sixmilebridge	Public WWTP -Working satisfactorily, capacity available

The adequacy of existing facilities should be assessed in terms of capacity and performance and the potential risk to human health and water quality. The potential impact on habitats and species of ecological importance should also be addressed as appropriate zoning for development should be linked to availability of water supply/waste water treatment infrastructure and capacity. Priority should be given to provision of adequate and appropriate infrastructure in advance of any development

The majority of Group Water Schemes extract from groundwater and as such operators are being advised to develop groundwater source protection plans to enable better water management and acknowledge EPA Guidelines on Urban Waste Water Discharges in Ireland for Population Equivalents Greater than 500 Persons (EPA,

2007). The EPA Code of Practice (COP) for Wastewater Treatment and Disposal Systems Serving Single Houses (p.e.≤10) (2009) must also be considered where necessary. It is one example of where policy has benefitted from specific targeted research whereby it establishes an overall framework of best practice in relation to the development of wastewater treatment and disposal systems, in unsewered rural areas, for protection of our environment and specifically water quality including site suitability assessment, system selection, installation and maintenance undertaken accordingly. Development of single treatment systems for housing developments of 10 houses or less in established villages or clusters will only be permitted where it is demonstrated that such development is in accordance with the EPA wastewater treatment code of practice, that proper management and maintenance arrangements are in place, and there is no threat to the integrity of Natura 2000 sites, NHAs or pNHAs. The utilisation of alternative single treatment wastewater systems will be encouraged as will the use of strategic metering systems to aid in leak detection and associated wastewater leak detection programme for larger plants. It is intended that the planning system will also aid in monitoring the effectiveness of waste water treatment and enforce current planning conditions related to septic tank systems.

Clare County Council recognise the need for adequate and appropriate wastewater treatment infrastructure to service lands within Shannon and objectives relating to such are evident in the Clare County Development Plan 2011-2017. The local authority is also proposing the following measures which should ensure that wastewater treatment does not adversely affect public health and that the quality of receiving waters, either ground or surface, are not diminished by the discharge.

- The Council will seek funding and carry out works as required ensuring that suitable public sewerage and treatment infrastructure is in place to facilitate new development.
- The Council will actively encourage the full and proper decommissioning of unused septic tanks in order to remove the potential for future pollution of surface and groundwater.
- The Council will use statutory powers under relevant Planning and Environmental legislation to protect groundwater, including Environmental Impact Assessment, Integrated Pollution Control and/or Water Pollution legislation in balancing the need to protect the environment with the need for development.
- All applications for residential developments in areas where public sewerage mains are not present shall be accompanied by the documentation as required by the relevant EPA Treatment Manual (or subsequent update), certified by a fully indemnified professional, indicating the suitability of the site for the disposal of effluent. These treatment plants must be installed in accordance with recommendations of the EPA in "Code of Practice: Wastewater Treatment Systems for Single Houses 2009" (or subsequent update).
- In cases where an effluent treatment system is to be installed, the system must, at all times, be covered by an appropriate maintenance contract.
- Point discharges of treated effluent to surface water will not be allowed from single dwellings.
- Development of treatment systems for small businesses/community facilities in unserved areas will only be allowed where they are in single ownership and where it is demonstrated to the satisfaction of the Planning Authority that the proposed wastewater treatment system is in accordance with Code of Practice Wastewater Treatment and Disposal Systems Serving Single Houses EPA (2009) and Wastewater Treatment Manuals-Treatment Systems for Small Communities, Business, Leisure Centres and Hotels, EPA (1999)
- Ongoing management and monitoring of all wastewater treatment facilities
- Nutrient reduction treatment on all wastewater treatment facilities
- Any new proposed or upgrades to wastewater treatment plants should fully

comply with all Urban Waste Water Regulations requirements 2001 – 2004 (paying particular attention to Phosphorous due to the sensitivity of Natura 2000 sites), and should furthermore comply with all wastewater discharge authorization requirements as per 2007 Regulations and Urban Wastewater Regulations 2001.

- Implement Sustainable Urban Drainage Systems or SUDS (see Appendix 5 of the CCDP 2011-2017 for a description of this principle)
- The disposal of waste water through individual wastewater treatment units (septic tanks) is in need of remediation. These methods have the potential to have significant negative impacts on sensitive receiving environments

Cognisance should also be had to the Implementation of the Regulations for Water Services Authorities for Public Water Supplies (EPA, 2010).

6. Renewable and Alternative Energy – Existing Environment

The Council recognises the importance of developing renewable sources of energy in the interest of supporting environmental sustainability. To this end the Council have identified the 'preferred' areas and areas 'open for consideration' for the development of wind energy infrastructure in the Clare County Wind Energy Strategy, included as Volume 5 of the Clare County Development Plan 2011-2017. Shannon Town & Environs LAP area is within the broad remit of being 'Open to Consideration'.

For any potential wind energy development within the Plan area, reference should be made to 'wind energy development and Natura 2000 sites' also designated areas currently zoned as 'acceptable in principle' for wind energy will be subject to AA where any such threats to the integrity of these sites will be identified.

The Clare County development Plan 2011-2018 also contains specific objectives relating to interalia renewable energy, energy security, and electricity network and energy storage.

It is envisaged that the Shannon Integrated Framework Plan (SIFP) will further assess the renewable energy potential on the Shannon Estuary.

It is also an objective of the Council to develop a Renewable Energy Strategy during the lifetime of the County Development Plan. This will outline and encourage the development of renewable energy, the reduction in waste of energy, the maximising usage of renewable energy sources and support energy conservation initiatives while making a significant contribution to reducing Ireland's energy related CO2 emissions and creating employment.

Renewable and Alternative Energy –Threats and Trends

The Limerick Clare Energy Agency in collaboration with Clare County Council are continually researching and publishing new data on the impacts of energy conservation, it is envisaged that this new data will form part of the review process of the Clare County Development Plan 2011-2017 and in turn the ST&E LAP 2012-2018 as well as forming the basis of the Renewable Energy Strategy for County Clare.

Map 4.7.3 highlights the designations for wind energy development within a 15km radius of the plan area including the areas designated in counties Limerick and Kerry. A strategic approach to wind development must be adopted taking into account transboundary views, landscape and accessibility to the grid network.

For any potential wind energy developments within the Plan area, reference should be made to "*Wind Energy Developments and Natura 2000 Sites*", also designated areas currently zoned as 'acceptable in principle' for wind energy will be subject to HDA

where any such threats to the integrity of these sites will be identified.

The Clare County Development Plan 2011-2018 outlines specific objectives relating to interalia, Renewable Energy, Energy Security, Electricity Network and Energy Storage.

It is envisaged that the Shannon Integrated Framework Plan (SIFP) will further assess the renewable energy potential on the Shannon Estuary.

Information Gaps

Transport - The most up to date information has been utilised but it is accepted that this may change over the lifetime of the plan making process and thus will be updated accordingly; this may include the finalised version of the Mid-West Area Strategic Plan (MWASP) - the 20 year long term infrastructure development plan for the Mid-West Region and a strategic Smarter Travel Initiative for the Town.

Waste - An updated edition of the Replacement Waste Management Plan 2006-2011 is currently being prepared by the Local Authorities of Clare County Council, Kerry County Council, Limerick City Council and Limerick County Council. It is envisaged that this will be adopted within the lifetime of the plan and implemented in the ST&E LAP area

Water Supply- It is expected that a National Water Body and associated water conservation measures will be developed over the lifetime of the plan making process. This will be acknowledged and implemented in the ST&E LAP area as appropriate.

Waste Water Treatment – The most up to date information has been utilised but it is accepted that this may change over the lifetime of the plan making process and thus will be updated accordingly.

Renewable Energy – Clare County Council do not currently have a Renewable Energy Strategy, however it is an objective of the Council to develop such during the lifetime of the CCDP 2011-2017.

Effects of Not Implementing the Plan

Transport – In the absence of the Plan, formal consultation with the NRA regarding localised issues of capacity, operational efficiency and safety would be limited. Rural transport links would not be offered the same protection and the future investment in key infrastructure would not be targeted appropriately to key development areas.

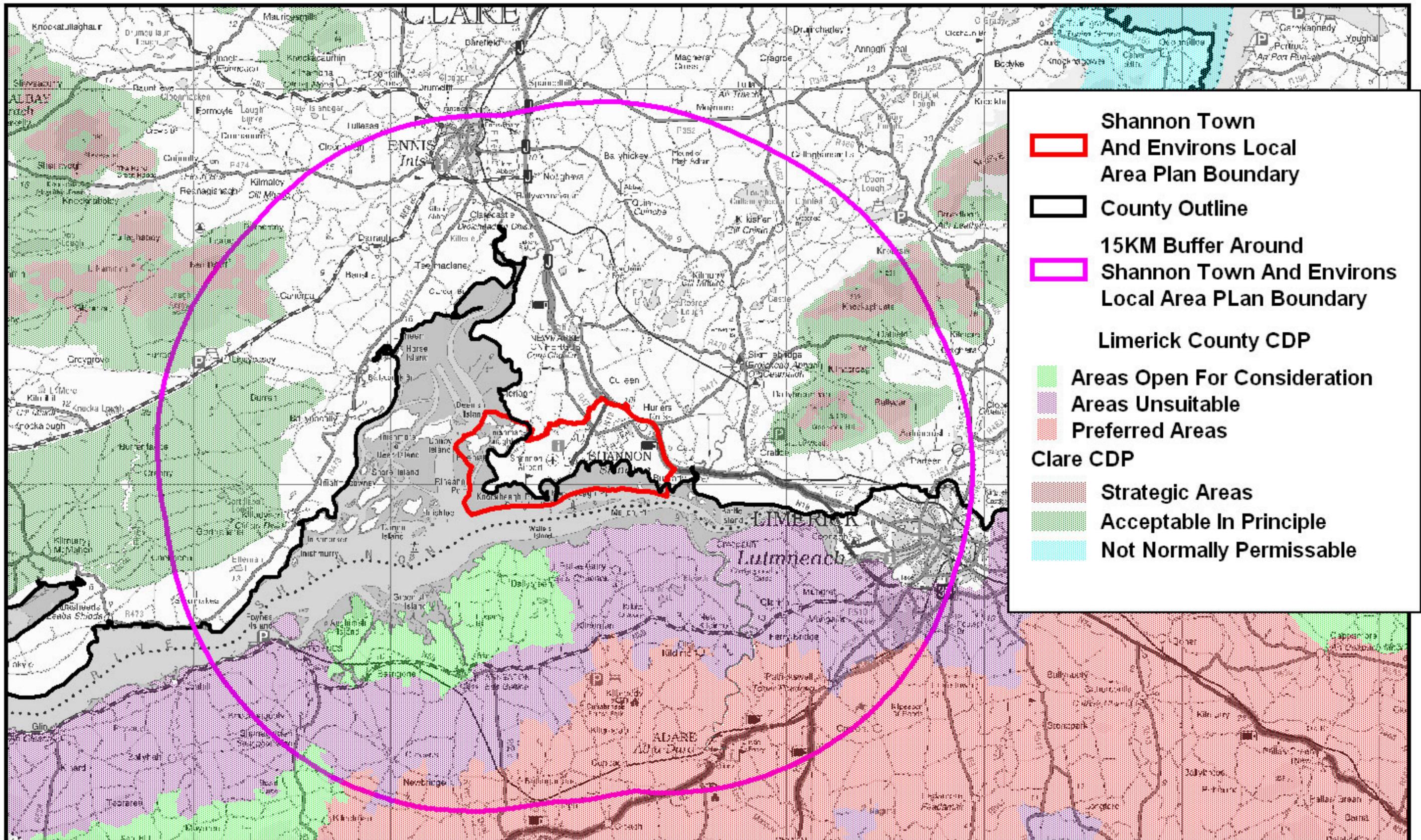
Waste - In the absence of the Plan, the process for assessing the issues which affect waste management within the plan area will go unchecked resulting in a general deterioration in this aspect of the environment. Ultimately the result would be unsustainable and undesirable.

Water Supply – In the absence of the Plan, issues such as future water demand, resource identification and protection will not be comprehensively assessed resulting in a poor level of service provision and possible degradation of important reserves. Also, the future investment in key infrastructure would not be targeted appropriately to key development areas. The result would be a haphazard, un-coordinated delivery of service, resulting in negative environmental impacts.

Waste Water Treatment - The significant shortfall in wastewater treatment capacity in the Shannon Town & Environs LAP area would undoubtedly continue to exist resulting in a poor level of service provision and further degradation of important natural water reserves. The cumulative and secondary effects of population, water, human health & quality of life would not be comprehensively assessed environmentally

and deterioration of the environment would occur.

Renewable Energy – In the absence of the Plan associated issues of landscape, water, material assets etc would not be cumulatively addressed and no comprehensive database of information would be available which would aid in both compiling a Renewable Energy Strategy for the County or in developing Renewable Energy projects in the ST&E LAP area. Also, the future investment in key infrastructure would not be targeted appropriately to key development areas.



Shannon Town And Environs Local Area Plan Boundary

County Outline

15KM Buffer Around Shannon Town And Environs Local Area Plan Boundary

Limerick County CDP

- Areas Open For Consideration
- Areas Unsuitable
- Preferred Areas

Clare CDP

- Strategic Areas
- Acceptable In Principle
- Not Normally Permissible



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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018		
TITLE: Map 4.7.3 Designated Areas For Wind Energy Development Within 15KM Of Plan Area		
SCALE: NOT TO SCALE	PROJECT NO.	DRAWING NO.
DATE: OCTOBER 2012	DRAWN BY: P. McMANUS	CHECKED: B. Mc Carthy

4.8 Cultural Heritage

The Plan area has an important built heritage, including archaeological and architectural heritage. The year 1700 AD is generally accepted as the dividing line between the two but there are exceptions to this. Map 4.8.1 illustrates the extent of archaeological and architectural heritage within the plan area.

Architectural Heritage

Part IV of the 2000 Planning and Development Act, as amended refers to the protection of Architectural Heritage. It 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”. The Record of Protected Structures (RPS) and Architectural Conservation Areas (ACAs), together with policies pertaining to the protection of vernacular and industrial architecture, cover the architectural heritage of the County.

Development which involves material alteration or additions to protected structures can detract from the special character of the structure and its setting, and have the potential to result in the loss of features of architectural or historic interest unless the historic form and structural integrity of the structure are retained. Also, development in close proximity to sites and areas of cultural heritage maybe adversely impact upon the cultural landscape setting. The Planning and Development Act, 2000 (as amended), requires Clare County Council to include objectives in their Development Plans for preserving the character of ACAs. The ACA provision is complimentary to the Record of Protected Structures, allowing a clear mechanism for the protection of these areas. The Act also removes exempted development rights where works to the exterior of a structure located in an ACA will materially affect the character of the area or where works to a Protected Structure or proposed Protected Structure will materially affect the character of the structure, or any element of the structure, which contributes to its special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. Planning permission will be required where such works are proposed. In this regard it is noted that the Planning Authority may issue a Section 57 Declaration to permit works to a Protected Structure, which will not adversely affect the character of the interior or exterior of the Structure.

An ACA is defined as a place, area, group of structures or townscape taking account of building lines and heights, 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 development plan to preserve. Their inclusion within the Plan, in terms of Section 81, Part IV of the Planning and Development Act, 2000, affords greater control over the form of development and reduces instances of inappropriate development, demolition and change within the designated area. There is no designated ACA within the plan area.

Taking into consideration the urban fabric of the plan area, the presence of a rich vernacular heritage within the Plan area is sparse. There are currently 3 buildings within the Record of Protected Structures – Table 4.8.1. It can be noted however that there may be other structures which have not generally been considered important enough for inclusion in the Record of Protected Structures, but nevertheless contribute to the character of the area by their scale, age and use of local materials and many have features which are typical to their particular locality, namely the built environment at Shannon Airport. It is important that such buildings are preserved to

maintain the attractive character of our rural landscape and contribute to the amenity and pleasure of residents and visitors alike.

Table 4.8.1 - Record of Protected Structures in Shannon Local Area Plan Area

RPS. No	RPS. Name	Address	Categories of Special Interest	Summary Description
663	Murphys Cottage	Tullyvarraga, Shannon	Architectural, Detail/Design Vernacular	Detached 4 bay single storey direct-entry thatched cottage, built c.1850, renovated c.1950, now in use as a café. Rectangular in plan with lean-to located to east side. Gabled reed roof having decorative swept block ridge. Central stone chimney to jamb wall. Traditional eaves and coped gable. Painted rubble stone walls with evidence of 2 building phases. Square-headed window openings with slate sills and replacement 2/2 timber ash windows. Square headed door openings having replacement timber panelled door and half door
664	Hastings Cottage	Tullyvarraga, Shannon	Architectural, Historical, Materials, Personality Association	Ruin of former detached, cob-built, 4 bay thatched cottage c.1820 at Illaunmanagh Point Shannon. The house was used during the War of Independence as the prison of British Brigadier General Lucas captured by the IRA and later released.
328	Shannon Airport,	Rineanna South, Shannon	Architectural, Historical, Group, Historical	

Archaeological Heritage

The protection of archaeological areas and sites is covered by the legislation contained in the National Monuments Acts 1930 to 1994 (as amended) and covers man-made structures built prior to the year 1700 AD, with some exceptions.

The archaeological heritage includes National Monuments in the care of the State, archaeological and architectural monuments and sites in the Record of Monuments and Places and the Register of Historic Monuments, zones of archaeological potential in Historic Towns; the underwater archaeological heritage, including Historic Wrecks; unknown and unrecorded archaeological sites (including subsurface elements with no visible surface remains); potential sites located in the vicinity of large complexes of site or monuments, present or former wetlands, unenclosed land, rivers or lakes, or the inter-tidal zone. The significant breadth of archaeological heritage within the plan area varies from castles, churches, graveyards, earthworks, enclosures, ring forts, Fulacht Fia and megalithic wedge tomb which contribute in total to over 70 recorded monuments. It is also recommended that developments located at or close to an archaeological monument or site, those that are extensive in terms of area (1/2 hectare or more) or length (1 kilometre or more) and developments that require an Environmental Impact Statement will be subject to archaeological assessment in accordance with DoEHLG guidelines.

Threats and Trends

Cultural Heritage, including all its various elements, represents a finite resource, one which must be protected in order to enrich future generations. Thus, development which is deemed to adversely impact on structures, features, historical areas etc must not be permitted. A proactive approach needs to be maintained by the local authority, working in conjunction with the various state agencies and departments as well as stakeholders to ensure the ongoing protection of this element of the environment.

The European Convention on the Protection of the Archaeological Heritage (Valetta, 1992) was ratified by Ireland in 1997. It requires that archaeological heritage is taken account of in the development process. This defines archaeological heritage as including structures, underwater archaeological remains, constructions, groups of buildings, developed sites, all recorded monuments as well as their contexts, and moveable archaeological and historic objects, situated both on land and underwater. Therefore the archaeological heritage of Shannon is not confined to the archaeological sites within the Record of Monuments and Places. It includes any archaeological site that may not have been recorded yet, as well as subsurface archaeology, the setting and the context of any site and the underwater archaeological heritage, including Historic Wrecks; unknown and unrecorded archaeological sites (including subsurface elements with no visible surface remains); potential sites located in the vicinity of large complexes of site or monuments, present or former wetlands, unenclosed land, rivers or lakes, or the inter-tidal zone.

The archaeological and architectural heritage of the Shannon Local Plan area will be appreciated and will be protected by objectives in the Clare County Development Plan 2011-2017, ensuring that it is not damaged either by its own decay or destruction or by unsympathetic developments nearby. The character of the town will be protected while acknowledging that change is inevitable and that the modern era must also leave its mark in time.

Information Gaps

The archaeological heritage of Shannon is not confined to the archaeological sites within the Record of Monuments and Places. It includes any archaeological site that may not have been recorded yet, as well as archaeology beneath the ground surface,

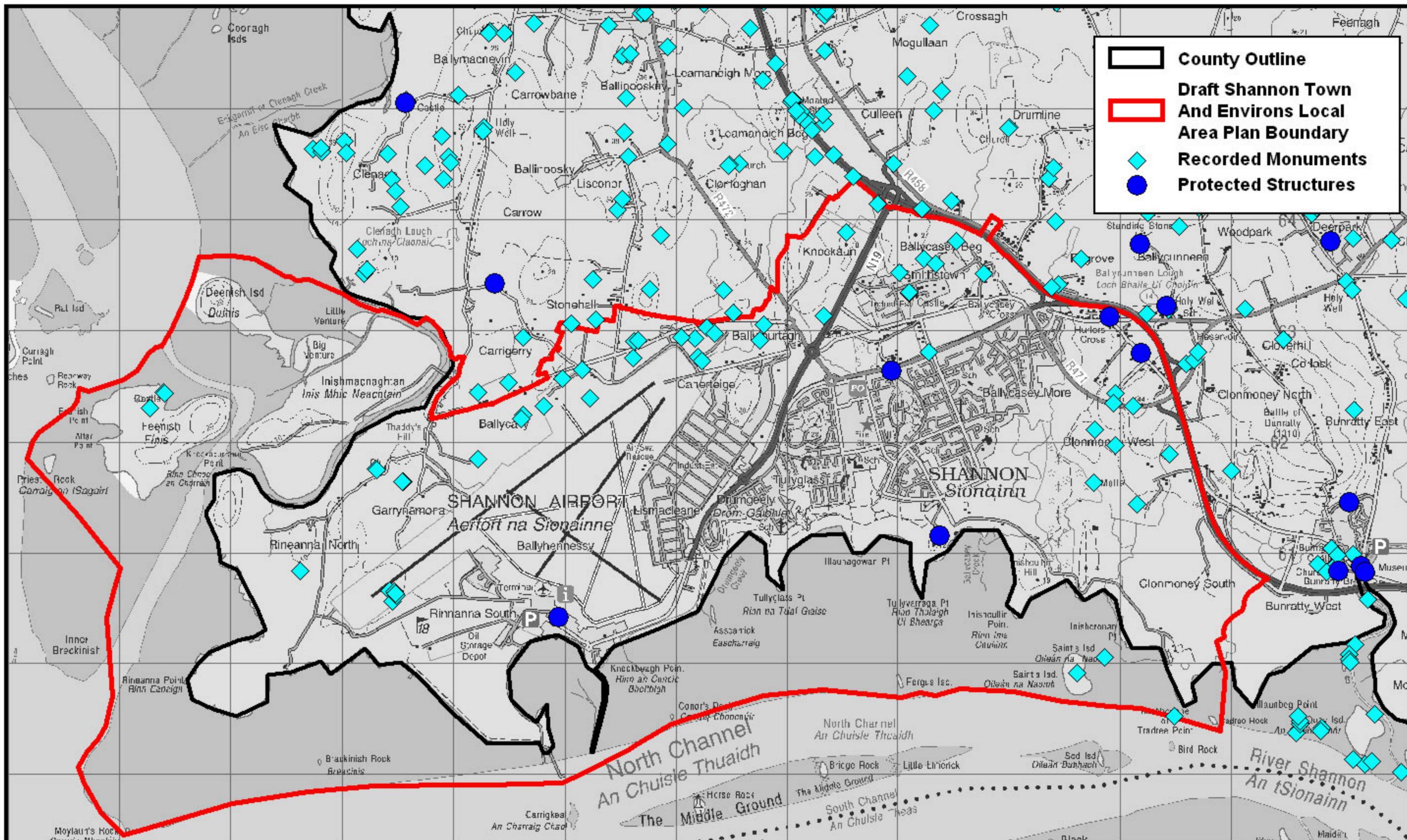
underwater as well as the context of any such site discovered. Therefore, the full extent of cultural heritage has yet to be completely identified.

Effects of Not Implementing the Plan

In the Shannon Plan area there are some archaeological monuments and protected structures which are covered by National legislation and local policy and objectives.

The Planning and Development Act, 2000 (as amended) introduced a tiered and planned system, setting out the framework for the provision of local area plans to give more detailed and localised effect to the policies and objectives of the County Development Plan. Thus, in the absence of the Shannon Town & Environs LAP, the process of assessing the pressure on Shannon's cultural heritage would be highly dependent on the CCDP 2011-2017. The value of the ST&E LAP with regard to establishing individual settlement objectives and zoning (both general and specific) could result in the potential loss of valuable and irreplaceable aspects of the Shannon cultural heritage.

Potential indirect effects due to the absence of a Plan include a negative impact on the cultural amenity value and the tourism economy. Uncontrolled development could lead to the excavation and movement of soil which could in turn interfere with subsurface cultural heritage. Furthermore, the cumulative effects of individual developments would not be easily monitored or coordinated and assessed for their effects on the archaeological or architectural landscape.



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PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018

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B. McCARTHY

4.9 Landscape

'Landscape' means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors (European Landscape Convention, 2002). It is this definition that is incorporated into Section 4(c) of the Planning and Development (Amendment) Act 2010. The Heritage Act (1995) defines landscape as including 'areas, sites, vistas and features of significant scenic, archaeological, geological, historical, ecological or other scientific interest'. The landscape is made up of a range of unique characteristics including land form and land cover in combination with associated human values. As well as being an important part of people's lives - giving individuals and communities a sense of identity and belonging, and bestowing a sense of place on our surroundings - the landscape is the context in which all change takes place. The Shannon Town & Environs LAP area hosts a variety of landscapes that shall be discussed in further detail in the following section.

Evolution of Landscape Designations and Protections in Shannon

Clare County Council's policy approaches since 1967 shows the importance that has always been attributed to areas of importance such as the Shannon Estuary. There have been a number of studies undertaken to characterise the diverse landscapes throughout the County and combined to provide a detailed set of landscape designations that appeared in the 2005 Clare County Development Plan. These Reports include:

- 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's (2000) Landscape and Landscape Assessment – Draft Guidelines for Planning Authorities.

In the Clare County Development Plan 2011-2017, Clare County Council in conjunction with CAAS Environmental Services have revisited the policy approach termed 'Clare's Living Landscapes'. This approach builds on the 'Landscape Character Assessment of County Clare' outlined below.

Living Landscapes of County Clare

The Clare County Development Plan 2011-2017 proposes a vision of Clare as a series of 'Living Landscapes' where different parts of the County are regarded as having different potential for how communities can pursue their ambitions and aspirations.

This approach is based on using places that make the best use of the different strengths and weaknesses of each area. Some areas have strong potential for tourism on account of their heritage and scenery, for example, while others have different potential on account of proximity to major roads or power lines. In this way different approaches emerge that are the most suitable for each area. It follows from this that what may be suitable in one area may not be suitable elsewhere. The three Living Landscape types are:

- Settled landscapes – where people live and work
- Working Landscapes – intensively settled and developed areas within Settled landscapes or areas with a unique natural resource
- Heritage Landscapes – where natural and cultural heritage are given priority but where development is not precluded rather things must happen more slowly and

carefully.

Settled Landscapes

Settled Landscapes comprise the network of farmland, villages and towns that make up the majority of the County, however do not exist in the ST&E plan area. These landscapes are where the majority of the population live and work. They provide opportunities for enterprise, leisure and personal fulfilment. They contain the resources of land, soil, minerals and water that are used to sustain the economy. They accommodate the roads, power-lines, quarries and piped services that service settlements and industry. Settled Landscapes also contain areas of concentrated development – called ‘Working landscapes’ which are considered in more detail below. Uses envisaged within Settled Landscapes include agriculture, energy, forestry, extraction, transportation, industry & commerce, tourism, recreation and leisure, education, healthcare and social infrastructure.

Criteria for definition of Settled Landscapes boundary

- All lands not classified as Heritage or Working Landscapes

Working Landscapes

Working Landscapes are areas of concentrated development or a unique natural resource. This Plan identifies two in the County, namely; the Western Corridor - Ennis to Limerick Working Landscape, and the Shannon Estuary Working Landscape. The majority of the LAP area comprises the Western Corridor - Ennis to Limerick Working Landscape (See Map 4.9.1).

Western Corridor - Ennis to Limerick Working Landscape

This part of the county contains the highest concentrations of population and jobs and the strongest transport links and connectivity. It includes the linked Gateway of Shannon and the County Town/Hub Town of Ennis. It is the economic driver of the County and an important component of the Mid-West Region. Criteria for Definition of Western Corridor Working Landscape:

All lands within 10km on either side of the N18/M18-except as excluded by Heritage Landscapes.

Heritage Landscapes

These areas define places where the majority of County Clare’s sensitive environmental resources – scenic, ecological and historic, occur together. Heritage Landscapes are envisioned as the most valued parts of the County that are important to the people of Clare as well as the wider community both National and International. The principle role of Heritage Landscapes is to sustain natural and cultural heritage. The word ‘sustain’ is used to convey the idea of keeping something alive – as opposed to ‘conserve’ or ‘preserve’ – which might imply something dead or beyond use. These landscapes have to continue to evolve to accommodate both the renewal of existing houses, farms, roads, power-lines etc as well as the development of new facilities needed to support the community, particularly in areas where agriculture can no longer provide sufficient income. Uses within these landscapes are expected to include refurbishment of dwellings, new dwellings for members of the existing rural community and developments for agriculture, small-scale employment, tourism, forestry, education, culture and social services. Heritage Landscape 1 – Lough Derg

and Eastern Uplands, 2 – The Burren and 4 – The Coast are outside the plan boundary.

Designated Heritage Landscape 3 – The Fergus/Shannon Estuary is applicable to the plan area. Criteria for definition of Heritage Landscape include;

Heritage Landscape 3: The Fergus/Shannon Estuary

This has been arrived at having regard to the Heritage Council's Seascape Areas 9-12 In the Shannon Town & Environs plan area, the Fergus/Shannon Estuary has been designated as a Heritage Landscape. Sufficient caveats have been included in Chapter 16 (Landscape) of the Clare County Development Plan 2011-2017 to protect the Natura 2000 Site network, including;

Objective 16.5 - *'It is an objective of the Development Plan to require that for all proposed developments in Heritage Landscapes, demonstrate that every effort has been made to reduce visual impact. This must be demonstrated for all aspects of the proposal- from site selection through to details of siting & design. All other relevant provisions of the Development Plan must be complied with. All proposed developments in these areas will be required to demonstrate;-*

i That sites have been selected to avoid visually prominent locations

ii That site layouts avail of existing topography and vegetation to minimise visibility from scenic routes, walking trails, public amenities and roads.

iii That design for buildings and structures minimise height and visual contrast through careful choice of forms, finishes and colour and that any site works seek to reduce the visual impact of the development'

Scenic Routes

There is one scenic route within the plan area (see Map 4.9.1) which offers a very attractive cross-sectional view and overall impression of differing landscapes including views and vistas to the Shannon Estuary. Scenic routes are interwoven with the Living, Working and Historic Landscapes of the County.

Landscape Character Assessment

One of the aims of the Landscape Character Assessment (LCA) is to integrate components so that Landscape Character Areas for the County could be defined. These components are Landscape Character Types, Landscape Character Areas and Seascape Character Areas.

Landscape Character Types

Landscape character types are distinct types of landscape that are relatively homogenous in character. They are generic in nature in that they may occur in different localities throughout the County. Nonetheless, where they do occur, they commonly share similar combinations of geology, topography, land cover and historical land use, for example, limestone river valleys and blanket bog uplands. The Clare Landscape Character Assessment identifies 26 Landscape Character Types sub divided into 3 groups, namely; Upland Types, Lowland Types and Coastal Types. The LCA also identified Habitat Types and Historic Landscape Types.

- A Habitat Type is an area in which an organism or group of organisms lives, and is defined by the living (biotic) and non-living (abiotic) components of the

environment. The latter includes physical, chemical and geographical factors, in addition to human impact or management.

- 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 are units of the landscape that are geographically specific and have their own character and sense of place. Each Landscape Character Areas' distinctive character is based upon patterns of geology, landform, landuse, cultural, historical and ecological features. The Landscape Character Assessment for County Clare identified 2 Landscape Character Areas in Shannon Town & Environs LAP functional area namely;

Fergus Estuary

- Flat estuarine farmland divided by drainage ditches, post and wire fences and degraded thorny hedgerows.
- Open expansive views are afforded across the estuary to the River Shannon, though these are limited in places due to flood defence embankments.
- Settlement is sparse reflecting the areas past tendency to flood, some settlement on higher ground. On eastern boundary, increased settlement due to proximity to
- Shannon Airport and town.
- Scattered holy wells with a number of graveyards and standing stones.

Sixmilebridge Farmland

- An undulating, well maintained landscape, with the principal river of Owengarney draining from Doon Lough in the north.
- An area of considerable archaeological and historical interest testifying to its strategic location and good land resources.
- Principal roads cross through this area such as the N18 and there is a significant urban and commercial centre at Shannon, as well as the smaller settlement of Sixmilebridge.

Seascape Character Areas

In the context of the Landscape Character Assessment process a 'Seascape' is 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 length of the County Clare coastline totals some 344km of which approximately 317km is on mainland Clare with the remaining 27km of coastline on the islands within the County. The LCA for County Clare identified 12 Seascape Character Areas. Of these 12, 2 of them are located in the Plan area namely;

- River Shannon
- Fergus Estuary

Threats and Trends

The concept of landscape encompasses all that can be seen by looking across an area of land, i.e. it is the visible environment in its entirety. Landscape is the context in which all change takes place and helps to create a unique sense of place or identity within an area. The landscape is constantly changing both through the actions of nature and human intervention, therefore the challenge is to bring about change and development that respects and enhances the landscape as opposed to detracting

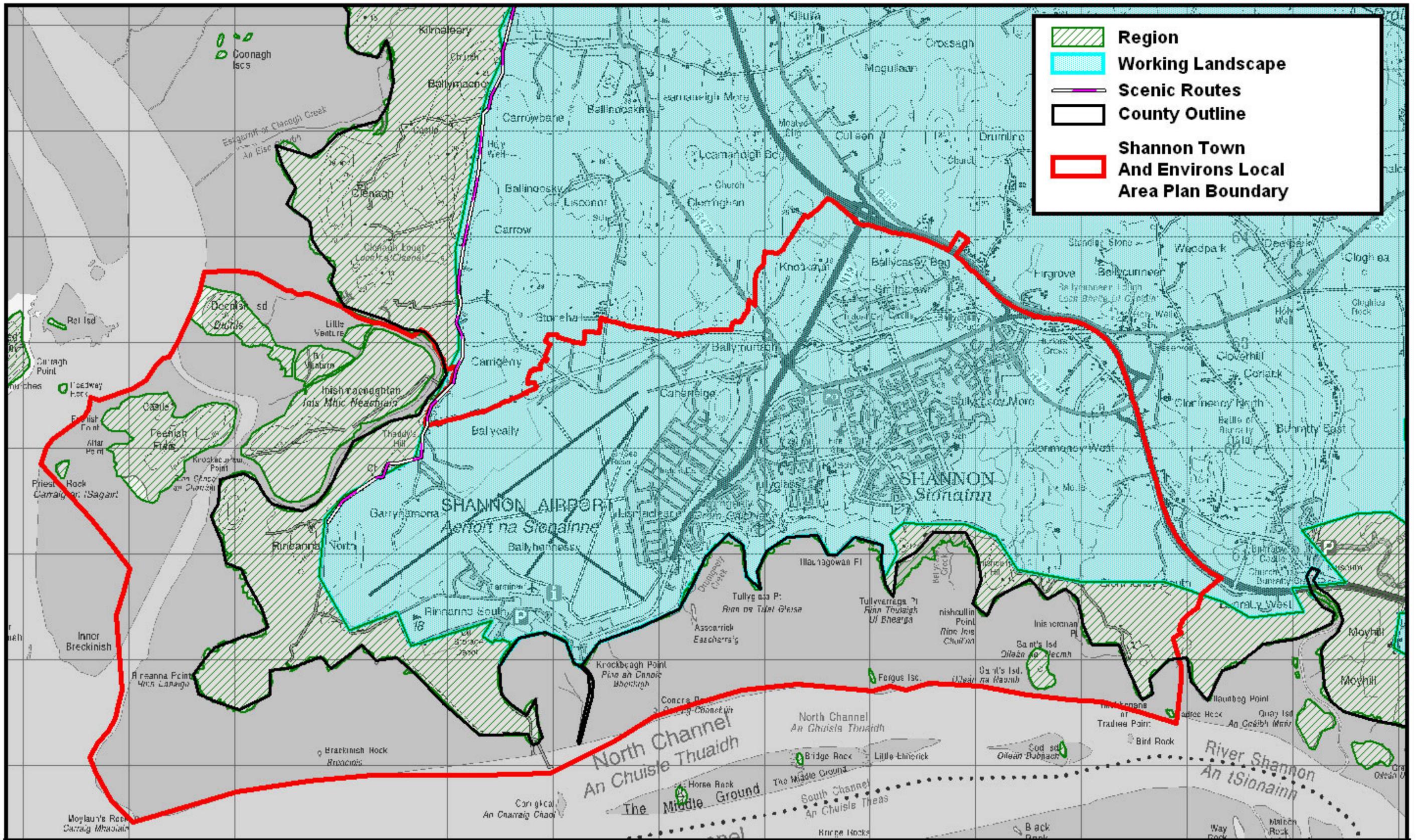
from it. It is essential that a cautious approach is adopted to further development in areas of Heritage Landscape and other scenic areas in the plan area. These important landscape areas will require long term protection from inappropriate or insensitive development and the plan will address this issue.

Information Gaps

Landscape Character Assessment is continually being researched and attributed to the countryside. The most up to date information has been utilised in the ST&E LAP 2012-2018. There are transboundary and methodological differences which have been highlighted by the Heritage Council which must be rectified at a national and regional level. Also, a lack of legislation and current guidelines need to be addressed at a national level.

Effects of Not Implementing the Plan

In the absence of the ST&E LAP 2012-2018 there would not be a localised settlement specific planning framework within which to regulate, aid and/or control development whether economic, social or environmental. Development would have no policy regulation or guidance over where it could occur this could lead to non-strategic developments in isolated areas resulting in a disregard for the landscape designations described. Furthermore, the cumulative effects of individual developments would not be easily overseen or coordinated and assessed for their effects.



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Chapter Five – Objectives, Targets and Indicators

5.1 Introduction

SEA uses a combination of objectives, targets and indicators to predict impacts, and describe and monitor change of proposed plans and programmes on the environment (Thérivel, 2004). Strategic Environmental Objectives (SEOs) and targets set aims and thresholds that should be taken into account when assessing the impact of proposed Plans and Programmes on the environment. Allied to the development of the SEOs are environmental indicators and targets. Indicators facilitate the monitoring aspect of the SEA, while Targets provide a realistic and achievable target to which the local authority can work towards. Indicators are used to illustrate and communicate impact in a simple and effective manner. Indicators can also be used to form the basis of a monitoring programme for the Plan, the results of which will inform the next Plan Review and other studies.

5.2 Objective of this Environmental Report

The primary objective of this Report is to provide for a high level of environmental protection and to contribute to the integration of environmental considerations into the preparation and adoption of the Shannon Town & Environs Local Area Plan 2012-2018. It did this by assessing the Plan in terms of its overall environmental impact, positive and negative, secondary, cumulative, synergistic, short, medium and long term, permanent and temporary effects and to indicate where necessary how improvements can be incorporated into the Plan to improve its environmental performance and/or mitigation and monitoring.

The SEA Directive and Regulations requires that evaluation be focused upon relevant aspects of environmental parameters likely to be significantly affected. In compliance with this requirement, SEOs have been developed for the environmental parameters which are likely to be impacted as a result of the implementation of the ST&E LAP 2012-2018.

Furthermore, monitoring is based upon the indicators which allow for a quantitative measure of progress over time relating to the SEOs used in the evaluation. Focus is given to indicators which are relevant to the likely significant environmental effects of implementing the Plan and existing monitoring arrangements will be used to monitor the selected indicators. Each indicator to be monitored is accompanied by the relevant target(s). The indicators and targets are discussed in more detail in Chapter 9 - Monitoring.

5.3 Development of SEA Objectives

SEOs are methodological measures against which the environmental effects of the ST&E LAP 2012-2018 can be tested. The SEOs for the ST&E LAP 2012-2018 (Table 5.2) were developed in line with other local area plans in the County, the 'parent' Clare County Development Plan 2011-2017 and the Mid-West Regional Planning Guidelines (RPGs) 2010-2022 (Appendix E – Strategic Environmental Objectives). They are also derived through consultation with the statutory consultees, in-house expertise, the SEA team and various others sectors of the Planning Authority, EPA SEA Guidelines and SEA best practice in Ireland, the UK, and elsewhere. If complied with in full, SEOs would result in an environmentally neutral/positive impact from implementation of the Plan. The SEOs are set out in correspondence with the higher tiered plans, etc. discussed in Chapter 3 and the environmental parameters set out in Chapter 4, and are used as standards against which the provisions of the Plan can be evaluated. This enables the identification of areas in which significant adverse impacts

are likely to occur, if unmitigated, and is therefore an incremental part of the SEA process.

As outlined above SEOs are distinct from the objectives of the Plan, although they will often overlap.

The use of SEOs, although not a statutory requirement, does fulfil obligations set out in Schedule 2B of the Planning and Development (SEA) Regulations 2004 and monitoring requirements.

As part of this SEA exercise two assessments were carried out:

- Examination of the internal compatibility of the SEA objectives to identify potential areas of conflict in relation to the objectives so that subsequent decisions could be made. The aim is to have most of the objectives compatible (Table 5.1).
- Examination of the compatibility of the SEA objectives (Table 5.2) and the Zoning Objectives to identify potential areas of conflict between the Plan and the SEA Environmental Report. This evaluation is outlined in the matrix in Appendix G.

The list of environmental objectives used in this Environmental Report is based on the environmental parameters set out in Schedule 2B of the SEA Regulations 2004:

- Biodiversity, Flora and Fauna
- Population, Human Health and Quality of Life
- Soil and Geology
- Air and Climatic factors
- Water
- Material assets
- Cultural Heritage including archaeology and architecture
- Landscape
 - And their interrelationships

Having regard to the issues arising from the scoping process, and an assessment of the existing environmental parameters, Table 5.1 outlines the SEOs internal compatibility.

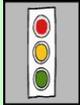
Table 5.1: SEO Internal Compatibility Assessment

	B	PHH	SG	W	AC	MA	CH	L
B	~	✓	✓	✓	✓	?	✓	✓
PHH	✓	~	✓	✓	✓	✓	✓	✓
SG	✓	✓	~	✓	✓	?	✓	✓
W	✓	✓	✓	~	✓	?	✓	✓
AC	✓	✓	✓	✓	~	?	✓	✓
MA	?	?	?	?	?	~	?	?
CH	✓	✓	✓	✓	✓	✓	~	✓
L	✓	✓	✓	✓	✓	✓	✓	~
potential incompatible - x					uncertain - ?			
compatible - ✓					neutral - ~			
no impact on each other - -								

Table 5.2: Strategic Environmental Objectives

This table has been updated in line with the monitoring table in Chapter 9 and the tables in appendices E and F.

