

Comhairle Chontae na Gaillimhe
Galway County Council



**Strategic Environmental
Assessment Final
Environmental Report of
Draft Loughrea
Local Area Plan 2012 – 2018
Non-Technical Summary**
October 2012

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Chapter One: Introduction

1.1 Introduction

Galway County Council is currently preparing a Local Area Plan (LAP) for Loughrea 2012-2018. This LAP is a land use plan and overall strategy for the development of the town over the period 2012-2018. The successful implementation of the Plan will have a positive impact on Loughrea ensuring that it develops in a sustainable manner, and will also complement the implementation of the Galway County Development Plan 2009-2015. ***The Loughrea LAP was adopted on 24th September 2012 by Galway County Council and this is the Final Non- Technical Summary (NTS) of the SEA Environmental Report. It is accompanied by the Final SEA ER, SEA Statement and a Natura Impact Report (NIR). New text in the NTS is shown in bold and italic font, and is accompanied by a footnote when additional text was inserted following the consultation processes.***

1.2 Strategic Environmental Assessment (SEA) and this Environmental Report

SEA is a key process that promotes sustainable development and highlights significant environmental issues within the planning regime. The Environmental Report forms part of the SEA on the Draft LAP. The purpose of the Environmental Report is to identify, describe, and evaluate the likely significant effects on the environment of implementing the proposed Draft LAP and should be read in conjunction with the Draft LAP itself. The Environmental Report is not the SEA, rather it documents the SEA process and is the key consultation document in the SEA process and facilitates interested parties to comment on the environmental issues associated with the Draft LAP.

1.3 Loughrea LAP area

Loughrea is located in east County Galway, approximately 30km southeast of Galway City and along the R446 regional route, a key strategic road between Dublin and Galway. Loughrea is situated along the northern shore of Lough Rea and derives its name from 'Baile Locha Riach', the 'town of the grey lake'. Loughrea is regarded as dating from 1236, when Loughrea Castle was reputed to have been built by the Anglo-Norman, Richard de Burgo. The town's Main Street is the primary street within the town with seven small side streets connecting to Barrack Street to the south.

There are significant employment opportunities within the town, which has a viable commercial core that retains its historical character. This, together with its location close to the M6 motorway and proximity to Galway City has meant that Loughrea is a desirable place to live. Recent residential developments have been located primarily to the northeast and northwest of the town, close to the new bypass road and town boundary. Commercial development has similarly developed in these areas with a large commercial area established to the east of the town. The lake of Loughrea is designated as a Special Protection Area (SPA, site code: 004134), cSpecial Area of Conservation (cSAC, site code: 000304), and proposed Natural Heritage Area (pNHA), reflecting the important ecological resource present in the town (part of the Loughrea SPA and

cSAC is outside the town boundary). Figure 1a shows the geographical location of Loughrea and presents the town boundary, water resources and transport routes.

1.4 Structure of the draft Loughrea LAP.

The draft LAP is structured around a range of policies and supporting objectives that aim to promote the sustainable development of Loughrea over the plan period. It is underpinned by the following vision.