Parameter	Strategic Environmental Objective
Population 	P1 – Protect, enhance and improve people’s quality of life based on high quality residential, community, educational, working and recreational environments and on sustainable travel patterns.
	P2 - To protect human health from hazards or nuisances arising from exposure to incompatible land uses/developments
	P3 - Implementation and enforcement of the County Litter Management Plan 2009-2012 and any subsequent plans.
	P4 - Adhere to the County Emergency Plan and other objectives of relevance to human health.
	P5 - Provision of green spaces for amenity
Biodiversity 	B1 – Protect, conserve and avoid loss of diversity and integrity of the broad range of habitats, species and wildlife corridors (non-designated sites) within the Shannon Plan area.
	B2 – Conserve and protect, or maintain and restore Natura 2000 sites and the Natura 2000 Network designated under Art. 6 of the Habitats Directive
	B3 - Conserve and protect other sites of nature conservation including NHAs, pNHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries.
	B4 – Conserve and protect annexed and other protected species
	B5 – Protect the inland aquatic environment.
	B6 - Meet the requirements of the WFD and the RBMP
	B7 - Protect habitats (terrestrial and aquatic) from invasive species.
	B8 - Protect the marine environment.
	B9 - Conservation of Wetlands and their use and resources
	B10 - Promote Integrated Coastal Zone Management.
Soil & Geology 	S1 – Give preference to the use of derelict, disused and infill sites, rather than Greenfield sites.
	S2 – Protect, improve and maintain the quality of soils.
	S3 – Minimise the consumption of non-renewable deposits on site
	S4 - Implement aquifer protection plans.
	S5 - Minimise the amount of waste to landfill from site
	S6 - Conserve, protect and avoid loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites.
Water 	W1 – Protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystem (quality, level, flow).
	W2 – Maintain or improve the quality of surface and groundwater water (including estuarine) to status objectives as set out in the Water Framework Directive (WFD), SRBM & POMS.
	W3 – Implement appropriate sustainable drainage systems (SuDS) in any future development in the Shannon Area.
	W4 – Reduce the impact of polluting substances to all waters.
	W5 – prevent pollution and contamination of ground water by adhering to aquifer protection plans.
	W6 - Maintain and improve the quality of drinking water supplies
	W7 - Reduce the impact of polluting substances to all waters.
	W8 - Promote sustainable water use based on a long-term protection of available water resources
	W9 - Upgrade infrastructure to meet future water supply needs
	W10 - Promote Integrated Coastal Zone Management.
	W11 - Reduce risk of flooding through avoidance of development in flood plains or in areas at risk of flooding
	W12 - Provide provision of flood relief through management of flood risk and living with floods rather than engineered flood solutions.
Air/Climate 	C1 – Minimise all forms of air pollution and maintain/improve ambient air quality.
	C2 – Minimise emissions of greenhouse gases and contribute to a reduction and avoidance of human-induced global climate change.
	C3 - Reduce car dependency within the plan area by way of, inter alia, encouraging modal change from car to more sustainable forms of transport and encouraging development which will not be dependent on private transport

Transport 	<p>T1 - Maximise sustainable modes of transport and encourage use of walkways/cycle paths as alternative routes to school, work, shops</p> <p>T2 - Provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety</p> <p>T3 - Provide an upgraded/improved public transport network.</p> <p>T4 - Promote, encourage and implement a Cycle Strategy for Shannon in association with an accessible walking network</p>
Waste	<p>WA1 - Implement the waste pyramid and encourage reuse/recycling of material wherever possible.</p>
Water Supply 	<p>WS1 - To ensure that drinking water supplies are both wholesome and clean and free of contamination.</p> <p>WS2 - Improve efficiency in distribution of potable water to the population.</p> <p>WS3 - To promote long-term protection of available water resources through sustainable water use.</p> <p>WS4 - Upgrade infrastructure to meet future water supply needs</p>
Waste Water	<p>WW1 - To ensure that all zoned lands (existing and proposed) are connected to the public sewer network ensuring treatment of wastewater prior to discharge.</p> <p>WW2 - Upgrade existing wastewater treatment plant infrastructure</p> <p>WW3 - Reduce the dependency on individual proprietary wastewater treatment facilities.</p>
Renewable Energy	<p>RE1 - Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives</p> <p>RE2 - Promotion of energy conservation across all sectors including the development of low carbon commerce and buildings.</p>
Cultural Heritage 	<p>CH1 - Protect and conserve the cultural heritage including the built environment and settings; archaeological (recorded and unrecorded monuments), architectural (Protected Structures, Architectural Conservation Areas, vernacular buildings, materials and urban fabric) and manmade landscape features (e.g. field walls, footpaths, gate piers etc.).</p> <p>CH2 - Conserve historic fabric of urban and rural settlements.</p> <p>CH3 - To ensure the restoration and re-use of existing uninhabited and derelict structures where possible opposed to demolition and new build (to promote sustainability and reduce landfill).</p>
Landscape 	<p>L1 - Conserve, protect and enhance valued natural landscapes and features including those of geological and aesthetic value.</p> <p>L2 - Protect designated landscapes and scenic views, routes and landscape features of local value</p> <p>L3 - Conserve and protect cultural landscapes including archaeological and architectural.</p> <p>L4 - Minimise visual impacts through appropriate design, assessment and siting</p> <p>L5 - Maintain and Enhance landscape quality within the plan area</p>

Chapter Six – Alternatives

6.1 Introduction

The consideration of Alternatives is a legal requirement of Directive 2001/42/EC of the European Parliament and of the Council on the assessment of the effects of certain plans and programmes on the environment (SEA Directive) which entered into force on 21st July 2001 and implemented by Member States prior to 21st July 2004. In particular the Directive states that:

"... an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme are identified described and evaluated" (Article 5.1).

The issue of alternatives is therefore a critical function of the SEA process and necessary to evaluate the likely environmental consequences of a range of alternative development strategies for the plan area within the constraints imposed by environmental conditions

6.2 Alternative Approaches

At the outset of the Local Area Plan process, a number of development scenarios were grouped into viable but very different approaches and highlighted based on the current and predicted future needs of the area. In accordance with SEA guidelines the alternatives put forward are realistic and capable of implementation, including;

- A 'Do Nothing' approach is not considered a reasonable and realistic approach as Clare County Council is obliged by legislation to prepare a Strategic Environmental Assessment on the Shannon Town & Environs LAP 2012-2018.

1. 'Business as Usual' Approach

Shannon Town is addressed in the South Clare Local Area Plan 2009-2015. As required under Section 10(1B) of the Planning and Development (Amendment) Act 2010, planning authorities must ensure that core strategies are incorporated into development plans within 1 year of the adoption of the relevant Regional Planning Guidelines; in this instance the Mid-West Regional Planning Guidelines came into effect in September 2010. In demonstrating consistency with the Regional Planning Guidelines and the Clare County Development Plan 2011-2017, the core strategy must also be incorporated into Local Area Plans. Therefore the South Clare LAP 2009-2015 has been revoked and a new South Clare Local Area Plan 2012-2015 prepared. However, Shannon does not form part of this new SCLAP 2012-2018 and thus would not be subject to localised planning framework.

The 'Business as Usual' approach would not accommodate a new LAP for the Shannon area and instead utilise the Clare County Development Plan 2011-2017 as the leading planning instrument for Shannon.

2. 'Gateway' Approach

Strengthening the critical mass of the existing Limerick/Shannon Gateway is a key component of the NSS. The existing airport and port facilities, road infrastructure and enterprise development forms the platform for capitalising on the strategic location of this gateway, in pursuit of national scale social and economic needs. A diverse

population base is also key to achieving this and providing sufficient land to accommodate future residential growth is paramount to the growing strength of Shannon as a Gateway. This option would ensure that land was available for development as required in order to strengthen and promote the Gateway designation. The physical and environmental constraints of land availability or suitability would not be addressed.

3. Demand-Led Approach

This approach would be predominantly based on a 'demand only' basis. Utilisation of vacant buildings and the reuse and redevelopment of existing buildings on brownfield sites would be encouraged prior to the development of new build on Greenfield sites. This would have a short term environmentally positive effect, but negates the requirement for core strategy and does not incorporate a strategic approach to sustainable development and proper planning. Also, this option does not address deficiencies in types of housing required.

4. Ad- Hoc Approach

Promoting development in the Plan area in an ad-hoc and unrestrictive manner;

- at any location within its functional area, not having regard to geographical scope,
- without restriction on development at or adjacent to existing built heritage,
- without regard to the current available levels of infrastructure and service utilities,
- without regard for environmental and ecological designations, sensitivities and constraints,
- without regard for the likely significant impacts on water resources.

5. Economic Development Approach

This approach would aim to facilitate economic stability in Shannon by providing sufficient land and requirements for development purposes. This option would create opportunities for employment, enterprise, and tourism development, etc. without restrictive environmental and planning constraints. Development at Shannon Airport and Shannon Estuary would be facilitated in the interests of economic sustainability. Linkages to marine industry would be accommodated to further enhance the Gateway designation as a key driver in the economic growth of the region.

6. Strong Environment led Approach

This scenario, essentially eco-centrally based, would offer strong short-term protection to the natural, cultural and aesthetic landscape, for example, areas of ecological interest and visually sensitive areas. Severely restrictive policies towards development in highly defined sensitive areas such as those listed as NHA, SPA, SAC or indeed those areas highlighted as being sensitive in terms of ground water resource protection or visually sensitive would apply. A zone of influence would apply which would apply a much broader interpretation as to which areas were designated as environmentally sensitive, therefore, much of Shannon would be deemed as such, leading to very minimal development occurring. Strict adherence to EU principles for protection of water quality, air emissions, cultural heritage, etc. would dominate. There would be a strict demarcation between urban and rural areas. Design of developments would be very prescriptive. The density of Shannon Town would increase with major emphasis on infill development and brownfield development. In summary, the key environmental impacts would include:

- Areas which are the subject of ecological designations would be carefully managed and sustained to ensure that the inherent, conservation value of

biodiversity, flora and fauna would not be compromised

- Developments would be served by appropriate wastewater treatment infrastructure thus avoiding impacts upon abstraction sources of water and surface and groundwater resources,
- Development would avoid negative impacts on the status of water quality, in an effort to comply with the requirements of the Water Framework Directive,
- Highly valued landscapes would remain as such to ensure that the character and quality is maintained.
- The environmental effects and cumulative impacts of development would be considered with development needs in the overall development of the County.

7. Sustainable Planning and Development

Sustainable development in Shannon can be achieved through the promotion, maintenance and enhancement of the existing viable urban community, preservation of the quality and character of the natural and man-made environment and concentration on infrastructural investment. A planned approach to the approval of acceptable development within the Plan area will ensure that development will be targeted in key areas in a sustainable and managed way. This approach emphasises the NSS designated gateway and the targeted accommodation of the predicted future population need in a planned and orderly manner. Ultimately the core issue of sustainability is addressed and significantly a balance between development and environmental protection is enshrined in the plan. This approach offers a full spectrum of planned options, thus, this approach offers a long term vision for the Plan area. Under this scenario the following results are envisaged:

- Implementation of Core Strategy highlighting population targets and a quantification of requirements for zoning of lands for residential/other development
- Implementation of the hierarchical gateway within the Settlement Strategy;
- Key areas for growth identified and promoted;
- Strategic or key routes and linkages identified and preserved;
- A high level of environmental protection;
- Valuable natural resources such as water quality are protected
- Key designations such as the Shannon Estuary are sustainably and environmentally addressed in the overall scheme of development.

This option includes objectives for promoting the growth within Shannon without compromising on character; promotion of tourism and enterprise; provision of enhanced waste water treatment facilities and protection/enhancement of the natural and cultural heritage of the settlements.

As a result of further analysis and consultation, additional alternative options can sometimes be considered, however, given the legislative requirements in this instance, it is envisaged that the ST&E LAP 2012-2018 will progress as planned.

6.3 Settlement Hierarchy

The settlement hierarchy in the Clare County Development plan 2011-2017 was drawn up using the principles of sustainability. The aim of the settlement strategy is to ensure that future development is directed in a balanced plan-led manner to rural and urban areas throughout the county as appropriate. The position of Shannon within the settlement strategy provides an indication of the potential scale of population growth permissible over the lifetime of the plan and therefore plays a key role in the appropriate delivery of the population targets identified.



6.4 Assessment of the Options

In conducting SEA, the likely significant environmental effects of implementing a plan or programme must be appraised and

“an outline of the reasons for selecting the alternatives dealt with” (Annex I (h))

In this regard the alternatives proposed are set at the appropriate strategic level to which the Plan will be implemented within the National planning hierarchy, they are assessed against the relevant Strategic Environmental Objectives (SEOs) established for the key environmental parameters likely to be affected e.g. biodiversity, population, etc. and clear justification is provided for the selection of the preferred alternative. Table 6.2 represents an environmental assessment only of the alternatives proposed.

Table 6.2 - Environmental Assessment of the Alternatives against SEOs

Environmental Assessment of the Alternatives									
									
Option 1 – 'Business as Usual' Approach	○	○	○	○	○	○	○	○	○
Option 2 – Gateway Approach	○	○	○	○	○	○	○	○	○
Option 3 – Demand Led Approach	○	○	○	○	○	○	○	○	○
Option 4 – Ad- Hoc Approach	○	○	○	○	○	○	○	○	○
Option 5 - Economic Development Approach	○	○	○	○	○	○	○	○	○
Option 6 - Strong Environment led Approach	○	○	○	○	○	○	○	○	○
Option 7 - Sustainable Planning & Development	○	○	○	○	○	○	○	○	○

Likely to Improve status of SEOs -	○	Probable Conflict with status of SEOs unlikely to be Mitigated -	○
Potential Conflict with status of SEOs likely to be mitigated by measures	○	Uncertain interaction with status of SEOs	?
Neutral Interaction with status of SEOs	-	No Likely interaction with status of SEOs	-

Option 1 - Business as Usual

The 'Business as Usual' approach was rejected on grounds that in the absence of a Local Area Plan for Shannon Town & Environs, a localised planning framework would not exist for the area and the Clare County Development Plan 2011-2017 would be the leading planning instrument.

Option 2 – Gateway Approach

Targeting economic growth in a particular area without recognising the surrounding environment is not conducive to proper planning and sustainable development. A balanced approach to development is required.

Option 3 - Demand Led Development

The availability of land space is a constraint in providing a viable demand led approach to development. The Shannon Estuary, Airport and Enterprise lands and the N18 act as physical boundaries to development in all directions and land which may seem available within the periphery of the LAP boundary is unsuitable on environmental grounds. The possibility of acquiring lands for development to the east of the plan area to Hurlers Cross was considered but refuted on land availability and environmental concerns. Also, this option does not accommodate core strategy requirements.

Option 4 – Ad Hoc Development envisages potentially inappropriate lands zoned for development without truly assessing the overall need for, or scale of development. Consequently development would occur in un-serviced or in insufficiently serviced areas. Therefore, this strategy was rejected on grounds that it would put unnecessary pressure both on the fringes of Shannon as well as in the open countryside surrounding the town and lead to significant levels of ribbon development between Shannon and surrounding settlements, it would have a negative impact on the significant and rich cultural heritage of the individual settlements in the Plan area, it would put undue pressure on the existing infrastructural provision prior to upgrade, and it would cause undue negative impacts on all aspects of the environment. By

adopting such a Non-Planned approach, development of all areas would occur with little control exerted, it would present significant environmental problems and would be contrary to the principles of sustainable development. This option would not allow for the orderly and sustainable development of the County.

Option 5 - Economic Development Approach, The planning consequences of Option 5 would be severe and while this alternative would allow for development and provide some short term economic benefits to the plan area and surrounding hinterland, it is not sustainable and therefore not a viable or acceptable alternative in practice. This scenario takes a short term view of development with no consideration of the long term negative environmental consequences; therefore, taking into consideration the following conditions, this strategy was rejected in favour of a more sustainable viable option.

- It would lead to deterioration in the settlement structure of the county, with a significant shift towards rural rather than urban development.
- Ultimately it would lead to a loss of population base within key centres and consequently a loss of critical mass for the development of key services and facilities within those centres.
- Lack of consideration for environmental constraints e.g. Natura 2000 site designations and flooding would undoubtedly lead to short & long term, cumulative negative impacts.
- Urban generated housing within the transport corridors would have long term implications for future road development and would compromise re-alignments, or road geometry with adverse risks to road users
- Development would have no policy regulation or guidance over where it could occur, this could lead to non-strategic developments in isolated areas resulting in significant increases in population, increase in private transport usage, decrease in quality of life for nearby residents, etc.
- Specific issues associated with climate change such as sea-level rise, extreme flooding and drought, changes in species distribution would continue unchecked and lead to catastrophic consequences, for example, continued and increased flooding, significant risk to human quality of life, property, biodiversity, agriculture productivity and water quality.
- Cumulative effects of individual developments would not be easily overseen or coordinated and assessed for their effects
- Such development is uncontrolled and essentially developer-led but without adequate provision for necessary infrastructure. This option would result in the development of the plan area through market forces in an unsustainable manner.
- Domination of market forces resulting in piecemeal development
- Furthermore, Core Strategy is a transparent evidence based rationale for the amount of land proposed to be zoned and as such must be adhered to

Option 6 - Strong Environment led Approach promotes a strong environmental approach, however, this scenario would have major negative implications for socio-economic growth. Infrastructure in Shannon Town would come under enormous pressure with the sudden influx of growth, which could in turn lead to long-term negative environmental impacts. There would be prevalence towards residential development in peripheral settlements in South Clare where wastewater and flooding issues are evident and the surrounding rural areas would experience decline due to less development, employment opportunities and thus, potential rural population migration. For example, traditional agricultural activities would decline, and alternative agricultural practices would not be an option. Tourism development would not be permitted in rural areas; thereby incomes from the revenue source would decline. In general, with this approach the degree of protection offered to the environment would be great while the level of economic and social growth would be

lessened.

- It would have the effect of focusing development on the larger Shannon urban centre with the potential for a consequent decline in the social, cultural and economic wellbeing of the surrounding rural areas.
- Significant negative impact on socio-economic growth in the County, particularly in relation to agriculture, tourism and rural industry (i.e. in areas outside of major hubs).
- Much of the rural County would be deemed not available for development, leading to very little development occurring, resulting in a decline in the social, cultural and economic wellbeing of rural areas.

Option 7 - Sustainable Planning & Development is the development scenario adopted by the Local Authority as it allows for planned development and represents a sustainable approach to planning in the Shannon LAP area. Development will be focused within zoned and serviced areas. Significant restrictions will be put in place to development in areas designated for environmental purposes such as Shannon Estuary as well as areas of archaeological importance or where threats to natural resources prevail, such as ground and surface waters. This scenario is based on the principles of sustainable development which means that the Plan is promoted in accordance with International, National, Regional and County guidelines and the entire Plan area is also covered by the objectives and policies of the Clare County Development Plan 2011-2017 and the mitigation measures proposed in such. In conclusion a planned approach to the further development of the area incorporating the principles of sustainable development is the option best suited to Shannon. Therefore, the above proposed alternatives which are 'realistic and reasonable' and capable of being implemented have been rejected in favour of this chosen, more sustainable approach.

6.5 Technical Difficulties

The use of qualitative and quantitative data in assessing and evaluating alternatives has provided a greater depth of knowledge than using one method alone. A combination of previous knowledge, site visits, consultation, GIS, matrix tables, environmental sensitivity mapping etc. has enabled the SEA team to compile a comprehensive list of reasonable and realistic alternatives worthy of inclusion in the ST&E LAP 2012-2018.

Therefore, based on the level of information available, it can be concluded that no technical difficulties were encountered in formulating the alternatives section of the Environmental Report to this level of detail.

Chapter Seven – Environmental Assessment

7.1 Introduction

This Chapter is a summary of the detailed assessment of the Shannon Town & Environs Local Area Plan, the issues of concern highlighted at the onset of the plan preparation process and an environmental assessment of the activities within the plan area.

The SEA welcomes the addition of text in Section 1.6 'Legislative Context' as the Planning and Development Act 2000 (as amended) will be informed by '...by other relevant legislation which is in force or which comes into force during the lifetime of the plan, in particular the requirement for Strategic Environmental Assessment and Habitats Directive Assessment, which is outlined below'.

NOTE:

Due regard shall be had to the Clare County Development Plan 2011-2017, its policies and objectives in relation to environmental protection and the accompanying Strategic Environmental Report. Appendix E of this Environmental Report - Strategic Environmental Objectives' (SEOs) comprehensively outlines the relationships between the SEOs for the Shannon Town and Environs Local Area Plan 2012-2018, the Clare County Development Plan 2011-2017 and the Regional Planning Guidelines 2010-2022. Also, Appendix F of this Environmental Report details the interrelationship between Shannon Town and Environs Local Area Plan SEOs and Clare County Development Plan 2011- 2017 objectives.

The assessment of effects detailed in Appendix G of this Environmental Report 'Zoning Assessment Matrix' outlines the assessment of environmental effects as noted. This in-depth assessment formed the basis for the assessment and discussion of the Shannon LAP objectives and zonings which is contained in Chapter 7 in its entirety. However, the SEA will revisit the assessment and strengthen the assessment descriptions to mirror the 'assessment matrix' in Appendix G to reflect how the preferred alternative has been assessed against the SEO's.

7.2 Issues of Concern

As stated in Chapter 1 and 2 of this Report, the Plan provides specific detail in relation to the future development of Shannon Town and Environs and has zoned lands for development accordingly. Thus, the assessment deals specifically with these issues.

At the outset of the process and during the scoping stage of the Strategic Environmental Assessment, a number of specific issues were raised which were of immediate concern for the process and are critical to the sustainable development of the Shannon area. The issues highlighted and discussed in Chapter 2 of this Environmental Report are:

- Biodiversity – Shannon Estuary;
- Wastewater;
- Flooding;
- Groundwater protection;
- Landscape & Visual Amenity.

A number of specific threats were identified during the baseline assessment of the existing environment. These issues have been comprehensively addressed and assessed, details of which are provided in Section 7.3

7.3 Environmental Assessment

It is worth reiterating that the development of the Strategic Environmental Assessment is an iterative process, carried out in conjunction with the development of the Local Area Plan. The principal reason for doing so is to ensure that negative

environmental impacts are highlighted at an early stage enabling them to be effectively 'designed out' as soon as possible. The result is a Local Area Plan which has had due regard to the environmental issues pertaining within the area and any negativity should be shown to be minimal.

However, it has been demonstrated that there are a number of areas where the impact is uncertain due to location specific issues, these are highlighted. Also, a limited number of areas have been shown to have a potentially negative environmental impact. In response, a series of mitigation measures are provided for in Chapter 8 of this Report which are designed to limit or eliminate identified impacts. Furthermore, due regard must be had to the Clare County Development Plan 2011-2017, its policies and objectives particularly in relation to environmental protection, and the accompanying Strategic Environment Assessment Report and the mitigation measures contained within. Both apply to the Plan area and should be read in conjunction with the LAP. In addition, monitoring the implementation of the Plan, as discussed in Chapter 9, will ensure that if any impact becomes a reality it will be identified and appropriate actions taken to remedy the situation.

Community Facilities and Services

The development of lands for Community uses shall be taken to include the use of land for community, public or educational uses, including the provision of schools, community halls, health care institutions, utilities, libraries and the development of other community uses. Ancillary facilities such as dedicated open space and sports facilities will also be facilitated within this type of zoned land.

It is essential that any development adheres to the zoning and development control standards set out in the LAP as well as the relevant government guidelines and policies. The stated objectives of the Clare County Development Plan 2011-2017 (the parent document to the ST&E LAP 2012-2018) in relation to the following criteria will be adhered to.

Economic Development (General)

The environmental impact of some economic developments would be site specific but could have long term adverse outcomes on flora and fauna, landscape, etc. Cumulatively, a rise in the number or scale of business and industrial enterprises in the hinterland of Shannon would lead to unsustainable transport patterns. It is considered that an integrated relationship with Shannon Development and, inter alia Shannon Airport and Clare County Council will alleviate significant impacts on the receiving environment. The stated objectives of the Clare County Development Plan 2011-2017 (the parent document to the ST&E LAP 2012-2018) in relation to any proposal infrastructure will also be adhered to.

Economic Development/Retailing

CDP 2011-2017 policies and objectives on retail development are in accordance with the Retail Strategy for the Mid-West Region 2010-2016 (adopted as Volume 6 of the Clare County Development Plan 2011-2017) which sets out the retail hierarchy for the entire area. The Retail Planning Guidelines indicates an explicit presumption against large retail centres adjacent or close to existing, new or planned national roads/motorways. The stated objectives of the Clare County Development Plan 2011-2017 (the parent document to the ST&E LAP 2012-2018) in relation to any proposal infrastructure will also be adhered to.

Environment

It is essential that the water resources, particularly the Shannon Estuary within the Plan area are afforded the highest protection and any development that would adversely impact upon the natural environment should be avoided wherever possible. Strict adherence shall be required in relation to mitigation measures put forward by the Council, which are in turn supported by the SEA. The stated objectives of the Clare County Development Plan 2011-2017 (the parent document to the ST&E LAP 2012-2018) in relation to any proposal infrastructure will also be adhered to

Housing

CDP 2011-2017 policies and objectives are in accordance with the Joint Housing Strategy for Clare Local Authorities and Limerick City and County Councils 2011 – 2017 (adopted as Vol. 7 of the Clare County Development Plan 2011-2017) which sets out the retail hierarchy for the entire area

The stated objectives of the Clare County Development Plan 2011-2017 (the parent document to the ST&E LAP 2012-2018) in relation to the following criteria will be adhered to. It should be noted that there is a 9.26% vacancy rate of housing stock in Clenagh ED (CSO, 2011) compared to 21.3% for all of County Clare. There is as yet no definite analysis of vacancy rate by settlement.

Infrastructure

Due to the scale and nature of infrastructural projects some uncertainty exists as to the impact they might have on the various environmental indicators and on the receiving environment. Each development should be examined on a case by case basis and the appropriate mitigation measures put in place in order to avoid undue negative impacts. Adherence to government guidelines will enable the sustainable provision of related infrastructure without adversely impacting the environment. Following the provisions of the EU Water Framework Directive, Shannon River Basin Management Plan and government guidelines including "The Planning System and Flood Risk Management" (2008) will ensure the protection of valuable water resources, both ground and surface, within the plan area.

It is also essential that any proposal for development in sensitive location must strictly adhere to the policies set out by the council in relation to development in sensitive landscapes. The stated objectives of the Clare County Development Plan 2011-2017 (the parent document to the ST&E LAP 2012-2018) in relation to any proposal infrastructure will also be adhered to.

Open Space

A revised definition of 'open space' has been incorporated into the Clare County Development Plan 2011-2017, it states as follows:

Any development on lands zoned as Open Space shall:

- a) be appropriate to the lands in question, taking into account ecological sensitivities and constraints;
- b) comply with the objectives of the County Development Plan, particularly in relation to protection of nature conservation sites, habitats and species; and
- c) be subject to ecological impact assessments and/or a Habitats Directive Assessment as necessary.
- d) Any landscaping or planting should be appropriate in areas of ecological sensitivity and should comprise native species appropriate to the area and local site conditions and require minimal management input. An ecologist should advise in this regard.

The stated objectives of the Clare County Development Plan 2011-2017 (the parent document to the ST&E LAP 2012-2018) in relation to the following criteria will be adhered to.

Recreation and Amenity

The use of land for recreation will be taken to include sports centres, playing pitches and associated facilities, outdoor recreation centres and other facilities that contribute to meeting the leisure, recreation and amenity needs of the immediate community and/or the wider area.

The stated objectives of the Clare County Development Plan 2011-2017 (the parent document to the ST&E LAP 2012-2018) in relation to the following criteria will be adhered to.

Tourism

Due to the scale and nature of potential tourism projects some uncertainty exists as to the impact they might have on the various environmental indicators and on the receiving environment. Tourism within Shannon is guided by CDP Objective 12.8: Tourism in South & Mid Clare which is supported by the Strategic Environmental Assessment. The mitigation measures proposed by the Council are therefore regarded as suitable in relation to these policies

Zonings

The extent of zoned land within the ST&E LAP 2012-2018 is in compliance with the core strategy of the CCDP 2011-2017 which is consistent with the population targets of the Mid West Regional Authority. However, the CCDP 2011-2017 states:

It is not intended that the population targets for individual settlements will be rigidly implemented without any flexibility. Local factors for consideration include:

- *Availability of services*
- *Demand and land availability*
- *The need to accommodate those who qualify to build in the countryside but who alternatively may wish to locate in a settlement*
- *The need to support the retention of local services e.g. schools, the Council will also have regard to:*
 - CDP 3.9 Monitoring & Implementation of Settlement Strategy
 - CDP 3.10 Planned Growth of Settlements
 - DoEHLG Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas.
 - The overall performance of the relevant level of the settlement hierarchy e.g. small villages.

This shall be the subject of regular monitoring”

The figures as they relate to the required area of residentially zoned land (ha), open space, community, recreation, enterprise and industry in ST&E LAP settlements are outlined in Table 7.2.

It may also be noted that it is an objective of Clare County Council (CDP 4.3) to reserve 20% of land used for “Residential” or for a mixture of Residential and other uses, including ‘low density residential’ as prescribed under section 94(4)c of the Planning and Development Act 2000 (as amended), for the purpose of meeting social and affordable housing need arising within the County, or the relevant Local Authorities.

The stated objectives of the Clare County Development Plan 2011-2017 (the parent document to the ST&E LAP 2012-2018) in relation to the following criteria will be adhered to.

7.4 Land Use Zoning Matrix

Notwithstanding the SFRA and associated Flooding mechanisms in the plan area, in the interim, all future developments proposed along the banks of the estuary will be required to assess the suitability of the existing flood defences to ensure that flood risk is avoided, minimised or mitigated.

The Clare County Development Plan 2011-2017 contains a land use zoning matrix. This is reproduced as an Appendix of the Shannon Town & Environs LAP for ease of reference. This matrix lists the most common forms of development and classifies whether the proposed use is acceptable in principle, or otherwise, on lands that are zoned for a particular use, so as to promote the orderly development of settlements and to guide future development to the most appropriate locations within the Plan area.

Table 7.1: Land Zoning

Agriculture	The use of land for agricultural purposes. Individual dwellings for permanent occupancy for family members will be open for consideration subject to normal site suitability considerations.
Commercial	The use of commercially zoned lands shall be taken to include the use of land for commercial and business uses, including retail, office, service industry, warehousing and the facilitation of enterprise/ retail park / office park type uses, as appropriate. It is important to reserve these lands for possible commercial and/or business uses and redirect other uses where it is considered that such uses would be more appropriately sited within other land zoning categories. Retailing is open for consideration in this area, provided that an appropriate sequential test is carried out and that the lands are demonstrably the optimum location for the proposed development. The development must not detract from the vibrancy and vitality of the identified town centre and the development must be in accordance with the <i>Retail Strategy for the Mid West Region 2010-2016</i> , or any subsequent strategy.
Community	The development of lands for Community uses shall be taken to include the use of land for community, public or educational uses, including the provision of schools, community halls, health care institutions, utilities, libraries and the development of other community uses. Ancillary facilities such as dedicated open space and sports facilities will also be facilitated within this type of zoned land.
Enterprise Development	Lands zoned for 'enterprise development' shall be taken to include the use and development of lands for light industrial, high-end research and development, science and technology based industry, financial services, call centres, incubator and small/medium manufacturing purposes, corporate offices excluding general retail, retail park outlets, motor sales and heavy industrial undertakings.
Existing Residential	The use of land for existing residential development and uses that enhance existing residential communities.
General Industry	The use of land for 'General Industry' shall be taken to include the use of land for major industrial manufacturing. This type of manufacturing may be subject to the European Communities (Control of major accident hazards involving dangerous substances (Seveso Sites) under the EU Directive 96/82/EC, and Health and Safety Regulations SI No 74 of 2006. The mix of uses such as light industrial, office-based or retail development is not considered appropriate in areas zoned for industrial development.
Light Industry	The use of land for 'Light Industry' shall be taken to include the use of land for industry/manufacturing, distribution, open storage, transport operating centres and the treatment and recovery of waste materials. A mix of uses such as 'office-based development' and or 'retail development' is not considered appropriate in areas zoned for 'Light Industry'.
Low Density Residential	The use of land to accommodate a low-density pattern of residential development, primarily detached dwellings. The underlying priority shall be to ensure that the existing character of the settlement/area is maintained and further reinforced by a high standard of design. Proposed development must also be appropriate in scale and nature for the area in which they propose to locate
Marine-Related Industry	The use of land for 'Marine-Related Industry' shall be taken to include the use of land for industry that, by its nature, requires estuarine / deep-water adjacency e.g. marine-transport, transshipment etc.
Maritime/Harbour	The use of land for maritime/harbour related activity shall be taken to include the use of land, including harbours and piers that will facilitate water-based commercial or tourism activity.
Neighbourhood Centre	It is intended that lands zoned for this purpose will be developed to provide an appropriate range of local services including commercial, retail and community uses, to support the population of the surrounding area.
Open Space	The use of land as 'Open Space' shall be taken to include the use of land for afforestation, playgrounds, housing estate open spaces,

	<p>landscaped areas and parks. Developments incidental to the enjoyment of open space including sports centres, outdoor recreation centres and landscapes areas, play equipment, dressing rooms and similar facilities are open for consideration. There may be limitations to what 'Open Space' can allow, particularly in relation to sensitive ecological sites.</p> <p>It should be noted that lands zoned as Open Space are not necessarily in public ownership and members of the public should not automatically assume that access to the lands is permitted.</p> <p>Also, note the revised definition of 'open space' incorporated into the CCDP 2011-2017, which states as follows: Any development on lands zoned as Open Space shall:</p> <ol style="list-style-type: none"> be appropriate to the lands in question, taking into account ecological sensitivities and constraints; comply with the objectives of the County Development Plan, particularly in relation to protection of nature conservation sites, habitats and species; and be subject to ecological impact assessments and/or a Habitats Directive Assessment as necessary. Any landscaping or planting should be appropriate in areas of ecological sensitivity and should comprise native species appropriate to the area and local site conditions and require minimal management input. An ecologist should advise in this regard.
Proposal Sites	' <i>Proposal Sites</i> ' comprise lands identified for future potential development where development and service objectives are defined for future development, and further masterplan development.
Recreation	The use of land for recreation will be taken to include sports centres, playing pitches and associated facilities, outdoor recreation centres and other facilities that contribute to meeting the leisure, recreation and amenity needs of the immediate community and/or the wider area
Residential	' <i>Residential</i> ' use shall be taken to primarily include the use of land for domestic dwellings. It may also provide for a range of other uses particularly those that have the potential to foster the development of new residential communities e.g. schools, crèches, small-scale medical facilities, formal and informal open spaces etc
Strategic Development Areas (SDA)	' <i>Strategic Development Areas</i> ' are areas identified within the plan area where specific planning and development objectives, land use policies and or master development plans have been identified for the future development of such designated area.
Tourism	Lands zoned for tourism development shall be used for a range of activities which are primarily designed for the facilitation of tourism development
Town Centre/ Mixed Use	The use of land as ' <i>Town Centre / Mixed Use</i> ' shall include the use of land for a range of uses, making provision where appropriate, for primary and secondary uses e.g. commercial/retail development as the primary use with residential development as a secondary use. Secondary uses will be considered by the local authority, having considered the particular character of the given area. A diverse range of both day and evening uses is encouraged and an over-concentration of any one use will not normally be permitted. These areas must be accessible to pedestrians, cyclist, persons with special mobility requirements and public transport (where feasible). The Council will continue to ensure that any proposed development is in the interest of the proper planning and sustainable development of the area, and serves to reinforce the vitality and viability of town centres whilst meeting the needs of its community and surrounding hinterland. Local area plans will also identify town centres that require the preparation of a town centre strategy, in order to encourage and facilitate the enhancement and improvement of the town centres.
Utilities/ Infrastructural Safeguard	Certain lands have been identified and reserved for the protection of existing and future provision of key infrastructural services, and the upgrading of existing service infrastructure. Such land uses may include the safeguarding and protection of energy water/ wastewater, road, rail and air infrastructural land uses requirements for the County

7.5 Zoning Assessment Summary

The general and specific zoning objectives outlined in the ST&E LAP 2012-2018 have been assessed against the SEOs detailed in Chapter 5 and each of the environmental parameters is represented in the matrix (Appendix G) by the symbols shown below:

	Population, Human Health ⁴ & Quality of Life
	Biodiversity, Flora and Fauna
	Soil and Geology
	Water
	Air Quality and Climatic Factors
	Material Assets – Transport/ Waste Management/ Renewable Energy
	Material Assets – Water Supplies/Wastewater
	Cultural Heritage
	Landscape

Note:

This is an assessment of the zonings in the Plan and the Proposed Material Alterations. The results of the assessment are tabulated in Appendix G.

Notwithstanding this a discussion is also provided for each zoning with further expansion, where relevant, on the significance (profound, moderate, and imperceptible) of the identified impact; the duration (short, medium, long term, permanent or temporary) of the identified impact; and the type (cumulative, irreversible, and synergistic) of the identified impact, in accordance with current guidelines. The zoning objectives relate to:

- Industry & Enterprise (7.5.2)
- Aviation (7.5.3)
- Town Centre (7.5.4)
- Mixed Use/Commercial (7.5.5)
- Housing (7.5.6)
- Community, Social & Recreation (7.5.7)
- Low Carbon Strategy (7.5.8)
- Tourism (7.5.9)
- Open Space (7.5.10)
- Infrastructure (7.5.11)

⁴ Human Health is not dealt with directly in the report, but is instead dealt with through consideration of other environmental issues such as flooding, water quality, etc.

A cumulative assessment of the environmental sensitivities, aligned to the SEOs of the plan was also assessed and mapped (Section 7.6) and Table 7.2 outlines the zoning calculation requirements in Shannon Town.

7.5.1 Shannon Town

The Vision for Shannon can be encapsulated by the following statement:

'A town where people want to live and work sustainably and visit because of its strong identity and sense of place high amenity value and quality of life. A sustainable low carbon town which continues to be the regional leader for economic development and employment maximising its strategic location accessibility and Gateway status'

Shannon Town & Environs Local Area Plan 2012-2018

This vision is being secured through the implementation of aims and objectives as outlined in the Shannon Town & Environs Local Area Plan 2012-2018 with reference given to CDP Objective 6.3 of the Clare County Development Plan 2011-2017 which states that Clare County Council intends:

- a) To protect and promote the Shannon Gateway as a primary location for industrial, manufacturing, warehousing, distribution and transport operating centres, and facilitate, where required, the adaptation of industrial areas to other employment generators;
- b) To facilitate the development and expansion of Shannon Airport, to include an International Air Freight cargo hub and encourage collaboration with global logistics companies;
- c) To support the development of innovative initiatives that harness the potential of the airport including, but not exclusive to, a residential flight school, global logistics centre for humanitarian aid, unmanned aerospace systems (UAS) and a centre for space collaboration and research cooperation;
- d) To facilitate and permit the economic development of Shannon town and environs including Shannon Airport in accordance with the strategic goals and detailed objectives of this Development Plan through the preparation of a Local Area Plan for Shannon town and environs;
- e) In collaboration with other agencies, to prepare a high level Strategic Plan, to identify key priority projects and developments capable of being accommodated at the Shannon Airport lands, Shannon Free Zone and Westpark;'

Objective 1.2 – Core Strategy

It is an objective of the Shannon Town and Environs Local Area Plan 2012-2018 to ensure that sufficient lands are zoned at appropriate locations, in accordance with the assigned population target and to meet all envisaged land use requirements of the area over the lifetime of the local area Plan.

Shannon Town & Environs Local Area Plan 2012-2018

7.5.2 Industry and Enterprise

The SEA welcomes objective 3.8 'To recognise the role of wide scale networking in the creation of a learning environment in SFZ'.

The Shannon Town and Environs Local Area Plan 2012-2018 seeks to ensure that Shannon continues to act as a driver of county and regional prosperity harnessing its existing resources and strategic location, this is in accordance with CDP objective 6.3 'Shannon & Shannon Airport', as set out in the Clare County Development Plan 2011-2017).

The existing plan area contains five main industrial areas;

- Shannon Free Zone
- WestPark
- Free Zone East
- Smithstown, and
- Lands related to Airport

In addition, the Shannon Business Centre located within the town centre and Shannon House, which is located within the Shannon Free Zone.

Industry and enterprise lands form to a significant majority of the development lands within the plan area which in turn contribute to large numbers of commuters daily, in this regard it is recommended that measures to encourage the practice of smarter travel for workers are introduced including inter alia, bike schemes, shuttle bus from enterprise zones to town centre etc.

The Council have addressed and recognised the importance of the Shannon Free Zone Masterplan in the plan preparation process. It is intended that the ST&E LAP will facilitate implementation of the Masterplan where it is consistent with, and does not prejudice the achievement of the other goals and objectives of the Shannon Town and Environs Local Area Plan 2012-2018. The ST&E LAP has incorporated a sustainable approach to development in line with the SFZ Masterplan (2008) which contains a GreenPrint; an innovative methodology for more sustainable urban development. Climate change, Transport, Place Making, Resources, Ecology, Business, Community and Buildings are all considered in the quantitative assessment of development. Notwithstanding this, cognisance must also be had to the interrelationship between human health, air quality and the provision of green spaces for amenity within working environments.

It is also the intent of the Council to require applicants for planning permission to provide details of the sustainable aspects of their proposals when they relate to either comprehensive site redevelopment or to "greenfield" development projects within the SFZ.

I1 – Shannon Free Zone (East and West) Business and Technology

The development of I1 is to accommodate light industry based business and technology.

I1 (West) - The SFZ lands to the west of the plan area are predominantly developed. Future development proposals within this zoning must consider the;

- high' groundwater vulnerability on the majority of the lands

- 2 exclusion zones for SEVESO Sites
- inner public safety zone, and
- flood zone within the southern section of the site.

I1 (East) – The lands are bounded to the east and west by the N18 and N19 roads and the N18/N19 interchange. Around 90 hectares remain available for strategic Greenfield development which is currently in agricultural use. It is envisaged that potential development will imitate the existing developed use as a mix of large-scale offices, logistics and advanced manufacturing businesses.

Characteristics for the development of these lands include landmark buildings facing the N18/N19, new vehicular access from N19, parking provision and complimentary parkland. Development proposals within this zoning must consider the;

- IPPC licensed activity within the site
- SEVESO exclusion zone
- flood zone to the east of the site
- inner public safety zone, and
- numerous remains of standing stones, enclosures, archaeological and cultural heritage.

I2 – Shannon Free Zone West (Advanced Manufacturing and Logistics)

This zone adjoins Shannon Airport and it is envisaged that it will facilitate associated opportunities in advanced manufacturing, distribution, warehousing, storage and logistics businesses. The zone is predominantly developed so any redevelopment will be on brownfield site, and which may facilitate limited complementary small scale local facilities i.e. café, restaurant etc. to serve the local employees. Development in this zone must be compliant with any HSA directives for the area due to existing SEVESO plants in the immediate vicinity (north) of this zone. Cognisance must also be had to the majority of lands being within a flood zone and the location of an IPPC licenced activity in the zone.

I3 – Smithstown

Predominantly, the 33ha of land at Smithstown is fully developed as a mixed use, commercial area with a large range of commercial uses, including retailing. However, it is stated that Smithstown will be designated for light industry uses only and proposals for site redevelopment and new uses will be considered in the context of this objective. The mix of development gives rise to issues of traffic pattern and usage including an accumulation of heavy commercial and private traffic; it is recommended that this issue is addressed. It is also recommended that regard be had to the visual enhancement of the quality of the streetscapes and general environmental quality throughout Smithstown including inter alia, the SEVESO exclusion zone; recorded monuments including the archaeological remains of a castle/tower and associated enclosures and the 2 IPPC licenced activities within the zone.

E1 – Shannon Zone East and West (Large Office based business and technology)

Clare County Council support and facilitate the redevelopment and regeneration of Shannon Free Zone East and West on a phased basis over the next 25 years. The redevelopment will accommodate for strategic sites for new enterprise, primarily office type activity, including advanced manufacturing, labs and R&D, linkages between the area and the airport, landscaped parkland setting, high quality, well designed frontages onto the surrounding road network, particularly Bothar Na Luachra and Bothar Mor and possible provision for associated ancillary business uses comprising café, restaurant, crèche, leisure facilities for the sole use of the employees employed on the campus.

It is also recommended that regard be had to the SEVESO exclusion zone and the 4 IPPC licenced activities within the area.

E2 Adjoining N18 - Enterprise Development

The site has a strategic and prominent location directly adjoining the Shannon Free Zone East, adjacent to Ballycasey roundabout and visible from the main M18 / N18 Ennis – Limerick national primary route. Cognisance must be had to the safe and accessible use by potential workers and sufficient landscape buffering from the adjacent M18.

E3 Stonehall – Enterprise Site

This site is addressed under Section 7.5.8 – Low Carbon Strategy

E4 - Airport Enterprise Site

This site occupies a prominent gateway position on the approach to Shannon International Airport, has convenient road access, with a high amenity location overlooking the Shannon Estuary which is directly adjoining internationally important EU designated Natura 2000 sites.

A key element of any future proposals shall be the development of a building(s) on the site which is of sufficient scale, height and of a suitably high design standard, so as to provide an appropriate landmark at a strategic location adjoining the entry point to the Airport lands. A detailed design brief for this site shall accompany all future development proposals.

The SEA recommends that such a landmark will not seriously injure the visual amenities of the area or the estuary viewsapes from land and/or the estuary. Development which would have a detrimental impact on the estuary, views or prospects, or which may be likely to have a negative impact on the Natura 2000 sites shall not be permitted. The SEA also recommends that any proposed development be subject to requirements with regard to appropriate siting, design and scale such that any proposals would not give rise to any significant negative impacts on visual amenities, prospects or views and would be in harmony with the surrounding landscape.

This SEA also requests adhering to the WFD requirements with regard to maintaining/improving the quality of surface and groundwater and adhering to the aquifer protection plan. The SEA recommends a strip of open space be provided along the entire eastern perimeter and a small area of community zoning to the north. The SEA recommends that the community site is labelled as 'C17' on Map A to correspond with the text in the Plan.

The Natura Impact Report states that no impacts on the Natura 2000 Site Network were noted at this strategic Plan-level as a result of these recommendations. However, any development proposals shall be required to undertake Habitats Directive Assessment.

7.5.3 Aviation

The strategic location of Shannon Airport has always been at the core of its unique selling point and the Council are fully supportive of the continued need for Shannon Airport to maximise this. The Mid-West Regional Planning Guidelines recognise the importance of Shannon International Airport as a key hub both for national and international air travel. It is a gateway to Ireland's primary tourist locations and a driver for County and regional economic development, in this regard the ST&E LAP 2012-2018 will seek to ensure the growth and development of Shannon Airport and to harness its full potential, in line with National, Regional and County development policy. The designation of a Strategic Development Area encompassing the Airport lands reinforces this commitment.

'Strategic Development Areas' are areas identified within the plan area where specific planning and development objectives, land use policies and or master development plans have been identified for the future development of such designated area.'

The Council also fully acknowledge the importance of key infrastructural resources within the Airport lands, including the treatment plant, storm water network and fuel terminal, which are critical to the existing and future needs of the Airport. The SEA also acknowledge the importance of such infrastructure in the operations of the airport, however, this must not be at the detriment of environmental concerns specifically public safety, water quality, biodiversity etc.

As stated earlier, Shannon Airport is serviced by a private wastewater treatment plant at Duglish Island within the SDA designation and a water supply network solely for the use by the Shannon Airport lands.

Access to the SDA is primarily by the existing Aerospace Road. It is considered that future development will require this to be upgraded. The car is the predominant mode of transport used to access the airport as there are limited public transport alternatives. The future rail link to Shannon Airport, as outlined in objective CDP 11.11 of the Clare County Development Plan 2011-2017 is welcomed in accordance with other sustainable measures including improved bus linkages such as, inter alia, a direct Shuttle Bus service from Sixmilebridge railway station to Shannon Airport and a dedicated airport flyer service between Limerick City and Shannon International Airport.

As stated the Council will support the development and expansion of Shannon Airport and will also facilitate the implementation of the Shannon Airport Masterplan, where its objectives do not conflict with the overall vision and objectives of the ST&E LAP.

Shannon Airport Lagoon

The Airport SDA includes the area known as the Shannon Airport Lagoon. The area can be subdivided into three distinct habitats, namely the brackish lagoon, the reed-beds, marsh and willow scrub which surround the lagoon and extend to the boundaries of the golf course, fuel depot and airport car parks, and the tidal mudflats enclosed between the breakwater and causeway to Dernish Island. The area forms part of the designated Lower River Shannon SAC and the River Shannon and Fergus Estuaries SPA Natura 2000 sites.

The creation of the Shannon Airport Lagoon is entirely linked to the historical development of the airport, created when two embankments were built between the mainland and Dernish Island. It remains an important component in the existing drainage arrangements of the airport complex. In the 1940's, when the airstrip at Rineanna was first built, it was necessary to build a seawall out into the estuary to protect the new airport from flooding. Rainwater drained from the airport area into the space between the seawall and the shore. When necessary, this runoff was released into the estuary via a sluice gate in the seawall, however, over time, the area of the Estuary adjacent to the sluice gate silted up, and it became ineffective. As a result, the level of drainage water in the lagoon rose to the point that the airfield drainage system was flooded. As the Lagoon had become part of the designated Natura 2000 site, approval to lower the water level in the drainage lagoon through mechanical over-pumping was sought and granted in 2002.

At the draft stage a submission received from the Department of Arts, Heritage and the Gaeltacht states that 'Of particular concern, the plan area includes Shannon Airport Lagoon within Lower River Shannon cSAC. This is an example of the Habitats Directive Annex I priority habitat, *Coastal lagoons [1150], and is a conservation interest of the SAC. The lagoon is linked with the drainage of a large part of the airport site and, hence, of the plan area. The conservation condition of the lagoon is already unfavourable. It is noted that one of the key goals of the plan is 'to drive the continued growth and development of Shannon International Airport'.

There is no acknowledgement of the problems that already exist within the plan area'.

The Manager's Report recommended that the following additional section is added to chapter 4:

'4.5 Shannon Airport Lagoon

The Airport SDA includes the area known as the Shannon Airport Lagoon.

The area can be subdivided into three distinct habitats, namely the brackish lagoon, the reed-beds, marsh and willow scrub which surround the lagoon and extend to the boundaries of the golf course, fuel depot and airport car parks, and the tidal mudflats enclosed between the breakwater and causeway to Dernish Island. The area forms part of the designated Lower River Shannon SAC and the River Shannon and Fergus Estuaries SPA Natura 2000 sites.

The creation of the Shannon Airport Lagoon is entirely linked to the historical development of the airport, created when two embankments were built between the mainland and Dernish Island. It remains an important component in the existing drainage arrangements of the airport complex. In the 1940's, when the airstrip at Rineanna was first built, it was necessary to build a seawall out into the estuary to protect the new airport from flooding. Rainwater drained from the airport area into the space between the seawall and the shore. When necessary, this runoff was released into the estuary via a sluice gate in the seawall, however, over time, the area of the Estuary adjacent to the sluice gate silted up, and it became ineffective. As a result, the level of drainage water in the lagoon rose to the point that the airfield drainage system was flooded. As the Lagoon had become part of the designated Natura 2000 site, approval to lower the water level in the drainage lagoon through mechanical over-pumping was sought and granted in 2002.

It is in this context that Clare County Council will endeavour to ensure that a balanced and sustainable approach to this issue is taken, and shall support and facilitate the National Parks and Wildlife Service, the

Department and Dublin Airport Authority in safeguarding the conservation objectives of the lagoon, whilst facilitating the continued growth and expansion of Shannon International Airport’.

Objective 4.8:

‘To support and facilitate the conservation of the Shannon Airport Lagoon as an Annex 1 priority habitat within the Plan area, in harmony with the continued growth and expansion of the airport’.

However, a resolution to disagree with the Managers Recommendation and to amend the Shannon Town and Environs settlement plan and to amend the wording of Manager’s Report proposed objective 4.8 from:

‘To support and facilitate the conservation of the Shannon Airport Lagoon as an annex 1 priority habitat within the Plan area, in harmony with the continued growth and expansion of the airport’ to read as follows: ‘Objective 4.8

To facilitate and support the continued growth and expansion of Shannon International Airport and the appropriate management of Shannon Airport Lagoon as an annex 1 priority habitat, ensuring that both can co-exist and are sustainable in the long term’

In addition, to amend the wording of the last paragraph of section 4.5 to include the words ‘in continuing to strike a careful balance between’.

‘It is in this context that Clare County Council will endeavour to ensure that a balanced and sustainable approach to this issue is taken, and shall support and facilitate the National Parks and Wildlife Service, the Department and Dublin Airport Authority in continuing to strike a careful balance between the conservation objectives of the lagoon, whilst facilitating the continued growth and expansion of Shannon International Airport’.

The Elected Members’ reason for the proposed modification was ‘having considered the Manager’s opinion in relation to submission 001b and the concerns raised in relation to the Habitats Directive Assessment and other matters in the vicinity of the site, the members are of the opinion that rewording of the subject objective is required to continue to strike a careful balance between conservation of the lagoon and growth of the airport, in the interest of proper planning and sustainable development.

It is acknowledged that there are existing issues with the conservation of the Shannon Airport Lagoon, and in response to these issues, the Plan contains caveats in Objective 4.1 to ensure that any development or expansion of Shannon International Airport is subject to the requirements of Habitats Directive Assessment. In addition, Objective 4.2, which relates to safeguarding and facilitating the improvement/upgrade of the key infrastructural resources within the Airport lands, including the treatment plant, airport lands water supply, storm water network and fuel depot, are all subject to the requirements of Habitats Directive Assessment.

Notwithstanding this, it is acknowledged that the original Habitats Directive Assessment report does not fully describe and acknowledge the importance of the Shannon Airport Lagoon as a priority habitat within the Plan area, and its conservation. This shortcoming is addressed below, and it is further required by the Habitats Directive Assessment that text be included in Chapter 4 of the Plan.

'The area usually referred to as the Shannon Airport Lagoon contains a variety of natural and semi-natural habitats, including the lagoon, mudflats, tidal creeks, salt marsh, drainage ditches, reed swamp, large sedge swamp, tall herb swamp, fresh water marsh, rich fen, calcareous grassland, amenity grassland, scrub and exposed sand, gravel or till. These can be subdivided into three distinct habitats, namely the brackish lagoon, the reed-beds, marsh and willow scrub which surround the lagoon and extend to the boundaries of the golf course, fuel depot and airport car parks, and the tidal mudflats enclosed between the breakwater and causeway to Dernish Island. This unique ecosystem is home to a huge number and variety of rare and protected birds, plants and animals.

The creation of the Shannon Airport Lagoon is entirely linked to the development of the airport. In the 1940's, when the airstrip at Rineanna was first built, it was necessary to build a seawall out into the estuary to protect the new airport from flooding. The lagoon was created when two embankments were built between the mainland and Dernish Island. Rainwater drained from the airport area into the space between the seawall and the shore. When necessary, this runoff was released into the estuary via a sluice gate in the seawall, however, over time, the area of the Estuary adjacent to the sluice gate silted up, and it became ineffective. As a result, the level of drainage water in the lagoon rose to the point that the airfield drainage system was flooded, and the integrity of the airfield was being undermined. As the Lagoon had become part of the designated Natura 2000 site, approval to lower the water level in the drainage lagoon through mechanical over-pumping was sought and granted from Duchas (now NPWS) in 2002. A temporary diesel pump has been in operation since then.

In 2007, an application was submitted to Clare County Council for permission to construct a pump station, control kiosks, water channels, oil interceptor traps, pipelines, roadway extension and associated works, in order to replace the temporary diesel pump. However, a Conservation Status Assessment Report on Coastal Lagoons, prepared by the NPWS in 2007, determined that the conservation status of the lagoon was unfavourable. A submission on the above application by the Department of the Environment, Heritage and Local Government stated that pumping is having a negative effect on the lagoon, including on its area, structure and function, and on the species it supports, and that the proposed development would continue these effects. The Planning Application was granted by Clare County Council, but the decision was overturned by An Bord Pleanála. As such, the status quo remains, which continues to impact negatively on the conservation status of the lagoon.

On this basis, Clare County Council will support and facilitate the National Parks and Wildlife Service and Dublin Airport Authority in finding a solution to this issue which will ensure the conservation of the lagoon and the continued growth and expansion of the airport'.

The Habitats Directive Assessment and SEA requires that the following objective be included in the Shannon Town and Environs Local Area Plan 2012 – 2018 Objective 4.8:

'To facilitate and support the continued growth and expansion of Shannon International Airport and the appropriate management of Shannon Airport Lagoon as an Annex 1 priority habitat, ensuring that both can co-exist and are sustainable in the long-term.

It is in this context that Clare County Council will endeavour to ensure that a balanced and sustainable approach to this issue is taken, and shall support and facilitate the National Parks and Wildlife Service, the Department and Dublin Airport Authority in

safeguarding the conservation objectives of the lagoon, whilst facilitating the continued growth and expansion of Shannon International Airport’.

This SEA also requests adhering to the WFD requirements with regard to maintaining/improving the quality of surface and groundwater, and adhering to the aquifer protection plan.

Please note the details relating to the Shannon Lagoon contained in the HDA (dated October 2012) particularly in Part 3. The information contained in this HDA must be read in conjunction with this Environmental Report.

SDA - Airport Lands

The location of Shannon Airport - SDA directly adjacent to European and National environmental designations including the Lower River Shannon SAC, River Shannon and Fergus Estuaries SPA and the Fergus Estuaries and Inner Shannon, North Shore pNHA is significant. An established legal basis exists to protect, conserve and enhance the biodiversity in these sites. In this regard, a Habitats Directive Assessment will be required for all proposed development within this area.

The majority of the SDA is within a flood zone and has varying degrees of ‘Low’, ‘High’ and ‘extreme’ groundwater vulnerability. In this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.

There are numerous recorded monuments within the SDA including:

Site Code	Description
CL061-003001	Ringfort unclassified
CL061-003002	Ringfort
CL061-003003	Road/Trackway
CL061-003004	Burial
CL061-003005	Burial
CL061-004001	Ringfort - rath
CL061-004002	hutsite
CL061-004003	Excavation -miscellaneous

Geological Heritage Site – Rineanna Point is also located within the SDA designated lands.

There are also 2 IPPC licensed activities within the SDA, 1 SEVESO site and exclusion zone which encompasses a large portion of the SDA.

Public Safety Zones and Red Zones - Shannon Airport

It is an objective of the LAP to ‘ensure that all future development which has the potential to prejudice the safe and efficient operation of Shannon International Airport be referred to the IAA and/or DAA for comment.’

Proposals for development within the public safety zones and Red Zones will not normally be permitted with the exception of various provisions outlined in the LAP.

The Planning Authority will have regard to the advice of the Irish Aviation Authority and the Dublin Airport Authority (or relevant successor) when assessing development proposals in the vicinity of Shannon Airport.

The SEA welcomes the inclusion of reference to the Guidelines on Public Safety Zones to be issued in due course by the Department of the Environment, Community and

Local Government. The SEA also welcomes the ERM's Public Safety Zone study of Cork, Dublin and Shannon Airports being taken into account in the assessment of any planning applications in the vicinity of the airport.

7.5.4 Town Centre

There is a concerted goal to secure a 'vibrant and viable town centre for Shannon'. The objectives set out to achieve this are outlined in detail in the LAP. Other key aspects which need to be addressed are the need to;

- improve the physical appearance of the town centre,
- enhance it in terms of appearance, linkages to residential areas and community facilities,
- ensuring that it is sufficiently pleasant, safe, accessible and vibrant to attract the public for shopping and social purposes.
- increase the variety of retail and service offer, and
- to encourage the increased use of the town centre for social and evening use, as an attractive place in which to shop, dine and recreate.

Creating a new heart and focus that will make Shannon Town Centre an attractive destination is a key driver in the continued future development and supporting sustainable communities. In this regard, it is proposed to expand the existing town centre north to include an area of land north of Bothar Mor.

The Masterplan for the Special Development Area (SDA) - Town Centre North which was prepared as part of the South Clare Local Area Plan 2009-2015 was considered and reappraised as part of the ST&E local area plan process. This was necessitated for a number of reasons outlined in the LAP. However, the proposal to link the existing town centre to a new expanded town centre area north of Bothar Mor is generally in accordance with the objectives set out therein.

The Integrated Area Plan (IAP) for Shannon, prepared under the 1998 DoELG Urban Renewable Scheme was also considered in the preparation of the ST&E LAP 2012-2018. It includes a number of key development sites, with a number of initiatives and programmes proposed for each - the proposed zonings and objectives of the ST&E LAP are generally in accordance with these. However, dissimilarity does exist in relation to proposed zoning Town Centre North (Mixed Use) which encroaches into an area referenced as 'sub area 2' in the IAP which would accommodate new industrial/enterprise units. Notwithstanding the significance of the IAP, it is considered that the current proposed Town Centre North (Mixed Use) zoning is more appropriate having regard to various factors outlined in the LAP.

Existing Shannon Town Centre

The existing Shannon Town Centre contains a number of mixed businesses, retail and community uses, an assortment of office space and the Skycourt shopping centre which provides the primary retail floor space within the town. It is noted that while it serves the local population for convenience shopping, there is little to attract visitors to the town centre in respect of comparison goods and thus opportunities exist for the redevelopment of the existing town centre.

Proposals to increase the quantity and quality of retail offer, both convenience and comparison goods, development of a night-time economy and cultural and entertainment facilities for the community are welcomed however regard must be had to the wider residential community and the potential impacts on noise and visual amenity, increased traffic usage and upgraded accessibility and permeability for all users.

It is also envisaged that the proposed Shannon rail link infrastructure safeguard which passes along Bother Mor and the indicative siting of a new central station at the Town Centre will contribute to the overall sustainable travel patterns of users to this area.

Proposed Town Centre - North of Bother Mor (8.97ha)

It is an objective of the LAP to link the existing town centre through strong pedestrian and road linkages to a new area which incorporates a street plaza, high street retail uses, restaurant /café cluster, outlet centre(s), public open spaces, small office units, cinema, and a major anchor store facility / outlet or discount centre or retail mall in the northern section of the town centre lands. It is envisaged that a unified and walkable core area will be established which complements the development of the public realm and new civic park to the east of the proposed expansion of the town centre.

Strong accessibility is addressed in the LAP but it is recommended that landscaping and a tree planting scheme is encouraged to complement the area of open space to the east.

A comprehensive master plan for the entire site which is consistent with the objectives of the local area plan, taking account of the Shannon Place Making Strategy shall accompany all development proposals.

The insertion of objectives relating to 'energy conservation and environmental sustainability' within the ST&E LAP 2012-2018 are welcomed. Particularly the objective 'To require all future planning applications within the Shannon Town and Environs Plan area to demonstrate how they contribute to the development of a low carbon town and how they have incorporated the principles of energy efficiency and environmental sustainability' will have a positive impact on the receiving environment and contribute to the overall goal of a low carbon town.

It should be noted that these lands fall within a SEVESO exclusion zone.

The western and southern sections of the site contain watercourses and vegetation indicative of wet conditions as well as being within a flood zone, in this regard all proposals for development will be required to submit a FRA and hydrological assessment, together with detailed drainage plans for the entire site.

Civic / Arts centre

At the draft stage submissions were received requesting a location for an arts centre and future civic offices. The Manager's Report recommended objective 5.5 'To facilitate the provision of a civic / arts centre within the town centre. However, a resolution to amend the wording of the proposed objective in relation to future provision of a civic / arts centre, to state the following: 'To facilitate the provision of a civic / arts centre at an appropriate location within the defined central area of the town'. The Elected Members' reason for the proposed modification was 'Having considered the Manager's opinion, and taking account of the importance of ensuring choice of location in respect of a future civic / arts centre, the Member's are of the opinion that the proposed additional objective for chapter 5 be broadened to allow such a facility to be considered within the defined central area of the town, in the interests of proper planning and sustainable development'.

The SEA welcomes this objective which will have a positive effect on the community and cultural development. However, it could have negative effects on the landscape and views, thus the SEA recommends that any proposed development be subject to requirements with regard to appropriate siting, design and scale such that any proposals would not give rise to any negative impacts on visual amenities, prospects or views and would be in harmony with the surrounding landscape.

Vacant Structures

The SEA welcomes the re-format of Section 9.4 to clarify those buildings which are on the Record of Protected Structures and those which are not, e.g. Public Library, and the inclusion of other buildings of merit in the Shannon LAP area to be included in Section 9.4.

The SEA also welcomes the sustainable objective 9.6 with regard to vacant structures: 'To encourage the facilitation and reuse of vacant structures by commercial /private development or uses associated with the provision of social, voluntary, community or charity facilities / services'. Results from CSO Census 2011 indicate that there is a vacancy rate of 9.26% in the Shannon area (Clenagh ED).

Public Transport

The SEA welcomes

- reference to National Cycle Policy Framework in the context of the Cycling Strategy proposed.
- The addition of text to objective 5.1 'improved access arrangement' in relation to consolidating the existing core retail area
- objective 8.6 'To facilitate and support proposals to improve public transport provision and associated facilities, including enhanced bus services, within the Plan area'.
- The inclusion of Bunratty in objective 4.5 'In the absence of the above rail link, to facilitate and encourage the provision of a direct Shuttle Bus service from Sixmilebridge railway station, via Bunratty, to Shannon Airport, as an immediate priority'. This is consistent with the South Clare Lap 2012-2018.

This will optimise the linkages between rail, road and air transport for tourism use and have a positive effect on the community in Shannon and the wider area. It will also support sustainable transport options.

The SEA recommends the inclusion of the following objective

- Objective 5.13 'To promote and facilitate improved access, parking and circulation arrangements within Shannon town centre, taking account of both vehicular, cycling and pedestrian movements'.

7.5.5 Mixed Use/Commercial

There is a concerted approach to deliver a 'vibrant and viable town centre for Shannon', however the areas zoned for mixed use /commercial development are outside the town centre remit and subject to separate objectives as outlined on the Plan.

MU1 –Adjoining N19 (5.18ha)

This highly prominent triangular site directly adjoins the N19 dual carriageway to the west, I3 - Smithstown to the east and the Town Centre to the south. The plan outlines key design elements to guide future development proposals on MU1 including development of this site as an area with potential to accommodate bulky goods retail warehousing, including a landmark building. Safe accessibility and ease of permeability for all users is a consideration of the SEA and recommendation is given to expand on the design elements outlined in the plan to address this issue. Appropriate landscaping and screening from the N19 will also be a key element in the design brief for future development.

It can also be noted that MU1 is within a SEVESO Exclusion Zone.

The western and southern sections of MU1 contain watercourses and vegetation indicative of wet conditions. All proposals for development will be required to submit a hydrological assessment, together with detailed drainage plans for the entire site.

MU2 – Adjoining N19

This site is the location of existing mixed use development including Shannon library, health centre, Garda Station, vehicle registration office, business premises, car parks and a petrol filling station. A key element of future development on this site as outlined in the Plan is the preservation and enhancement of the range of uses within this area, and to retain the function of this area as an important link between the town centre and the Town Park. It is envisaged that the Town Park is actively incorporated into MU2 to facilitate increased knowledge, use and enjoyment of the park.

COM1 East of town centre

These lands are currently occupied by existing commercial development including a Hotel, filling station, McDonalds DriveThru, children's play centre, car sales / service, restaurant and the Atlantic Air Venture premises. The remaining undeveloped lands are subject to a planned approach which will avoid the piecemeal nature of the units that currently exist along the eastern boundary while maintaining the vitality and viability of Shannon town centre.

It can be noted that COM 1 encloses the proposed R1 residential zoning. In this regard it is essential that any future development ensures the residential amenities of R1 are safeguarded, having particular reference to noise and visual amenity and landscape.

It can also be noted that COM1 is within a SEVESO Exclusion Zone and has high groundwater vulnerability.

COM2 Ballycasey Craft and Design Centre

The setting of Ballycasey Craft and Design Centre at Ballycasey House in the east of the plan area consists of two attractive courtyards containing various craft and design shops and small businesses, including a restaurant. These are accessed by a tree-lined road with surrounding mature broadleaf woodland. The Plan suggests that the old

walled garden immediately east of Ballycasey House has potential to be developed as an amenity area associated with the centre, or for expansion of the existing business premises; in this regard the SEA recommends that the approach road will require upgrade to accommodate increased traffic, the mature woodland is preserved and incorporated into any development proposal and cognisance be had to the majority of lands being within a flood zone.

NC1 Drumgeely Neighbourhood Centre

The plan contains a specific objective to, 'support the retention of this centre for the benefit of the local community and to facilitate new developments / changes of use which are appropriate to its zoning for neighbourhood centre use'. The SEA recommends that provision is included for noise and visual amenity concerns.

NC2 Future neighbourhood centre serving residential zoned lands

The proposed NC2 is zoned to take account of the quantum of proposed residential zoned lands in the surrounding area. It is envisaged that NC2 will serve the future local resident population with developments only permitted which are considered compatible with the zoning for neighbourhood centre use. Pedestrian and cycle provision is key to facilitate local accessibility and permeability.

The SEA further recommends that design criteria are incorporated into the plan to guide potential development to develop in line with the Placemaking Strategy of the ST&E LAP while having regard to the noise and visual amenity of the neighbouring residential community.

The site is located on a flood zone and is composed predominantly of wet grassland. In this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.

NC3 Ballycasey Neighbourhood Centre

The plan contains a specific objective to, 'support the retention of this centre for the benefit of the local community and to facilitate new developments / changes of use which are appropriate to its zoning for neighbourhood centre use'. The SEA recommends that provision is included for noise and visual amenity concerns.

7.5.6 Housing

The EPA submission noted that certain proposals for residential development as detailed in this section recommend that master plans be established to incorporate particular environmental vulnerabilities/sensitivities. The EPA also stated that it should be ensured that the requirements of EIA, HDA, SEA are incorporated as required. The SEA recommends that all residential master plans ensure that the requirements of EIA, HDA, SEA are incorporated as required.

The SEA welcomes the following additional aim to be added to Section 6.2 'To endorse the imaginative refurbishment of the older housing stock in Shannon, including energy efficiency measures'.

The population target for Shannon gives a requirement for 53.1ha of residentially zoned lands. The lands zoned for residential development has increased in area from 41.06ha (South Clare LAP 2009-2015 not inclusive of Other Settlement Land which may have accommodated residential development) to 48.39 ha in the ST&E LAP 2012-2018 to accommodate this requirement.

The residential zoned lands proposed in Shannon are concentrated in the south-east of the town and infill sites throughout the plan area. These greenfield sites are currently not accessible by a developed road system however are subject to a network of planned new road infrastructure. Accessibility to, and throughout the proposed sites is of particular concern to the SEA. These lands are some distance from the existing town centre and identified area for town centre expansion, and in this context, it is imperative that appropriate provision be made for connection to the core area, e.g. through the provision of a sustainable travel pattern including inter alia, regular shuttle bus service, and development of pedestrian and cycle networks. The cumulative effect of allocating residential development in a concentrated area is also a concern of the SEA, and it is recommended that aspects of visual amenity, air quality, landscape and open space are taken into consideration in development briefs.

Taking into consideration the physical nature and location of Shannon, the deficiencies in wastewater treatment and the expansive area of flood risk, it is recommended, in line with the HDA for the Shannon Town & Environs LAP 2012-2018 that the following text is adhered to in the plan:

'The development of identified lands in Shannon will be strictly contingent on the provision of appropriate wastewater treatment facilities which can fully demonstrate that no adverse effects will result on the adjacent SAC/SPA, and ensuring that all future development is sustainable in the long term'

The Strategic Flood Risk Assessment of the Clare County Development Plan 2011-2017 identified lands within Shannon as being at risk of flooding, thus a detailed Flood Risk Assessment is required in accordance with Section 9.4 of the CCDP and the OPW/DoEHLG Planning Guidelines on Flood Risk Assessment in respect of any future development proposals on lands zoned for residential development. The insertion of objectives relating to 'passive / low carbon housing' and 'energy conservation and environmental sustainability' within the ST&E LAP 2012-2018 are welcomed. Particularly the objective 'To require all future planning applications within the Shannon Town and Environs Plan area to demonstrate how they contribute to the development of a low carbon town and how they have incorporated the principles of energy efficiency and environmental sustainability' will have a positive impact on the receiving environment and contribute to the overall goal of a low carbon town. The

addition of potential access to a district heating network is welcomed and criteria to establish energy sustainability in future developments in Shannon.

It is also determined that all sites zoned for residential development incorporate Sustainable urban Drainage Systems (SuDS) and include detailed proposals for landscaping / tree retention.

R1 – East of Town Centre (2.18ha)

This greenfield site currently in agricultural use is located to the north of Bothar Mor behind existing commercial development.

It is recommended that a Masterplan for the site is developed taking into account;

- noise and visual amenity of the residents including landscape buffering to the commercial zoning on the north, south and east;
- SEVESO exclusion zone;
- high groundwater vulnerability;
- safe access to lands, including upgrade of local road, pedestrian and cycle routes.

At the draft stage a submission objected to a proposal to include a portion of the former SDA area (now R1) as residential, requesting the area be zoned commercial, i.e. R1 should be rezoned as commercial to reflect existing uses. The Manager's Report recommended that no alterations are made to the Draft Shannon Town and Environs Local Area Plan 2012-2018 on the basis of the contents of this submission. However, a resolution 'To disagree with the Managers Recommendation and to amend the Shannon Town and Environs settlement plan to change the zoning on the site which forms part of R1, proposed in the Draft Plan as residential, to commercial zoning, as per Map A of the LAP (June 2012). The Elected Members' reason for the proposed modification was 'Having regard to the nature of the permitted and established uses on the subject lands, the Members are of the opinion that the site, proposed for zoning in the Draft Plan as residential, should be rezoned to commercial use, in the interests of proper planning and sustainable development'.

The SEA welcomes the attention to a suitable buffer to the commercial zoning along the northern, eastern and southern site boundaries which will be agreed at project prior to the commencement of any development on R1. However, the SEA is not in favour of the Proposed Material Alterations to changes west of R1 from residential to commercial which would result in R1 being more or less surrounded by a commercial zoning. R1 is effectively cut off from the town centre, i.e. a link that is walkable and encourage a sustainable modal choice. The SEA recommends a landscape buffer around the perimeter of the existing residential site R1.

R2 –Tullyglass lowlands (2.13ha)

This area relates to the proposed expansion of residential development at Cluain Airne. It is envisaged that development of this site will require the provision of a new road and extension of the existing cul-de-sacs. Access will also be required to link the site to the new road, and the wider road network, to create greater permeability as well as pedestrian and cycle access to services, recreation, community and open space.

The site is located on a flood zone, and has poor drainage capabilities due to a dominant Gley soil base which effects drainage impedance and which has developed under the influence of permanent or intermittent waterlogging. In this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.

At the draft stage a number of submissions objected to a proposed road at back of Cluain Airne (LCDR4 Area/R2). The Manager's Report recommended that an indicative sketch proposal be further developed with appropriate consultation and that an agreed

solution for the provision of the road forms part of the final plan. However, a resolution 'to disagree with the Managers Recommendation and to amend the Infrastructure Safeguard between Park Rangers and Cluain Airne to remove the provision of a vehicular route, and to provide only for a footpath and cycleway', as per Map A of the LAP (June 2012). 'Also, to amend the indicative sketch proposal as per Manager's Report, to illustrate only a footpath and cycleway in the space between Park Rangers and Cluain Airne'. The Elected Members' reason for the proposed modification was 'Having carefully considered traffic movements within the town, it is considered, in the interests of traffic safety, that it would not be appropriate to bring additional vehicular traffic along this route'. This link adjoining Cluain Airne and Park Rangers is called 'IS2'. The SEA recommends that appropriate and visual acceptable signage is provided to acknowledge this cul de sac, and that the existing residential amenities and established natural features in the area are respected.

R3 – Cronan Extension (1.72ha)

This Greenfield site is bounded by existing housing to the north and east and playing fields to the west. The development of this site will consolidate an existing residential area however; regard must also be had to the provision of landscape and visual amenity and areas of open space for residents in the overall approach to development. A new service road (Shannon Primary Road) bounds the southern site boundary and will provide vehicular access thereto.

The site is located on a flood zone, and has poor drainage capabilities due to a dominant Gley soil base which effects drainage impedance and which has developed under the influence of permanent or intermittent waterlogging. In this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.

R4 – East of Wolfe Tones (7.3 ha)

The topography on this site varies from relatively flat wet grassland in the east rising to the west with extensive mature vegetation. The plan states that a new neighbourhood park will be provided for within the central part of the site and the provision of open space and landscaping should be appropriate to reflect the surrounding built and natural environment and views into the site from adjoining residential development and the approach road. A new service road (Shannon Primary Road) bounds the southern site boundary and will provide vehicular access thereto.

The site is located on a flood zone, has a stream transecting the land and has poor drainage capabilities due to a dominant Gley soil base which effects drainage impedance and which has developed under the influence of permanent or intermittent waterlogging. In this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.

There are records of mixed broadleaved/conifer woodland (WD2) and wet grassland (GS4) habitats in this zoning. The latter habitat contains an EU Annex I habitat. The SEA recommends that an ecological survey if required is submitted as part of any application.

R5 – South of Ballycasey (15.2 ha)

This greenfield site currently in agricultural use is located to the east of the developed plan area. It is predominantly wet grassland with a watercourse (Ballycasey Creek) traversing the site, which feeds into the Lower River Shannon SAC and River Shannon and River Fergus Estuaries SPA.

In accordance with the HDA of the ST&E LAP 2012-2018 all watercourses must be considered to be important aquatic habitats and potential fisheries habitats, supporting an extensive range of biodiversity, including both terrestrial and aquatic insects, a wide range of birds, and a significant amount of wildlife. The culverting of any part of a stream is contrary to the objectives and goals of the WFD and Habitats Directive, as well as a breach of Fisheries Legislation and a wide range of other national legislation, all aimed at maintaining and improving aquatic ecosystems and preserving biodiversity, not only in the watercourse itself, but in the adjacent riparian zone. Culverting of the watercourse (Ballycasey Creek) would seriously impact on the Natura 2000 site and would reduce both water quality and diversity in the River Shannon. In particular, the reduction in food items would have a significant impact on birds visiting and feeding in this area of the estuary. In addition, the culverting of this stream may lead to accelerated discharge from a loss of attenuation, and may prevent the early detection of pollution events in the future.

On this basis, this HDA requires that the stream is retained as is, with a buffer of at least 10metres on both sides. In addition, this buffer must be shown on the zoning maps.

The provision of open space and landscaping shall be appropriate to reflect the surrounding built and natural environment and views into the site from adjoining residential development and from the approach road.

The site is also located on a flood zone, has a stream transecting the land and has poor drainage capabilities due to a dominant Gley soil base which effects drainage impedence and which has developed under the influence of permanent or intermittent waterlogging. In this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.

There are records of wet grassland (GS4) habitat in this zoning. This habitat contains an EU Annex I habitat. The SEA recommends that an ecological survey if required is submitted as part of any application.

R6 – Ballycasey North (1.57ha)

This site is directly adjacent to the N18. The plan has provided for a 30 meter buffer building line from the new N18 in the interests of residential amenity; however it is also recommended that landscape and areas of open space are incorporated into future development proposals to alleviate negative noise and visual aspects. Due regard must also be had to the extreme groundwater vulnerability on the site.

LDR1 – East End (21.5 ha)

This greenfield site currently in agricultural use is located to the east of the developed plan area. It is predominantly wet grassland with a watercourse (Ballycasey Creek) traversing the site, which feeds into the Lower River Shannon SAC and River Shannon and River Fergus Estuaries SPA.

In accordance with the HDA of the ST&E LAP 2012-2018 all watercourses must be considered to be important aquatic habitats and potential fisheries habitats, supporting an extensive range of biodiversity, including both terrestrial and aquatic insects, a wide range of birds, and a significant amount of wildlife. The culverting of any part of a stream is contrary to the objectives and goals of the WFD and Habitats Directive, as well as a breach of Fisheries Legislation and a wide range of other national legislation, all aimed at maintaining and improving aquatic ecosystems and preserving biodiversity, not only in the watercourse itself, but in the adjacent riparian zone. Culverting of the watercourse (Ballycasey Creek) would seriously impact on the

Natura 2000 site and would reduce both water quality and diversity in the River Shannon. In particular, the reduction in food items would have a significant impact on birds visiting and feeding in this area of the estuary. In addition, the culverting of this stream may lead to accelerated discharge from a loss of attenuation, and may prevent the early detection of pollution events in the future.

On this basis, this HDA requires that the stream is retained as is, with a buffer of at least 10metres on both sides. In addition, this buffer must be shown on the zoning maps.

It is recommended that a Masterplan for the site is developed taking into account;

- high groundwater vulnerability;
- historical landscape; and
- safe access to lands, including road, pedestrian and cycle routes

The site is also located on a flood zone, has a stream transecting the land and has poor drainage capabilities due to a dominant Gley soil base which effects drainage impedance and which has developed under the influence of permanent or intermittent waterlogging. In this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment

There are records of wet grassland (GS4) habitat in this zoning. This habitat contains an EU Annex I habitat. The SEA recommends that an ecological survey if required is submitted as part of any application.

LDR2 – Adjacent to Ballycasey Craft and Design Centre (4.47 ha)

This wet grassland site located adjacent to Ballycasey Craft and Design Centre has a mature landscape setting and visually pleasant tree-lined approach road. It is recommended that the trees within and on approach to this site are retained and preserved.

The site is also located on a flood zone, extreme groundwater vulnerability and poor drainage capabilities due to a dominant Gley soil base which effects drainage impedance and which has developed under the influence of permanent or intermittent waterlogging. In this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.

There are records of wet grassland (GS4) habitat in this zoning. This habitat contains an EU Annex I habitat. The SEA recommends that an ecological survey if required is submitted as part of any application.

The SEA welcomes the requirement for layout, services, open space, landscaping, lamp standards, footpaths, boundaries, etc. to be finished to an acceptable standard.

LDR3 – Adjoining Shannon Newtown (2.02 ha)

The zoning of LDR3 as residential land on existing recreation grounds (Newtown Soccer grounds) is required to be carefully evaluated in order not to impact on the recreation and amenity value of the residents of Shannon.

The SEA also recommends that the approach road requires upgrade to accommodate increased levels of traffic.

The site is also located on a flood zone, a stream traversing the land, high groundwater vulnerability and poor drainage capabilities due to a dominant Gley soil base which effects drainage impedance and which has developed under the influence of permanent or intermittent waterlogging. In this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.

At the draft stage a number of submissions objected to zoning of community facilities as residential, citing LDR3. The Manager's Report recommended part of LDR3 be

rezoned to 'community use'. In the interest of clarity a resolution was made in the interests of clarity, to confirm the proposed change in zoning on the eastern portion of LDR3 from low density residential to Recreation as per Map A of the LAP (June 2012) included in Manager's Report (not to community as stated in the text of the Managers Report). The Elected Members' reason for the proposed modification was in the interest of clarity and to reflect the existing use on the site.

The SEA welcomes this resolution. The SEA also welcomes the requirement for layout, services, open space, landscaping, lamp standards, footpaths, boundaries, etc. to be finished to an acceptable standard.

LDR4 – Adjoining St. Patrick's school grounds (4.84 ha)

At the draft stage a number of submissions objected to a proposal to zone the area of Shannon Hibernians sports ground to low density residential (LDR4). The Manager's Report recommended that no alterations are made to the Draft Shannon Town and Environs Local Area Plan 2012-2018 on the basis of the contents of this submission. However, a resolution to disagree with the Managers Recommendation and to amend the zoning on the Park Rangers grounds from Low Density Residential (LDR4) to Recreational and to label the site REC10, as per Map A of the LAP (June 2012). The Elected Members' reason for the proposed modification was 'to reflect the existing use on the site. See section 7.5.7 – REC10.

There are records of wet grassland (GS4) habitat in this zoning. This habitat contains an EU Annex I habitat. The SEA recommends that an ecological survey if required is submitted as part of any application.

All activities must be in compliance with the EC (Birds and Natural Habitats) Control of Recreational Activities Regulations 2010.

Residential area to north of LDR2 (now open space)

At the draft stage a submission requesting the land at Radharc na Coille estate and Bothair na Droichead zoned OS remain as OS and not changed to LDR. The Manager's Report recommended the subject residential zoning be rezoned to Low Density Residential. However, a resolution 'to disagree with the Managers Recommendation and to amend the Shannon Town and Environs settlement plan to change the zoning on the site adjoining Radharc Na Coille, proposed in Manager's Recommendation as low density residential, to open space, as per Map A of the LAP (June 2012). The Elected Members' reason for the proposed modification was 'Having regard to the location of the site directly adjoining existing dwellings within Radharc Na Coille and the concerns raised in the submission by the residents, the members are of the opinion that the subject site should not be zoned for housing development, but rezoned to open space to ensure that the established residential amenities of adjacent dwellings houses are protected.

The rezoning of the subject residential zoning to open space will have a positive effect on the community and landscape with the provision of a local green space for amenity. It will also have a positive effect on local biodiversity. The SEA recommends that this open space is given an OS code.

Hurlers Cross LDR

A resolution 'to amend the Shannon Town and Environs settlement plan to change the zoning of a number of sites at Hurlers Cross from agricultural to low density residential, as per Map A of the LAP (June 2012). The Elected Members' reason for the

proposed modification was 'having regard to the location of the subject sites within Hurlers Cross, the Member's are of the opinion that the zoning of these lands for low density residential use would enable the consolidation of the existing pattern of development and provide options for those living in the town or wishing to move into the area to avail of a rural lifestyle in close proximity to existing services and facilities.

Due regard must also be had to the extreme and extreme rock near surface or karst groundwater vulnerability on the sites. Any development of low density residential should comply with normal requirements for site suitability as set out in Section 3.16 of the Clare County Development Plan 2011-2017, in particular relating to visual impact and traffic safety

7.5.7 Community & Recreation

The Shannon Town & Environs Plan has various areas zoned for community and recreational use including schools, religious institutions, graveyard, fire station, town hall, leisure centre and sports related facilities. The majority of lands are existing developed lands with provision for expansion in some circumstances.

The SEA welcomes the addition of 'sustainable' and 'cultural' to 'Objective 7.1: To support the consolidation and enhancement of existing community facilities within the Plan area and to facilitate the sustainable development of new community facilities and cultural at appropriate locations'.

The SEA also welcomes the Manager's recommendation with regard to the Plan being proofed to cater for people with disabilities. The policies and objectives, where applicable will be proofed to cater for persons with disabilities.

Community

The provision for social and community facilities is necessary to support and consolidate the present local resident population and future population growth while ensuring that the town retains a sustainable vibrant community base. Also, provision for pedestrian/cycle access throughout Shannon is recommended including ease of access to residential, community and recreation, open space and service areas. It is an objective of the Plan to zone the proposed sites for community use and;

Objective 7.1: To support the consolidation and enhancement of existing community facilities within the Plan area and to facilitate the sustainable development of new community facilities and cultural at appropriate locations'.

It is also stated that within sites zoned for community use, only developments compatible with their continued community use shall be considered acceptable to the Council.

Education/ Schools	
C2 – St. John's NS C3 – St. Senan's NS C6 – St. Tolas NS C7 – St. Patrick's Comprehensive School & grounds, Gaelscoil & leisure centre C9 – St. Conaire's NS & sports field C13 – St. Aidan's Comm. Sch C16 – St. Caimin's Comm. Sch	Shannon is well provided for education with five National Schools, a Gaelscoil and two secondary schools, which serve a wide catchment area. These important facilities must be supported and enhanced to maintain and improve the benefits they provide to the existing resident population.
Religious Association	
C1 – Convent C4 – Mary Immaculate Church C11 – Graveyard C14 – Kingdom Hall - Jehovah's Witnesses C15 – St. John and Paul Church / Funeral Home	Hastings Cottage (Protected Structure) is currently located within C11. The sensitive redevelopment of Hastings Cottage for appropriate community use is supported and encouraged by the plan. Community engagement and involvement is preferred in discussing preferred options for bringing this site back into active use. Consultation with the Conservation Officer of Clare County Council is essential.
Public Facilities	
C5 – Handball alley	

C8 – Town Hall & Fire Station C12 – Shannon Community Hall and Car Park	
Other Community facilities	
C10 – Old DeBeers Clubhouse and Private Chalet	These lands are predominantly wet grassland and are located on a flood zone; In this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.

The SEA also welcomes the inclusion of the following text at the end of section 2.5.6:

'There may be benefits in supporting an identity for Shannon, by the sculptures/landmarks forming part of an agreed theme, possibly air/space travel & technological achievement.'

However, the SEA recommends that such landmarks will not seriously injure the visual amenities of the landscape. The SEA also recommends that any proposed development be subject to requirements with regard to appropriate sitting, design and scale such that any proposals would not give rise to any significant negative impacts on visual amenities, prospects or views and would be in harmony with the surrounding landscape.

C10

These lands are predominantly wet grassland and are located on a flood risk zones A and B. In this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment (this paragraph is a repeat of information in the table above presented at draft stage).

At draft stage a submission proposed a nursing home development and associated facilities at REC8. The Manager's Report noted among other planning concerns, stated '...the proposal at this location to be at risk of flooding. The subject site is also designated a proposed Natural Heritage Area. I further note that the River Shannon SAC also encroaches partly into the subject site'. Thus, the Manager's Report recommends that no alterations are made to the Draft Shannon Town and Environs Local Area Plan 2012-2018 on the basis of the contents of this submission.

However, a resolution to disagree with the Managers Recommendation and to amend the Shannon Town and Environs settlement plan to change the zoning of the triangular site directly adjoining C10, from open space to community, and to include it as part of the C10 community zoning, as per Map A of the LAP (June 2012). In addition, to include an additional objective in section 7.3 of the Draft Plan pertaining to site C10, which states the requirement for Flood Risk Assessment, as follows:

To require all future proposals for development on site C10 to undertake Flood Risk Assessment'.