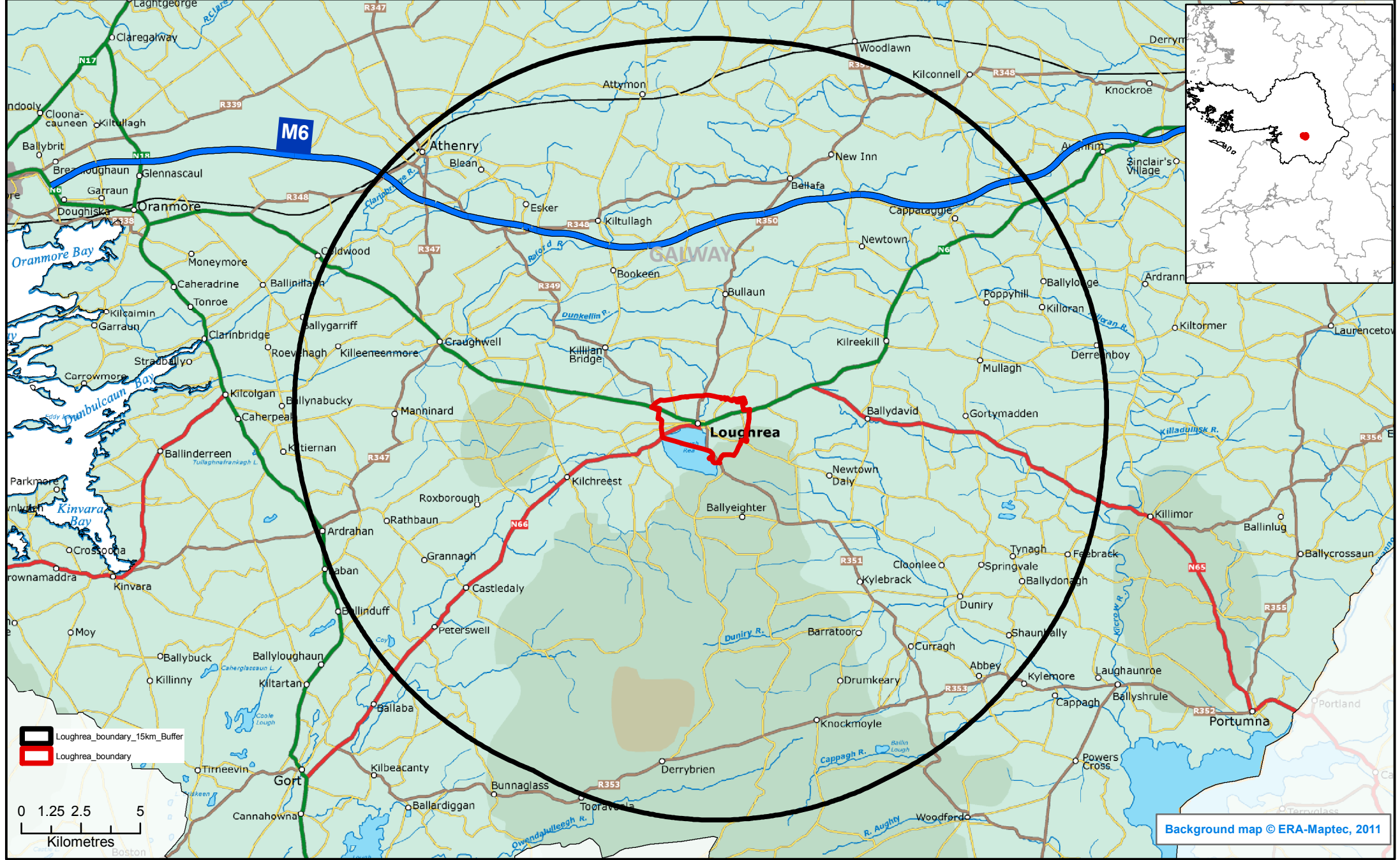
Strategic Vision:

Loughrea will be a sustainable, self-sufficient, vibrant, socially inclusive and innovative growth centre within the County, protecting and enhancing its attractive medieval character and natural environment, supporting an educated workforce, providing a range of supporting services/facilities/ amenities and with a high quality of life for the local community. This will be delivered through a managed and phased development strategy on appropriately zoned and serviced lands in a manner that is balanced and sustainable for Loughrea and the immediate environs that it serves.