The Elected Members' reason for the proposed modification was 'having regard to the location of the site the subject of submission 12, and taking account of the former use of the building at the western end of the site, together with wider flooding issues, the Members consider it appropriate to include a triangular plot at the western end of the site only, as part of the C10 community zoning, thereby increasing the size and potential viability of the C10 site for appropriate and sustainable future community development'.

The SEA reiterates its concerns that these lands are predominantly wet grassland and are located on a flood risk zone A and B. This SEA requests adhering to the WFD requirements with regard to maintaining/improving the quality of surface and groundwater, and adhering to the aquifer protection plan. Added to this are concerns with regard to minimising landscape and visual impacts through appropriate design and siting. Thus, the SEA recommends that any proposed development be subject to requirements with regard to appropriate siting, design and scale such that any proposals would not give rise to any negative impacts on visual amenities, prospects or views and would be in harmony with the surrounding landscape.

The Natura Impact Report states that no impacts on the Natura 2000 Site Network were noted at this strategic Plan-level as a result of these recommendations.

There are records of wet grassland (GS4) habitat in this zoning. This habitat contains an EU Annex I habitat. The SEA recommends that an ecological survey if required is submitted as part of any application.

C11

At the draft stage the Manager's report recommended that the Draft Plan be amended to include the following at the end of section 7.3: 'The Council will facilitate and encourage development of a crematorium facility at Illaunmanagh that will assist in providing an additional important community facility for the town, subject to the requirements of the Habitats Directive and all other environmental considerations'. The Manager's report also noted that the subject site has full planning permission for a crematorium and will provide an important community facility, and that the community zoning should be retained in this instance.

This SEA requests adhering to the WFD requirements with regard to maintaining/improving the quality of surface and groundwater, and adhering to the aquifer protection plan. Added to this are concerns with regard to minimising landscape and visual impacts through appropriate design and siting. Thus, the SEA recommends that any proposed development be subject to requirements with regard to appropriate siting, design and scale such that any proposals would not give rise to any negative impacts on visual amenities, prospects or views and would be in harmony with the surrounding landscape.

C17 to the north of E4 – not labelled on Map A

At the draft stage the Manager's Report recommended community site C17 be created as it 'currently contains a religious building and has the potential to accommodate support structures for community activity. However, a resolution 'To amend the proposed additional text in the Manager's Report for Section 7.3 of the Plan, to remove reference to a religious building, as follows: This site has the potential to accommodate support structures for community activity. The Elected Members' reason for the proposed modification was 'to reflect the existing use on the site'.

The Natura Impact Report states that no impacts on the Natura 2000 Site Network were noted at this strategic Plan-level as a result of these recommendations. However, this community facility will be subject to the requirements of the Habitats Directive Assessment and all other environmental considerations. This SEA requests adhering to the WFD requirements with regard to maintaining/improving the quality of surface and groundwater, and adhering to the aquifer protection plan. Added to this are concerns with regard to minimising landscape and visual impacts through appropriate design and siting. Thus, the SEA recommends that any proposed development be subject to requirements with regard to appropriate siting, design and scale such that any

proposals would not give rise to any negative impacts on visual amenities, prospects or views and would be in harmony with the surrounding landscape.

Recreation

To zone the following sites for recreational use and to consolidate, promote and enhance them as important recreational and amenity facilities within Shannon Town and Environs.

Sports Facilities	
REC1 – Shannon Town United FC REC3 – Shannon Olympic and Wolfe Tones Camogie Club REC4 – Shannon Athletics Club REC5 – St. Senan’s Rugby Football Club REC6 – Aras Wolfe Tones na Sionna REC7 – Wolfe Tones Sports Grounds	Retain as recreation amenity facilities for the residents of Shannon & Environs
Other Recreation facilities	
REC2 – Adjoining estuary	<p>This is a highly sensitive location adjoining the existing footpath which affords access to Illaunagowan Point and the existing estuary riverside walks. It is outlined in the Plan that this site may have the potential to accommodate recreational activities that could compliment any future development on TOU1. It is also stated that it will accommodate a road access to facilitate TOU1; the SEA recommends that any future development of this nature will require an environmental assessment to alleviate any significant effects on the users of REC2, including inter alia, quality of life, amenity and air quality.</p> <p>It must be noted however that these lands are located on a flood zone and in this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.</p>
REC8 – Former DeBeers amenity grounds	<p>This site is within the Fergus estuary and Inner Shannon, North Shore proposed Natural Heritage Area (pNHA). It has an attractive setting near the estuary and is surrounded by mature trees; it was previously occupied by sports pitches and tennis courts but has been unused for sometime. Provision for the upgrade of the approach road should be included in the Plan as necessary to provide safe access to users.</p> <p>It can also be noted that these lands are located on a flood zone and in this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.</p>
REC9 – Shannon Model Flying Club	This secluded site to the east of the plan area is occupied by the Shannon Model Flying Club which serves an opportunity for members to use the facility.

	It can be noted that these lands are predominantly wet grassland located on a flood zone and in this regard, any future development proposal must be accompanied by a FRA and Hydrological Assessment.
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Shannon estuary slip way

At draft stage a number of submissions requested a slipway for launching boats at the water edge east of E4 and south of OS6 and western REC 1 with a view to encouraging boating on the estuary and if properly encouraged could also lead to another tourist amenity for the town. The Manager's Report recommended that an additional objective be added to the end of section 7.5 stating:

'Objective 7.8: To facilitate the provision of a slipway access to the Shannon Estuary at an appropriate location within the Plan area, subject to reconciling all environmental considerations and ensuring that any such development shall not adversely affect species and habitat designated by the Habitats Directive'.

The Manager's Report also recommended that the text of section 7.5 be amended to include the following:

'It is considered that Shannon's location directly adjoining the Shannon Estuary affords the opportunity to improve the recreational potential offered by the water through the provision of a slipway access at an appropriate location, subject to demonstrating that there will be no adverse effects on existing Natura 2000 sites.

Map A outlines two indicative potential locations which it is considered may be suitable to accommodate a slipway. There are stream outlets at both these locations which flow through an area of salt marsh before entering mudflats in the wider bay area. The intention is to build a slipway through the saltmarsh to allow small crafts enter these streams at high tide. The use of the slipway will be determined by tides.

Any future development proposals will require Habitats Directive Assessment. Consultation will be required with NPWS to ensure design, materials used, and timing of works will minimize any disturbance to the Natura 2000 site, and particularly its bird population. Land take from the Natura 2000 site shall be minimal and must be fully addressed in project level HDA in order to minimize land take. It must be ensured that there are no works to the channel of the stream such as dredging, and that the natural rise and fall of water levels are not interfered with.

Assessment Outline

The estuary adjacent to Shannon Town contains a mixture of mudflats, saltmarsh and waterlogged grassland, and is an important bird habitat for both feeding and roosting, supporting nationally and internationally important numbers of species for which the River Shannon and River Fergus Estuaries SPA is designated.

The mudflats in particular represent a shifting environment where the hydrology of the river and the tides play a key role. This shifting environment can be particularly sensitive to hard developments such as marinas or piers, or earth movement activities such as dredging.

Notwithstanding this, and having regard to the Strategic Integrated Framework Plan for the Shannon Estuary which is underway, it is considered that there may be

potential for a small slipway, at an appropriate location in, or in close proximity to Shannon, which will not result in significant negative impacts to the Natura 2000 sites. Any proposed slipway for Shannon is likely to be of a small scale, with low intensity recreational use.

A number of locations were visited as part of the Habitats Directive Assessment to assess their suitability for a slipway. Two possible slipway locations were identified as shown on Map A of the associated draft Plan, and proposed for inclusion in the final Shannon Town and Environs Local Area Plan 2012 - 2018.

There are stream outlets at both these location which flows through an area of salt marsh before entering mudflats in the wider bay area. The intention is to build a slipway through the salt marsh to allow crafts enter these streams. The use of the slipway will be determined by tides. When the tide is in, the water level in the stream will naturally rise, allowing the launching of crafts. Land take from the Natura 2000 site is required. This issue must be fully addressed in the HDA at project level. At project level, consultation will be required with the NPWS to ensure design, material used, and timing of works will have minimal disturbance to the nature 2000 site, and particularly its bird population. It must be ensured that there are no works to the channel of the stream such as dredging, and that the natural rise and fall of water levels are not interfered with. The design and construction of the slipway must be fully addressed at Project level HDA to ensure minimum impact to the protected habitats and species. Any ancillary works which may come forward in the future, must not encroach onto the Natura 2000 site, or result in the disturbance of the bird species for which the SPA is designated.

In addition, the following text and objective have been proposed for inclusion in the final Shannon Town and Environs Local Area Plan 2012 - 2018:

It is considered that Shannon's location directly adjoining the Shannon Estuary affords the opportunity to improve the recreational potential offered by the water through the provision of a slipway access at an appropriate location, subject to demonstrating that there will be no adverse effects on existing Natura 2000 sites.

Map A outlines two indicative potential locations which it is considered may be suitable to accommodate a slipway. There are stream outlets at both these locations which flow through an area of salt marsh before entering mudflats in the wider bay area. The intention is to build a slipway through the saltmarsh to allow small crafts enter these streams at high tide. The use of the slipway will be determined by tides.

Any future development proposals will require Habitats Directive Assessment. Consultation will be required with NPWS to ensure design, materials used, and timing of works will minimize any disturbance to the Natura 2000 site, and particularly its bird population. Land take from the Natura 2000 site shall be minimal and must be fully addressed in project level HDA in order to minimize land take. It must be ensured that there are no works to the channel of the stream such as dredging, and that the natural rise and fall of water levels are not interfered with.

Objective 7.8: To facilitate the provision of a slipway access to the Shannon Estuary at an appropriate location within the Plan area, subject to reconciling all environmental considerations and ensuring that any such development shall not adversely affect species and habitat designated by the Habitats Directive.

This SEA also requests adhering to the WFD requirements with regard to maintaining/improving the quality of surface and groundwater, and adhering to the aquifer protection plan. The protection of the aquatic ecosystem status with regard to

water needs, terrestrial ecosystems and wetlands directly depending on the estuary system (quality, level, flow) must be considered. Added to this are concerns with regard to minimising landscape and visual impacts through appropriate design and siting as discussed above. Thus, the SEA recommends that any proposed development be subject to requirements with regard to appropriate siting, design and scale such that any proposals would not give rise to any negative impacts on visual amenities, prospects or views and would be in harmony with the surrounding landscape.

7.5.8 Low Carbon Strategy

Shannon has significant potential in the context of developing a low carbon economy. The agglomeration of enterprise, industry and commercial interests in the plan area are suitably located to avail of a future energy network that can provide sustainable low carbon energy security. Shannon's road layout and abundance of open spaces also lends itself to the furthering of Smarter Travel, whereby existing travel behaviours can be challenged through the provision of efficient, safe and high amenity walking and cycling routes.

Objective 8.1: 'To require all future planning applications within the Shannon Town and Environs Plan area to demonstrate how they contribute to the development of a low carbon town and how they have incorporated the principles of energy efficiency and environmental sustainability'.

It is acknowledged that small changes made in terms of individual proposals, when taken together cumulatively, can effect greater returns in respect of low carbon generation and provide 'best case' examples to inform and guide future development within Shannon Town and Environs.

Two sites within the plan area can play a significant part in achieving this overall aim and objective namely:

- E3 Stonehall - Enterprise
- IS4 – Infrastructure Zoning - Airport Road

There are also various initiatives outlined in the overall approach to sustainable development and achieving a low carbon town, including:

- Smarter Travel
- Electric Vehicle Infrastructure
- Green Infrastructure incorporating a Cycling and Walking Strategy for Shannon Town and Environs

E3 Stonehall - Enterprise

The zoning of this large site is to facilitate the development of a large scale green / renewable energy development.

Access to the site is good with direct access to the N19, however no cycle/foot paths exist, it is also significantly further away than other enterprise zones from the town centre and retail services. However, given the nature of the proposed development and availability of land it is recommended that regard can be had to facilitating these recommendations in further development proposals.

Cognisance must also be had to the 'high' groundwater vulnerability on the site, and a number of archaeological remains.

At the draft stage a number of submissions objected to a proposal to zone E3 Stonehall Enterprise Site at Stonehall Rd and adjacent to the Shannon Airport lands as an enterprise area and suggest locating the E3 site in the Industrial Estate. The Manager's Report made several recommendations, namely:

- The amendment of Objective 8.2 to include district heating and 'cooling' networks
- *Inclusion of the following text*
 - o *'The Council will support and facilitate the development of site E3 for a large scale, strategic Green Energy development and Distribution Network, where appropriate, to assist in the delivery of a low carbon industrial, commercial and business environment, meeting the existing energy requirements of the town and business and the capacity to attract further industry / employment to the town'.*
 - o *produce in a highly efficient process, green electricity, thermal heat and cooling, to be distributed throughout Shannon through a District Heating and Cooling Network, attractingand biorefining, etc. to a low carbon zone.*
 - o *'The provision of such a facility would also enable the creation of a strategic green energy infrastructure network for Shannon, with the potential to deliver sustainable electricity, thermal energy, in line with a low carbon regional economy, delivering low carbon energy to industry, commerce and residential, sustained through an integrated program of supply and delivery utilising available natural resources in the region and the further development of such natural resources'.*
- *'The development of the subject site shall be subject to satisfactorily addressing all environmental and amenity considerations'.*

The SEA welcomes all efforts regarding the provision of a low carbon regional economy and County, delivering low carbon energy to industry, commerce and residential. It also welcomes maintaining the zoning of the subject site as part of the Draft *'...satisfactorily addressing all environmental and amenity considerations'*. The following issues must also be addressed.

As noted in the Draft Plan Environmental Report (December 2011) cognisance must be had to the 'high' groundwater vulnerability on the site, and the presence of a number of archaeological remains. This SEA requests adhering to the WFD requirements with regard to maintaining/improving the quality of surface and groundwater and adhering to the aquifer protection plan. Added to this are concerns with regard to minimising landscape and visual impacts.

Furthermore, the Natura Impact Report states that no impacts on the Natura 2000 Site Network were noted at this strategic Plan-level as a result of these recommendations. However, any development should be subject to Habitats Directive Assessment at project level, EIA if required and any EPA license requirements.

IS4 – Infrastructure Zoning - Airport Road

This triangular shaped site is located west of MU1 and is bounded by the N19 to the north, the town centre link to the east and Drumgeely road to the south. It is zoned 'for appropriate infrastructural development that will reinforce the town's commitment to low carbon generation and environmental sustainability'. Appropriate green infrastructural development may include:

- Maximising the existing wetland conditions by using the site for SUDS / drainage of surface/storm waters
- Wind turbine(s),
- Solar power.
- Opportunities for enhanced local benefit as a high quality amenity space

The visual prominence of this site is an aspect with which the plan wants to enhance. It is extensively covered by mixed broadleaf woodland and scrub and it is therefore recommended that development of this site shall provide for the maximum area of woodland and natural drainage to be retained and preserved.

The site is subject to 'high' groundwater vulnerability, there is a network of drainage ditches transecting the land and it has poor drainage capabilities due to a dominant Gley soil base which effects drainage impedence and which has developed under the influence of permanent or intermittent waterlogging. In this regard, any future development proposal must be accompanied by a Hydrological Assessment.

It is within a SEVESO exclusion zone but noting the proposed nature of development is considered to be 'open for consideration' for wind energy development.

The SEA considers the promotion of appropriate green infrastructural development as a positive impact on the receiving environment and recommends that any energy produced as an output is utilised to the benefit of the community, including for example, public lighting and/or facilities.

Smarter Travel

It is an objective of the plan to 'To formalise and implement a Smarter Travel Plan for Shannon Town and Environs.' The SEA welcomes this proposal and recommends consultation with the SEAI and the enterprise/business community within Shannon.

Electric Vehicle Infrastructure

It is an objective of the plan 'In consultation with ESB and the relevant landowners, to reserve a number of sites within Shannon at publicly accessible key locations for EV charging stations.' The SEA welcomes this proposal and has mapped these tentative locations on Map 4.7.1.

Passive / low carbon housing

It is an objective of the plan 'To facilitate and actively promote the development of passive / low carbon housing at appropriate locations within Shannon Town and Environs'. The SEA welcomes this objective and its approach to reduce energy bills, improve air quality, maximise the use of natural light and the overall health benefits, associated with incorporating these measures in houses.

7.5.9 Tourism

A strategic goal within the Shannon Town & Environs LAP 2012-2018 is 'Developing Shannon as a visitor destination'. The Clare County Development Plan 2011-2017 sets out objectives relating to Tourism in Shannon including; CDP 12.2 and CDP 12.8.

TOU1 - Illaunagowan Point

TOU1 is located at Illaunagowan Point (or Third Point); the headland is outside, but adjoining the Natura 2000 sites (SAC/SPA/pNHA). The site in question has been zoned to accommodate a potential tourist information / interpretative centre to promote the estuary for environmentally sensitive tourist related activity including inter alia – walking, biodiversity trails, bird watching etc. This centre would be complimented by other appropriate uses such as a restaurant, children's play area etc. The location of this zoning is directly in line with Bothar Na Rinne, thereby affording the opportunity to consolidate this route as the main 'spine' of the town, providing a facility at the southernmost extent, which will draw people down to the Estuary. A feasibility study on the provision of such a facility on the subject site is proposed.

The headland currently contains a backdrop of woodland which opens into a green open space with benches, which offers spectacular views of the Shannon Estuary, and is a popular recreational area. The headland is surrounded by mudflats and saltmarsh, and is an important bird habitat. The mudflats in particular, were shown to be particularly important for Dunlin, Redshank and Golden Plover, with flocks occasionally approaching and exceeding 1% of the national population, with both Dunlin and Redshank using the area for both feeding and roosting. In addition, the adjacent saltmarsh and waterlogged grasslands are used for both foraging and roosting, most notably by curlew, snipe and oystercatcher.

However the siting of the zoning in a set back position on the headland is considered to have a reduced likelihood of significant negative impacts on the Natura 2000 site or its qualifying interests. It is recommended that any development proposal will be required to connect to the existing water main and foul sewer network and stringent regard had to the alleviation of any disturbance during construction, increased concentration of recreational pressure, lighting, noise, and vehicles during operation and the significant views/vistas afforded from the site.

7.5.10 Open Space & Green Infrastructure

Shannon has an abundance of open space including green areas, wooded areas, scrub, wetlands, parks, estuary amenities, walkways, housing estate open spaces, garden allotments etc. These all provide an important amenity and visual enhancement for the town and its residents as well as which offering opportunities for many species, and particularly small birds.

It is recommended that these areas are maintained and linkages provided from these to town centre/service areas. Reference should also be made to Objective 17.12 of the Clare County Development Plan 2011-2017 in relation the expanse of 'Trees for Preservation within the settlement.

Any works will be required to carry out Habitats Directive Assessment to ensure no significant negative impacts to water quality, disturbance of wildfowl and waders, or impacts to the Qualifying Interests of the Natura 2000 site.

The abundance of open space in Shannon means that it is an ideal settlement to progress the concept of Green Infrastructure which for the purposes of the Shannon Town & Environs LAP is defined as the integration of walking, cycling and recreation with biodiversity, creating interconnected networks of land and water around us that sustain environmental quality and enrich our quality of life. A successful Green Infrastructure Strategy for Shannon will ensure that all these elements are provided and that they work in harmony with each other. A key concept is the creation of multi-functional networks, whereby green infrastructure is planned, designed and managed as a network so that the whole is more than the sum of the parts. Such networks can benefit urban areas in terms of addressing the challenges of climate change, flood risk, water management, food supply, providing efficient and renewable energy and creating comfortable, attractive places in which to live. In Shannon Town and Environs, there is significant scope to connect the green infrastructure within the town centre, industrial areas and airport to the Shannon Estuary and to the wider County Clare countryside. Shannon already has a significant network of existing footpaths and some cycle lanes, it is envisaged that these will be enhanced through the implementation of a walking and cycling strategy. Aligned to the Green Infrastructure Strategy and Walking & Cycling Strategy is the Place Making Strategy for Shannon; together, these will be fully integrated with this local area plan and compliment each other so can they be implemented successfully over the lifetime of the plan.

OS1 – Future Civic Park

This site is located directly adjacent to the future expanded town centre area – MU1 and composed of predominantly mature woodland. It is proposed that this area be developed as a much needed civic park with potential to also cater for future outdoor events and festivities and as a location for a playground and activities area (natural playgrounds are preferred).

It is envisaged that the siting of the proposed civic park will be an integral part of the future new urban fabric of Shannon Town, tying in to the pedestrian / cycle network and the layout of future new mixed use and residential development to the west and east respectively.

It is recommended that all development proposals will be required to take account of the significant woodland resource on the site and the safe access and ease of movement for all users.

OS2 – Town Centre Woodland Area

The site supports a significant woodland resource of mature deciduous trees and is well utilised as part of an important circulation route, linking the town centre with the school and leisure centre, and the Shannon Estuary via the wetlands area.

It is envisaged that the Council will formulate a management strategy for this important resource to include various functional and safety measures.

NOTE: As part of the SEA process a textual error has been identified in the Plan. The SEA recommends removing the green text in Section 11.5.1 'OS2 – Town centre Woodland Area' which relates to an objective 11.6 which does not exist in this section of the Plan.

OS3 – Shannon Wetlands

The Shannon Wetlands Project was initiated in response to the Clare Heritage Plan 2003-2007 to provide a local Nature Reserve or Wildlife Area in Shannon Town. The lands are managed by Duchas na Sionna, a local heritage group based in Shannon. It is envisaged that this site will form an educational fulcrum for the local schools so that the children can learn about and enjoy the natural environment.

OS3 is a sizeable wetland area to the south of the town centre. There is an existing walkway along the eastern boundary of the wetlands site; however a feasibility and viability study on the potential for a walk along the western boundary will be investigated as one of the objectives of this Plan. Any development will require consultation with Duchas na Sionna and the Clare Biodiversity Officer.

Dumping has been problem in recent times and it is recommended that measures are incorporated to amend this including the disposal of garden waste which facilitates the growth of invasive species.

OS4 – Shannon Estuary

Part of the Shannon Town and Environs Plan area encroaches onto the Lower River Shannon SAC and River Shannon and River Fergus SPA. This includes the entire landward side of the Shannon estuary, the tidal mudflats, flood protection barrier, Illaunmanagh Point, Illaunagowan Point and Illaunaconeen Point. The Council proposes to designate this entire area as a nature reserve and formalise / enhance the pedestrian routes along the estuary. To achieve this, this area has been zoned as 'Open Space'.

There are extensive intertidal mudflats adjacent to the Plan area, fringed with saltmarsh vegetation, which provide important habitat for overwintering wildfowl and waders. Other habitats for which the Natura 2000 is designated, and which occur in close proximity to the Plan area include, estuaries, lagoons, salicornia and other annuals colonizing mud and sand, Atlantic salt meadows, and Mediterranean salt meadows.

To facilitate the area for pedestrian usage it is envisaged that action will be undertaken to enhance the safety and walkability of existing walkways including trimming back or felling some vegetation, appropriate signage, and the erection of bird hides in consultation with NPWS, Clare Biodiversity Ltd and Birdwatch Ireland. Lighting, fencing or works which would require heavy machinery or earth movements are not envisaged.

OS5 – Shannon Allotments and lands in the vicinity of Hastings Cottage

The location, siting and concept of the community allotments are a welcome addition to Shannon and its residents. They act as an important resource for the local community and should be retained and expanded to accommodate demand subject to environmental conditions.

Hastings Cottage (Protected Structure) is also located in the vicinity of OS5; this has been discussed in the community assessment (Section 7.5.7).

Open Space within Housing Estates	
OS6 – Drumgeely Hill	Many of these areas of open space form an important community landmark or association and thus should be retained and enhanced as areas of open space to preserve the residential amenity and to provide a high quality, amenity open space for the local residential community. Many are also used as thoroughfares and contain networks of pedestrian footpaths linking the surrounding residential communities to each other/service areas; these require upgrade and enhancement to facilitate a safe user friendly network.
OS7 – Open space / wooded area west of Cluain Airne	
OS8 – Tullyglass Hill	
OS10 – Open space adjoining Killian Park / Tullyvarraga Court	
OS11 – Open space adjoining St. Aidan’s School	
OS9 – Tullyvarraga Hill and Sli Na Mara	It is recommended that Tullyvarraga Hill be retained as an open space amenity area. It is also recommended that Sli Na Mara Way, which is the oldest route in Shannon, is protected and enhanced as a walking route and also develop a cycle route along its length. Upgrade and enhancement of facilities including lights is required to offer a safe user friendly network.

OS6 – Drumgeely Hill

At the draft stage the Manager’s report recommended that the settlement plan for Shannon be amended, to change the zoning on Drumgeely Hill from open space to a mix of community and recreation, i.e.

C1 - This is the site of the former community hall. The zoning facilitates its future redevelopment back into active use. The site shall be developed for the purposes of a community hall.

REC1 - There are existing tennis courts on this site. The site shall be developed for the provision of recreational facilities only. Development shall be permitted which is considered to have a positive impact on the established residential amenities of surrounding dwellings.

However, a resolution ‘to disagree with the Manager’s Recommendation and to amend the Shannon Town and Environs settlement plan to change the zoning on the site at Drumgeely Hill, proposed in the Manager’s Recommendation as a mix of recreation and community, to open space, as per Map A of the LAP (June 2012). Also, to label the site OS6 and retain the text as per the existing Draft Plan. The Elected Members’ reason for the proposed modification was ‘having regard to the location of the site adjacent to existing dwellings, the Members consider that it is appropriate to zone the

subject site as open space to ensure that established residential amenities are safeguarded and to provide for a high quality, open space amenity area for the local population.

At the monthly meeting of Clare County Council held on Monday 10th September 2012, further modifications to the proposed material alterations were made by resolution, namely:

Not to agree with the Manager's Recommendation to amend the zoning of open space for Drumgeely Hill to include a mix of open space and community zoning, and therefore to zone the subject site entirely as open space, as per the attached map.

The Elected Members' reason for the proposed modification was 'having regard to the location of the site adjacent to existing dwellings, the Members consider that it is appropriate to zone the subject site as open space to ensure that established residential amenities are safeguarded and to provide for a high quality, open space amenity area for the local population. The SEA notes that this will have a positive effect on the local community by protecting, enhancing and improving people's quality of life based on a high quality recreational environment.

OS12 – Ballycasey Woodland

This is a mature mixed woodland adjacent to Ballycasey Craft and Design Centre. The SEA recommends that this site is marked on Map A 'Land use zonings'. This area of open space forms an important community landmark and thus should be retained and enhanced as an area of open space to preserve the residential amenity and to provide high quality open space for the local residential community, the wider catchment and tourists.

Looped Walks

As part of a walking strategy, it is also proposed to formalise looped walks in the town that incorporate the existing estuary walking trails.

Objective 10.3: To formalise, enhance and promote looped walks around Shannon, encompassing the Shannon Estuary riverside network and the Sli Na Mara Way.

A total of four looped walks are proposed within the Plan area

Three of the walks start in the town centre and would be advertised by way of a display board and map, colour coded according to route. By commencing three of the walks in the town centre, it is intended to reinforce the plan goal of a vibrant and viable town centre that has increased activity, social use and is an attractive place in which to spend time, meet people and to recreate. The town centre also provides ample existing parking provision and its central location and existing function provides an appropriate base from which to commence the walking trails.

The fourth trail begins in the Shannon Free Zone and the development and promotion of this trail will tie in with the overall objective to increase linkages between the industrial zone and the rest of the town. By formalising and promoting a Free Zone Estuary trail, it is anticipated that this would attract a greater percentage of the 7,000 daily commuters to avail of this recreational opportunity in Shannon.

Map C 'Green Infrastructure' associated with the ST&E LAP 2012-2018 outlines the four proposed looped walking trails as detailed below.

Estuary Trail West – 4.5KM

This trail commences in the town centre and heads south through the town park, past the leisure centre and alongside the Shannon Wetlands, past Shannon Olympic sports grounds, a loop around Illaunagowan Point, Illaunaconeen Point, west around Shannon Town United grounds, past Mary Immaculate Church, through the woodland north of Illaunaconeen Point and back along the same route to the town centre.

Sli Na Mara Trail – 8KM

This trail commences at either the town centre or the Oakwood Arms Hotel. It follows the same route as Estuary Trail West as far as the Shannon Olympic sports grounds, then heads east along the existing estuary walk as far as the cemetery before heading north along the Sli Na Mara Way, past Wolfe Tones GAA club and St. Conaire's school, north along the Sli Na Mara onto the old N19, past the Oakwood Arms Hotel and heading south along Bealach Bri, returning to the town centre

Estuary Trail East – 7.5KM

This trail commences in the town centre and again follows the same route as the above trails before heading east to the roundabout and then south along the cemetery road. The trail then follows along the estuary and the existing access road to the Shannon Wastewater Treatment Plant before returning to the town centre via the same route.

Free Zone Estuary Trail – 9.6KM

This trail commences at the Shannon Free Zone West, following an existing trail south, around the base of Drumgeely Hill, past Shannon Town United grounds, alongside St. Senan's national school and along the estuary walk past Illaunaconeen Point, looping around Illaunagowan Point and returning to Free Zone West via the north side of Drumgeely Hill. An additional trail spur will connect this trail to the hotel at Shannon Airport.

The walks range from 4.5km to 9.6 km so provide a variety of different lengths to suit a variety of abilities and interests. The routes are also all inter-connectable so that longer or shorter loops can be created as desired.

The SEA recommends having regard to the NRA's Policy on the Provision of Tourist and Leisure Signage on National Roads in the preparation of the Draft Shannon Town and Environs Local Area Plan 2012-2018. The issues of Traffic Impact Assessment (TIA) and Road Safety Audits are dealt with in section A.1.7.4 of the Clare County Development Plan 2011-2017.

The SEA recommends that regard is given to the need to provide visually acceptable signage, where appropriate. Existing residential amenities and the natural features of the area should be respected in the development of any new routes.

Green Infrastructure

The SEA welcomes

- reference (as suggested by the EPA in their submission to the Draft Plan) to the recent EU Guidance '*Green Infrastructure and Territorial Cohesion*'(2011) in chapter 11.

- Objective 9.3(a) 'To facilitate the carrying out of a full survey of the trees in Shannon, recording location, species & condition which shall inform future developments and works to the townscape and proposal for replanting'.
 - o The SEA recommends noting CCDP Objective CDP 17.12 Woodlands, Trees & Hedgerows and CCDP 17.17 on Invasive Species in this instance
- *An additional trail spur connecting the estuary walk to the hotel at Shannon Airport*

7.5.11 Infrastructure

The provision of a high quality transportation and service infrastructure network is critical to the plan area, and indeed the wider regions existing and future socio-economic growth, sustainable development and competitiveness. Various infrastructure projects have been identified as necessary including those related to:

- Roads
- Rail
- Water Supply
- Wastewater
- Broadband Network
- Flood Risk & Sea Defences
- Sustainable urban Drainage Systems

At draft stage the ESB infrastructure was addressed within the Manager's Report which recommended that the proposed ESB cable route infrastructure safeguard, as shown on Map B of the Plan, be referenced in Section 12.4 of the Draft Plan as follows:

12.4.3. IS2 – Proposed ESB cable

The Council will retain and protect the infrastructure safeguard shown on Map B to accommodate a proposed future ESB cable. The Council will also facilitate proposals to enhance the electrical power infrastructure available to the Plan area in the interests of achieving security of energy supply, supporting established business and attracting additional investment. In the event that these proposals require EIA or other environmental assessment, these will be carried out at project level.

The provision of major road/rail infrastructure will be subject to a Habitats Directive Assessment as required by Article 6(3) of the Habitats Directive, on a case by case basis. Where appropriate, applications for Strategic Infrastructure will be presented to An Bord Pleanála for their consideration, in accordance with the Strategic Infrastructure Act 2006. A consultation process for major road/rail infrastructure will include referral of project details and the Habitats Directive Assessment for each project to the relevant bodies. For all major road projects a route selection process is informed by a constraints study, the main criteria for which are environmental considerations.

Objective CDP 17.19 (Natural Heritage and Infrastructural Schemes) of the Clare County Development Plan 2011-2017 must also be considered in the development of infrastructure. The aim of this objective is to regulate activities where Clare County Council or other bodies are required to undertake infrastructure provision within, or in the vicinity of, Natura 2000 sites, and to provide sufficient safeguards to protect the Natura 2000 Site Network.

Specific Objectives relating to the individual infrastructure development are assessed in Appendix G.

The SEA welcomes the additional objectives included as part (b) and (c) of Objective 12.7 of the Draft Plan which states that the Council will:

B) facilitate the maintenance and improvement of the existing seawall embankments as necessary.

C) facilitate the implementation of the CFRAMS for Shannon when complete.

NOTE: As part of the SEA process a mapping inconsistency has been identified which shows an Infrastructural Safeguard (to the north west of LDR3) where there is an existing road.

7.5.12 Countryside

The countryside is the parts of the County outside of recognised settlements and is therefore the lowest level of the settlement hierarchy in that its population is dispersed at the lowest density levels. The National Spatial Strategy and the Sustainable Rural Housing Guidelines recognise and support the long tradition of people living in the countryside and policies relating to this are included in the Plan.

The strategic aims are (CCDP 2011-2017):

- To ensure that Ennis “Hub” Town and Shannon “Linked Gateway” are drivers for the growth and development of both Clare and the Mid-West region.
- To provide a strategic settlement strategy to manage population growth/targets and its respective housing needs and to achieve balanced development within the County.
- To promote sustainable urban development at a scale appropriate to the existing settlements and their location within the County, thus managing their development in an attractive, incremental, plan-led manner.
- To ensure that the specific needs of rural communities are identified and that policies are put in place to sustain and renew established rural communities.

7.6 Cumulative Assessment

The purpose of the SEA is to identify where impacts are likely to occur and subsequently to identify where those impacts can be mitigated against. In order to identify and assess where more sensitivities occur within the ST&E Plan area, a number of environmental sensitivities, aligned to the SEOs of the plan were weighted and mapped overlapping each other. These included:

Environmental Parameter	Environmental Sensitivity	
Biodiversity, Flora and Fauna	Special Protection Area	
	Special Area of Conservation	
	Natural Heritage Area	
	Proposed Natural Heritage Area	
Water	Flood Zone A	1 in 100 year flood risk (Fluvial and Tidal)
	Groundwater Vulnerability	
Cultural Heritage	Protected Structures	A 10m was provided for surrounding structures
	Recorded Monuments	
Landscape	Heritage Landscape	
	Working Landscape	

Environmental sensitivities are indicated by colour which range from low sensitivity (white) to high vulnerability (red). Where the mapping shows a concentration of environmental sensitivities there is an increased likelihood that development will conflict with the receiving environment and cause environmental deterioration. This is particularly evident in situations where the cumulative development of small scale projects, such as rural housing, gradually causes a slow deterioration of a resource, such as water quality or landscape value.

Map 7.1 - Environmental Sensitivity in Shannon has been prepared for the LAP area showing areas where the potential for cumulative significant effects may exist within the Plan area. This is beneficial in the context of ensuring that those areas are afforded significant protection. The majority of the area is subject to the same sensitivity, namely high/extreme groundwater vulnerability, flood zones and a dispersed array of archaeological heritage. The cumulative deterioration in water quality as a result of high/extreme groundwater vulnerability over an expansive area will have direct and indirect effects on population, biodiversity, aquaculture, flora and fauna and groundwater as a resource both within designated and vulnerable areas in Shannon Town & Environs and a surrounding zone of influence. Also, a cumulative negative impact to human health would result from a general deterioration in drinking water quality.

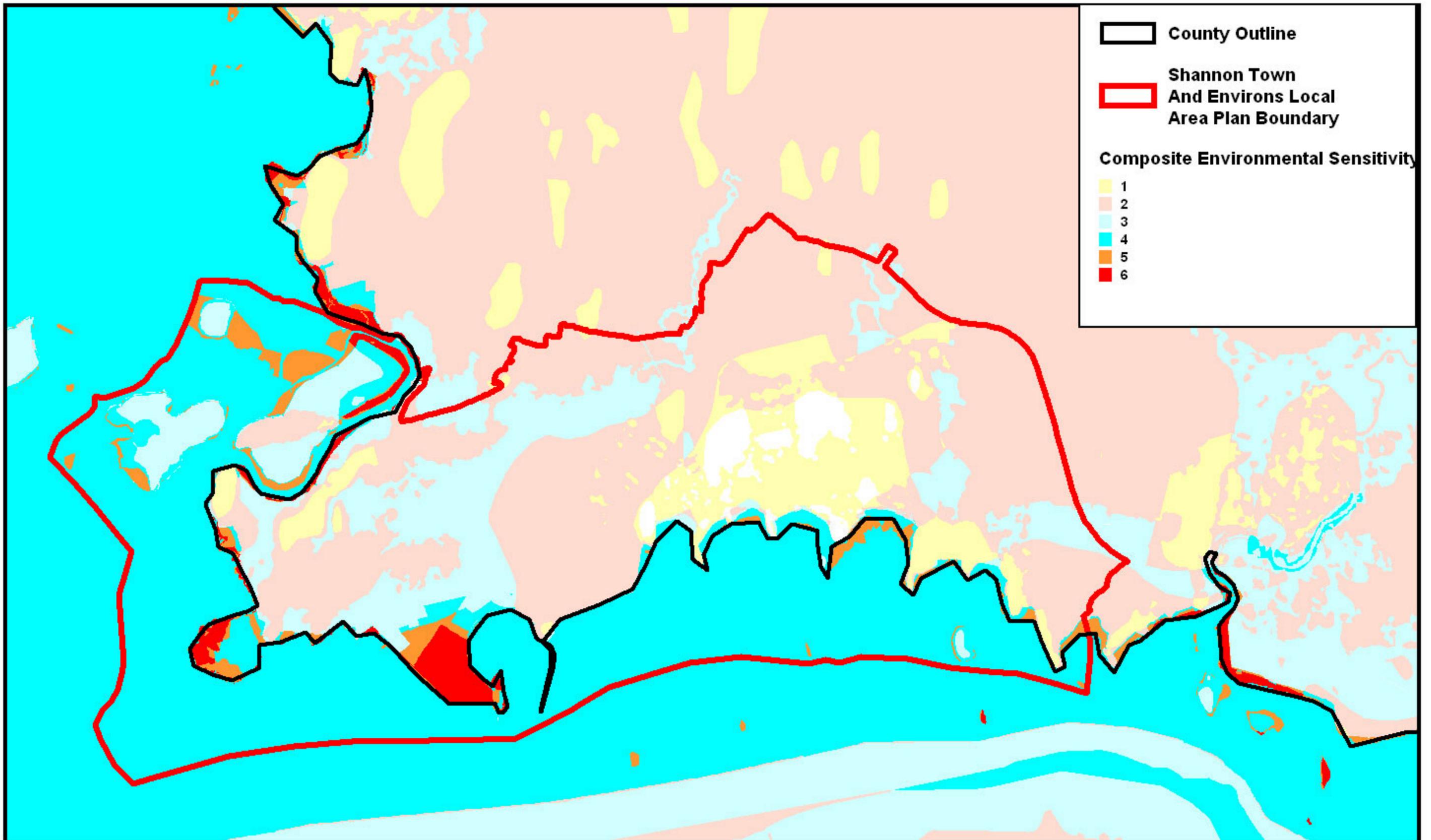
There are also areas within the ST&E LAP area with increased levels of risk, including the estuary shore to the south of the plan area. The sensitivities within these areas vary but areas adjacent to estuary are heightened due to the presence of Flood Plain/s and ecological designation/s (SAC/SPA/pNHA). Architectural and archaeological designations also increase the vulnerability in certain parts of the plan area particularly in areas where these designations occur in clusters.

Secondary to this assessment, the SEA has identified insufficient wastewater treatment in the plan area which will subsequently have direct and indirect effects on a wide range of environmental parameters. Due to an increase in untreated waste and the high/extreme groundwater vulnerability within the plan area, the health of the population is at risk. The need for the construction of new/upgraded infrastructure is highlighted. Upgraded infrastructure would have long term positive impacts on biodiversity, human health, water quality and soil but consideration of the wider

environment prior to siting new infrastructure would greatly enhance this potential cumulative impact.

It is envisaged that further sensitivities will be addressed throughout the plan making process, and the plan updated accordingly.

A cumulative assessment of the amount of proposed zoning of lands within the plan area was also addressed. Table 7.2 outlines zoning figures as they relate to the required area of residentially zoned land (ha), open space, community, recreation, enterprise and industry in the ST&E LAP 2012-2018 but also the percentage difference between this zoning and those proposed in the South Clare LAP 2009-2015. This highlights an additional 16.9ha zoned for open space, an additional .93 ha of community and recreational lands and also an additional 27.225ha zoned for Enterprise/Industry lands.



County Outline
 Shannon Town And Environs Local Area Plan Boundary
Composite Environmental Sensitivity
 1
 2
 3
 4
 5
 6



**Clare
County
Council**

Comhairle Contae An Chláir

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Planning and Enterprise Development,
 Áras Contae An Chláir,
 New Road,
 Ennis.

PROJECT: SHANNON TOWN AND ENVIRONS LOCAL AREA PLAN 2012 - 2018		
TITLE: Map 7.1 - Environmental Sensitivity In Shannon		
SCALE: NOT TO SCALE	PROJECT NO.	DRAWING NO.
DATE: OCTOBER 2012	DRAWN BY: P. McMANUS	CHECKED: B. McCARTHY

Table 7.2 – Zoning Calculation Requirements in Shannon*

Residential				
Land Zoned 'Residential' in the SCLAP 2009-2015 (ha)	Land Zoned as 'OSL' in the SCLAP 2009-2015 (ha)*	Required Area of Residentially Zoned Land as set out in Core Strategy (ha)	Proposed 'Residential' Zoning in the ST&E LAP 2012-2018 (ha) (RES &LDR)	
41.06	127	53.1	47.11	
Open Space				
Land Zoned 'Open Space' in the SCLAP 2009-2015 (ha)		Proposed 'Open Space' Zoning in the ST&E LAP 2012-2018 (ha)		% Difference
156.7		178.2*		(20.5ha) +13.7%
Community & Recreation				
Land Zoned 'Community' in the SCLAP 2009-2015 (ha)	Land Zoned 'Recreation' in the SCLAP 2009-2015 (ha)	Proposed 'Community' Zoning in the ST&E LAP 2012-2018 (ha)	Proposed 'Recreation' Zoning in the ST&E LAP 2012-2018 (ha)	Cumulative % Difference
55.46	.51	30.12*	36.01	(10.16ha) +18.15%
Enterprise & Industry				
Land Zoned 'Enterprise' in the SCLAP 2009-2015 (ha)	Proposed 'Enterprise' Zoning in the ST&E LAP 2012-2018 (ha)	Proposed 'Industry' Zoning in the ST&E LAP 2012-2018 (ha)	Cumulative % Difference	
264.35	101.9	193.785	(31.35ha) +11.86%	

*It is envisaged that throughout the plan making process, this table will be amended to include the following criteria

- Required Equivalent in Low Density Residential as set out in Core Strategy (Ha)
- Available Residentially Zoned Lands (Ha)(2009-2015 SCLAP)
- Available Other Settlement Land (Ha) (2009-2015 SCLAP)
- Actual Lands zoned 'Residential' in ST&E LAP 2012-2018
- Settlement boundary area difference
- Status of water supply
- Status of wastewater services

* - This figure has been updated due to a calculation error

* Land zoned as Other Settlement Land included for reference only. Also, Other Settlement Land allowed for a variety of uses and not solely for Residential development. Therefore it is not appropriate to directly count these lands as part of the quantum as lands available for residential use in the Shannon Town & Environs Local Area Plan 2012-2018.

7.7 Conclusion

The Council have adopted a 'Sustainable Planning and Development' approach, as discussed in Chapter 6 of this Environmental Report and correspondingly the settlement objectives contained within the Plan have been devised in accordance with the guiding principles of this strategy. The assessment matrix, provided as Appendix G to this Report (which has/have been updated due to the Proposed Material Alterations, has assessed each zoning objective against the Environmental Objectives and has demonstrated that the Plan has a significant sustainable dimension, however, the assessment also revealed some potential for negative impacts on the environmental receptors. The Sensitivity Mapping has also addressed the cumulative impact on the receiving environment.

The long term future development of Shannon Town & Environs is framed within the Local Area Plan for the area. This noted the individual sensitivities relative to specific areas and the cumulative impact of a range of environmental sensitivities will be addressed in Chapter 8 – Mitigation Measures and Chapter 9 - Monitoring which proposes specific monitoring measures to ensure impacts are identified at an early stage and appropriate action taken.

Chapter Eight – Mitigation Measures

8.1 Introduction

The quality of the environment within the Plan area is an important issue for consideration by the Local Authority and only through its protection, preservation and enhancement can sustainable development be truly achieved. The Plan area lies adjacent to the internationally renowned Shannon Estuary, contains a rich and varied landscape, as well as natural and man-made heritage assets. These form the basis for a high level of amenity potential in the area. To this end, the mitigation and enhancement measures outlined in this Chapter of the Environmental Report will ensure the continued protection of the natural and built environment throughout the lifetime of the Plan, while recognising the potential of the Plan area.

The Plan deals with the functional area of Shannon town within the Plan area, as illustrated on the settlement map included in the Shannon Local Area Plan 2012-2018. However, the Clare County Development Plan 2011-2017 is the 'parent' document to which the Plan has been prepared. Thus, the environmental protection policies and objectives apply, as well as all other policies and objectives. These have been thoroughly assessed through the SEA process and are determined to be sufficient to ensure the long-term protection of environmental resources within the County as a whole.

Furthermore, the Environmental Report associated with the Clare County Development Plan 2011-2017 detailed a number of specific mitigation measures applicable throughout the full extent of the County area and includes the area covered by the Shannon Local Area Plan 2012-2018. The mitigation measures included here deal with the identified potential significant impacts discussed in Chapter 4 and 7 and key strategic level impacts. Mitigation measures therefore contained within the Clare County Development Plan 2011-2017 SEA Environmental Report are relevant to the development of zoned lands within the remit of the Shannon Local Area Plan boundary. While these measures contained within the Clare County Development Plan 2011-2017 are not discussed in detail here, this Chapter outlines a number of general measures for each environmental receptor designed to avoid, limit or eliminate identifiable adverse environmental impacts.

In general terms, all proposals for development will be required to have due regard to environmental considerations outlined in Environmental Report. Proposals for development which are deemed contrary to the environmental objectives and policies contained within the Plan will not normally be permitted, and if permitted, not without the appropriate site and development specific mitigation measures.

8.2 Planning

Clare County Council is the planning authority with responsibility for development management within the Shannon LAP area. The planning process is the principal mechanism available to the local authority to primarily control development and ultimately to prevent adverse environment impacts.

Any application for planning permission for a new development, extension to existing development, intensification or change of use will be assessed in terms of its potential impact on existing environment, adjacent developments, land uses and/or the surrounding landscape. Where development would potentially have an impact on the amenities of the area through pollution by noise, fumes, dust, grit or vibration, or

cause pollution of air, water and/or soil, appropriate mitigation must be incorporated into the development proposals.

Where a masterplan is required, it must incorporate a habitat and species survey followed by an Ecological Impact Assessment, which will inform a Habitats Directive Assessment Strategic Environmental Assessment and/or Environmental Impact Assessment, where required.

8.3 Enforcement

The Planning Acts give power to the Council to take enforcement action where development proceeds without the necessary consent from the local authority, or if conditions attached to permission are not complied with and when other breaches of planning control have occurred. The Council will take enforcement action whenever it is required to do so, having regard to the provisions of the Planning and Development Act 2000-2010, and associated guidelines.

8.4 Liaise with other Authorities

The Local Authority will continue to liaise with state agencies/departments whose remit is the protection of the environment or aspects of it. To this end the Local Authority will continue to work closely with the Environmental Protection Agency, the Department of the Environmental, Community and Local Government, and the Department of Communications, Energy and Natural Resources, the National Parks and Wildlife Service, the relevant Fisheries Board and others with responsibilities for the various aspects of the environment.

Major industries and waste facilities throughout Ireland are licensed by the Environment Protection Agency (EPA). The local authority will work with and assist the EPA in carrying out its functions within the plan area. The Environment Section within Clare County Council monitors and controls industries and waste activities that fall outside the EPAs remit and provide an array of essential environmental services, including:

- Water pollution monitoring and control
- Air pollution monitoring and control
- Waste management plan implementation
- Waste management permitting & enforcement
- Control of hazardous waste movements
- Pollution incident response
- Environmental awareness and education
- Burial grounds
- Animal control, litter control and tidy towns

These activities will continue throughout the lifetime of this Local Area Plan and key indicators will be monitored on an ongoing basis

8.5 Environmental Awareness

There are obvious environmental benefits in creating an awareness of the environment generally and the contributions individuals as well as communities/sectors/industries can make to its enhancement. The local authority will be proactive in promoting environmental issues and sustainable practices in the various sectors which have

potential to cause deterioration in the quality of the natural or built resources within the Plan area.

Mitigation Measures – Issues of Concern

At the outset of the process and during the scoping stage of the Strategic Environmental Assessment, a number of specific issues were raised which were of immediate concern for the process and are critical to the sustainable development of the Shannon Plan area. The issues highlighted and discussed in Chapter 2 of this Environmental Report are.

- Biodiversity – Shannon Estuary;
- Wastewater;
- Flooding;
- Groundwater protection;
- Landscape & Visual Amenity.

Also outlined are the associated relevant objectives in the 'parent' Clare County Development Plan 2011-2017 which align to the issues of concern.

Biodiversity – Shannon Estuary

The Shannon Estuary forms an important aspect to the plan area and thus an enhancement of such a resource is a key element of the plan. It is designated as Natura 2000 site (SPA/SAC) and a proposed Natural Heritage Area. This designations is afforded European and National legislative status and a HDA will be required on any development where likely significant impacts on the Shannon Estuary. The Shannon Estuary is a significant part of the Shannon Town & Environs Plan area and its status as the most important site in Ireland for over-wintering wildfowl and waders, and an important breeding site in the summer season. The significance of the Shannon estuary is broad ranging and thus various objectives are outlined in the CCDP 2011-2017 which guide development in this area.

Mitigation Topics – Issues of Concern	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Biodiversity – Shannon Estuary	CDP 6.16: Shannon Estuary CDP 14.1: Integrated Development of Shannon Estuary CDP 14.2: Strategic Integrated Framework Plan CDPB 14.3: Estuarine Port and Harbour Facilities CDP 14.5: Renewable Energy on Shannon Estuary CDP 14.6: Electricity Infrastructure on the Shannon Estuary CDP 14.7: Commercial Fishing/Aquaculture CDP 14.8 : Marine Tourism/Recreation/Leisure CDP 14.9: Natural and Landscape Heritage CDP 14.10: Eco / Heritage Tourism CDP 14.11: Estuary Settlements CDP 14.12: Flood Risk Management CDP 14.13: Water Borne Transport CDP 14.14: Marina Development

Wastewater treatment

Wastewater treatment is essential to ensure public health and to ensure the quality of receiving water, either ground or surface are not diminished by the discharge. The local authority is proposing the following measures which should ensure that the water quality is not adversely affected by such discharges:

- The Council will actively encourage the full and proper decommissioning of unused septic tanks in order to remove the potential for future pollution of surface and groundwater.
- The Council will facilitate the provision of waste water and effluent treatment services by private developers in order to promote development in certain identified settlements where significant deficiencies exist and where it is not proposed to provide such services within the life of the current Local Area Plan. Any proposed treatment plants shall be purpose designed to the required Council standards, appropriate in capacity and scale, and have a suitable outfall and method of disposal.
- All applications for residential developments in areas where public sewerage mains are not present shall be accompanied by the documentation as required by the relevant EPA Treatment Manual (or subsequent update), certified by a fully indemnified professional, indicating the suitability of the site for the disposal of effluent. These treatment plants must be installed in accordance with recommendations of the EPA in Wastewater Treatment Manuals, Treatment Systems for Single Houses (2000, and/or any new or amended versions).
- In cases where an effluent treatment system is to be installed, the system must, at all times, be covered by an appropriate maintenance contract.
- Point discharges of treated effluent to surface water will not be allowed from single dwellings.

Shared treatment systems will only be considered in cases where the shared treatment plant is an interim measure, only intended to serve the development until such time as an appropriate connection to the public treatment plant can be made.

Mitigation Topics – Issues of Concern	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Wastewater treatment	CDP 8.7: Wastewater Treatment & Disposal CDP 8.8: Wastewater Treatment Systems for un-serviced Developments CDP 8.9: Wastewater Treatment Services for un-serviced small businesses and/or Community Facilities CDP 8.10: Wastewater Treatment for Multiple Housing Units

Flooding

Much of Shannon consists of low-lying coastal flatlands and the majority of the plan area is within a Flood Zone. Shannon has also been highlighted as an area for further study as part of the Catchment Flood Risk Assessment and Management Study (CFRAM) Study for the Shannon River Basin District (SIRBD). To ensure that proposals for development in areas where there is a risk of flooding (based on SFRA, Vol II, CCDP) shall have regard to the OPW/DoEHLG planning guidelines, The Planning System & Flood Risk Management – Guidelines for Planning Authorities (2009) and any future OPW flood assessment information, and such proposals must also demonstrate that appropriate mitigation measures can be put in place.

Mitigation Topics – Issue of Concern	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Flooding;	CDP 8.11: Storm Water Management CDP 9.15: Strategic Flood Risk Assessment CDP 14.12: Flood Risk Management CDP 9.17: Monitoring CDP 21.3: Flood Risk Assessment

Ancillary to flooding is the issue of coastal erosion and thus the relevant objectives in the CCDP 25011-2017 are as follows:

Mitigation Topics – Issue of Concern	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Coastal erosion	CDP 15.8: Integrated Coastal Zone Management CDP 15.11: Coastal Erosion and Flooding

Groundwater protection

Groundwater protection is a concern in the plan area. There are intermittent areas of groundwater vulnerability classified as being of 'low', 'moderate', and 'high' vulnerability. There are also areas to the periphery of the plan area and airport lands which are categorised as having 'extreme' groundwater vulnerability. Clare County Council will protect groundwater resources, in accordance with statutory requirements and specific measures as set out in the Shannon River Basin Management Plan.

Mitigation Topics – Issue of Concern	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Groundwater protection	CDP 8.1: Protection of Groundwater Resources

Landscape & Visual Amenity

The purpose of strategic landscape mitigation measures are to ensure that adverse visual impacts of any proposed development are mitigated against and a better fit of development is achieved within the landscape. For any development of significant scale, visual impacts are inevitable, however, with considered, high quality building and landscape design, these impacts can be minimised. However, inappropriate development within sensitive areas will not be permitted.

Clare County Council has prepared guidelines on the protection of the landscape within the county. The local authority is incorporating the recommendations of the assessment into the LAP. This provides for the protection of visually sensitive areas, landscapes of intrinsic value and unique to the county in general. The Council will also preserve views and prospects which are of importance.

In addition to the above, the Council will implement the following general measures in order to protect the landscape and visual quality of the plan area.

- Applicants for development should consult Clare County Council publications "Buds of the Banner", "Stone Walls of Clare" and "The Living Farmland", and must demonstrate that the proposed development will retain, protect, maintain, plant, and, where necessary, enhance the appearance and character of existing local landscape features.
- All proposals for development will be required to retain, protect and, where necessary, enhance the appearance and character of the existing local landscape. The local authority will not grant permission for proposed developments which will have a detrimental impact on the landscape.
- The location of windfarm developments will be managed by the Clare County Wind Energy Strategy (Vol. 5 of CCDP 2011-2017) to minimise adverse visual impacts on the landscape.
- Proposals for renewable energy developments will be evaluated to avoid negative impacts on the character and amenity of the surrounding area.
- The Planning Authority shall control development in protected areas (scenic views and prospects, ridge lines, broad zones of the lakes, European sites etc.) which has the potential to negatively impact on the scenic, heritage and cultural assets of the plan area.

Scenic Routes:

- Identified scenic routes are interwoven with the living, working and historic landscapes. The Council recognizes that in some areas the land adjoining these

scenic routes can have relatively limited capacity (both environmentally and in terms of scenic amenity) to accommodate individual houses in significant numbers. In such areas, the Council will aim to protect sensitive areas from injurious development, while providing for development and change that will benefit the community.

It is proposed that permitted development along scenic routes should not seriously hinder or obstruct these views and should be designed and located to minimise their impact. Planning Applications that have the potential to significantly adversely impact upon valuable and sensitive landscapes and protected views shall be required to be accompanied by an assessment of the potential landscape and visual impacts of the proposed development - demonstrating that landscape impacts have been anticipated and avoided to a level consistent with the sensitivity of the landscape. In order to achieve this goal, the Council shall be consulted at an early stage in this regard in order to determine whether there is a need for more detailed assessment or for specific mitigation measures at design stage.

Mitigation Topics – Issues of Concern	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Landscape & Visual Amenity	CDP 14.9: Natural and Landscape Heritage CDP 16.1: Landscape Character Assessment CDP 16.2: Settled Landscape CDP 16.4: Shannon Estuary Working Landscape CDP 16.5: Heritage Landscape CDP 16.6: Scenic Routes

Mitigation Measures – Specific Topics

Also outlined are the associated relevant objectives in the 'parent' Clare County Development Plan 2011-2017 which align to the specific issues.

Biodiversity – HDA

If the requirements of the Habitats Directive Assessment are implemented in the Shannon Local Area Plan 2012-2018, the Plan 2012-2018 should not have a negative impact on the Natura 2000 Site Network. Implementation of Objectives in the Clare County Development Plan 2011-2017, and particularly Objective CDP 17.3 and Objective CDP 17.4 will ensure overarching safeguards for the protection of the Natura 2000 Site Network within the Shannon Plan area. In addition, the Shannon Local Area Plan 2012-2018 contains a specific objective (Objective LAP1) for Habitats Directive Assessment.

The functional area of the Shannon Local Area Plan 2012-2018 has a landscape and a natural heritage that is rich in biodiversity. Clare County Council has undertaken a Habitats Directive Assessment of the likely impacts of the Shannon Local Area Plan. Due to the amount of information contained in the Habitats Directive Assessment (HDA) Report it is not possible to include detailed information in this Section of the Environmental Report. The potential for in-combination, cumulative effects, transboundary etc., in relation to the amount of proposed and existing zoning within the Plan area and adjacent to designated Natura 2000 sites have been dealt with in the report. This HDA Report is provided as a separate document titled 'Habitat Directive Assessment (Natura Impact Assessment) for the Shannon Local Area Plan 2012-2018' located in Volume 3.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Biodiversity – HDA	CDP 17.3: Natura 2000 Sites CDP 17.4: Requirement for Appropriate Assessment under

	the Habitats Directive (1992) CDP 17.18: Mitigation Measures from Habitats Directive and Strategic Environmental Assessment
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Biodiversity - Designated Areas

There are 3 designated sites within the plan area. The Council will be proactive in the protection of such sites designated in National and European legislation, and in other relevant International Conventions, Agreements and Processes. The Council will work with the relevant statutory authorities, such as the Wildlife Service to identify, protect and conserve vulnerable, rare and threatened species of wild fauna and flora and their habitats. Proposals for development within designated areas will not be permitted unless it can be clearly demonstrated that the development would pose no significant risk or adverse impact to the area.

This includes sites proposed to be designated or designated as:

- Special Areas of Conservation under the Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) and collectively form part of Natura 2000, a network of protection areas throughout the EU.
- Special Protection Areas under the EU Birds Directive
- Natural Heritage Areas (NHAs) and Proposed Natural Heritage Areas (pNHA under the Wildlife (Amendment) Act, 2000.

In order to protect features that are important to local biodiversity, a suitable protection zone must be established between any proposed development and the natural feature. The extent of this protection zone will be decided on a case by case basis by the local authority. The Council will ensure that sufficient environmental impact assessments accompany development proposals where they are required in accordance with the Planning and Development Act 2000(as amended).

The local authority will have regard to the Shannon River Basin Management Plan and the Shannon Regional Fisheries Board guidance document, "Planning for watercourses in urban environment - A guide to the protection of watercourses through the use of buffer zones, Sustainable Drainage Systems, instream rehabilitation and recreational planning" when assessing planning applications for development in the vicinity of watercourses within the Plan area.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Biodiversity - Designated Areas	CDP 17.5: Natural Heritage Areas (NHAs) & Proposed Natural Heritage Areas (pNHAs) CDP 17.6: Geological Heritage Sites CDP 17.8: Non-designated Sites

Biodiversity – Trees

- The Council will encourage development proposals that enhance the landscape through positive management and additional planting of native tree species.
- The Council will require developers to submit a vegetation survey including species, size and condition of trees to be planted
- The Council will seek to support the Department of the Marine's Neighbourhood Scheme which promotes the development of woodland areas around towns and villages by promoting the development of woodland areas in conjunction with proposed developments as well as on lands in their own ownership.

- Hedgerow maintenance and protection will be a condition of planning permissions in the plan area and unnecessary removal of hedgerows will not be permitted.
- The Council recognise the importance of hedgerows and shelterbelts as wildlife habitats and will thus seek their protection and maintenance through the Shannon Local Area Plan.
- Agricultural developments should minimise interference with existing hedgerows and trees.
- In relation to mariculture on the estuary, development either on or off shore which would have an unacceptable effect on designated mariculture areas, particularly developments involving the discharge of effluent or the abstraction of water into such areas will not normally be permitted.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Biodiversity – Trees	CDP 17.12: Woodlands, Trees & Hedgerows

Biodiversity – General

- In general where significant land use changes are proposed, where it is evident that biodiversity is likely to be significantly affected, appropriate mitigation measures will be required. These measures may, in association with other specified requirements, include establishment of wildlife areas/corridors/parks, tree planting, wildflower meadows/marshes and other areas. With regard to residential development, in certain cases, these measures may be carried out in conjunction with the provision of open space and/or play areas.
- Where significant development is proposed outside zoned areas the local authority will require that the developer provides a full and detailed Environmental Impact Statement in accordance with EPA guidelines, detailing the receiving environment, the potential impact and proposed mitigation measures. The provision of an EIS will not automatically qualify for a grant of permission.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Biodiversity – General	CDP 6.11: Natural Resources CDP 17.1: Guiding Policy CDP 17.2: Conservation and Environmental Management CDP 19.9: Biodiversity CDP 17.10: Inland Waters CDP 17.11: Peatlands CDP 17.13: Grasslands CDP 17.14: Limestone Habitats CDP 17.17: Invasive Species CDP 17.19: Natural Heritage and Infrastructure Schemes CDP 17.20: Ecologically Protected Areas

Soil and Geology

The soil and geology environment plays a significant role in land uses and its appropriateness for differing activities, not just confined to agricultural practices. Soil and geology also plays a significant role in terms of the availability of water resources and pollution prevention. Therefore many of the mitigation measures proposed in the water section are of relevance here also. However in relation to the soil and geology environment specifically, the following mitigation measures are proposed:

- The Council will implement the relevant EPA and Department of Agriculture guidance and regulations in the percolation and/or spreading of domestic and agricultural effluent to land to prevent soil pollution.

- Important geological or geomorphological sites in the County, including any sites proposed to be designated or designated as Natural Heritage Areas (NHAs) will be protected.
- Clare County Council is required to seek technical advice from the Health and Safety Authority in relation to any planning application within “consultation distance” of these establishments.

Mitigation Topics – Specific Issue	Relevant Objective/s in ‘Parent’ Clare County Development Plan 2011-2017
Soil and Geology	CDP 13.10: Minerals, Mining and Quarrying

Water Quality

The Shannon Local Area Plan 2012-2018 is within the Shannon International River Basin District (SIRBD). The associated River Basin Management Plan (2010) set out the environmental objectives together with actions (known as the Action Programme) that will ensure these objectives are achieved in practice. Clare County Council will be obliged to ensure the objectives identified in the management plans are achieved.

It will be the policy of the Council when assessing development proposals to have regard to any significant negative impact caused on groundwater resources within the Plan area, having regard to the Environmental Protection Agency guidelines applicable at the time. The Council will use statutory powers under relevant Planning and Environmental legislation to protect groundwater, including Habitats Directive Assessment, Environmental Impact Assessment, Integrated Pollution Control and/or Water Pollution legislation in balancing the need to protect the environment with the need for development.

Specifically in relation to the protection of water resources in the plan area, the following will be undertaken:

- The Council will encourage and promote compliance with the recommendations contained in the River Basin Management Plans.
- It will be Council policy not to allow any development that would have an unacceptable impact on the water resource of the area, including surface water, and groundwater quality and quantity, river corridors and associated wetlands.
- In areas of potable groundwater sources, or over vulnerable aquifer areas, development proposals will be considered if the applicant can clearly demonstrate that the proposed development will not pose a risk to the underlying groundwater.
- The Council will protect and enhance surface water and groundwater resources which are essential as part of an integrated approach to the management of water resources, necessary to ensure the highest water quality into the future, as set out in the Water Framework Directive (Directive 2000/60/EC establishing a framework for Community action in the field of water policy).
- It will be Council policy to promote the implementation of Water Quality Management Plans for ground, surface, coastal, and estuarine waters in the plan area as part of the implementation of the European Water Framework Directive (European Communities (Water Policy) Regulations 2003).

Mitigation Topics – Specific Issue	Relevant Objective/s in ‘Parent’ Clare County Development Plan 2011-2017
Water Quality	CDP 8.2: Protection of Water Resources CDP 8.3: Protection of Surface Waters CDP 8.11: Storm Water Management CDP 8.12: Sustainable Drainage Systems CDP 9.1: Water Framework Directive

	CDP 9.2: Protection of Water Resources
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Air Quality

Fossil fuels, which affect air quality and contribute to the greenhouse effect, are used in transport and general energy consumption. While considerable advances have been made in engine design and fuel efficiency, the planning authority are advising all potential developers that they will require a clear demonstration that traffic management is a key consideration for any proposed large scale residential, industrial or commercial development.

While public transport is recommended and supported by the local authority this is not always a realistic proposition. However, the local authority will require developers to give due consideration to the transport implications of any proposed development for which the planning authority must adjudicate on.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Air Quality	CDP 9.10: Air Pollution CDP 9.12: Climate Change

Renewable Energy

The Council recognises the importance of developing renewable sources of energy in the interest of supporting environmental sustainability. To this end the Council have identified the preferred areas and areas open for consideration for the development of wind energy infrastructure, these areas are subject to change as research continues in that sector.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Renewable Energy	CDP 6.7: Energy Supply CDP 10.1: Development of Low Carbon Economy CDP 10.2: Renewable Energy CDP 10.3 Wind Energy Development and Residential Amenity CDP 10.4: Wave/Tidal Energy CDP 10.5: Hydroelectric Energy CDP 10.6 Bioenergy CDP 10.7: Waste to Energy/ Combined Heat and Power CDP 10.8: Energy Security CDP 10.9: Electricity Network CDP 10.12: Energy Storage CDP 10.13: Energy Efficiency CDP 10.14: Electric Powered Vehicles CDP 10.15: Telecommunications Infrastructure CDP 13.9: Bioenergy CDP 13.11: Wind Energy Development CDP 19.3: Materials & Design

Transport – General

An efficient transport/access network is essential to the economic performance of the Shannon region. It is essential that the road network in the area is maximised in order to strengthen accessibility both within the plan area and between the plan area and the wider region. Strengthening economic activity is of the utmost importance and needs to be supported by a good quality road network. The following mitigation measures are also proposed:

- Proposals for large-scale development are required to incorporate public transport infrastructure in order to ensure future delivery.

- It is the policy of the Council to implement traffic calming measures, where appropriate, in residential areas, within defined settlement boundaries
- In the design and improvement of roads and in the assessment of proposals for new development, the safety of road users, including motorists, cyclists and pedestrians will be a primary consideration.
- It is an objective of the Council to promote walking as a viable alternative to the car for local, short distance trips through well managed footpaths, clear signage and where appropriate, well maintained crossings.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Transport - General	CDP 10.14: Electric Powered Vehicles CDP 11.8: Proposed Projects Identified for Future Development CDP 11.15: Shannon Airport CDP 11.17: Access

Transport – Roads

- The Council will seek to improve the existing roads where necessary by setting back of new building and boundary lines particularly at road junctions to improve sight lines in the interests of traffic safety and to retain the potential for future realignment;
- The local authority will continue to work closely with the National roads Authority in developing the national road network within the plan area.
- The local authority will apply the guidance offered by the National Roads Authority in:
 - NRA Policy Statement on the Provision of Service Areas and Rest Areas on Motorways and High Quality Dual Carriageways
 - NRA Policy Statement on Development Management and Access to National Roads.

Best Practice and Mitigation for Road Infrastructure Projects

If a road project comes forward during the plan-making process, or throughout the lifetime of the Plan, the following best practice and mitigation must be adhered to.

Continuous compliance with relevant environmental standards will be required for all road infrastructure projects, including the implementation of Sustainable Urban Drainage Systems (SUDS), and ensuring full compliance with the measures prescribed under the Shannon International River Basin Management Plan, the European Communities Water Framework Directive 2000/60/EC, the Water Pollution Acts 1977 & 1990, and the Fisheries (consolidation) Act, 1959.

Best Practice Guidelines as specified by the NRA will be adhered to in all cases. The required procedure is as follows:

- A commitment to check the location of designated sites to see if the proposed development lies within, or in the vicinity of, or within the catchments of, Natura 2000 sites or Natural Heritage Areas, and whether the development is likely to have any direct or indirect effects on these designated sites.
- Consultation with National Parks and Wildlife Service and if necessary Clare County Council or others, and comply with the Notifiable Actions procedure as set out by NPWS, when considering works not subject to Planning Permission and that are likely to have a negative effect on the Natura 2000 site.
- Where development is proposed which is liable to have a direct, indirect or in combination effect (taking account of existing development in the area), the

development will require a Habitats Directive Assessment, in accordance with the requirements of Article 6.3 of the Habitats Directive.

In addition the following guidance should be followed.

- Fishery Guidelines for Local Authority Works (DCENR, 2008), Regional Fishery Boards
- Eastern Regional Fisheries Board Guidance Notes: 'Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites' (Eastern Regional Fisheries Board, 2006).
- Maintenance and Protection of the Inland Fisheries Resource during Road Construction and Improvement Works - Requirements of the Southern Regional Fisheries Board (Southern Regional Fisheries Board, 2007).

Due regard must also be given to guidance documents including, but not limited to, the following:

- Control of Water Pollution from Construction sites – Guidance for Consultants and Contactors published by CIRIA (2001); and
- NRA Guidelines (2006) NRA Guidelines for the Crossing of Watercourses during the Construction of National Road Scheme.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Transport - Roads	CDP 11.1: MWASP CDP 11.2: Motorway, National Primary & Secondary Roads CDP 11.4: Strategic Development of National Road Network CDP 11.3: Service Rest Areas CDP 11.5: Direct Access onto National Routes CDP 11.6: Strategic Regional Roads CDP 11.7: Development of Regional Roads

Transport - Public Transport

- The Council supports the development of community transport schemes within the plan area.
- The Council will work in partnership with public transport providers to facilitate the provision of other, more modest, improvements to the public transport system such as the provision of bus lanes, bus bays, shelters and other facilities

Developers seeking permission for significant and large scale developments with potential for significant traffic generation will be required to submit a traffic impact assessment.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Transport - Public Transport	CDP 11.9: Rail Network CDP 11.11: Shannon Rail Link CDP 11.12: Bus Services CDP 11.13: Bus Facilities CDP 11.14: Community Transport CDP 11.18: Cycling & Walking CDP 11.21: Ports, Jetties, Harbours, Quays and Piers CDP 13.1: Rural Transport

Waste Management

It is the policy of the local authority to implement the provisions of the replacement Regional Waste Management Plan. The main objectives of the plan focuses on the prevention, minimisation, reuse and recycling of waste, the provision of a framework

for the development and operation of waste infrastructure within the region and the application of the polluter pays principle. It is the policy of the Development Plan to implement the objectives of the Regional Waste Management Plan and any future amendments/revisions.

The planning authority will promote effective waste management through the avoidance and/or reduction of waste within the plan area. The main strategies which will be implemented will be:

- Waste prevention to be a key waste management priority in the region and the Council will seek to encourage waste prevention at source.
- The Council will support sustainable waste management methods including pre-treatment, recycling/reuse and energy from waste, including capture and use of methane.
- To require the segregation at source and segregated collection of biodegradable waste in its functional area, and biological treatment of this material in accordance with the National Strategy on Bio-Degradable Waste.
- To encourage the promotion and provision of Waste Transfer Stations and Material Recovery Facilities subject to the provisions of the Regional Waste Management Plan.
- To promote the provision of thermal treatment of residual waste with energy recovery in the Limerick/Clare/Kerry region.
- To require bring-banks and recycling facilities to be included as part of the overall development of large developments subject to the provisions of the Regional Waste Management Plan.
- The Council will pursue the preparation, establishment and implementation of/compliance with The Waste Management Plan and The National Hazardous Waste Plan and any future updates.
- Where considered necessary, the Planning Authority will require Project Construction and Demolition Waste Management Plans as part of applications for development in accordance with "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects" (DoEHLG, 2006). Such plans should be submitted for developments above the stated thresholds within these guidelines and as required by the Planning Authority.

Construction and demolition (C&D) waste is seen as a direct by-product of the building industry. The Council will seek to reduce the quantity of C&D waste that goes to landfill and will seek to ensure that such waste is recycled and reused in the proposed development where possible, especially on brownfield sites. Where significant C&D waste is envisaged arising from a proposed development, the Council will seek the provision of a waste management plan for the scheme as part of the planning process. All such plans will be subject to the written agreement of the Council prior to the commencement of development and be in compliance with the EPA Best Practice Guidelines on the Preparation of Waste Management Plans for Construction & Demolition Projects.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Waste Management	CDP 9.3: Waste Management CDP 9.4: Re-use and Recycling of Waste CDP 9.5: Household Waste CDP 9.6: Litter Management CDP 9.7: Construction and Demolition Waste CDP 9.8: Agricultural Waste

Water Supply

The water supply of Shannon is highly vulnerable and the Council will not permit development that would have an unacceptable impact on the water environment. It is council policy that any new development meets the requirements of the European Water Framework Directive (2003) and the Council promotes the implementation of Water Quality Management Plans in accordance with this directive.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Water Supply	CDP 8.4: Water Supply CDP 8.5: Water Conservation CDP 8.6: Water Abstraction

Cultural Heritage – General

The Cultural Heritage element of the environment is a broad issue encompassing architecture, archaeology and historical features. All aspects are non renewable and are an important aspect of the town, county and indeed the nation, ultimately they are part of our identity. The following measures are divided by category and the breadth of measures proposed is reflective of the importance cultural heritage plays in our modern society.

- The Planning Authority shall promote the protection and conservation of heritage sites, monuments, artefacts and monuments and the integrity of their setting, as listed and illustrated in the Record of Monuments and Places.
- The Planning Authority shall endeavour to identify important landscapes and habitats and the importance of local character, identity and distinctiveness, in both the natural and built heritage of the area.
- Any proposed development which may impact on the integrity and/or setting of any monuments, sites, objects or areas of archaeological, cultural, architectural, historical or Heritage importance under the protection of this Development Plan and/or the Department of the Environment, Community and Local Government and Department of Arts, Heritage and Gaeltacht shall be referred to the relevant department for observations/comment prior to a grant of permission/approval being obtained.
- The Council will strictly control development proposals on unzoned lands which may be detrimental to, any area, site, structure, monument or object of archaeological significance, or detract from, its interpretation and setting. Development will only be permitted where the Council, in consultation with the DoECLG/DoAHG, considers it acceptable, in view of its objectives and policies, and where all necessary mitigation has been carried out.
- The Council will ensure that all new development in urban and rural situations must be guided by high standards of design.
- In securing the preservation of the archaeological heritage, the Planning Authority will have regard to the recommendations of the DoEHLG/DoAHG, both in respect of whether or not to grant Planning Permission and in respect of the condition to which permission would, if granted, be subject.

Where necessary, the Planning Authority may impose, through the Development Management Process, conditions to safeguard that adequate measures are taken to identify and mitigate the archaeological impacts of any development, including where required the completion of a licensed excavation.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Cultural Heritage -	CDP 12.7: Arts, Heritage and Cultural Tourism

General	CDP 18.3: Architectural Heritage of General Interest CDP 18.4: Proposed Works to Buildings and Protected Species CDP 18.5: Sites, Features and Objects of Archaeological Interest CDP 18.2: Architectural Conservation Areas
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Cultural Heritage - Protected Structures

- As part of the Clare County Development Plan 2011-2017, the local authority has made additions to the Record of Protected Structures (Volume 4) based on surveys and assessments carried out by the Planning Department
- The local authority will issue Section 55 notices to owners of proposed Protected Structures when the Minister for the Arts, Heritage and Gaeltacht has recommended structures for inclusion on the Record of Protected Structures.
- The local authority will assess the List of Protected Structures and will make additions to the list on the advice of the Department of Arts, Heritage and Gaeltacht.
- The local authority will publicly advertise the list of the Minister's recommendations contained in the National Inventory of Architectural Heritage (NIAH).
- The Council will, where possible and feasible acquire protected structures, if this is necessary to protect the structure. On acquiring the structure, to its use or sale shall be considered by the Council.
- The Council will insist on the protection of structures included in the Record of Protected Structures generally and in particular by:
 - Controlling development which would alter the character of protected structures and proposed protected structures
 - Monitoring the condition of protected structures and proposed protected structures to identify those endangered by neglect, vandalism or unauthorized development and taking appropriate action
 - Preventing the endangerment of protected structures in the Council's ownership
 - The Council will issue Declarations as to the type of works that would affect the character of a protected structure and therefore require planning permission.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017
Cultural Heritage - Protected Structures	CDP 18.1: Protected Structures

Cultural Heritage - Archaeology

- The Council will require that any new development proposals have regard to the archaeological survey and the Record of Monuments and Places published by the National Monuments Service.
- Where significant archaeological remains are found through excavation, the Council will require a plan for their recording and conservation (either in-situ or ex-situ).
- In the interest of reducing the impacts on the buried archaeological environment, new development should only be undertaken in accordance with national policy.
- Authority will have regard to the recommendations of the DoEHLG/DoAHG, both in respect of whether or not to grant Planning Permission and in respect of the condition to which permission would, if granted, be subject.

Mitigation Topics – Specific Issue	Relevant Objective/s in 'Parent' Clare County Development Plan 2011-2017

Cultural Heritage - Archaeology	CDP 18.7: Zones of Archaeological Protection CDP 18.8: Archaeological and Infrastructure Schemes CDP 18.9: Underwater Archaeology CDP 18.10: Industrial Archaeology CDP 18.11: Raising Archaeological Awareness
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Chapter Nine – Monitoring

9.1: Introduction

Monitoring of the local area plan and its implications on the environment is paramount to ensure that the environment of the Shannon Local Area Plan area is not adversely affected through the Plan's implementation. The SEA Directive and Regulations requires that the significant environmental effects of the implementation of a Plan are monitored. Under Article 10 of the SEA Directive and Section 14J of the Planning and Development (SEA) Regulations 2004 (as amended), monitoring must be carried out of the significant environmental effects directly related to the implementation of the Plan "in order to, inter alia, to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action...existing monitoring arrangements may be used if appropriate, with a view to avoiding duplication of monitoring". The primary purpose of monitoring is to allow the actual impacts of the Plan to be tested against those that were predicted. It allows major problems to be identified and dealt with in a timely fashion, and environmental baseline information to be gathered for future Plan reviews and other studies. It also ensures that proposed mitigation measures are carried out and that no unforeseen impacts occur (Thérivel, 2004).

9.2: Responsibilities

Clare County Council is responsible for monitoring the Shannon Town & Environs Local Area Plan 2012-2018. This includes:

- collating existing relevant monitored data,
- devising a monitoring programme,
- the preparation and publication of a monitoring report,
- ensuring all relevant agencies are aware of their involvement,
- ensuring all arrangements are in place for the timely collection of monitoring data,
- evaluating the results of monitoring and/or the carrying out of corrective action, if necessary

The Department of the Environment, Heritage and Local Government Guidelines on SEA (2004) recommends that monitoring does not require new research activity, existing sources of information can be used, and the task of data collection can be shared. While considerable environmental data is directly available to the Council such as water quality, recycling rates, etc, other sources of information were accessed to provide a comprehensive overview of the effect of the Plan. There are a number of state bodies who have monitoring responsibilities, e.g. the Environmental Protection Agency, the National Parks and Wildlife Service, and the Central Statistics Office. Information from such authorities was and will need to be acquired in the future to carry out a comprehensive monitoring programme of the Shannon Town & Environs Local Area Plan 2012-2018.

In this regard the Local Authority will work with such agencies particularly those with environmental mandates to gather data for the purposes of monitoring the implementation of the Plan. Thus, while monitoring specific elements of the environment is not strictly the preserve of the Council, the Council will continue to liaise and work with the Environmental Protection Agency, The National Parks and Wildlife Service, Inland Fisheries Ireland, as well as others in the pursuit of environmental conservation and protection through existing environmental monitoring

procedures. The Strategic Environmental Objectives for the Shannon Town & Environs LAP 2012-2018 were developed in accordance with the Mid West Regional Planning Guidelines 2010-2022 and the Clare County Development Plan 2011-2017 (see Appendix D). The Monitoring table identifies the actual departments responsible for collecting, collating and analysing the relevant data. This has been prepared in accordance with the associated monitoring table in the CCDP 201-2017. Once the Plan is adopted and the monitoring programme commences these departments will be liaised with and the relevant data confirmed and updated, etc.

The Shannon Town & Environs LAP monitoring programme will be linked to the RPG and the CCDP programmes and to other plan/programme monitoring programmes relevant to the County, e.g. other LAPS, SRBMP, etc.. Thus, this monitoring Chapter is proposed as a platform to allow key aspects of the environment to be monitored, with the knowledge that the ongoing review of the implementation of the Plan and associated environmental assessments may require amendments and additions.

9.3: Indicators, Targets and Thresholds

It is proposed to base monitoring on a series of indicators which measure changes in the environment, especially changes which are critical in terms of environmental quality, for example, water or air pollution levels. The indicators aim to simplify complex interrelationships and provide information about environmental issues which is easy to understand. Monitoring is based around the indicators which were chosen earlier in the process. These indicators allow quantitative measures of trends and progress over time relating to the SEOs used in the evaluation. Focus was given to indicators which were relevant to the likely significant environmental effects of implementing the Plan and existing monitoring arrangements will be used, where possible, in order to monitor the selected indicators. Each indicator to be monitored is accompanied by the relevant target(s) which were identified and/or developed depending on the availability of legislation and/or guidelines, for example. The objectives for each environmental parameter together with their associated targets, indicators, thresholds and the responsible Authority are outlined. Setting appropriate thresholds, will determine when intervention measures might be required.

9.4: Reporting

The ongoing monitoring of the Shannon Town & Environs Local Area Plan 2012-2018 and its implications on the environment is paramount to ensure that the environment of the Plan area and zone of influence is not adversely affected by the implementation of the Plan.

The use of a Geographical Information System (GIS) based monitoring system is currently being reviewed and it is envisaged that this will be developed over the lifetime of the plan to monitor and assess the implementation of the Plan. The SEA team, the spatial analysis team and the development management team will cooperate in an attempt to overcome any limitations in spatial analysis, to achieve an improved and better informed decision-making process, and provide data for future Plan reviews and the associated SEA process requirements.

The primary objective of the Monitoring Report is to provide for a high level of environmental protection and to contribute to the integration of environmental considerations into the preparation and adoption of the Shannon Town & Environs Local Area Plan 2012-2018. It will do this by assessing the Plan in terms of its overall environmental impact, positive and negative, secondary, cumulative, synergistic, short, medium and long term, direct, indirect, permanent and temporary effects and

to indicate where necessary how improvements can be incorporated into the Plan to improve its environmental performance and/or mitigation and monitoring.

The monitoring programme will be flexible and able to deal with specific environmental issues as they arise. For example, environmental indicator assessment during monitoring can have a positive/neutral impact on the environment or may have a negative impact. Where an indicator value leads to a positive/neutral impact on the environment, it is likely that the policies and objectives of the Plan are well defined with regard to the environment. Conversely, where the policies and objectives of the Plan have a negative impact on the environment, it may be necessary to review the policies and objectives of the Plan or to take some other form of intervention.

It is expected that this Report will be issued to the designated Environmental Authorities and made available in the Local Authority offices and on their website. It is also recommended that this data be shared with neighbouring local authorities to assist in monitoring transboundary effects should they arise.

It is the intention of the SEA to ensure that the monitoring plan for the Shannon LAP area is robust enough to take into account the number of ongoing plans/programmes within/adjacent to the Plan area and the potential to influence habitats and species during the lifetime of the Plan.

As part of the SEA monitoring programme all the adopted ongoing plans/programmes within / adjacent to the Plan area (including county transboundary plans) which will have their own individual monitoring programme will also be linked and integrated into an overall monitoring programme based on the hierarchy of plans within the County. It is suggested that this monitoring programme could be extended to regional and national levels in the foreseeable future.

Please note 'Appendix E - Strategic Environmental Objectives'(SEOs) which comprehensively outlines the relationships between the SEOs for the Shannon Town and Environs Local Area Plan, the Clare County Development Plan 2011-2017 and the Regional Planning Guidelines 2010-2022. Also, note Appendix F which details the interrelationship between Shannon Town and Environs Local Area Plan SEOs and Clare County Development Plan 2011-2017 objectives'. All of this linked information will be vital to ensuring this monitoring programme is robust and effective. Furthermore, mitigation measures proposed in the SEA Environmental Report will be clearly linked with key 'significant effects' and/or 'key strategic level recommendations' identified in the environmental assessment.

In this regard, a link will be established between the all Plans and the relevant SEA environmental objectives, targets, indicators and mitigation measures outlined under the various SEA monitoring programmes for their relevant Plan.

As per the Manager's Report (dated march 2012) the question re. *the addition of appropriate corrective action thresholds for unauthorised development, illegal waste activity and water pollution incidents not involving oil spills* remained from an earlier review of the EPA template (which should have been removed prior to submission to the Draft ST&E LAP 2012-2018). A review of SEA effectiveness in Ireland highlighted that mitigation and monitoring would require further discussion / guidance to improve these aspects of SEA in Plans/Programmes/Strategies. The Agency will be looking at issuing guidance in relation to mitigation / monitoring and this will be taken into account in our SEA submissions at a later stage. Thus, the corrective action threshold for unauthorised development, illegal waste activity is zero, so it's aspirational in nature).

The Planning and Development Act 2000 (as amended) requires a progress report to be prepared two years after the making of a new Development Plan, outlining progress achieved in securing all of the Development Plan objectives. With regard to Local Area Plans there is no such requirement to conduct a midterm review. However, it is envisaged regardless of the Plan that a monitoring report will be available during the lifetime of the Shannon LAP which will be linked to and integrated into the overall SEA monitoring programme for the County.

The Monitoring Programme will be flexible to take account of the various stages of the Plan, and to deal with all effects including secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative as required under Schedule 2B of the Planning and Development (SEA) Regulation (S.I. No. 436 of 2004) (as amended). All departments responsible for collecting, collating and analysing the data will be identified as soon as possible after the Plan has been adopted. Finally, the Monitoring Programme will endeavour to include information on how the monitoring will allow unforeseen adverse effects to be identified and responded to as appropriate.

9.5: Conclusion

The purpose of indicators is to monitor the effectiveness of the Plan in meeting the environmental objectives and targets identified in this Report. The methodology for the development and selection of the SEA indicators for the Shannon Town & Environs Local Area Plan 2012-2018 has been informed by the scoping process, the baseline assessment and the identification of existing environmental problems, the RPGs 2010-2022 and the CCDP 2011-2017 monitoring data.

However, it should be noted that the final set of indicators is also influenced by the availability of existing and relevant indicators, current monitoring programmes and the scale of application. Where data is not available one of the recommendations of this Report is to put a data/indicator collation and monitoring system in place where possible. Based on the information above all of the indicator information required is already being actively collected and reported at a level sufficient to meet the needs of this Shannon Town & Environs Local Area Plan 2012-2018. However, Clare County Council are committed to overseeing the implementation of mitigation measures and the monitoring programme for the Shannon Town & Environs LAP 2012-2018 and will also have the overall responsibility for ensuring that the on-going review of the environmental targets and indicators in the monitoring programme are adhered to and alterations made when and where required.

All responsible bodies and authorities have been involved throughout the SEA process and will be further notified of their responsibilities for collecting, collating and analysing data as soon as is reasonable expected after the Plan has been adopted.