Thereafter, a range of policies and objectives are provided under the following headings:

- Development Strategy
- Land Use Management
- Residential Development
- Social and Community Development
- Economic Development
- Transportation Infrastructure
- Utility and Environmental Infrastructure
- Urban Design and Landscape
- Built Heritage and Cultural Heritage
- Natural Heritage and Biodiversity

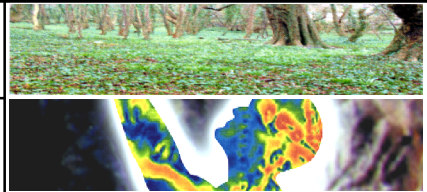
A landuse zoning map, a strategic objectives map, supporting environmental maps, and a land use matrix provide additional detail to the above policies and objectives.



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FIGURE 1a: LOCATION

Galway County Council Loughrea Local Area Plan SEA



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Chapter Two: Methodology

2.1 Screening for SEA

The SEA Directive is implemented through a number of regulations. The SEA Regulations introduced in 2011 have lowered the population thresholds whereby SEA becomes mandatory for a LAP. The 2011 Regulations¹, state that SEA is mandatory for LAPs where a population or target population is over 5,000; where the area covered by the plan is greater than 50 square kilometres, or where the LAP is being prepared for a town and its wider environs.

The County Galway Core Strategy has identified Loughrea as a 'key town' in the settlement hierarchy and is targeted for a further 25% increase in population up to 2015, the timeframe for the validity of the current County Development Plan. In terms of population trends, according to the 2006 Census figures, the population of Loughrea was recorded as 4,532 persons. This represents a population increase of 13% from the previous Census of 2002. The 2011 Preliminary Census data for Loughrea Urban DED (the only DED fully within the town boundary) records a population of 5058. Therefore, the combination of 4,532 persons in the 2006 Census with the target population in the Core Strategy brings the total target population of the town to over 5,000 persons. In addition, the 2011 preliminary Census records 5057 persons within the Loughrea Urban DED. Hence, under the 2011 SEA Regulations, the draft Loughrea LAP is required to undergo a full SEA.

2.2 Consultation

Pre- draft submissions on Loughrea LAP.

A Background Issues Paper was prepared in May 2011 with the aim to promote discussion and consultation on issues affecting the sustainable development of Loughrea. A notice was published on 30th May providing information on the preparation of the LAP and requesting submissions until 1st July 2011. The following table provides information on submissions received over this time period.

Table2a: Pre draft submissions on Loughrea LAP.

Consultee	Issues Raised	Addressed in SEA
NRA, St Martin's House Waterloo Road, Dublin	Compliance with various guidelines Retain capacity of national roads Seek to reduce local trip generation in cards Traffic and transport assessments	Chapter Four and Chapter Seven discusses traffic and transport under Material Assets.
Irish Rural Housing/One Off Ireland Campaign	Detailed submission providing information on environmental impacts associated with urban generated one off rural housing. LAPS are essential components of the settlement planning hierarchy and have a key role to play in regulating development outside of their immediate settlement.	Environmental issues are acknowledge and LAP and all land use zonings, policies and objectives are evaluated in Ch 7, and Annex A.
ESB, c/o John Kehoe, Brady Shipman Martin Dundrum Business Park Dundrum Road	ESB runs and operates depot from Caherwalter. Intends to continue to operate from this site and may extend in the future. Current zoning is residential which does not reflect current use and suggests that zoning be replaced by enterprise zoning.	Noted, and zonings will be assessed through SEA process.