Summary of Recommendations:

In summary, the following recommendations have been included in this Chapter. It is recommended that:

- An environmental report is issued to the designated Environmental Authorities, transboundary authorities, and made available in the Local Authority offices and on their website.
- Where data is not available one of the recommendations of this Report is to put a data/indicator collation and monitoring system in place where possible.
- GIS Monitoring database established.

Table 9.1 –Schedule of Monitoring

Strategic Environmental Objective	Target	Indicator	Responsible Authority	Timeframe	
Population, Human Health and Quality of Life					
Population	P1 - Protect, enhance and improve people's quality of life based on high quality residential, community, educational, working and recreational environments and on sustainable travel patterns.	- Increase in the number of green spaces & amenities available to the public -Improved trends in perceived quality of life related to these matters - Bonds to ensure the completion of developments until taken charge	- No/area of green spaces & amenities available to the public -Improved trends in perceived quality of life related to these matters as gathered through surveys - Employment rates over the lifetime of the Plan - Completion handover of development to CCC -Availability of public transport/ smarter travel initiatives	CSO CCC Iarnrod Eireann Bus Eireann	TBC
Human Health	P2 - To protect human health from hazards or nuisances arising from exposure to incompatible land uses/developments	- Increase in the number of green spaces & amenities available to the public - No significant deterioration in human health as a result of environmental factors - No spatial concentrations of health problems arising from environmental factors	- No/area of green spaces & amenities available to the public - Occurrence of any decline in human health around the particular area in the plan area - Occurrence (any) of a spatially concentrated deterioration in human health	EPA HSE	
Litter	P3 - Implementation and enforcement of the County Litter Management Plan 2009-2012 and any subsequent plans.	- No litter fines during the lifetime of the Plan.	- Number of litter fines issued.	CCC	
County Emergency Plan	P4 - Adhere to the County Emergency Plan and other objectives of relevance to human health.	- No 'boil water' notices - Maintain or improve levels of ambient SO ₂ , NO _x , & particulate matter as conducted by EPA monitoring - Increase in the number of green spaces & amenities available to the public - Promotion of cyclepaths/ walkways in plan area - No Remedial Action List (RAL) from the EPA notices	- Drinking Water Quality - No. of remedial action list - No./timescale of boil notices -Maintaining and /or improving air quality in the plan area	CCC EPA	
Green Spaces	P5 - Provision of green spaces for amenity	- Increase in the number of green spaces available to the public. - Increase designation of trees for	- No/area of green spaces available to the public - No./areas of trees designated for preservation and amenity	CCC	

		preservation and amenity	- No. of new civic amenity sites provided during the lifetime of the Plan		
Biodiversity					
Non - Designated	B1 - Protect, conserve and avoid loss of diversity and integrity of the broad range of habitats, species and wildlife corridors (non-designated sites) within the Shannon Plan area.	<ul style="list-style-type: none"> - No/reduce loss of hedgerows - Operators who conduct mechanical hedge cutting should have achieved the Teagasc proficiency standard MT 1302-Mechanical Hedge Trimming - 30% broadleaf/native afforestation - Protection & promotion of non-designated salmonid rivers - No ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity to be lost without remediation as a result of implementation of the LAP 	<ul style="list-style-type: none"> - % of unique habitats and species lost in non-designated sites over the lifetime of the Plan through trending of annual/bi-annual surveys - % of broadleaf/native afforestation - Percentage loss of connectivity between areas of local biodiversity as a result of implementation of the LAP as evidenced from a resurvey of CORINE mapping 	CC OPW Coillte	
Europe Designated	B2 – Conserve and protect, or maintain and restore Natura 2000 sites and the Natura 2000 Network designated under Art. 6 of the Habitats Directive	<ul style="list-style-type: none"> - No loss of protected habitats & species during the lifetime of the Plan. - No compromise in the status of the Natura 2000 network 	<ul style="list-style-type: none"> - Designation of additional areas due to biodiversity &/or geological value - Percentage of unique habitats and species lost in designated sites through trending of annual surveys. - No./% of developments in/near Natura 2000 network - % of Natura 2000 sites in the plan area that are at 'Favorable' conservation status 	NPWS CCC SWRBD OPW	
National Designated	B3 – Conserve and protect other sites of nature conservation including NHAs, pNHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries.	<ul style="list-style-type: none"> - No loss of protected habitats & species during the lifetime of the Plan. - Submission of HDA for proposed developments with planning applications in/and/or near Natura 2000 sites. 	<ul style="list-style-type: none"> - Percentage of unique habitats and species lost in designated sites through trending of annual surveys. - Provision/No. of HDAs with developments proposed for sites in/and/or near Natura 2000 sites. 		
Annexed and other Protected Species	B4 – Conserve and protect annexed and other protected species	<ul style="list-style-type: none"> - Sites to be selected as NHA or CGS designation 	<ul style="list-style-type: none"> - No of sites designated - % of annexed and other protected species lost over the lifetime of the Plan through trending of annual/bi-annual surveys 		
Aquatic Habitats	B5 – Protect the inland aquatic environment.	<ul style="list-style-type: none"> - All waters to achieve good status by 2015 - Ensure the provision of a riparian zone of at least 5m for development close to water - Ensure new development are set back at least 10m from rivers 	<ul style="list-style-type: none"> - WFD risk levels for aquatic habitats - No of planning permissions/ applications close to water 	Inland Fisheries Ireland Waterways Ireland	
	B6 – Meet the requirements of the WFD and the RBMP				

Invasive Species	B7 - Protect habitats (terrestrial and aquatic) from invasive species	- Prevent no new invasive species - control/manage new/existing invasive species	- No. and types of invasive spp. Identified - Increase/decrease in coverage of invasive species identified - No of submission/observations	Inland Fisheries Ireland Waterways Ireland	
	B8 – Protect the marine environment				
Wetlands	B9 - Conservation of Wetlands and their use and resources	No deterioration	- % of unique habitats and species lost in wetlands over the lifetime of the Plan through trending of annual/bi-annual surveys - No./type of development in Wetland areas		
	B10 – Promote Integrated Coastal Zone Management				
Soil & Geology					
Brownfield Development	S1 – Give preference to the use of derelict, disused and infill sites, rather than Greenfield sites.	- 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/% of new developments on brownfield sites - Area of brownfield land developed over the plan period - % of total greenfield land developed - level of Urbanisation - Excessive landfilling of quality soil		
Soil Quality	S2 – Protect, improve and maintain the quality of soils.	- No incidences of soil contamination - At least one site to be remediated during the lifetime of the Plan or - Preparation of report on contaminated/unregulated sites in the plan area	- Incidents of soil contamination - No of sites identified & remediated.		
Non-renewable deposits	S3 – Minimise the consumption of non-renewable deposits on site	- Re-use of soil from redeveloped sites where possible - Increased provision for C&D Waste facilities	- Excessive landfilling of quality soil. - No. of facilities for C&D Waste		
	S4 – Implement aquifer protection plans				
	S5 – Minimise the amount of waste to landfill from site				
Geological	S6 - Conserve, protect and avoid loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in	- No loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites. - designation of sites as GSI	- % of habitats, geological features, species etc lost over the lifetime of the Plan through trending of annual/bi-annual surveys - No of areas designated as Geological Heritage Sites		

	designated ecological sites.				
Water					
Aquatic Ecosystems	W1 – Protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystem (quality, level, flow).	- To achieve a Q Rating of 4 as per the WFD 'good' quality status by 2015.	- Biotic quality rating of river waters at EPA monitoring locations	EPA	
Water Quality	W2 – Maintain or improve the quality of surface and groundwater water (including estuarine) to status objectives as set out in the Water Framework Directive (WFD), SRBM & POMS.	- Improvement or at least no deterioration in surface water quality by 2015 - Improvement or at least no deterioration in ground water quality by 2015 - - Aquifer water quality to remain or improve during the lifetime of the Plan	- Changes in receiving water quality as identified during water quality monitoring for the WFD, SRBD & POMS conducted by CCC and the EPA - Changes in groundwater quality as identified in monitoring programmes conducted by CCC and the EPA under the WFD/ SRBMP - Groundwater quality monitoring in aquifer	CCC EPA	
SuDS	W3 – Implement appropriate sustainable drainage systems (SuDS) in any future development in the Shannon Area.	- New drainage systems to be compliant with SuDS - Increase the use of SuDS - Require the development of SuDS as part of permitted developments granted by CCC - Provision for Drainage systems to be compliant with SuDS - Provision of SuDS compliant drainage plans for proposed developments in plan area	- Provision of SuDS compliant drainage plans for proposed developments in plan area - SuDS usage - Provision of SuDS compliant drainage plans for proposed developments in study area - % new development with SuDS		
Water Pollution	W4 – Reduce the impact of polluting substances to all waters	- Updated data on surface water generation within the County - No. of Pollution Reduction plans in place - No deterioration in aquifer water quality	- Quantified surface water flows from proposed developments as part of planning process - Measured river levels - No. of Pollution Reduction plans in place		
	W5 - prevent pollution and contamination of ground water by adhering to aquifer protection plans.				
Drinking water	W6 – Maintain and improve the quality of drinking water supplies	- Drinking Water Quality - Improvement or at least no deterioration in surface water quality by 2015 - Improvement or at least no deterioration in groundwater quality as per the WFD 'good'	- Drinking water quality - Changes in receiving water quality as identified during water quality monitoring for the WFD, SRBD & POMS conducted by CCC and the EPA - Changes in groundwater quality as identified in	EPA CCC	

		<p>quality status by 2015/SRBMPs</p> <ul style="list-style-type: none"> - Implement the Water Supply Plan as per the Water Services National Investment Programme - Extent to which drinking water standards in public/private water supplies are met - No. of annual exceedences in drinking water quality standards - Upgrade of water supply network 	<p>monitoring programmes conducted by CCC and the EPA under the WFD/ SRBMPs</p> <ul style="list-style-type: none"> - No./timescale of boil notices - No. of supplies upgraded 		
	W7 – Reduce the impact of polluting substances to all waters				
Water Conservation	W8 - Promote sustainable water use based on a long-term protection of available water resources	<ul style="list-style-type: none"> - Decrease in the number of 'water shortage' notices issued - Implementation of water conservation measures in new build - Greater public Awareness of the benefits of Water conservation - Reduction in use of water by population - Adoption/Implementation of Water management plans - Upgrade of water network/ reduction in leakages 	<ul style="list-style-type: none"> - Frequency of 'water shortage' notices - % new development with water conservation measures - Public awareness programme - Reduction in use of water by population - Increase in water recycling - % new development with water conservation measures - Calculation of Water usage - No. of upgrades to water network - Extent of water recycling 	EPA CCC	
	W9 – Upgrade Infrastructure to meet future water supply needs				
Coastal Zone Management	W10 – Promote Integrated Coastal Zone Management	<ul style="list-style-type: none"> - Proactive Approach to ICZM - No negative impacts on receiving environment - Promote natural protective measures rather than engineering structures - New development not located in areas that will augment coastal erosion/flooding - All Activities that Require Consent (ARC) 	<ul style="list-style-type: none"> - No./%/nature of developments in areas of risk - No./%/nature of incidences of flooding/erosion - Consultation and implementation SIFP 		
Flood Risk	W11 - Reduce risk of flooding through avoidance of development in flood plains or in areas at risk of flooding	<ul style="list-style-type: none"> - Provide for Flood Risk Assessment at the Local Area Plan level to guide zoning (in accordance with FRA Vol III of CCDP - In accordance with OPW/DOEHLG Flood Risk Assessment, require all applications within designation Flood Risk zones A and B to undertake a flood risk assessment as part of 	<ul style="list-style-type: none"> - Level/ Incidence of flooding - Strategic CFRAM Report and Mapping guidelines 2015 - No./% of development in identified flood risk areas 	OPW	

		the planning application.			
Flood Management	W12 - Provide provision of flood relief through management of flood risk and living with floods rather than engineered flood solutions.	<ul style="list-style-type: none"> - Coordinated approach to flooding in the SIRBD - Develop strategies for the management of flood risk 	<ul style="list-style-type: none"> - Implementation of Strategic CFRAM Report - No. of localised strategies 		
Air & Climate					
Air Quality	C1 – Minimise all forms of air pollution and maintain/improve ambient air quality.	<ul style="list-style-type: none"> - Maintain/ improve ambient air quality through reduction of private vehicle usage - Increased use of public transport - Alternative modes of travel 	<ul style="list-style-type: none"> - Air quality indicators - % of people using public transport on a regular basis - Availability of alternative modes of transport 	CCC EPA Bus Eireann Iarnrod Eireann	
Greenhouse Gases	C2 – Minimise emissions of greenhouse gases and contribute to a reduction and avoidance of human-induced global climate change.	<ul style="list-style-type: none"> - Provide for increased use of public transport - Increase numbers of cycle lanes & pedestrian routes in the plan area - Establish smarter travel incentives - Increase no. of permissions for renewable energy projects - Compliance with Part L (Amendment) of the Building Regs. S.I. No. 259 of 2008 - Increase in no. of energy audits conducted on existing facilities & new homes 	<ul style="list-style-type: none"> - Use of public transport - Provision of cycle lanes and walking routes - Types and popularity of incentives - No. of permissions granted for renewable energy projects - Provision of new homes to meet Regs - No of energy audits conducted 	CCC SEAI LCEA	
Smarter Travel	C3 - Reduce car dependency within the plan area by way of, inter alia, encouraging modal change from car to more sustainable forms of transport and encouraging development which will not be dependent on private transport	<ul style="list-style-type: none"> - An increase in the percentage of the population travelling to work or school by public transport or non-mechanical means - Safe walking to Schools Initiatives - Increase in numbers of cycle lanes & pedestrian routes in the plan area - Establish points for charge for electric vehicles - Introduction of bike schemes/ car pooling 	<ul style="list-style-type: none"> - Percentage of population within the plan area travelling to work or school by public transport or non-mechanical means - No./usage of electric charge points in plan area - Use of public transport - Types/ take up of sustainable forms of transport incentives - Introduction of bike schemes/ car pooling 	CCC SEAI	
Material Assets – Transport					
Sustainable Transport	T1 – Maximise sustainable modes of transport and encourage	<ul style="list-style-type: none"> - Reduce the number of private vehicles on the road. - Increase use of public transport. 	<ul style="list-style-type: none"> - Number of private cars on road as a percentage of AADT. - Extent of walkways/ cycle paths throughout 	CCC Shannon Town Council	

	use of walkways/cycle paths as alternative routes to school, work, shops	- Increase in the % of the population travelling to work or school by public transport or non-mechanical means	plan area	NRA	
Road Safety	T2 - Provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety	- An increase in the percentage of the population travelling to work or school by public transport or non-mechanical means - A decrease in the average distance travelled to work or school - Integrated traffic/pedestrian management plan for Shannon Town - Safe walking to School Initiatives - Increased use of public transport.	- Percentage of population within the plan area travelling to work or school by public transport or non-mechanical means - Average distance travelled to work or school - No./% of s - Extent of walkways/cycle paths throughout plan area		
Public Transport	T3 – Provide an upgraded/improved public transport network.	- Increased use of public transport - Upgrade of bus shelters - Improved/Upgraded public transport network	-% of people using public transport on a regular basis - Extent of upgrade to bus infrastructure - Extent of improvement/upgrade to public transport network		
Walkways/ Cyclepaths	T4 – Promote, encourage and implement a Cycle Strategy for Shannon in association with an accessible walking network	- Increased use of walkways/cycle paths for work, amenity and leisure - Increased provision/upgrade of existing cycle paths and walkways - Integration of walkways/cycle paths with enterprise zones	- %/ usage of cycle paths/walkways - No./% of s - Extent of walkways/cycle lanes upgraded/developed		
Material Assets - Waste					
Waste	WA1 – Implement the waste pyramid and encourage reuse/recycling of material wherever possible.	- Reduction in the quantities of waste sent to landfill - Increase in the quantities of waste sent for recycling - Increase in the number of bring banks provided for the plan area - Compliance with the Waste Management Plan - 85% of C&D waste recycled by 2013	- Compliance with Waste Management Plan - Quantity of household waste sent to landfill - Quantity of household waste sent for recycling - The number of bring banks provided for in the plan area.	CCC EPA	
Material Assets - Water Supply					
Drinking Water	WS1 - To ensure that drinking water supplies are both wholesome and clean and free of	- Drinking Water Quality - Improvement or at least no deterioration in surface water quality by 2015 - Improvement or at least no deterioration in	- Drinking water quality - Changes in receiving water quality as identified during water quality monitoring for the WFD, SRBD & POMS conducted by CCC and the EPA	CCC EPA	

	contamination.	groundwater quality as per the WFD 'good' quality status by 2015/SRBMPs - Extent to which drinking water standards in public/private water supplies are met - No. of annual exceedences in drinking water quality standards	- Changes in groundwater quality as identified in monitoring programmes conducted by CCC and the EPA under the WFD/ SRBMPs - No./timescale of boil notices		
Distribution	WS2 - Improve efficiency in distribution of potable water to the population.	- Implement the Water Supply Plan as per the Water Services National Investment Programme	- Implementation of the Water Supply Plan as per the Water Services National Investment Programme		
Sustainable water use	WS3 - To promote long-term protection of available water resources through sustainable water use.	-Water Conservation Measures			
Future Needs	WS4 - Upgrade infrastructure to meet future water supply needs	- Upgrade of water supply network - Implement the Water Supply Plan as per the Water Services National Investment Programme	- No. of supplies upgraded		
Material Assets – Wastewater Treatment					
Connection to public network	WW1 - To ensure that all zoned lands (existing and proposed) are connected to the public sewer network ensuring treatment of wastewater prior to discharge.	- New development should be served by a public wastewater treatment system or an approved on site wastewater treatment plant designed, constructed and managed in accordance with EPA Guidelines	- New development should be served by a public wastewater treatment system or an approved on site wastewater treatment plant designed, constructed and managed in accordance with EPA Guidelines	EPA CCC	
Plant Infrastructure	WW2 - Upgrade existing wastewater treatment plant infrastructure	- Provision and upgrade to provide adequate wastewater infrastructure based on existing and forecasted population demands - Full Compliance with EPA Discharge Licence and monitoring at Tradaree	- Number of new or upgraded wastewater treatment plants - Compliance with EPA	CCC EPA	
Dependence on proprietary facilities	WW3 - Reduce the dependency on individual proprietary wastewater treatment facilities.	- Timely testing of individual proprietary wastewater treatment facilities in line with EU/National Guidance. - Sustainable alternative individual proprietary wastewater treatment facilities - Measures to promote, encourage and incentivise a change from traditional WW treatment systems to alternative, sustainable systems.	- Timely testing of individual proprietary wastewater treatment facilities. - Types/Usage/% of population using sustainable methods of wastewater treatment - Study of alternative, sustainable treatment systems in use in plan area		
Material Assets – Renewable Energy					
Renewable	RE1 - Reduce waste of	- Increase in renewable energy developments	- No. of applications submitted for renewable	CCC	

Energy	energy, promote use of renewable energy sources and support energy conservation initiatives	and R&D in the County - Address the potential Shannon Plan Area can make to the overall County contributions to National targets on energy efficiency, and energy related CO ₂ emissions as set out in policy documents. - Meet or exceed County contributions to national energy efficiency/conservation targets. - Provision and upgrade to provide adequate electricity infrastructure based on existing and forecasted demands - Increase in number of renewable energy projects in plan area - Upgrade/maintain existing electricity infrastructure to accommodate supply and demand in region	energy projects - No. of renewable energy developments granted planning permission - Establishment of R&D projects - Assessment of contribution of Shannon to County renewable energy targets. - Development & maintenance of existing electricity infrastructure.	LCEA MWRA	
Energy Conservation	RE2 - Promotion of energy conservation across all sectors including the development of low carbon commerce and buildings	- Compliance with Part L (Amendment) of the Building Regs S.I. No. 259 of 2008 - Increase in no. of energy audits conducted on existing facilities & new homes - Number of permitted development for wind farms, bio-energy developments - Increased use of Building Energy Rating (BER) - Development of energy storage facilities at appropriate locations throughout the plan area, in line with Wind Energy Strategy and Chapter 10 of CDP - Development of district heating infrastructure	- Compliance with Part L (Amendment) of the Building Regs - No of energy audits conducted - % low carbon building built/redeveloped - study of BER rating buildings in plan area - extent of district heating/ energy storage facilities		
Cultural Heritage					
Cultural Heritage	CH1 – Protect and conserve the cultural heritage including the built environment and settings; archaeological (recorded and unrecorded monuments), architectural (Protected Structures, Architectural Conservation Areas, vernacular buildings,	- No development permitted during the lifetime of the Plan which will result in the loss/partial loss of protected structures or sites of archaeological importance - Ensure that all planning applications that might have an impact on heritage are referred to the DoAHG for comment and that their recommendations are adhered to. - Use of National Heritage Plan (2002) and any subsequent plan in setting archaeological policies and principles - Number of cultural heritage sites developed	- No Development permitted during the lifetime of the Plan resulting in the loss or partial loss of protected structures or sites of archaeological status. - Development of cultural heritage areas for amenity resources - No. of developments on/at-protected sites & complexes - No. of developments occurring which result in full or partial loss to entries listed in the RMPs or protected by the Council including Zones of Archaeological Potential & the context of the		

	materials and urban fabric) and manmade landscape features (e.g. field walls, footpaths, gate piers etc.).	for amenity purposes. - No developments on/at protected sites & complexes. - No developments occurring which result in full or partial loss to entries listed in the RMPs or protected by the Council including Zones of Archaeological Potential & the context of the above within the surrounding landscape where relevant - Make additions to the Record of Protected Structures and additional ACAs where appropriate.	above within the surrounding landscape where relevant - Number of additions to the Record of Protected Structures and the number of additional ACAs		
Urban Settlements	CH2 – Conserve historic fabric of urban and rural settlements.	- No permitted developments (in towns) that will impact significantly on the location landscape character. - Developments to take account of Recorded Monuments and Protected structures within an urban setting	- Number of permitted developments that impact significantly on the existing character. - Number of areas with a distinct character and quality urban environments and public realms - A masterplan for Shannon to enhance townscape, place-making and green infrastructure		
Restoration	CH3 – To ensure the restoration and re-use of existing uninhabited and derelict structures where possible opposed to demolition and new build (to promote sustainability and reduce landfill).	- No developments during the lifetime of the Plan which could result in damage to archaeological features - Review of the annual Excavations Bulletin for archaeological potential in study area. - Use of “Framework and Principles for the Protection of Archaeological Heritage” DoEHLG and the National Monuments Act amended (1930-2004)	- Number of developments which result in the loss or damage to archaeological features		
Landscape					
Natural Landscapes and Features	L1 – Conserve, protect and enhance valued natural landscapes and features including those of geological and aesthetic value.	- Ensure no significant disruption of historic/cultural landscape & features through objectives of Clare County Development Plan - Conduct an audit of designated geological sites of importance in plan area & take cognisance of proposed designated sites of geological importance	- No of developments permitted and their impacts on cultural/historic landscapes. - Audit of geological sites of importance in plan area	CCC. Heritage Council Failte Ireland GSI NPWS	
Designated Landscapes	L2 – Protect designated landscapes and scenic views, routes and landscape features of local value	- No development to be conspicuously located within sensitive landscapes, designated scenic landscapes, features or routes - No significant disruption of designated views from Scenic Route - No degradation of areas designated as Heritage Landscapes	- No/type of dev. - No. of developments located within Scenic Route - No degradation of areas designated as Heritage Landscape		
Cultural Landscapes	L3 – Conserve and protect cultural	- Ensure no significant disruption of historic/cultural landscape & features	- No of developments permitted and their impacts on cultural/historic landscapes		

	landscapes including archaeological and architectural.	including archaeological and architectural through objectives of Clare County Development Plan			
Visual Impacts	L4 - Minimise visual impacts through appropriate design, assessment and siting	- No significant visual impact - Ensure no significant disruption of designated scenic views and scenic routes and high landscape areas through objectives of County Development Plan	- No. of developments located within a designated scenic view or route or high landscape area that disrupt views (based on the LCA) - Loss of vista/views - Loss of TPO Trees - Loss of amenity woodland		
	L5 – Maintain and Enhance landscape quality within the plan area				

This monitoring table is designed to be flexible to take account of various stages of the Plan and developed to accommodate for specific environmental issues as they arise. In this regard, the schedule may change due to unforeseen circumstances. Cumulative/In-combination effects will be considered as part of the review process in the Clare County Development Plan 2011-2017.

Chapter Ten – Overall Findings of the Assessment

10.1 Introduction

The Local Area Plan for Shannon Town & Environs and its policies and objectives as set out by the Local Authority, are key to the future sustainable development of the area. The Plan aims to balance the needs of the future population with the preservation and conservation of environment in which that population will live and work. The Plan therefore has a strong focus towards the concept of sustainability. The chosen development strategy as set out in the Plan and summarised in Chapter 1, has been assessed in terms of its overall sustainability and its potential to impact on the environment. The policies and objectives of the Plan were assessed against the environmental objectives and the results indicate that the full implementation of the plan will not generally result in a significant negative or adverse impact on the environmental resources within the plan area. Where there is the potential for negative impacts, mitigation as well as enhancement measures have been identified. The implementation of these measures, coupled with the monitoring procedures will ensure the proposed Local Area Plan is acceptable from an environmental perspective. At the outset of the assessment process, a number of environmental issues were identified, principally;

- Biodiversity – Shannon Estuary;
- Wastewater;
- Flooding;
- Groundwater protection;
- Landscape & Visual Amenity.

While these are and remain the key environmental issues facing the Council over the lifetime of the plan, they also have complex interrelationships with other environmental receptors. Therefore the imperative is to promote a holistic, all inclusive response towards the protection of the natural assets within the plan area. For example groundwater for human consumption can be improved if restrictions on inappropriate land uses and surface based activities are applied. Subsequently, efforts made to improve water quality also have beneficial impacts on soil quality, habitat conservation, landscape and visual quality etc. The potential synergies at play if appropriately addressed will lead to an improvement in the quality of life for the residents of the plan area, therefore becoming sustainable.

10.2 Environmental Issues

The environmental issues of Wastewater; Flooding; Groundwater protection are interrelated to a degree and are addressed together. Predominantly, but not solely, the issues are connected to water quality. Preserving water quality (both ground and surface resources) is a keen consideration in assessing the sustainability of the Plan. Water quality or indeed deterioration in water quality has a number of implications, not just for human health, but also on wildlife that requires clean water. To this end, the Local Authority will not allow development which may result in a deleterious impact on receiving waters, either ground or surface. Moreover the discharge of effluent to water courses is a significant concern, particularly in terms of human health, environmental quality and biodiversity. It is recognised within the LAP that currently the outfall from the public wastewater treatment plant is inadequate. Thus there is a requirement for all discharges to water courses from sewerage treatment

plants to conform to the highest possible standards in terms of BOD, COD, suspended solids and nutrient loading. In this regard the implementation of the Shannon International River Basin District Management Plan will have a significant impact on the improvement of water within the catchment. Flooding is a significant issue and is likely to be exacerbated over the coming years due to the impacts of climate change. The Council has taken a proactive stance in this regard by requiring all development proposals to comply with the objectives of “The Planning System and Flood Risk Management” (DoEHLG & OPW Sept. 2009) as well as requiring all developments within the plan area to provide ‘Sustainable Urban Drainage Systems’ (SUDS) as part of their development proposals.

Landscape & Visual Amenity

The landscape of Shannon is a significant resource and has been coming under considerable development pressure over the past number of years. The local landscape is one of the foundation stones of local identity, contributing to the quality of life of local people and attracting visitors and tourists to the area. The Council aim to protect this finite resource through a number of policies and objectives. It is also the policy of the Council to protect areas of nature conservation such as SPAs, SACs and NHAs/pNHAs within the LAP area. Landscape areas within the plan area that have been designated as sensitive or vulnerable will be afforded extra protection to ensure that they are not adversely impacted by inappropriate development.

10.3 Conclusion

It is acknowledged that a planned approach to the orderly development of the plan area is required. Development is both necessary and desirable to achieve economic growth and the purpose of the Strategic Environmental Assessment is to ensure that the guiding principles for development do not impact in an adverse manner on the environmental quality of the plan area. Monitoring of the Plan throughout its lifetime will ensure that any potential adverse environmental impacts, unforeseen at this stage will be identified early, so as to prevent any deterioration of the environment.

References

- Architectural Heritage Protection - Guidelines for Planning Authorities, Department of Environment, Heritage and Local Government 2004⁵
- Central Statistics Office, 2006. Census 2006: Principal Demographic Results. Dublin; Stationary Office. <http://census.cso.ie/censusasp/saps/boundaries/saps.htm>.
- Central Statistics Office, 2006. Census 2006: Small Area Population Statistics. Dublin; Stationary Office. <http://census.cso.ie/censusasp/saps/boundaries/saps.htm>.
- Clare County Council, 2011. Clare County Development Plan 2011-2017 Strategic Environmental Assessment – Environmental Report Volume 3.
- Clare County Council, 2011. The Clare County Development Plan 2011-2017. Clare County Council <http://www.clarecoco.ie/planning/planning-strategy/development-plans/clare-county-development-plan-2011-2017/#NewPplan>
- Department for Communities and Local Government, 2006. Planning for the Protection of European Sites: Appropriate Assessment - Under The Conservation (Natural Habitats) (Amendment) (England and Wales) Regulations 2006 - Guidance For Regional Spatial Strategies and Local Development Documents <http://www.communities.gov.uk/documents/planningandbuilding/pdf/160442>
- Department of Communications, Marine and Natural Resources, 2007. Delivering A Sustainable Energy Future For Ireland. The Energy Policy Framework 2007–2020.
- Department of the Environment, Heritage and Local Government, 2004. Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment – Guidelines for Regional Authorities and Planning Authorities <http://www.environ.ie/en/Publications/DevelopmentandHousing/Planning/FileDownload,1616,en.pdf>
- Donnelly, A., Jennings, E., Finnan, J., Mooney, P., Lynn, D., Jones, M., O'Mahony, T., Thérivel, R. and Byrne, G. 2006a. Objectives, targets and indicator for use in Strategic Environmental Assessment (SEA). *Journal of Environmental Assessment Policy and Management* 8: 135-156.
- Donnelly, A., Jones, M.B., O'Mahony, T. and Byrne, G., 2006b. Decision support framework for establishing objectives, targets and indicators for use in SEA. *Impact Assessment and Project Appraisal* 24: 151-157.
- Donnelly, A., Jones, M.B., O'Mahony, T. and Byrne, G., 2007. Selecting environmental indicators for use in strategic environmental assessment. *Environmental Impact Assessment Review* 27: 161-175.
- Eireco Environmental Consultants, 2009. Clare invasive alien species project the establishment of a baseline on invasive alien species in County Clare and the development of a Draft County-level Management Strategy. Clare County Council, Clare Biodiversity Ltd., The Heritage Council.
- Environmental Protection Agency, 2003. Development of Strategic Environmental Assessment (SEA) - Methodologies for Plans and Programmes in Ireland. Environmental Protection Agency: Wexford. http://www.epa.ie/downloads/advice/ea/epa_development_methodology_sea_syntesis_report.pdf
- EPA, 2006, 'Air Quality in Ireland 2006 Key Indicators of Ambient Air Quality' http://www.epa.ie/downloads/pubs/air/quality/epa_air_quality_report_2006.pdf
- EPA, 2008, SEA Process Draft Checklist <http://www.epa.ie/downloads/advice/ea/SEA%20Process%20Checklist.pdf>
- ERM Ireland, 2003. Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland – produced on behalf of the EPA

⁵ Reference list included as per EPA submission June 2010

- by ERM Ireland
- ERSI, 2010. Quarterly Economic Commentary, Winter 2010
- European Commission, 1979. Directive 79/409/EEC on the Conservation of Wild Birds (The Birds Directive). Official Journal of the European Communities, Brussels, L 103: 0001 – 0018.
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1979:103:0001:005:EN:HTML>
- European Commission, 1992. Directive 92/43/EC on the Conservation of Natural Habitats and of Wild Fauna and Flora (The Habitats Directive). Official Journal of the European Communities, Brussels, L 206: 7-50. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0043:EN:HTML>
- European Commission, 1999. Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions. European Commission, Brussels.
- European Commission, 2000. Managing Natura 2000 Sites – The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC
http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_en.pdf
- European Commission, 2001. Assessment of plans and projects significantly affecting Natura 2000 sites- Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EC. European Commission, Brussels.
- European Commission, 2001. Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment. Official Journal of the European Communities; Brussels, L197: 30–7.
- European Commission, 2002. Assessment of plans and projects significantly affecting Natura 2000 sites - Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf
- European Commission, 2003. Implementation of Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment, Brussels.
- European Landscape Convention, 2002
- European Union, 2001. Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment. Official Journal of the European Communities L197 of 21 July 2001, p. 30.
http://ec.europa.eu/environment/eia/full-legal-text/0142_en.pdf
- Global Development Research Centre, 2007. www.gdrc.org/uem/ait-terms.html
- Government of Ireland, 2000 (as amended). Planning and Development Act. House of the Oireachtas: Dublin.
- Heritage Act (1995)
<http://www.irishstatutebook.ie/1995/en/act/pub/0004/index.html>
- Limerick Clare Energy Agency, 2006. Limerick Clare Climate Change Strategy, 2006. Limerick Clare Energy Agency.
- MWRA/Mid West Regional Authority, 2009. The Mid West Region Biomass Action Plan. Mid West Regional Authority.
http://www.mwra.ie/european_union_projects/BioMobProject.shtml
- MWRA/Mid West Regional Authority, 2010. Mid West Regional Planning Guidelines 2010-2022.
- Parkes, McAteer and Engering, 2005. An audit of County Geological Sites in Clare. Irish Geological Heritage Programme The Heritage Council, The Geological Heritage of Clare, and Clare County Council.
- Planning and Development Regulations, 2001 Department of the Environment, Heritage and Local Government
- RPS Consulting Engineers et al., 2006. The Replacement Waste Management Plan for the Limerick/Clare/Kerry Region 2006-2011.

- Statutory Instrument, No 436 of 2004. Planning and Development (Strategic Environmental Assessment) Regulations. Stationery office: Dublin
<http://www.irishstatutebook.ie/2004/en/si/0436.html>
- Statutory Instrument, No. 435 of 2004. Environmental Assessment of Certain Plans and Programmes. Stationery Office: Dublin.
<http://www.irishstatutebook.ie/2004/en/si/0435.html>
- Statutory Instrument, S.I. No. 94 of 1997. European Communities (Natural Habitats) Regulations, 1997. Stationery office: Dublin
<http://www.irishstatutebook.ie/1997/en/si/0094.html>
- The Department of the Environment, Heritage and Local Government, 2009 National Spatial Strategy – State of the Regions Report, DoEHLG
<http://www.mwra.ie/Publications/documents/StateofTheRegionsReportFinalPublishedVersion5May2009.pdf>
- The United Nations, 1992. Convention on Biodiversity, 1992
<http://www.cdb.int/convention/text/>
- Thérivel, R 2004. Strategic Environmental Assessment in Action. Earthscan, London, UK, pp 276.
- Wildlife (Amendment) Act, No 38 of 2000.
<http://www.irishstatutebook.ie/2000/en/act/pub/0038/index.html>
- Wildlife Act, No. 39 of 1976
<http://www.irishstatutebook.ie/1976/en/act/pub/0039/index.html>
- Environmental Resources Management (ERM), 2003. Landscape Character Assessment of County Clare. Clare County Council and the Heritage Council.
- Clare County Council, 1999. Clare County Development Plan 1999, Clare County Council.
- CASS, 1997. Criteria for the Evaluation of Landscape. Clare County Council
- DoEHLG, 2000. Landscape and Landscape Assessment – Draft Guidelines for Planning Authorities.
- OPW, 2009. The Planning System and Flood Risk Management. Guidelines for Planning Authorities. Department of the Environmental Heritage and Local Government.
- Mc Grath et al.2005. Climate Change: Regional Climate Model Predictions for Ireland. Environmental protection Agency ERTDI Report 36.
- K. Daly, K. and Fealy, R., 2007 Digital Soil Information System for Ireland – Scoping Study. Environmental protection Agency ERTDI Report 72.
- Shannon River Basin Management Plan (2010)



Appendix A - EPA Checklist

SECTION 11 – ENVIRONMENTAL REPORT AND NON-TECHNICAL SUMMARY

Note: This section provides an overview of the compliance of the ER with the requirements of the SEA Directive and the SEA Regulations. Where non-compliance has been highlighted in previous sections of the SEA Process Checklist, actions taken to resolve non-compliance should be highlighted in the 'Comment' section.

Minimum Requirements Question		Yes, No, Comment	Statutory Basis
11.1	Does the ER contain all of the aspects listed in Annex 1 of the SEA Directive and Schedule 2 and 2B of S.I. 435 and 436 of 2004?	Yes	SEA Directive Article 5 Annex 1 S.I. No's 435 & 436 of 2004
11.2	Does the ER include a non-technical summary?	Yes	SEA Directive Article 5 Annex I (j) S.I. No's 435 & 436 of 2004
11.3	Does the non-technical summary clearly summarise the following:		SEA Directive Article 5 Annex I (j) S.I. No's 435 & 436 of 2004
		Y/N	Comment
	a) Contents and main objectives of the draft P/P	Y	Chapter 1/Appendix G
	b) Current state of the environment and evolution	Y	Chapter 4
	c) Environmental characteristics of area significantly affected	Y	Chapter 4
	d) Existing environmental problems	Y	Chapter 4
	e) Environmental protection objectives	Y	Chapter 5
	f) Significant effects on the environment	Y	Chapter 7
	g) Mitigation measures	Y	Chapter 8
	h) Alternatives	Y	Chapter 6
	i) Monitoring	Y	Chapter 9

Additional Recommended Tasks

	Question	Yes, No. Comment	Statutory Basis
11.4	Has a description been provided in the ER of the screening process and subsequent determination?	Yes, Chapter 2	
11.5	Have the responses to the scoping exercises been included in the ER? Has an explanation been given as to how these responses were considered?	Yes, Appendix D Yes, Chapter 2	
11.6	Is the Non-Technical summary concise and easy to understand?	Yes	DoEHLG Guidelines S.4.41
11.7	Has a description of the outcome of all consultations (including transboundary) been documented in the ER?	The outcome of all consultations has been considered and referenced as appropriate in the ER. A comprehensive review of all consultation will be detailed in full in the Environmental Statement	
11.8	Have relevant references, glossary of terms and scaled maps (with source identified) been included?	Yes	

Note: Complete EPA Checklist is outlined in the Environmental Statement Final.

Appendix B - Relevant International, National & Other Policy Documents, Strategies and Guidance

International Legislation	National/Regional/County Legislation
Sustainable Development	
<p>Johannestown Plan of Implementation, 2002 Agenda 21, 1992 EU Sixth Environmental Action Programme, 1998</p>	<p>Sustainable Development: A Strategy for Ireland, 1997 Making Ireland's Development Sustainable Review, Assessment and Future Actions, 2002 Planning & Development Act 2000 (as amended) Planning & Development Regulations, 2006, S.I. No.685 Building Ireland's Smart Economy, A Framework for Sustainable Economic Renewal 2008 Mid-West Regional Planning Guidelines, 2010-2022 Draft Mid-West Area Strategic Plan (MWASP), 2011 Clare County Development Plan 2011-2017 County Development Board Strategy 2002-2012;</p>
Spatial Development	
<p>European Spatial Development Perspective (1999)</p>	<p>National Spatial Strategy 2002-2020 Implementing the National Spatial Strategy:2010 Update and Outlook National Development Plan (NDP), 2000-2006 National Development Plan (NDP), 2007-2013 Development Management Guidelines (DoEHLG), 2007 Shaping the Future – Integrated Strategy for the Economic, Social and Cultural Development of County Clare 2002 – 2012 County Development Board. Planning and Development (Strategic Infrastructure) Act 2006 as amended The Atlantic Gateways Initiative – Achieving Critical Mass, September 2006 Framework Plan The Atlantic Gateways Corridor Development Frameworks – Overview Report (2009) Mid-West Regional Planning Guidelines 2010-2022 Draft Mid-West Area Strategic Plan (MWASP), 2011</p>
SEA	
<p>Protocol on Strategic Environmental Assessment (SEA), 2003 SEA – Directive (2001/42/EC) - Assessment of the effects of certain plans and programmes on the Environment. European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, S.I. No. 435 of 2004</p>	<p>Planning & Development (Strategic Environmental Assessment) Regulations 2004, S.I. No. 435 of 2004 Planning & Development (Strategic Environmental Assessment) Regulations 2004, S.I. No. 436 of 2004 Implementation of SEA Directive (2001/42/EC), Assessment of the Effects of Certain Plans & Programmes on the Environment, Guidelines for Regional Auths & Planning Auths, 2004</p>
Environmental Impact Assessment	
<p>ESPOO (EIA) Convention, 2002 Environmental Impact Assessment Directive 85/337/EEC (amended by Directive 97/11/EC), European Communities (Environmental Impact Assessment) (Amendment) Regulations 1989-2006.</p>	<p>Guidelines on Information to be contained in EIS, EPA 2002 Advice Notes on Current Practice in the Preparation on EIS, EPA, 2003 EIA Guidance for consent Authorities regarding sub-threshold development, DoEHLG, 2003</p>
Environment	
<p>Directive 2004/35/CE on Environmental Liability with regard to the prevention and remedying</p>	

of environmental damage Environmental Liability Regulations EPA Guidance Document on Environment Liability Regulations, 2010	
Biodiversity, Flora & Fauna	
European Biodiversity Strategy, 1998 Convention on Wetlands of International Importance (Ramsar Convention 1971) EU Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (Habitats Directive) (92/43/EEC) EU Directive on the Conservation of Wild Birds (Birds Directive) (79/409/EEC) UN Convention on Biological Diversity (1992) Maintenance and Enhancement of Biodiversity Council Directive on the assessment of the effects of certain public and private projects on the environment (85/337/EEC) EU Freshwater Fish Directive (78/659/EEC)(S.I. No. 293 of 1988) European Communities (Quality of Salmonid Waters) Regulations 1998 (S.I. No. 293 of 1988) OSPAR Convention, 2002 The MARPOL Convention Aarhus Convention 1998 The UN Conference on Environment and Development (UNCED, Earth Summit) Rio de Janeiro, Brazil 1992 The World Summit on Sustainable Development (WSSD), Johannesburg, September 2002 – Commitments arising from Johannesburg Summit The UN Millennium Declaration (2000) and Millennium Development Goals Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979) Bonn Convention on the Conservation of Migratory Species and Wild Animals (1979) The EU Biodiversity Strategy - Communication on a European Community Biodiversity Strategy. EU Guidance: Wind Energy Developments and Natura 2000 sites, October 2010	European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94 of 1997). The Status of EU Protected Habitats and Species in Ireland (NPWS, DoEHLG, 2008) National Biodiversity Plan, 2002 National Heritage Plan, 2002 Growing for the Future: A Strategic Plan for the Development of the Forestry Sector in Ireland, 1996 Irish National Forest Standard, 2000 The Wildlife Act, 1976 Wildlife (Amendment) Act, 2000 Creating a Green Infrastructure for Ireland- Enhancing Natural Capital for Human Wellbeing, 2010 Clare Heritage Plan 2003 Clare Heritage Plan 2011 Clare Biodiversity Action Plan The County Clare Wetlands Survey 2008 Wetlands Conservation and Protection in EPA Code of Practice: Environmental Risk Assessment for Waste Sites (EPA, 2007) Guidance for Planning Authorities on Drainage and Reclamation of Wetlands (consultation draft),September 2011 Draft Wetlands Guidance National Biodiversity Data Centre (NBDC) - www.biodiversity.ie Fishery Guidelines for Local Authority Works (DCENR, 2008) Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads, NRA 2008 The Status of EU Protected Habitats and Species in Ireland, (EPA, 2008)
Population, Human Health and Quality of Life	
Social Inclusion	
	National Anti-Poverty Strategy, 2007-2016 National Partnership Agreement – Towards, 2016 National Action Plan for Social Inclusion, 2007-2016 The National Disability Authority Strategic Plan 2010-2012 Strategy for the Coordination of Public Services to the Travelling Community in County Clare. Social Inclusion Strategy for Clare 2011-2014
Soil & Geology	
EU Soil Directive (proposed) EU Guidance: Undertaking Non-Energy Extractive Activities in Accordance with Natura 2000 Requirements, July 2010	Quarries and Ancillary Activities – Guidelines for Planning Authorities (2004)
Air and Climate Factors	

<p>Kyoto Protocol, 2005 The Stockholm Convention (2001) World Health Organisation (WHO) Air Quality Guidelines (1999) and Guidelines for Europe (1987) Montreal Protocol (UN September 1987) Geneva Convention on Long-Range Transboundary Air Pollution 1979 Directive on Air Quality Assessment and Management (Framework Directive) (1996/62/EC) Directive on National Emission Ceilings for Certain Atmospheric Pollutants (2001/81/EC)</p>	<p>Ireland's National Climate Change Strategy, 2007-2012 Air Pollution Act, 1987 National Programme for Ireland on Transboundary Pollutants – Update and Revision, 2007 Discussion Paper - Strategy to Reduce Emissions of Transboundary Air Pollution by 2010, Integrated Pollution Prevention and Control (IPPC) Licensing, 2004 Air Quality in Ireland 2008 – Key Indicators of Ambient Air Quality (EPA, 2009)</p>
Noise	
Noise Directive	Noise Regulations, 1994
Water	
<p>The Water Framework Directive (2000/60/EC) EU Nitrates Directive (91/676/EEC) EU Groundwater Directive (2006/118/EC) EU Surface Water Directive (75/440/EEC) EU Bathing Water Directive 2006/7/EC) EU Directive establishing a Framework for the Community Action in the Field of Water Policy, 2000 (2000/60/EC)</p>	<p>Water Services Act 2007 Water Pollution Act, 1977-2007 Protection of the Environment Act 2003 Pollution Reduction Programme for Shellfish Waters in the Clare Region Local Government (Water Pollution) Acts, 1977 and 1990 Water Quality (Dangerous Substances) Regulations 2001. Shannon River Basin Management Plan and Western River Basin Management Plan, 2010 EU Urban Waste Water Treatment Regulations 2001, 2004 and 2010 Water Framework Directive, implemented in Ireland by the Water Policy Regulations, 2003 Water Framework Directive as implemented by the Water Policy Regulations, 2003 EC Bathing Water Quality Regulations 2008 EC Quality of Shellfish Waters (Amendment) Regulations 2009 EC Environmental Objectives (Freshwater Pearl Mussel) Regulations, 2009 EC Good Agricultural Practice for Protection of Waters Regulations 2009 EC Environmental Liability Regulations 2008 EC Environmental Objectives (Surface Water) Regulations 2009 (S.I. No. 272 of 2009) EC Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010) EC (Drinking Water No. 2) Regulations 2007 Water Quality in Ireland 2007-2008, Key Indicators of the Aquatic Environment' (EPA, 2009) A Provision and Quality of Drinking Water in Ireland – A Report for the Years 2007-2008 (EPA, 2009) Implementation of the Regulations for Water Services Authorities for Public Water Supplies (EPA) Drinking Water Advice Notes 1-6 Waste Water Discharge (Authorisation) Regulations 2007, S.I. No. 684 of 2007 Urban Wastewater Discharges in Ireland for: Population Equivalents Greater than 500 persons – A report for the years 2006 and 2007 (EPA, 2009)</p>

	Code of Practice: Wastewater Treatment and Disposal Systems Serving Single Houses (p.e≤10), (EPA, 2009)
	The Quality of Bathing Water in Ireland – A Report for the Year 2009, (EPA, 2010) Report on Water Quality in Ireland 2007-2009 (EPA, 2011) Bathing Water Quality Regulations 2008, S.I. No. 79 of 2008 Planning for Watercourses in Urban Environment0, Shannon Regional Fisheries Board
Marine	
Marine Directive	The Marine Strategy Framework Directive (July 2008) The Integrated Maritime Policy for the European Union UNCLOS Foreshore Act 1933 as amended Continental Shelf Act 1968 as amended The Implementation of the Birds & Habitats Directives in Estuarine and coastal areas – with particular attention to port development and Dredging, European Commission, 2011
Flooding	
EU Directive on the assessment and management of flood risks (2007/60/EC)(Floods Directive)	The Planning System and Flood Risk Management Guidelines (and Technical Appendices) for Planning Authorities (DoEHLG, OPW), 2009
Natural and Cultural Heritage	
UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage, 1991 European Convention on the Protection of the Archaeological Heritage, 1992 (The Valletta Convention) Granada Convention for the Protection of the Architectural Heritage of Europe 1985 Convention for the Protection of the Architectural Heritage of Europe, 1997 Convention Concerning the Protection of the World Cultural and Natural Heritage, UNESCO 1972	Architectural Heritage Protection 2004 - Guidelines for Planning Authorities National Inventory of Architectural Heritage (NIAH) Framework and Principles for the Protection of the Archaeological Heritage, 1999 The Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. Architectural Heritage Protection for Places of Worship – Guidelines for Planning Authorities (2003) Architecture Policy Guidelines 2009-2015
Material Assets	
Transport	
1988 European Charter of Pedestrian Rights	Transport 21 (2006 - 2016), Planning Guidelines on Spatial Planning and National Roads, 2012 National Secondary Roads Needs Study (in preparation), 2011 Smarter Travel – A Sustainable Transport Future A New Transport Policy for Ireland 2009-2020 Department of Transport 2020 Vision – Sustainable Travel and Transport Public Consultation Document, February 2009
Energy	
EU White Paper on Renewable Energy, 1997 Energy Performance in Buildings Directive, 2005 EU Directive on the Energy Performance of Buildings (recast), 2010	Delivering a Sustainable Energy Future for Ireland - The Energy Policy Framework, 2007–2020 (White Paper) Wind Energy Development Guidelines - Guidelines for Planning Authorities

EU Guidance on Undertaking New Non-Energy Extractive Activities in accordance with Natura 2000 Requirements, 2010 The Electricity Directive, 1996	(DoEHLG, 2006) Green Paper on Sustainable Energy, 1999 National Renewable Energy Action Plan (NREAP), 2010
EU Directive on Promotion of Electricity Sources from Renewable Sources, 2001 EU Directive on the Promotion of the Use of Energy from Renewable Sources (2009/28/EC) and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC	Draft Offshore Renewable Energy Development Plan, 2010 Energy White Paper: Delivering a Sustainable Energy Future for Ireland 2007 Ocean Energy Strategy, 2005 All Island Electricity Grid Study 2008 GRID 25 Sustainable Energy Association Ireland www.SEAI.ie
Dangerous Substances	
COMAH (Seveso II) Directive - European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations, 2000 EU Major Accident (Seveso II) Directive, (96/82/EC) 1996 Dangerous Substances Directive 76/464/EEC (S.I. No. 258 of 1998, S.I. No. 12 of 2001)	
Communications	
	Guidelines on Telecommunication Antennas and Support Structures, 2006
Wastewater	
EU Urban Waste Water Treatment Directive (91/271/EEC) 1991	National Urban Wastewater Study, 2005 Code of Practice: Wastewater Treatment Systems for Single Houses (P.E. <10), 2009 Waste Water (Discharge) Authorisation Regulations 2007 and all authorisations issued under these Regulations Implementation of the Regulations for Water Services Authorities for Public Water Supplies (EPA, 2010)
Waste	
Waste Framework Directive (75/442/EEC) (and amending legislation) EU Directive on Waste (2006/12/EC) EU Landfill Directive (91/31/EEC) EC Directive on Hazardous Waste (91/689/EEC)(as amended)	National Strategy for Biodegradable Waste, 2006 Changing Our Ways, 1998 Preventing and Recycling Waste: Delivering Change, 2002 Taking Stock and Moving Forward, 2004 Replacement Waste Management Plan for Limerick/Clare/Kerry Region 2006-2011 Waste Management Act 1996-2007 The Nature and Extent of Unauthorised Waste Activity in Ireland, Sept 2005 National Waste Report 2009 Ireland's Environment 2008 - State of the Environment Report National Hazardous Waste Management Plan 2008-2012
Landscape	
European Landscape Convention, 2000	Landscape and Landscape Assessment Guidelines, 2000 Clare Landscape Character Assessment 2004 A National Landscape Strategy for Ireland 2011 Tree Preservation Guidelines

Other Plans & Policies from a regional/County level were also referred to during the plan preparation process, these include:

Residential & Housing

- Limerick/Clare Joint Housing Strategy 2010-2017
- Sustainable Rural Housing – Guidelines for Planning Authorities, 2005
- Design Standards and New Apartments Guidelines, DOEHLG, 2007
- Delivering Homes, Sustaining Communities, 2007
- The Housing (Traveller Accommodation) Act, 1998
- Sustainable Residential Development in Urban Areas and accompanying Urban Design Manual, (DoEHLG) 2009
- National Housing Strategy for people with a disability, Building for Everyone (BFE) 2009
- The Right Living Space – The housing and accommodation needs of people with disabilities 2008
- Clare, Limerick City and County Housing Strategy (2009-2017)
- Limerick Clare Joint Housing Strategy 2010-2017
- Sustainable Residential Development in Urban Areas – Guidelines for Planning Authorities, 2008

Retail

- Mid-West Regional Retail Strategy 2010-2016
- Retail Planning Guidelines, 2005 (DoEHLG)

Leisure & Tourism

- County Clare Recreation and Sports Strategy 2009 – 2011
- Tourism Strategy for the Shannon Region 2008-2010

Transboundary Development Plans

The Development Plans of adjoining Planning Authorities were reviewed during the SEA process and transboundary consultation took place in relation to same:

- Limerick County Development Plan 2010-2016
- North Tipperary Development Plan 2010-2016
- Ennis and Environs Development Plan (2008-2014)
- Kilrush Development Plan 2008-2014
- Galway County Development Plan 2009-2015

Relevant Policies and Plans at County Level

- Ennis and Environs Development Plan (2008-2014)(and associated Variations)
- Kilrush Development Plan (2008-2014)
- West Clare LAP (2009-2015)
- West Clare LAP (2012-2018)
- North Clare LAP (2011-2017)
- East Clare LAP (2011-2017)
- South Clare LAP (2009-2015)
- South Clare LAP (2012-2018)

Note: This list is comprehensive in its formation but not exhaustive in terms of background consultation completed to date. Also there is a certain amount of overlap in relation to specific documents e.g. The Mid West Regional Planning Guidelines document can be associated with a wide range of matters within varying environmental issues including; Biodiversity, flora and fauna, Population, Human Health and Quality of

Life, Social Inclusion, Water, Flooding, Natural and cultural heritage, Social and community, Material assets, Transport, Energy, Dangerous substances, Wastewater / groundwater and Landscape.

Appendix C - Letter to Environmental Authorities and Interested Parties

The following letter was sent to the prescribed Environmental Authorities including:

Environmental Authorities	Response
EPA	X
Dept of Communications, Energy & Natural Resources	✓
Dept of Arts, Heritage & the Gaeltacht	✓

15th July, 2011

Notice is given under 20(3) of the Planning & Development Act 2000 Act (as amended), of intention to prepare a new Shannon Local Area Plan 2012-2018.

Notice of Intention to prepare an Environmental Report is given pursuant to Articles 13 and 14 of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004) and

Observations are requested in relation to Scope and Detail of report.

A Chara,

Clare County Council intends to prepare a Shannon Local Area Plan 2012-2018 within the functional area of Clare County Council as set out on the attached map. It should be noted that the proposed Shannon Local Area Plan is intended to include Shannon town, Shannon Airport, the industrial estates and the environs area. The population of the proposed Local Area Plan area is less than 10,000 persons.

I hereby give notice, pursuant to the requirements of Article 14 C(2) of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004) that, as part of the preparation of the Shannon Local Area Plan 2012-2018, the Planning Authority will prepare a SEA Environmental Report of the likely significant effects on the environment of implementing the proposed Local Area Plan.

The environmental report shall include information that may reasonably be required, taking into account–

- (i) current knowledge and methods of assessment,
- (ii) the contents and level of detail in the plan,
- (iii) the stage of the plan in the decision-making process, and
- (iv) the extent to which certain matters are more appropriately assessed at different levels in the decision-making process in order to avoid duplication of environmental assessment.

Any submission or observation in relation to the scope and level of detail of the information to be included in the environmental report may be made to the planning

Appendix C – Letter to Environmental Authorities and Interested Parties
authority within a period of 4 weeks from the date of the notice; ie from 15th July 2011 until 15th August 2011.

In addition, pursuant to Article 6 of the Habitats Directive, Clare County Council will be undertaking a Habitats Directive Assessment Screening to establish if an Appropriate Assessment of the impacts of the Shannon Local Area Plan will be required

Submissions or observations may be made in writing to the Forward Planning Unit, Planning Land Use and Transport, Clare County Council, New Road, Ennis, Co. Clare. Submissions or observations may also be e-mailed to forwardplan@clarecoco.ie or may be faxed to 065-6892071.

The closing date for receipt of submissions or observations is 4pm on 15th August, 2011.

Should you have any queries or wish to discuss any aspect of the Strategic Environmental Assessment or the Habitats Directive Assessment Screening, please contact me. If you think that a meeting to consider the scoping would be useful, please advise.

Is mise le meas,

Brian McCarthy

Senior Executive Planner

Clare County Council

Enclosed: Copy of Map of Shannon Local Area Plan area.

Appendix D – Summary of Responses from Consultation

Appendix D (I) - Pre-Draft Submissions on the Shannon Local Area Plan 2012-2018

(Received between 22nd July -19th August 2011)

Sub Ref.	Person/ Organisation	Summary of Submission
001(a)	DECLG - Planning System and Spatial Policy Unit	x
001(b)	DECLG – DAU – NPWS Division	x
001(c)	DECLG – DAU – Architectural & Archaeological Heritage	Plan should include objectives regarding architectural heritage, including protected structures.
002	Mid West Regional Authority (MWRA)	Request LAP take into account the key role Shannon & Environs plays as provided for in the MWRPGs, etc general
003	Bernadette Kinsella	Private sites for Housing. Site/building suitable for a Civic Centre & Site for fun/fairs/circus
004	NRA	General
005	Michael Connolly	Req Handball Alley at Cill Chais de-zoned, N19 as it stands is adequate, states that ghost estate at Cluain Airne and further building nearby would destroy the area.
006	John Byrne	Req Green Area at Killian Park be kept as an Amenity Area.
007	Anne Germaine	Req Handball Alley at Cill Chais de-zoned, N19 as it stands is adequate, states that ghost estate at Cluain Airne and further building nearby would destroy the area.
008	Nicole Murphy on behalf of Cluain Airne Residents	Objects to proposed road that will link Corrib Dr to Cluain Airene. Against development at Tullyglass as area is below sea level. Proposed site is adjacent to SAC & SPA, development will increase traffic, noise, etc. Overall requests that a road not be built & requests to dezone 5.29 ac at Glaisse Rinne where affordable houses were meant to be built & return land to a green area.
009	Nicole Murphy	Objects to proposed road that will link Corrib Dr to Cluain Airene. Against development at Tullyglass as area is below sea level. Proposed site is adjacent to SAC & SPA, development will increase traffic, noise, etc. Overall requests that a road not be built & requests to dezone 5.29 ac at Glaisse Rinne where affordable houses were meant to be built & return land to a green area.
010	Pauline & PJ Daly	Objects to proposed road that will link Corrib Dr to Cluain Airene. Against development at Tullyglass as area is below sea level. Proposed site is adjacent to SAC & SPA, development will increase traffic, noise, etc. Overall requests that a road not be built & requests to dezone 5.29 ac at Glaisse Rinne where affordable

Sub Ref.	Person/ Organisation	Summary of Submission
		houses were meant to be built & return land to a green area.
011	Rosemary Power, Secretary, Duchas na Sionna	Duchas carried out a report in 2007 on the physical heritage, identifying well known structures & protected structures. Duchas established the Shannon Wetland Project & maintains interest of green areas in the town.
012	Margaret Mulqueen	Land at Cluain Airne be rezoned a green area. Objects to proposed road that will link Corrib Dr to Cluain Airene. Cause disruption to Wildlife.
013	Fergal McCarthy, Margaret McCarthy & John McCarthy	Concerns regarding the proposal to build a road at Cluain Airne, objects to remainder of affordable housing development being built & requests area be dezoned to green area. Concerns for wildlife in the area.
014	Radhard na Coille Concerned Residents Group	Retain Open Space zoning on land adjacent to Radharc na Coille
015	Beatrice and Patrick Keville	Return zoning of Drumgeely Hill to Open Space. Request that submission issued 16/08/11 be replaced with submission sent 17/08/11
016	Cllr. Gerard Flynn	Various zoning issues in Shannon
017	Colm Egan	Dezone land in Cluain Airne
017	Betty Egan	Dezone land in Cluain Airne
019	Dept of Education	Various issues regarding education
020	Pat Madden on behalf of Cul na Greine Residents	Area adjacent to Bothar na Luchra be rezoned from Commercial to Community as surrounding estates more need green areas. Would support opening of road at Sli na Mara to Bothar Mor in the vicinity of The Oakwood to Tullyvarraga Rd.
021	TJ & Mary O'Dwyer	Requests lands at Ard na Greine, Killian Pk & Tullyvarraga Crt be rezoned as Open Space. Road at Ard na Greine is a safety hazard.
022	Fionnuala Riordan	Requests Building works at Handball Alley along with plans to build a link road at Cill Chais be de-zoned.
023	M. Fitzgibbon Builders Ltd	Req lands at De-Beers be zoned for Housing/Health Care/Nursing Home
024	Co-ordination Unit, DCENR	No comments to make
025	Mary Moran	Planning issues on Drumgeely Hill ie parking issues at Larch, Cedar & Maple Houses where occupants presumed parking was for the Apts & Planning was issued for a hotel & student Apts instead. Also centre of Drumgeely Hill req zoning green area to 'Open Space'.
026	Development Planning Partnership LLP (DPP)	Retail Policy, etc
027	Cllr Tony McMahon, Snn Town Co	Req lands at Broofields & Tullyvarraga Hill be designated as 'Community'/'Open Space'
028	Stephen O'Malley	Restore Green & playground on Drumgeely Hill to Community use.
029	Don O'Shea	Restore Green & playground on Drumgeely Hill to Community use.

Sub Ref.	Person/ Organisation	Summary of Submission
030	John Woods	Restore Green & playground on Drumgeely Hill to Community use.
031	Derek Barrett	Rezone open space
032	An Taisce	Various issues in Shannon
033	Cllr Tony McMahon, Snn Town Co on behalf of Residents of Tullyvarraga Hill, Brookfields & Oakfields	Req lands at Broofields & Tullyvarraga Hill be designated as 'Community'/'Open Space'
034	Simon Clear & Assoc on behalf of STC Developments Ltd	Req retail provision within the TC1Retail Core area. Req the conflict between the strategic rail corridor be resolved. Also req lands identified as SDA be reserved as a strategic land reserve area
035	Cllr Tony McMahon, Snn Town Co on behalf of Residents of Ard na Greine, Killian Pk & Tullyglass Crt	Req these areas be designated 'Community'/'Open Space'
036	Green Party	Various issues regarding Shannon
037	Clare Network of People with Disabilities	Issues regarding accessibility
038	Shannon Local Agenda 21	Issues regarding habitat
039	Irish Council for Aspier and Autistics Networking	Issues regarding people with disabilities
040	Shannon Chamber	Full submission received 5/9/11
041	Mary Grace	Leave Handball alley at Cill Chais as it, objects to the building of link rd between Cluain Airne & Corrib Dr.
042	John Murphy	Objects to proposed road that will link Corrib Dr to Cluain Airne. Req Phase 2 of Housing Dev be dezoned to 'amenity use', req zoning of tourist facility to east of bldg site that the entrance be moved slightly to allow access for walkers, objects to proposed road from Cluain Airne and Tradaree. States Shannon Town needs is a Main St.
043	Paschal Regan	Req zoning at Drumgeely Hill be returned to 'Open Space' & 'Community Use'
044	Michael McKenna	Objects to proposed road that will link Corrib Dr to Cluain Airne.
045	DAA	General re Shannon Airport
046	Federation Trust	F.T. had discussions with residents of Ballycaseymore, Killian Pk & Finnian Pk Residents & commented as follows: removal of trees & natural flow of water of Tullyvarraga Hill toward the estuary has depleted, b) removal of topsoil for the creation of Ballycaseymore est & so many new estates, c) flooding at lwr Tullyvarraga & Ballycaseymore last yr for the first time in 8 yrs, survival of frogs are at risk, d) measures should be taken to allow ditches & biodiversity habitat in Public amenity areas. These wetlands should receive support, etc

Sub Ref.	Person/ Organisation	Summary of Submission
047	Carbon Sole Industries Ltd.	The possibility and viability of providing High Efficiency Combined Head & Power Plant in Shannon

Appendix D (II) - Pre-Draft Submissions on the Scope and Detail of the Environmental Report to the Shannon Local Area Plan 2012-2018

(Received between 15th July -15th August 2011)

Submission Correspondence	Summary	SEA Comment
EPA		
Department of Arts, Heritage & Gaeltacht – DAU		
	<p>Archeology The inclusion of detailed commitment to protect archaeological heritage is recommended, including.</p> <ul style="list-style-type: none"> • General policies relating to the archaeological heritage - 'The council will protect the archaeological heritage from damage, including any hitherto unrecorded sites.' • Specific objectives relating to Recorded Monuments and any other archaeological features: 'It should be an objective of the Planning Authority to secure the preservation in-situ of, or preservation by record of: The archaeological monuments included in the Record of Monuments and Places as established under section 12 of the National Monuments (Amendment) Act, 1994, Any sites and features of historical and archaeological interest, Any subsurface archaeological features that may be discovered during the course of infrastructural/development works in the operational area of the Local Area Plan' 	<p>It is considered that objectives relating to Archaeological Heritage are adequately addressed in the Clare County Development Plan 2011-2047; the 'parent document' to the ST&E LAP.</p>
	<ul style="list-style-type: none"> • Where a proposed development (excluding individual residential home units) includes a monument or site included in the Record Monument and Places within the landholding we recommend that: <ul style="list-style-type: none"> ○ 'The developer shall commission an archaeological assessment (see below) to establish the extent of archaeological material associated with the monument or site. This assessment shall also define the buffer area or area contiguous with the monument which will preserve the setting and visual amenity of the site. ○ The area of the monument and buffer should not be included as part of the open space requirement demanded of a specific development but should be additional to the required open spaces' 	
	<ul style="list-style-type: none"> • Should a monument or place included in the Record of Monument and Places lie within the open space requirement for a development, a conservation plan for that monument should be requested as part of the landscape plan for that proposed open space. 	
	<ul style="list-style-type: none"> • Should a monument or site included in the Record of Monument and Places be incorporated into a development the monument and attendant buffer area should be ceded to Local Authority Ownership once the development and 	

Submission Correspondence	Summary	SEA Comment
	associated landscaping works are complete so that the future protection of the monument can be assured.	
	<p>Archaeological monuments within areas zoned for future development</p> <ul style="list-style-type: none"> The location of the archaeological features should be clearly indicated in the Local Area Plan 	Map 4.8.1 outlines the cultural heritage of the plan area
	<ul style="list-style-type: none"> When making provision for the zoning of lands, due regard should be given to the specific objectives relating to Recorded Monuments and any other archaeological features 	Noted
	<ul style="list-style-type: none"> The Council should be aware of the stated policy of the DoEHLG with regard to the preservation in-situ of archaeological remains: "There should always be a presumption in favour of avoiding developmental impacts on the archaeological heritage. Preservation in-situ must always be the first option to be considered rather than preservation by record in order to allow development to proceed, and preservation in-situ must also be presumed to be the preferred option." 	Noted
	<p>Archeological Assessment</p> <p>Developments subject to archaeological assessment in accordance with DoEHLG include: Those developments located at or close to an archaeological monument or site, those that are extensive in terms of area (1/2 hectare or more) or length (1 kilometre or more) and developments that require an Environmental Impact Statement</p>	Noted
	<ul style="list-style-type: none"> The archaeological heritage includes National Monuments in the care of the State, archaeological and architectural monuments and sites in the Record of Monuments and Places and the Register of Historic Monuments, zones of archaeological potential in Historic Towns; the underwater archaeological heritage, including Historic Wrecks; unknown and unrecorded archaeological sites (including subsurface elements with no visible surface remains); potential sites located in the vicinity of large complexes of site or monuments, present or former wetlands, unenclosed land, rivers or lakes, or the inter-tidal zone 	Noted
	<p>Nature Conservation</p> <ul style="list-style-type: none"> AA (including screening) under Art 6(3) of the Habitats Directive is specifically intended to determine the likely significant effects on Natura 2000 sites in view of their conservation objectives, and to ensure that no plan/ project that would have adverse effects on the integrity of a Natura 2000 site is approved or adopted (unless in exceptional circumstances where the requirements of Article 6(4) of the Habitats Directive can be met). AA does not deal with all significant ecological issues of relevance to proper planning and sustainable development, nor does it address all legal requirements in relation to the conservation and protection of ecological sites, habitats and species. 	Noted
	<p>Key ecological issues</p> <p>The plan area contains the following sites, habitats and species of international to local importance for biodiversity and nature conservation. These should be taken into account in preparing the new plan, and in undertaking its associated environmental assessments. Objectives to conserve and protect the above should be included in the new plan -</p>	The HDA and SEA have both considered these sites and those

Submission Correspondence	Summary	SEA Comment
	Natura 2000 sites, including Lower River Shannon (cSAC) (site code 002165) and River Shannon and River Fergus Estuaries Special Protection Areas (SPA) (site code 004077).	within a 15km radius of the plan area in the environmental assessment of the plan area
	Certain species of flora and fauna, and their key habitats (i.e. breeding sites and resting places), which are strictly protected under national wildlife legislation wherever they occur, whether inside or outside the above sites	
	'Protected species and natural habitats' as defined in the European Liability Directive (2004/35/EC) and European Communities (Environmental Liability) Regulations, 2008, including: Birds Directive – Annex I species and other regularly occurring migratory species, and their habitats (wherever they occur), Habitats Directive – Annex I habitats, Annex II species and their habitats, and Annex IV species and their breeding sites and resting places (wherever they occur), Stepping stones and ecological corridors including nature conservation sites (other than Natura 2000 sites), habitat areas and species locations covered by Article 101 of the Habitats Directive.	
	<ul style="list-style-type: none"> As site boundaries of nature conservation sites may be subject to change, the Council is advised to ensure that the most up-to-date boundaries available from the NPWS website are included in the plan, and its AA and SEA Environmental Report at each stage of the plan preparation process. 	Noted
	<p>SEA</p> <ul style="list-style-type: none"> Biodiversity, Flora and Fauna section of the SEA should be undertaken by or in conjunction with a suitably qualified ecologist, and in conjunction with the appropriate assessment to ensure full integration of biodiversity issues and concerns, particularly in relation to nature conservation sites, rare and protected species, habitats that are rare or of high ecological value, and Art 10 of the Habitats Directive 	Noted
	<ul style="list-style-type: none"> For biodiversity, flora and fauna, the scope of the SEA should include: All sites with nature conservation designations Available information on habitats, including the Council's habitat mapping for the plan area, results of habitat surveys (including NPWS datasets on habitats/habitat complexes), and habitat indicator mapping Available information on rare and protected species and their habitats All watercourses, surface water bodies and associated wetlands, including flood risk areas Other sites of high biodiversity value or ecological importance Local biodiversity areas, including those identified as a result of the Council's Heritage Plan or Biodiversity Plan actions or projects Ecological networks and corridors and stepping stones 	Noted
	<ul style="list-style-type: none"> In general, no areas should be identified or targeted for development (e.g. through landuse zoning or other strategies) without basic information on the ecological sensitivities of the lands in question, including a habitat map, i.e. the precautionary principle should apply and no areas should be committed to development in the absence of basic ecological information so as to ensure sustainable development and avoid conflicts 	Noted
	<ul style="list-style-type: none"> The environmental protection objectives for biodiversity, flora and fauna should integrate with the objectives and obligations of other directives such as the Habitats and Birds Directives, and the WFD, the Wildlife Acts, 1976-2000, 	Noted

Submission Correspondence	Summary	SEA Comment
	and with the aims and objectives of the county's own Heritage Plan and Biodiversity Plan.	
	<ul style="list-style-type: none"> • SEOs should be included for all nature conservation sites (not just Natura 2000 sites), natural habitats, protected species and ecological network listed above 	Noted
	<p>Architectural Heritage It is recommended that the architectural heritage within the operational area of the plan should be identified and included within the scope of the report.</p>	The architectural heritage of the plan area is outlined in Chapter 4.8 and Map 4.8.1
Department of Communications, Energy & Natural Resources - No comment		

Appendix D (III) – Draft Consultation Submissions on the Shannon Town & Environs Local Area Plan 2012-2018

(Received between 12th December 2011 – 1st February 2012)

50 submissions were received on the Draft Shannon Town & Environs 2012-2018 between 12th December 2011 and 1st February 2012. The following submissions made reference to the SEA Environmental Report and these are considered in detail below. However, please note all of the submissions were assessed and incorporated into the Plan, Environmental Report and Natura Impact Report, where appropriate.

Submission Summary and Comments	SEA consideration
<u>Dept. of Arts, Heritage and the Gaeltacht - Sub No. 001b</u>	
<p><u>SEA Environmental Report</u> The Biodiversity, Flora and Fauna section of the Environmental Report requires some update and the input of an ecologist to correct erroneous references to legislation and other ecological matters. Some examples are set out below:</p>	
<p><i>Page 50</i></p> <ul style="list-style-type: none"> • Habitats Directive – now transposed by the European Communities (Birds and Natural Habitats) Regulations, 2011. This also transposes the Birds Directive. • ARCs – not yet directly applicable to SACs, but do apply to SPAs. In the context of the plan, it may be more appropriate to refer to restrictions on exemptions that would apply for projects in or potentially impacting European sites, including, for example, in the case of advance works, site investigations or trial holes. • In the context of ARCs, the Minister would be the Minister of Arts, Heritage and the Gaeltacht. • The Birds Directive should now be referred to as the codified directive 2009/147/EC. • The Circulars listed refer to various nature conservation matters, particularly appropriate assessment and species 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>

licensing, and are not specific to the legislation which was published in September 2011.	✓
<p><i>Page 51</i></p> <ul style="list-style-type: none"> • SACs are not selected for the conservation of birds. • The qualifying interests are the conservation interests of the sites; details can be found on the NPWS website. The specific habitat types that are listed should be specific to the site in question in this case. 	<p>✓</p> <p>✓</p>
<p><i>Page 54</i></p> <ul style="list-style-type: none"> • Consider changing the heading referring to sites or areas of environmental and ecological protection. 	✓
<p><i>Habitat mapping</i></p> <p>It is stated that habitat mapping is available for the plan area. However, it is unclear why the available data were apparently not used in assessing the impacts of the plan and in quantifying and identifying what habitats would be impacted by the land-use zoning proposed, particularly on greenfield sites.</p> <p>Note:</p> <p>This is has been addressed in Chapter 4 Section 4.3.3. Designations and re-addressed in Chapter 7 - Environmental Assessment.</p>	✓
Mid-West regional Authority - Sub No. 002	
<p>It is noted that the SEA assessment concludes that, subject to the implementation of mitigation measures as set out in the Draft Plan and SEA Environmental Report, the development of Shannon Town and Environs will not impact negatively on the environment.</p> <p><u>NOTE</u></p> <p>Finally, I note the comments in respect of the SEA which accompany the Draft Plan, specifically that the assessment concludes that, subject to the implementation of mitigation measures as set out in the Draft Plan and SEA Environmental Report, the development of Shannon Town and Environs will not impact negatively on the environment; and that, subject to</p>	✓

<p>any future proposed material alterations, the Plan is considered to be consistent with the Mid-West Regional Planning Guidelines 2010-2022</p>	
<p><u>EPA – Sub No. 014</u></p>	
<p><u>Point 1 – NTS</u></p> <p>There would be merits in providing a brief summary of each of the alternative development scenarios referred to in section 5.0 <i>Alternatives</i> in the context of further explaining Table 5.1 – <i>Assessment of Alternatives</i>. Consideration should be given to expanding on the reasons for selecting the preferred alternative.</p> <p>In section 6.0 – <i>The Assessment</i>, consideration should be given to further strengthening the fourth paragraph to reflect a stronger commitment to not conflict with the policies / objectives of the County Development Plan.</p> <p>In section 6.1 – <i>Cumulative Assessment</i>, there may be merits in providing a brief description of which vulnerabilities were included / assessed in the making of the cumulative sensitivity map.</p> <p>While the current state of the environment is described, you are referred to Schedule 2B(b) of SI No. 436 of 2004, in relation to describing '<i>the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the Plan</i>'.</p> <p><u>NOTE:</u></p> <p>See the SEA NTS on the Proposed Material Alterations to the Draft Shannon Local Area Plan 2012-2018 (June 2012) for highlighted details.</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>
<p><u>SEA Point 2 – Chapter 3: Relationship to Other Plans</u></p> <p>Reference is made to the new European Communities (Birds and Natural Habitats) Regulations 2011 which should be</p>	<p>✓</p>

<p>referred to and included in section 3.3 Biodiversity, Flora and Fauna.</p> <p>The inclusion of the SIFP is welcomed. There would be merits, however, in providing further detail on the relationship which is envisaged between the SIFP and the Draft Plan, and ensuring that CDP objectives are complied with.</p> <p><u>NOTE:</u></p> <p>Note the new European Communities (Birds and Natural Habitats) Regulations 2011 were referred to and included in section 4.3.3 'Biodiversity, Flora and Fauna - Legislation'. Also, as new legislation and guidelines become available they will be integrated into the Shannon Local Area Plan and associated SEA Environmental Report and Natura Impact Report.</p> <p>The significance of the SIFP is acknowledged. This Strategic Plan is currently in the early stages of preparation. It is envisaged that this document, upon completion, will be incorporated into the Clare County Development Plan 2011-2017 by means of a Variation which will be assessed through the SEA and HDA processes. In this regard, the Shannon Town and Environs Plan, being a local area plan, will be required to be consistent with the SIFP and all objectives within it, when finally adopted.</p> <p>Unfortunately, at this stage, a Draft SIFP and associated environmental assessment report have not yet been prepared, and are unlikely to be prepared prior to the adoption of the subject Plan. Clare County Council is the lead authority on the SIFP thus will work towards the delivery of the CDP objectives. Settlements identified as key urban centres within the regional planning guidelines which have the potential to influence and be influenced by the Plan area have been included in relation to the Shannon LAP review and the associated environmental assessment. Please note Appendix B 'Relevant international, national and other policy documents, strategies and guidance' which tabulates and highlights the relevant legislation and policy documents, ongoing key strategies, plans and programmes, and their interaction with the existing Plan. However, the SEA environmental report will strengthen this issue in the context of assessing the potential influence of / on other Plans/Programmes adjacent to the Plan area.</p> <p>Also, note the SIFP has been incorporated in the ER under Chapter 3 'relationships to other Plans - Material Assets', Chapter 4 'Environmental Baseline - Water, and in the Monitoring table in Chapter 9.</p>	<p>✓</p>
<p><u>SEA Point 3 – Chapter 4: Environmental Baseline</u> Under section 4.3 – <i>Biodiversity: Flora and Fauna</i>, consideration should be given to referencing the new Birds and Natural</p>	<p>✓</p>

<p>Plan. However, the SEA has strengthened their inclusion in the main body of this Environmental Report.</p>	
<p><u>SEA Point 6 – Chapter 8: Mitigation Measures</u></p> <p>It should be ensured that the monitoring plan is robust enough to take into account the number of ongoing plans/programmes within / adjacent to the Plan area and the potential to influence habitats and species during the lifetime of the Plan. Consideration should be given to the following:</p> <ul style="list-style-type: none"> • <input type="checkbox"/> The addition of appropriate corrective action thresholds for unauthorised development, illegal waste activity and water pollution incidents not involving oil spills • <input type="checkbox"/> The inclusion of monitoring frequencies • <input type="checkbox"/> Monitoring of both positive and negative effects, where they occur. The Monitoring Programme should be flexible to take account of the various stages of the Plan, and be able to deal with cumulative effects. The actual departments responsible for collecting, collating and analysing the data should be identified as soon as possible after the Plan has been adopted. <p>The Monitoring Programme should include information on how the monitoring will allow unforeseen adverse effects to be identified and responded to as appropriate.</p>	<p>✓</p>
<p><u>SEA Point 7 – Assessment of Environmental Effects</u></p> <p>Whilst it is noted that the assessment of environmental effects has been provided within the Appendices, consideration should be given to incorporating them within the main body of the document to reflect how the preferred alternative has been assessed against the SEO's.</p> <p>Also, clarify how the full range of environmental effects of the implementation of the Plan, as set out in the SEA Directive and Regulations, have been assessed and documented. In particular, reference is made to the potential for cumulative effects in combination with other relevant plans / programmes and projects.</p>	<p>✓</p> <p>✓</p>

<p><u>Section 1: Development Plan</u> <u>Chapter 1</u></p> <p>There would be merit in section 1.7, under subsection <i>Shannon Estuary Strategic Integrated Framework Plan</i>, to provide a summary of how the Plan proposes to influence and be influenced by the SIFP. Consideration should be given to improving the readability of Table 1.3 –Population targets.</p> <p><u>Manager’s Opinion on chapter 1 comment</u></p> <p>I note the comments made in relation to the Shannon Estuary SIFP. I can advise that this is currently in the early stages of preparation. I concur that the SIFP is a hugely important document which seeks to establish a robust and integrated framework which will facilitate economic growth and promote sustainable environmental management within and adjacent to the Shannon Estuary. It is envisaged that this document, upon completion, will be incorporated into the Clare County Development Plan 2011-2017 by means of a variation. In this regard, the Shannon Town and Environs Plan, being a local area plan, will be required to be consistent with the SIFP and all objectives within it, when finally adopted. At this stage, a draft has not yet been prepared, and is unlikely to be prepared prior to the adoption of the subject Plan. I note however section 1.7 of the Draft Plan which references the SIFP in acknowledgement that it is a key element of the planning framework which will govern the Plan area.</p> <p>In relation to table 1.3, I have previously addressed this issue in submission 1(a) however will restate my comments here for ease of reference. As noted in part C of the subtext to Table 1.3, 1ha of residential zoned land equates to 2ha of low density residential zoned land, except for small villages. This ratio therefore applies to Shannon, as a gateway. 33.35ha represents the total area of land proposed for residential zoning in the Draft Plan. 30.98ha refers to the total area of land proposed for low density residential zoning in the Draft Plan. Accordingly, the figure of 30.98ha, after applying the above ratio, equates to 15.49ha LDR. I would also point out that this tabular format is consistent with other adopted local area plans.</p> <p><u>Chapter 4</u></p> <p>The inclusion of objective 4.1 in section 4.3, providing a commitment to subject the development and expansion of Shannon Airport to the requirements of the Habitats Directive Assessment is acknowledged.</p>	<p>All Issues In This section were considered</p>
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Objective 4.2, relating to safeguarding and providing appropriate critical service infrastructure , drainage infrastructure etc. is noted.

Manager's Opinion on chapter 4 comment

I note the EPA's comments in respect of the above.

Chapter 5

It should be ensured that the proposed future Shannon rail link and central station will be subject to the requirements of EIA and Habitats Directives where relevant and appropriate.

Manager's Opinion on chapter 5 comment

I can confirm that the proposed future Shannon rail link will be subject to the requirements of EIA and the Habitats Directives where relevant.

Chapter 9

The inclusion of specific new objectives in the Plan to protect environmental vulnerabilities / sensitivities within the Shannon Town and Environs area are welcomed and acknowledged, in particular in relation to the protection of biodiversity value of the Shannon Estuary.

Manager's Opinion on chapter 9 comment

I thank the EPA for their positive comments in this regard.

Chapter 10

The inclusion of new objectives associated with increasing tourism are noted. It should be ensured however, that a commitment is provided that the requirements of EIA and Habitats Directives, in particular, are taken into account as relevant.

Manager's Opinion on chapter 10 comment

I note the comment above, and would point to objective 1.1, which requires all planning applications for development within, adjacent to, or likely to impact on Natura 2000 sites, to carry out a Habitats Directive Assessment, in accordance with the Habitats Directive. A number of specific criteria are set out in relation to potential development impacts, in addition to the requirement to demonstrate that any future proposals can be adequately serviced. I believe that this objective, together with similar policies in the parent County Development Plan, together with existing statutory obligations to undertake EIA where relevant, affords satisfactory protection for the environment.

Chapter 11

The EPA welcome and acknowledge the chapter on Green Infrastructure. It is recommended that recent EU Guidance on the subject be referenced and integrated as appropriate in the Plan.

Manager's Opinion on chapter 11 comment

I thank the EPA for their positive comments in respect of the Draft Plan's Green Infrastructure Framework. I note the recent EU guidance referred to and can advise that it will be taken into account in the continued preparation of the Plan and the relevant Green Infrastructure chapter and objectives. In this regard, I recommend that it be referenced in chapter 11.

Chapter 12

There would be merit in referring in section 12.3.7 *Flood Risk and Sea Defences* to the Shannon CFRAMS which is undergoing SEA currently, and also describing any coastal zone management plans which have been undertaken or are proposed to be undertaken. Consideration should be given to including an objective to support / promote / continue the maintenance / management of the sea-wall embankment adjoining the estuary.

Manager's Opinion on chapter 12 comment

I can clarify that the Shannon CFRAMS has been referenced in section 12.3.7 and when this process is concluded, it will provide for the continued maintenance / management of the sea-wall embankment adjoining the estuary. There are currently no coastal zone management plans in place for the Plan area. Having regard to the need to ensure future coastal protection and management, I recommend that an additional objective be included in section 12.3.7 of the Draft Plan

<p>stating that the Council will:</p> <ul style="list-style-type: none"> • a) facilitate the maintenance and improvement of the existing seawall embankments as necessary. • b) facilitate the implementation of the CFRAMS for Shannon when complete. 	
<p><u>Section 3 Integration of Environmental Considerations in the LAP.</u></p> <p><u>1. Water</u></p> <p><u>1.1 Water Framework Directive</u> Provision should be made in the Local Area Plan for the incorporation of the specific relevant objectives and measures for individual water bodies set out in the Shannon International River Basin Management Plan (SIRBMP) and associated Programme of Measures (POM). In addition, the Plan should outline the current water quality status and the status to be achieved by 2015 in any receiving waters covered by the Plan.</p> <p><u>Manager's Opinion on Point 1.1</u> The SIRBMP has been appropriately referenced in the SEA Environmental Report of the Draft Shannon Town and Environs Local Area Plan 2012-2018. It is also detailed in the CDP, which is the parent policy document for the County to which the Draft LAP is required to be in compliance.</p> <p><u>1.2 Drinking Water / Water Supply</u> The SEA and Plan making processes should address drinking water supply, capacity, leakage and quality in the Plan area through prioritisation of remedial works to be carried out. Future predicted increases in population should be taken into consideration in the context of current drinking water supply and future requirements.</p> <p><u>Manager's Opinion on Point 1.2</u> In relation to drinking water supply, capacity, leakage etc, I consider this matter to be satisfactorily addressed in Objective CDP8.4 Water Supply and Objective CDP8.5 Water Conservation of the Clare County Development Plan 2011-2017 (CDP). The CDP is the 'parent' document to the subject Plan and therefore both of those objectives apply to the Shannon Town and Environs Area. With regard to future predicted increases in population, this comment is noted and will be taken into consideration in the plan-making process and in the SEA Environmental Report as appropriate.</p> <p><u>1.3 Waste Water Treatment</u> The Plan should include, as appropriate, measures to improve water quality impacted by waste water discharges as identified in the EPA Waste Water Report and the Water Quality in Ireland reports. Where relevant, the potential impacts on habitats and species of ecological importance should be addressed. In addition, measures should be included to ensure that trade effluent in the area covered by the Plan is managed properly and discharged to sewer in accordance with relevant discharge licences where appropriate.</p> <p><u>Manager's Opinion on Point 1.3</u></p>	<p>All Issues In This section were considered</p>

The Regulations and Reports listed above have been appropriately referenced in the SEA Environmental Report of the Draft Shannon Town and Environs Local Area Plan 2012-2018. The provision and maintenance of adequate and appropriate waste water treatment infrastructure is addressed in Objective CDP8.7 'Waste Water Treatment and Disposal' of the Clare County Development Plan 2011-2017 (CDP). The CDP is the 'parent' document to the subject local area plan and therefore CDP8.7 will also apply to the Shannon Town and Environs Plan area.

1.4 Groundwater Protection

The Plan should provide for the protection of groundwater resources and associated habitats and species. The Plan should make reference to the requirements of the Groundwater Directive (2006/118/EC) on the protection of groundwater against pollution and deterioration, which came into force on the 12th December 2006.

Consideration should be given to the promotion of the inclusion of policies and objectives in the Plan for the following:

- Enforcement of planning conditions related to the installation, operation and maintenance of on-site waste water treatment / septic tank systems.
- Connection of all remaining house within town boundaries to the waste water treatment plant.

- The development of a waste water leak detection programme. The use of a strategic metering system to aid in leak detection should be considered. Reference is made to the European Communities Environmental Objectives (Groundwater) Regulations 2010.

Manager's Opinion on Point 1.4

The Clare County Development Plan contains policies and objectives to deal with the protection of groundwater resources and associated habitats and species (Section 8.3.1 and Objectives CDP8.1 and CDP8.2) and those policies and objectives apply to the Shannon Town and Environs local area plan area.

1.5 Water Conservation

The Plan should include measures to promote conservation of water. In this regard, the development of a Water Conservation Strategy should be considered.

Manager's Opinion on Point 1.5

This is a matter that has been satisfactorily addressed under Objective CDP8.5 of the Clare County Development Plan 2011-2017, which is the 'parent' document to the Draft Shannon Town and Environs Local Area Plan 2012-2018.

1.6 Water Services Act 2007 – Strategic Water Services Plans

The Plan should include provisions to promote the preparation and implementation of Water Services Plans in accordance with any Regulations likely to be made under Section 35 of the Water Services Act 2007.

Manager's Opinion on Point 1.6

The Clare County Development Plan 2011-2017 (CDP) makes appropriate reference to the Water Services Act 2007 and the CDP applies to the Shannon Town and Environs Local Area Plan area.

1.7 Flood Prevention and Management

Consideration should be given to including a commitment to incorporate any recommendations which may be forthcoming upon completion of the Shannon CFRAMS, currently undergoing SEA, as relevant to Shannon Town and Environs. The Plan should promote the development, where appropriate, of adaptation measures to account for the likely increased risk of flooding due to climate change within the Plan area.

Manager's Opinion on Point 1.7

This is a matter that has been integrated into the preparation of the Draft Local Area Plan. Flood risk areas were identified and the zoning on those areas was either removed or altered to reflect the risk associated with potential future development on the sites. Where sites zoned within identified flood risk areas were retained, the Draft Plan ensures that the requirement for detailed flood risk assessment of development proposals is clearly outlined in the text of the Plan as relevant. In addition, the Clare County Development Plan 2011-2017, as the parent policy document, includes policies relating to climate change (CDP9.13) and flood risk management (CDP9.15) to which the local area plan is required to be in compliance. As regards the Shannon CFRAMS, it is unlikely that this study will be completed before the adoption of the Plan, however the findings of this study will inform future reviews / variations of the Plan, where appropriate.

1.8 Integration of Infrastructure, zoning and development

Where zoning/rezoning of lands and the introduction of new development is being proposed, the Plan should ensure that the adequacy of the existing water supply and waste water treatment facilities and associated networks are assessed. The potential impact on habitats and species of ecological importance should also be addressed as appropriate, from pressures impacting on water quality and quantity.

The impact of Flood Risk likely to be associated with already zoned and undeveloped lands in the Plan area should also be considered in the context of possible rezoning options as appropriate.

Manager's Opinion on Point 1.8

The existing water supply and waste water treatment arrangements in the Plan area were assessed and were a key consideration in the preparation of the Draft Plan. Chapter 4 of the SEA Environmental Report details the threats and trends associated with water quality. Flood risk was also assessed and taken into consideration in the preparation of the draft Local Area Plan. In any undeveloped areas where a risk of flooding has been identified, the zoning in those areas has either been removed or altered to ensure that inappropriate development does not take place in these areas. Where sites zoned within identified flood risk areas were retained, the Draft Plan ensures that the requirement for detailed flood risk assessment of development proposals is clearly outlined in the text of the Plan as relevant. In addition, the Clare County Development Plan 2011-2017, as the parent policy document, includes policies relating to climate change (CDP9.13) and flood risk management (CDP9.15) to which the local area plan is required to be in compliance.

2. Biodiversity

2.1 European Communities (Birds and Natural Habitats Regulations) 2011

The above should be taken into account in implementing the Plan.

Manager's Opinion on Point 2.1

I can confirm that the above document will be taken into account in the implementation of the Plan.

2.2 EU Protected Habitats and Species in Ireland

The Plan should include, where relevant, a specific commitment to deliver the requirement of the Habitats Directive (Article 4, Paragraph 4), including the maintenance or restoration of annexed habitats and species within SAC's at a 'favourable conservation status'.

Annex 1/Annex II/Annex IV Habitats Directive

The Plan should also commit to the protection of SAC's, Annex I habitats and Annex II and IV species and their key habitats which occur within and adjoining the Plan area as per the Habitats Directive and Environmental Liability Directive.

Birds Directive

The Plan should include a commitment to protect SPA's, Annex 1 bird species and regularly occurring migratory bird species and their habitats. Also, the protection of wetlands and any wetlands of international importance.

Appropriate Assessment

The Plan should promote the setting up of procedures to ensure compliance with the requirements of Article 6 of the Habitats Directive and should itself be subject to AA. Consideration should be given to the potential for cumulative / in-combination effects associated with other relevant plans / programmes / projects prior to approval for development being granted. The Plan should promote the application of the DoEHLG AA Guidelines and relevant EU Guidance.

Water Framework Directive

Reference is made to the Register of Protected Areas and in particular those relating to biodiversity.

Manager's Opinion on Point 2.2

In relation to EU Protected Habitats and Species in the Plan area, I consider that objective 1.1 in the Draft Plan and the existing policies of the parent document – the County Development Plan – will ensure that all requirements of the EU Habitats Directive will be met in the Shannon Town and Environs Local Area Plan 2012-2018. With regard to Annex 1/Annex II/Annex IV Habitats Directive I consider that this issue has been appropriately addressed in the HDA and SEA Reports of the Draft Plan. These matters are also extensively addressed in Chapter 17 Natural Heritage of the Clare County Development Plan 2011-2017. This is the 'parent' document to the subject local area plan and therefore the policies and objectives contained therein apply to the Shannon Town and Environs area. Objective 1.1 of the draft Local Area Plan ensures that consideration will be given to the potential for cumulative / in-combination effects associated with other relevant plans / programmes / projects prior to approval for development being granted.

2.3 Nationally Designated Habitats and Species

The EPA recommends that the Plan promotes the protection of NHA's, National Parks, Nature Reserves etc.

Manager's Opinion on Point 2.3

In relation to the protection of national designated habitats, species and local biodiversity features, for example NHA's, this issue is addressed in detail in the Chapter 17 of the Clare County Development Plan 2011-2017, in particular in Objectives CDP17.8 through to CDP17.14. The SEA Environmental Report also contains various SEO's to protect non-designated habitats, species and local biodiversity features including rivers, wetlands, hedgerows, individual trees, streams, grassland, coastal areas etc.

2.4 Other Biodiversity considerations

The Plan should promote the inclusion of a policy/objective for phased and coordinated Habitats Mapping (including wetlands) within the Plan area, provision of appropriate buffer zones. The Green Infrastructure section of the Draft Plan is welcomed – it is suggested that the EU Green Infrastructure Guidance be incorporated in the Plan.

Manager's Opinion on Point 2.4

It is an objective of Clare County Council to complete the habitats mapping for the County. This is clearly stated in Objective CDP17.8 of the Clare County Development Plan 2011-2017. This objective also applies to the Shannon Town and Environs plan area. The provision of buffer zones will be a consideration at development management stage when future proposals for development in the Plan area are being assessed. I thank the EPA for their positive comments on the Green Infrastructure section of the Draft Plan.

2.5 Alien Species and Noxious Weeds

(also reference to the European Environmental Agency '10 message' publications, Ramsar 'Wise Use of Wetlands')

The Plan should promote the implementation of measures to control and manage alien/invasive species and noxious weeds within the Plan area. The EPA refer to the NRA document "*Management of Noxious Weeds and Non-Native Plant Species on National Roads*".

Manager's Opinion on Point 2.5

I note the EPA's comments in relation to the control and management of alien/invasive species and noxious weeds. I consider this matter to be adequately addressed in Objective 17.17 'Invasive Species' of the Clare County Development Plan 2011-2017. The Development Plan is the 'parent' document to the draft Shannon Town and Environs Local Area Plan 2012-2018 and therefore the objectives in the Development Plan apply to the local area plan area. The document "*Management of Noxious Weeds and Non-Native Plant Species on National Roads*" has been appropriately referenced in the SEA Environmental Report of the subject local area plan. The above referenced documents are referenced in the parent policy document – the Clare County Development Plan 2011-2017.

3. Air, Noise and Climatic Factors

3.1 Noise

The EPA recommends that the Plan include reference to and, as appropriate, promote the implementation of the Noise Directive and associated national regulations.

Manager's Opinion on Point 3.1

I note the EPA's comments in relation to noise and the Noise Directive. I consider this matter to be adequately addressed in Section 9.3.2.1 'Noise Pollution' and associated Objective CDP9.9 'Noise Pollution' of the Clare County Development Plan 2011-2017. The Development Plan is the 'parent' document to the draft Shannon Town and Environs Local Area Plan 2012-2018 and therefore the objectives in the Development Plan apply to the local area plan area. The Noise Directive has also been appropriately referenced in the SEA Environment Report on the subject local area plan.

3.2 Air and Climatic Factors

The Plan should promote the integration of the implementation of Climate Change at a regional and local level in land use planning within the Plan area. In particular the Plan should refer to "*Ireland's National Climate Strategy 2007-2012*" and the recent '*Air Quality in Ireland 2010*'.

Manager's Opinion on Point 3.2

I note the EPA's comments in relation to climate change. I consider this matter to be adequately addressed in Section 9.3.4 and associated Objective 9.13 'Climate Change' of the Clare County Development Plan 2011-2017. The Development Plan is the 'parent' document to the draft Shannon Town and Environs Local Area Plan 2012-2018 and therefore the objectives in the Development Plan apply to the local area plan area. Climate change has also been addressed in the SEA Environmental Report and the document "*Ireland's National Climate Strategy 2007-2012*" has been appropriately referenced therein.

4. Energy Conservation / Renewable Energy

Consideration should be given in the Plan to the inclusion of an objective in relation to the preparation and implementation of an 'Energy Conservation Strategy' and associated awareness campaign within the Plan area.

Manager's Opinion on Point 4

I consider that chapter 8 – A Low Carbon Strategy – adequately deals with this issue in respect of the Plan area. This is also supplemented by detailed policies in the County Development Plan in chapter 10 which, as the parent policy document, the local area plan is required to be consistent.

5. Landscape Character Assessment

The Plan should promote the protection of designated scenic landscapes, scenic views, scenic routes and landscape features, and should take account of the landscape character adjoining the Plan area. The EPA recommends that consideration should be given to promoting the requirement for a 'Visual Impact Assessment' for proposed developments that have the potential to impact adversely on significant landscape features within the Plan area. The Plan should also promote the recognition of visual linkages between established landmarks and landscape features and views which should

be taken into account when land is being zoned and when development proposals are being assessed.

Manager's Opinion on Point 5

I note the EPA's comments in relation to the promotion of the requirement for Visual Impact Assessments where developments have the potential to impact on significant landscape features. I consider this matter to be adequately addressed in Section 16.4.5 of the Clare County Development Plan 2011-2017. The Development Plan is the 'parent' document to the draft Local Area Plan 2012-2018 and therefore the objectives in the Development Plan apply to the subject local area plan. In relation to visual linkages between landmarks and landscape features and views, Clare County Council recognises the importance of this issue. The Landscape Character Assessment carried out in County Clare takes account of the importance of views to and from different landscapes and seascapes. The Clare County Development Plan contains an objective promoting the use of the Landscape Character Assessment in the management, enhancement and promotion of landscapes in the County (Objective CDP16.1). Furthermore, the County Development Plan contains an objective to ensure that development proposals in areas that are identified as scenic routes take account of their impact on the important views (CDP Objective 16.6). Given that the Clare County Development Plan 2011-2017 is the 'parent' document to the draft Shannon Town and Environs Local Area Plan 2012-2018, these objectives also apply to the subject Plan area. In relation to the consideration of visual links in the assessment of individual planning applications, I would like to give assurance that this matter is always to the fore in the assessment of planning applications in the Shannon Town and Environs area. Any proposed development will be required to integrate into the existing townscape and have regard to the nature and character of the existing settlement as part of the Development Management process.

6. Human Health / Quality of Life

The Plan should ensure provision of adequate and appropriate infrastructure and to serve both the existing community and likely future predicted increases in population within the Plan area. Reference is also made to the potential for applying quality of life indices.

Manager's Opinion on Point 6

I consider that the above issues as they pertain to the Plan area have been adequately addressed in the accompanying SEA.

7. Transportation

The proposal for a walking/cycling strategy is welcomed. It is stated that this should not conflict with the overall conservation objectives of adjoining Natura 2000 sites.

Manager's Opinion on Point 7

I note the EPA's comments in this regard and I consider that the HDA process will ensure that the walking / cycling strategy is implemented taking full account of all environmental constraints within the Plan area, including the existing Natura 2000 sites. Objective 1.1 of the Draft Plan makes provision for the same.

8. Tourism

The Plan should promote appropriate long term sustainable planning for tourism in Shannon. There may be merits in considering the promotion of the preparation of an Integrated Sustainable Regional Tourism Strategy for the region in associated with adjacent local authorities.

Manager's Opinion on Point 8

I acknowledge the issues raised in relation to Tourism in the Shannon Town and Environs area. I consider that Chapter 12 (Tourism) of the Clare County Development Plan 2011-2017, which addresses tourism development at both County and Sub-County level, suitably addresses these issues and plans for the future of the tourism industry in Shannon Town and Environs.

9. Infrastructure Planning

The EPA consider that the Plan should promote the provision of adequate and appropriate wastewater treatment, water supply, surface and storm water drainage, transport, waste management, community services and amenities etc.

on a planned and phased basis to address any current problems and/or deficits and to reflect predicted increases in population during the life of the Plan. The Plan should promote the development of traffic management measures to reduce the potential for traffic congestion and associated vehicular emissions. In particular, the preparation of Integrated Traffic Management Plans for existing areas and proposed new urban developments. They should address the short, medium and long term traffic management requirements within the Plan area.

Manager's Opinion on Point 9

Clare County Council fully supports sustainable infrastructure planning in all settlements and communities. Adherence to government guidelines will enable the sustainable provision of adequate and appropriate wastewater treatment, water supply, surface and storm water drainage, transport, waste management, community services and amenities etc. without adversely impacting the environment. The Shannon Town and Environs LAP process, including the SEA Environment Report, has taken cognisance of seasonal traffic related pressures in determining zonings in individual settlements. Integrated Traffic Management Plans will be encouraged where appropriate.

10. Waste Management

The Plan should promote the integration of land use zoning and development to existing and planned availability of waste infrastructure and capacity. Priority should be given to the provision of adequate and appropriate waste related infrastructure in advance of development.

Manager's Opinion on Point 10

The LAP process, including the SEA, has taken cognisance of existing and planned availability of waste infrastructure and capacity.

11. Environmental Impact Assessment

The Plan should highlight the fact that under EIA and Planning and Development Regulations certain projects that may arise during the implementation of the Plan may require an Environmental Impact Assessment. There are also requirements with regard to EIA for sub-threshold development. Projects should also be screened with respect to Habitats Directive/Appropriate Assessment.

Manager's Opinion on Point 11

I note the comments of the EPA in relation to Environmental Impact Assessment. This issue is addressed in Section 17.3.5 and Appendix 1, Section A1.4 of the Clare County Development Plan 2011-2017 and, given that the CDP is the 'parent' document to the draft Shannon Town and Environs Local Area Plan 2012-2018, I consider that this issue is satisfactorily addressed. In relation to screening for Habitats Directive/Appropriate Assessment, this matter is addressed in detail in Chapter 17 (Natural Heritage) of the Clare County Development Plan 2011-2017.

12. Strategic Environmental Assessment

Consideration should be given to the inclusion of a specific commitment in the Plan to ensure full compliance with the requirements of *Directive 2011/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment* – the SEA Directive and the associated Planning and Development (Strategic Environment Assessment) Regulations 2004, as amended by S.I. No. 200 and S.I. No. 201 of 2011. The EPA also refers to the DoECLG Circular (PSSP 6/2011) in relation to "*Further Transposition of the EU Directive 2001/42/EC on Strategic Environmental Assessment*" which should also be integrated into the Plan. The EPA reminds Clare County Council that they need to be cognisant of their responsibilities with respect to the SEA Directive and related SEA Regulations.

Manager's Opinion on Point 12

The SEA Environmental Report (Volume 2) is in full compliance with the Directives and regulations listed above.

13. Obligations with Respect to National Plans and Policies and EU

Environmental Legislation

The Plan should refer to Clare County Council's responsibilities and obligations in accordance with all national and EU environmental legislation.

Manager's Opinion on Point 13

Clare County Council is fully aware of its obligations and responsibilities with regard to national and EU environmental legislation. These responsibilities and obligations are dealt with in detail in the Clare County Development Plan 2011-2017 (CDP). Given that the CDP is the 'parent' document to the Draft Shannon Town and Environs Local Area Plan 2012-2018, I do not consider it necessary to reiterate those points in the local area plan.

Manager's Recommendation

In light of the comments made by the EPA in their submission, and my consideration and discussion of those issues above,

<p>I recommend that the following amendments be made to the Draft Shannon Town and Environs Local Area Plan 2012-2018: I recommend that the recent EU Guidance '<i>Green Infrastructure and Territorial Cohesion</i>' be referenced in chapter 11. I recommend that an additional objective be included as part (b) and (c) in section 12.3.7 Objective 12.7 of the Draft Plan stating that the Council will: B) facilitate the maintenance and improvement of the existing seawall embankments as necessary. C) facilitate the implementation of the CFRAMS for Shannon when complete. I also recommend that the associated SEA Environmental Report (and Non- Technical Summary) be amended accordingly, taking account of the comments made in the Manager's Opinion above</p>	
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Appendix E – Strategic Environmental Objectives

The Strategic Environmental Objectives for the Shannon Town & Environs Local Area Plan LAP 2012-2018 were developed in accordance with the Mid West Regional Planning Guidelines 2010-2022 and the Clare County Development Plan 2011-2017*.

Env. Parameter	ST&E LAP SEA 2012-2018	CCDP SEA 2011-2017	RPGs SEA 2010-2022
Population, Human Health & Quality of Life	<p>P1 – Protect, enhance and improve people’s quality of life based on high quality residential, community, educational, working and recreational environments and on sustainable travel patterns.</p> <p>P2 - To protect human health from hazards or nuisances arising from exposure to incompatible land uses/developments</p> <p>P3 - Implementation and enforcement of the County Litter Management Plan 2009-2012 and any subsequent plans.</p> <p>P4 - Adhere to the County Emergency Plan and other objectives of relevance to human health.</p> <p>P5 - Provision of green spaces for amenity</p>	<p>PHH1 Improve people’s quality of life based on high quality living environments, working and recreational facilities</p> <p>PHH2 To protect human health from hazards or nuisances arising from exposure to incompatible landuses/developments</p> <p>PHH3 Implementation of the County Litter Management Plan 2009-2012 and any subsequent plans.</p> <p>PHH4 Adhere to the County Emergency Plan and other objectives of relevance to human health.</p> <p>PHH5 Provision of green spaces for amenity</p>	<p>Q1. The enhancement of quality of life for the population in the context of better transport facilities, recreational amenities and social and educational facilities</p> <p>S1. The maintenance and enhancement of public health and safety in the context of relevant environmentally related factors</p> <p>Q1. The enhancement of quality of life for the population in the context of better transport facilities, recreational amenities and social and educational facilities</p>
Biodiversity	<p>B1 – Protect, conserve and avoid loss of diversity and integrity of the broad range of habitats, species and wildlife corridors (non-designated sites) within the Shannon Plan area.</p> <p>B2 - Conserve and protect, or maintain and restore Natura 2000 sites and the Natura 2000 Network designated under Art. 6 of the Habitats Directive</p> <p>B3 – Conserve and protect other sites of nature conservation</p>	<p>B1 Conserve, protect and avoid loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites.</p> <p>B2 To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites.</p> <p>B3 Protect and enhance Natura 2000 sites (SACs &</p>	<p>E1. The protection of Natura 2000 sites in the context of the potential impact of a range of development types</p> <p>E2. The protection and improvement of other habitats</p> <p>E1. The protection of Natura 2000</p>

Env. Parameter	ST&E LAP SEA 2012-2018	CCDP SEA 2011-2017	RPGs SEA 2010-2022
	<p>including NHAs, pNHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries.</p> <p>B4 - Conserve and protect annexed and other protected species</p> <p>B5 – Protect the inland aquatic environment.</p> <p>B6 – Meet the requirements of the WFD and the RBMP</p> <p>B7 – Protect habitats (terrestrial and aquatic) from invasive species.</p>	<p>SPAs) under Art 6. of the Habitats Directive</p> <p>B4 Conserve and protect and avoid loss of diversity and integrity of non-designated habitats, geological features, species or their sustaining resources in non-designated ecological sites.</p> <p>B5 To sustain, enhance and promote the sustainable management of habitat networks or where relevant prevent the loss of ecological corridors, networks or parts there of which provide significant connectivity between areas of local biodiversity.</p> <p>B6 Designate Geological Sites of Importance as NHAs or CGSs</p> <p>B7 Meet the requirement of the WFD and RBMP</p> <p>B8 Provision of riparian zones for developments close to water</p> <p>B9 Protect habitats (terrestrial and aquatic) from invasive spp.</p>	<p>sites in the context of the potential impact of a range of development types</p> <p>E2. The protection and improvement of other habitats</p> <p>E2. The protection and improvement of other habitats</p> <p>P1. The protection of sites of the Freshwater Pearl but that may be impacted on by activities within the Region</p> <p>E2. The protection and improvement of other habitats</p>
	B8 - Protect the marine environment.		
	B9 - Conservation of Wetlands and their use and resources		
	B10 - Promote Integrated Coastal Zone Management.		
Soil & Geology	S1 – Give preference to the use of derelict, disused and infill sites, rather than Greenfield sites.	SG2 Retain and conserve areas of natural soil profile with its constituent soil, flora and fauna (wherever practical) by preserving undisturbed soil	

Env. Parameter	ST&E LAP SEA 2012-2018	CCDP SEA 2011-2017	RPGs SEA 2010-2022
	<p>S2 – Protect, improve and maintain the quality of soils.</p> <p>S3 – Minimise the consumption of non-renewable deposits on site.</p> <p>S4 - Implement aquifer protection plans.</p>	<p>profiles in areas to be used for open space and planting.</p> <p>SG1 Maximise the sustainable development/re-use of brownfield sites & the use of the existing built environment & reduce developing greenfield sites.</p> <p>SG3 Implement aquifer protection plans.</p> <p>SG4 Conserve, protect and maintain the diversity and integrity of floodplains in the County, Maintain, free from development existing flood plains within the County</p> <p>SG5 Identify any unregulated quarries, landfill sites or historical contamination sites in the County</p> <p>SG6 Minimise the amount of waste to landfill</p>	<p>B1. The maximisation of the use of brownfield land and the minimisation of the use of greenfield land.</p> <p>E2. The protection and improvement of other habitats</p>
	<p>S5 - Minimise the amount of waste to landfill from site.</p> <p>S6 - Conserve, protect and avoid loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites.</p>		
Water	<p>W1 – Protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystem (quality, level, flow).</p> <p>W2 - Maintain or improve the quality of surface and groundwater water (including estuarine) to status objectives as set out in the Water Framework Directive (WFD), SRBM & POMS.</p> <p>W3 – Implement appropriate sustainable drainage systems (SuDS) in any future development in the Shannon Area.</p> <p>W4 – Reduce the impact of polluting substances to all waters.</p>	<p>W01 Maintain or improve the quality of surface water (including coastal and estuarine) to status objectives as set out in the Water Framework Directive (WFD), SRBM & POMS</p> <p>W02 Maintain or improve the Biotic Quality Rating (Q Value) of surface waters (including coastal and estuarine)</p> <p>W03 Implement appropriate sustainable drainage systems (SuDS) in the County</p> <p>W04 Knowledge of developments contributions to surface water (including coastal and estuarine)</p>	<p>W1. The maintenance and improvement of surface water quality</p>

Env. Parameter	ST&E LAP SEA 2012-2018	CCDP SEA 2011-2017	RPGs SEA 2010-2022
	<p>W5 – prevent pollution and contamination of ground water by adhering to aquifer protection plans.</p> <p>W6 -. Maintain and improve the quality of drinking water supplies</p> <p>W7 - Reduce the impact of polluting substances to all waters.</p> <p>W8 - Promote sustainable water use based on a long-term protection of available water resources</p> <p>W9 -Upgrade infrastructure to meet future water supply needs</p>	<p>quantities</p> <p>W05 Promote an integrated catchment management initiative (Surface water management) to ensure that there are no deteriorating quality trends in the catchment area.</p> <p>W06 Prevent pollution and contamination of ground water by adhering to aquifer protection plans</p> <p>W07 Maintain and improve the quality of drinking water supplies</p> <p>MA5 Serve development within the County with drinking water that is both wholesome and Clean</p> <p>W08 Promote sustainable water use & water conservation based on long-term protection of resources</p> <p>W09 Upgrade infrastructure to meet future water supply needs</p> <p>W10 Facilitate the safe and controlled disposal of surface waters to approved receptors</p> <p>W11 Prevent pollution and contamination of bathing water</p> <p>W12 Maintain blue flag status on beaches</p> <p>W13 Pollution Reduction Plans to prevent pollution and contamination of shellfish waters</p> <p>W14 Reduce risk of flooding through avoidance of development in flood plains</p> <p>W15 Provide provision of flood relief through</p>	<p>W2. The maintenance and improvement of groundwater quality</p> <p>W3. The maintenance and improvement of drinking water quality</p> <p>W5. The adoption and implementation of water conservation and sustainable water management regimes</p> <p>W4. The maintenance and improvement of bathing water quality</p> <p>P1. The protection of sites of the Freshwater Pearl but that may be impacted on by activities within the Region</p> <p>F1. The appropriate management of flood risk, the reduction of the risk to development arising from flooding and the making of provision for flood plains.</p>

Env. Parameter	ST&E LAP SEA 2012-2018	CCDP SEA 2011-2017	RPGs SEA 2010-2022
		<p>management of flood risk and living with floods rather than engineered flood solutions W16 Prevention of interference with inland water morphology by developments/landuse changes W17 To ensure that the necessary attenuation measures are implemented within the County. W18 – Promote Integrated Coastal Zone Management.</p>	
	W10 - Promote Integrated Coastal Zone Management.		
	W11 --Reduce risk of flooding through avoidance of development in flood plains or in areas at risk of flooding		
	W12 - Provide provision of flood relief through management of flood risk and living with floods rather than engineered flood solutions.		
Air/Climate	<p>C1 – Minimise all forms of air pollution and maintain/improve ambient air quality.</p> <p>C2 – Minimise emissions of greenhouse gases and contribute to a reduction and avoidance of human-induced global climate change.</p> <p>C3 - Reduce car dependency within the plan area by way of, inter alia, encouraging modal change from car to more sustainable forms of transport and encouraging development which will not be dependent on private transport</p>	<p>AC1 Maintain and improve ambient air quality</p> <p>AC2 Minimise GHG emissions to meet International and National legislation/standards</p> <p>AC3 To reduce car dependency within the County by way of, inter alia, encouraging modal change from car to more sustainable forms of public transport and encouraging development which will not be dependent on private transport</p> <p>AC4 Provide an upgraded/improved public transport network.</p>	<p>A1. The maintenance and improvement of air quality</p> <p>G1. The reduction in the generation of greenhouse gases through the process of management of development location, maximizing the use of public transport, minimising traffic congestion and reducing commuting needs in scale and distance</p> <p>G1. The reduction in the generation of greenhouse gases through the process of management of development location, maximizing the use of public transport, minimising traffic congestion and reducing</p>

Env. Parameter	ST&E LAP SEA 2012-2018	CCDP SEA 2011-2017	RPGs SEA 2010-2022
		<p>AC5 Encourage and implement Building Energy Regulation</p> <p>AC6 Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives</p>	<p>commuting needs in scale and distance</p>
<p>Material Assets Transport</p>	<p>T1 – Maximise sustainable modes of transport and encourage use of walkways/cycle paths as alternative routes to school, work, shops</p> <p>T2 - Provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety</p>	<p>MA01 Development of a sustainable transportation infrastructure which reduces the need for travel and journey length</p>	<p>G1. The reduction in the generation of greenhouse gases through the process of management of development location, maximizing the use of public transport, minimising traffic congestion and reducing commuting needs in scale and distance</p>
<p>Material Assets Transport</p>	<p>T3 – Provide an upgraded/improved public transport network.</p>	<p>MA02 Reduce car dependency within the County by way of, inter alia, encouraging modal change from car to more sustainable forms of public transport and encouraging development which will not be dependent on private transport</p>	
<p>Material Assets - Waste Material Assets - Waste</p>	<p>T4 - Promote, encourage and implement a Cycle Strategy for Shannon in association with an accessible walking network</p> <p>WA1 – Implement the waste pyramid and encourage reuse/recycling of material wherever possible.</p>	<p>MA03 Minimise waste production and pollution and introduce sustainable waste management practices</p> <p>AC6 Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives</p> <p>MA04 Promote the production and reuse of aggregates from C&D waste and their use in construction projects in the region</p>	
<p>Material Assets - Water Supply</p>	<p>WS1 - To ensure that drinking water supplies are both wholesome and clean and free of contamination.</p>	<p>MA05 Serve development within the County with drinking water that is both wholesome and Clean</p>	

Env. Parameter	ST&E LAP SEA 2012-2018	CCDP SEA 2011-2017	RPGs SEA 2010-2022
Material Assets – Water Supply	WS2 - Improve efficiency in distribution of potable water to the population.	MA06 Improve efficiency in the operation and demand management of the water supply infrastructure, promote water conservation and to reduce the overall level of water losses in the public water supply.	
Material Assets – Water Supply	WS3 - To promote long-term protection of available water resources through sustainable water use.	MA06 Improve efficiency in the operation and demand management of the water supply infrastructure, promote water conservation and to reduce the overall level of water losses in the public water supply.	W5. The adoption and implementation of water conservation and sustainable water management regimes
	WS4 - Upgrade infrastructure to meet future water supply needs		
Material Assets – Waste Water	WW1 - To ensure that all zoned lands (existing and proposed) are connected to the public sewer network ensuring treatment of wastewater prior to discharge.	MA07 Serve new development with appropriate waste water treatment	
Material Assets – Waste Water	WW2 - Upgrade existing wastewater treatment plant infrastructure	MA08 Upgrade existing wastewater treatment plants infrastructure under Water Services Need Programme	
Material Assets – Waste Water	WW3 - Reduce the dependency on individual proprietary wastewater treatment facilities.	MA09 Strive to reduce septic tanks and monitor maintenance of septic tanks	
Material Assets - Renewable Energy	RE1 - Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives RE2 - Promotion of energy conservation across all sectors including the development of low carbon commerce and buildings.	AC6 Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives MA10 Promotion renewable energy systems. Promote R&D in renewable energy technology MA11 Ensure that a safe and efficient infrastructure is available for the transmission, distribution and storage of energy. Promote the development of infrastructure that will enable the development of indigenous & renewable energy resources MA12 Promotion of energy conservation across all sectors. Promote the development of low carbon commerce and buildings.	
Cultural Heritage	CH1 - Protect and conserve the cultural heritage including the built environment and settings; archaeological (recorded and unrecorded monuments), architectural (Protected	CH01 Promote best practice in heritage conservation and management CH02 Promote cultural heritage as Amenity	B1. The maximisation of the use of brownfield land and the minimisation of the use of greenfield land

Env. Parameter	ST&E LAP SEA 2012-2018	CCDP SEA 2011-2017	RPGs SEA 2010-2022
	<p>Structures, Architectural Conservation Areas, vernacular buildings, materials and urban fabric) and manmade landscape features (e.g. field walls, footpaths, gate piers etc.).</p> <p>CH2 – Conserve historic fabric of urban and rural settlements.</p> <p>CH3 – To ensure the restoration and re-use of existing uninhabited and derelict structures where possible opposed to demolition and new build (to promote sustainability and reduce landfill).</p>	<p>CH03 Identification and protection of individual sites and complexes</p> <p>CH04 Identification and protection of archaeological features and their settings</p>	
Landscape	<p>L1 – Conserve, protect and enhance valued natural landscapes and features including those of geological and aesthetic value.</p> <p>L2 – Protect designated landscapes and scenic views, routes and landscape features of local value</p> <p>L3 - Conserve and protect cultural landscapes including archaeological and architectural.</p> <p>L4 - Minimise visual impacts through appropriate design, assessment and siting</p> <hr/> <p>L5 - Maintain and Enhance landscape quality within the plan area</p>	<p>L01 Protect designated landscapes and scenic views, routes and landscape features of local value</p> <p>L02 Designate and protect urban (townscapes/streetscapes quality) and industrial views & prospects.</p> <p>L03 Where feasible incorporate Sustainable Urban Design (SuDs) in the landscape design.</p> <p>L04 Conserve and enhance historic/cultural landscapes and features</p> <p>L05 Conserve and enhance aesthetic landscapes and features</p> <p>L06 Minimise visual impacts through appropriate design and siting</p>	<p>L1. The maintenance and enhancement of landscape quality both within and outside the Region</p>

- * Additional SEOs to Local Area Plan made after the adoption of the CCDP 2011-2017 will be considered at monitoring/review stage of CCDP ER

Appendix F – Interrelationship between Shannon Town & Environs Local Area Plan SEOs and Clare County Development Plan 2011-2017 Objectives

		ST&E LAP SEA 2012-2018	CDP Objectives
Population 	P1	Protect, enhance and improve people's quality of life based on high quality residential, community, educational, working and recreational environments and on sustainable travel patterns.	
	P2	To protect human health from hazards or nuisances arising from exposure to incompatible land uses/developments	
	P3	Implementation and enforcement of the County Litter Management Plan 2009-2012 and any subsequent plans.	CDP 9.6: Litter Management
	P4	Adhere to the County Emergency Plan and other objectives of relevance to human health.	
	P5	Provision of green spaces for amenity	
Biodiversity 	B1	Protect, conserve and avoid loss of diversity and integrity of the broad range of habitats, species and wildlife corridors (undesignated) within the Shannon Plan area.	CDP 6.16: Shannon Estuary CDP 14.1: Integrated Development of Shannon Estuary CDP 14.9: Natural and Landscape Heritage CDP 17.1: Guiding Policy CDP 17.2: Conservation and Environmental Management
	B2	Conserve and protect, or maintain and restore Natura 2000 sites and the Natura 2000 Network designated under Art. 6 of the Habitats Directive.	CDP 6.16: Shannon Estuary CDP 14.1: Integrated Development of Shannon Estuary
	B3	Conserve and protect other sites of nature conservation including NHAs, pNHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries.	CDP 17.3: Natura 2000 Sites CDPO 17.4: Requirement for Appropriate Assessment under the Habitats Directive (1992)
	B4	Conserve and protect annexed and other protected species	CDP 17.5: Natural Heritage Areas (NHAs) & Proposed Natural Heritage Areas (pNHAs) CDP 17.6: Geological Heritage Sites
	B5	Protect the inland aquatic environment	CDP 19.9: Biodiversity CDP 17.8: Non-designated Sites CDP 17.10: Inland Waters CDP 17.11: Peatlands CDP 17.13: Grasslands' CDP 17.12: Woodlands, Trees & Hedgerows
	B6	Meet the requirements of the WFD and the RBMP	CDP 17.14: Limestone Habitats CDP 17.17: Invasive Species CDP 17.19: Natural Heritage and Infrastructure Schemes
	B7	Protect habitats (terrestrial and aquatic) from invasive species.	CDP 17.18: Mitigation Measures from Habitats Directive and Strategic Environmental Assessment
	B8	Protect the marine environment.	CDP 17.20: Ecologically Protected Areas
	B9	Conservation of Wetlands and their use and resources	
	B10	Promote Integrated Coastal Zone Management.	
Soil & Geology 	S1	Give preference to the use of derelict, disused and infill sites, rather than Greenfield sites.	CDP 6.15 Reuse of Brownfield Sites CDP 20.2: Derelict Sites and Dangerous Structures CDP 20.3: Promoting Regeneration and Renewal
	S2	Protect, improve and maintain the quality of soils.	
	S3	Minimise the consumption of non-renewable deposits on site	CDP 13.10: Minerals, Mining and Quarrying
	S4	Implement aquifer protection plans.	
	S5	Minimise the amount of waste to landfill from site.	
	S6	Conserve, protect and avoid loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites.	
Water 	W1	Protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystem (quality, level, flow).	
	W2	Maintain or improve the quality of surface water (including estuarine) to status objectives as set out in the Water Framework Directive (WFD), SRBM & POMS.	CDP 8.3: Protection of Surface Waters CDP 8.11: Storm Water Management CDP 9.1: Water Framework Directive
	W3	Implement appropriate sustainable drainage systems (SuDS) in any future development in the Shannon Area.	CDP 8.12: Sustainable Drainage Systems
	W4	Reduce the impact of polluting substances to all waters	CDP 8.2: Protection of Water Resources CDP 9.2: Protection of Water Resources
	W5	Prevent pollution and contamination of ground water by adhering to aquifer protection plans.	CDP 8.1: Protection of Groundwater Resources

		ST&E LAP SEA 2012-2018	CDP Objectives
	W6	Maintain and improve the quality of drinking water supplies	
	W7	Reduce the impact of polluting substances to all waters.	
	W8	Promote sustainable water use based on a long-term protection of available water resources	
	W9	Upgrade infrastructure to meet future water supply needs	
	W10	Promote Integrated Coastal Zone Management.	
	W11	Reduce risk of flooding through avoidance of development in flood plains or in areas at risk of flooding	CDP 9.15: Strategic Flood Risk Assessment CDP 9.17: Monitoring CDP 14.12: Flood Risk Management CDP 21.3: Flood Risk Assessment
	W12	Provide provision of flood relief through management of flood risk and living with floods rather than engineered flood solutions.	CDP 15.8: Integrated Coastal Zone Management CDP 15.11: Coastal Erosion and Flooding
Air & Climate 	C1	Minimise all forms of air pollution and maintain/improve ambient air quality.	CDP 9.10 Air Pollution
	C2	Minimise emissions of greenhouse gases and contribute to a reduction and avoidance of human-induced global climate change.	CDP 9.12: Climate Change
	C3	Reduce car dependency within the plan area by way of, inter alia, encouraging modal change from car to more sustainable forms of transport and encouraging development which will not be dependent on private transport	
Transport 	T1	Maximise sustainable modes of transport and encourage use of walkways/cycle paths as alternative routes to school, work, shops	CDP 10.14: Electric Powered Vehicles CDP 11.18: Cycling & Walking CDP 11.21: Ports, Jetties, Harbours, Quays and Piers
	T2	Provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety	CDP 11.3: Service Rest Areas CDP 11.5: Direct Access onto National Routes CDP 11.1: MWASP CDP 11.2: Motorway, National Primary & Secondary Roads CDP 11.4: Strategic Development of National Road Network CDP 11.6: Strategic Regional Roads CDP 11.7: Development of Regional Roads CDP 11.15: Shannon Airport CDP 11.17: Access CDP 13.1: Rural Transport
	T3	Provide an upgraded/improved public transport network.	CDP 11.9: Rail Network CDP 11.11: Shannon Rail Link CDP 11.12: Bus Services CDP 11.13: Bus Facilities CDP 11.14: Community Transport
	T4	Promote, encourage and implement a Cycle Strategy for Shannon in association with an accessible walking network	CDP 11.18 Cycling & Walking
Waste	WA1	Implement the waste pyramid and encourage reuse/recycling of material wherever possible.	CDP 9.3: Waste Management CDP 9.4: Re-use and Recycling of Waste CDP 9.5: Household Waste CDP 9.6: Litter Management CDP 9.7: Construction and Demolition Waste CDP 9.8: Agricultural Waste
Water Supply 	WS1	To ensure that drinking water supplies are both wholesome and clean and free of contamination.	CDP 8.4: Water Supply
	WS2	Improve efficiency in distribution of potable water to the population.	CDP 8.5: Water Conservation
	WS3	To promote long-term protection of available water resources through sustainable water use.	CDP 8.6: Water Abstraction
	WS4	Upgrade infrastructure to meet future water supply needs	
	WW1	To ensure that all zoned lands (existing and proposed) are connected to the public sewer network ensuring treatment of wastewater prior to discharge.	
	WW2	Upgrade existing wastewater treatment plant infrastructure	
	WW3	Reduce the dependency on individual proprietary wastewater treatment facilities.	
Renewable Energy	RE1	Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives	CDP 10.2: Renewable Energy CDP 10.3: Wind Energy Development and Residential Amenity CDP 6.7: Energy Supply CDP 10.7: Waste to Energy/ Combined Heat and Power

		ST&E LAP SEA 2012-2018	CDP Objectives
	RE2	Promotion of energy conservation across all sectors including the development of low carbon commerce and buildings.	CDP 10.1: Development of Low Carbon Economy CDP 10.4: Wave/Tidal Energy CDP 10.5: Hydroelectric Energy CDP 10.6 Bioenergy CDP 10.7: Waste to Energy/ Combined Heat and Power CDP 10.8: Energy Security CDP 10.9: Electricity Network CDP 10.12: Energy Storage CDP 10.13: Energy Efficiency CDP 10.14: Electric Powered Vehicles CDP 10.15: Telecommunications Infrastructure CDP 13.9: Bioenergy CDP 13.11: Wind Energy Development CDP 14.5: Renewable Energy on Shannon Estuary CDP 19.2: Design & Built Environment CDP 19.3: Materials & Design
Cultural Heritage 	CH1	Protect and conserve the cultural heritage including the built environment and settings; archaeological (recorded and un recorded monuments), architectural (Protected Structures, Architectural Conservation Areas, vernacular buildings, materials and urban fabric) and manmade landscape features (e.g. field walls, footpaths, gate piers etc.).	CDP 12.7: Arts, Heritage and Cultural Tourism CDP 18.1: Protected Structures CDP 18.2: Architectural Conservation Areas CDP 18.3: Architectural Heritage of General Interest CDP 18.4: Proposed Works to Buildings and Protected Species CDP 18.5: Sites, Features and Objects of Archaeological Interest CDP 18.7: Zones of Archaeological Protection CDP 18.8: Archaeological and Infrastructure Schemes CDP 18.9: Underwater Archaeology CDP 18.10: Industrial Archaeology CDP 18.11: Raising Archaeological Awareness
	CH2	Conserve historic fabric of urban and rural settlements.	
	CH3	To ensure the restoration and re-use of existing uninhabited and derelict structures where possible opposed to demolition and new build (to promote sustainability and reduce landfill).	
Landscape 	L1	Conserve, protect and enhance valued natural landscapes and features including those of geological and aesthetic value.	CDP 14.9: Natural and Landscape Heritage CDP 16.1: Landscape Character Assessment CDP 16.2: Settled Landscape CDP 16.3: Western Corridor Working Landscape CDP 16.4: Shannon Estuary Working Landscape CDP 16.5: Heritage Landscape
	L2	Protect designated landscapes and scenic views, routes and landscape features of local value	CDP 16.6: Scenic Routes
	L3	Conserve and protect cultural landscapes including archaeological and architectural.	
	L4	Minimise visual impacts through appropriate design, assessment and siting	CDP 14.9: Natural and Landscape Heritage
	L5	Maintain and Enhance landscape quality within the plan area	

Appendix G – Zoning Assessment Matrix

SETTLEMENT MATRIX EXPLANATORY NOTES;

The results of the assessment are tabulated and the following broad scale rating system is used to indicate environmental impacts.

-  - Positive Impact – A change which improves the quality of the environment.
-  - Negative impact – A change which reduces or lessens the quality of the environment.
-  - Uncertain – The scale and nature of the impact, either positive or negative cannot be determined at this stage.

When the assessment is 'blank' a finding of a 'Neutral Impact' (i.e. a change which does not affect the quality of the environment) is assumed.



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