¹ S.I. No. 201 of 2011

Dublin 14		
The West Regional Authority, 1st Floor, Woodquay Court, Woodquay, Galway	Regional Planning Guidelines identify Loughrea as Key Town. Alignment of Core Strategy and Regional Planning guidelines. Population target for Loughrea and residential zonings – current oversupply and requirement to ally with Core Strategy. Consider existing vacant housing units and live planning permissions – availability of services such as water, wastewater, pedestrian, cycling and transport access. SEA and AA should examine likely impact of implementing the LAP on the Natura 2000 network and other environmental receptors	Noted and accepted SEA and AA address likely impacts on Natura 2000 sites, see Chapters Four and Seven of SEA ER.
Sarah Byrne Shared Services ESB	In April 2010 an agreement was signed between the Department of Communications Energy and Natural Resources (DCENR), ESB and a number of motor manufacturers to provide incentives, infrastructure and Electric Vehicles (EV's) to the Irish market. ESB has committed to the rolling out of a pilot national charging infrastructure, including Loughrea. Location and availability of charging points will be a key driver in the uptake of electric vehicles. These will be located in publicly accessible areas such as on-street, retail parks, car parking etc.	Noted. LAP contains a number of policies and objectives in relation to this issue. These are assessed in detail in Annex of the ER.
Tesco c/o DPP	LAP should support Loughrea as self-sufficient town. LAP should ensure sufficient amount of appropriately zoned and located sites to support development of industrial sector in town Such zonings should be focused to the east of Loughrea.	Zonings will be assessed through SEA and HAD process
Yvonne Nolan, DAU, Dept of Arts, Heritage and the Gaeltacht, Newtown Rd Wexford	Requirements of EU Habitats Directive. Information given on the following sites, and request that objectives and policies be developed to support same. area contains the following: _ The Natura 2000 sites, Lough Rea cSAC (site code 000304) and Lough Rea SPA (site code 004134; S.I. 72 of 2010). These are sites of international importance for nature conservation and form part of Ireland's contribution to the Natura 2000 network within the EU	Noted and addressed in SEA.
	SEA ER Biodiversity, flora and fauna should be undertaken by/in conjunction with qualified ecologist and integrated with AA Scope of SEA should include: All sites with nature conservation designations. Available information on habitats and habitat indicator mapping. Available information on rare and protected	Noted and addressed in SEA

	<p>species and their habitats. All watercourses, surface water bodies and associated wetlands including floodplains and flood risk areas. Other sites of high biodiversity value. Local biodiversity areas. Ecological networks, corridors and stepping stones. Generally no lands should be targeted for development without basic information on ecological sensitivities of lands in question including a habitat map.</p>	
<p>Department of Education & Skills Portlaoise Road, Tullamore Co Offaly.</p>	<p>Information provided on calculating primary and post primary provision in an area. Reference to site suitability and guidelines on same. Existing schools should be capable of catering for increase in pupil numbers.</p>	<p>Noted, LAP contains a range of policies and objectives under community facilities. These are assessed through SEA process.</p>
<p>Maura Kelly Stewart Loughrea</p>	<p>Loughrea Raises concerns about traffic associated with schools around Cross Street, Mount Pleasant, An Sruthan and Banogues – concern about accident risk and need to address traffic management in this area</p>	<p>Noted, the draft LAP contains a number of policies and objectives around sustainable transport and traffic and these are assessed through SEA process</p>

2.3 SEA Scoping and Consultation

Following the SEA screening process, a scoping exercise was undertaken. This established the scope and extent of the Environmental Report and facilitated consultation with the designated statutory consultees. Two submissions were received on the scope of the SEA, from the Environmental Protection Agency (EPA), and the Department of Arts, Heritage and the Gaeltacht, both statutory consultees. The environmental issues raised through this scoping process are presented below in *Table 2b*.

Table 2b: Scoping Responses

Consultee	Issues raised	Response
EPA	<p>SEA Scoping Guidance document and SEA Pack provided.</p> <p>Specific Comments to be considered</p> <ul style="list-style-type: none"> - The inclusion of suggested alternative development scenarios in <i>Section 3.1.5 Development Strategy Options</i> is noted. It should be ensured that each development scenario is both reasonable and realistic. In this regard, Scenario 1 should be consistent with the Policies/Objectives of the Regional Planning Guidelines and in particular reflect the Core Strategy requirements. - Prior to selecting a preferred scenario, each alternative scenario should be assessed in a consistent manner against the Environmental Report SEO's. - Consideration should be given to ensuring that the following key environmental aspects, in particular are taken into account in the SEA and Plan. - Ground Water Vulnerability 	<p>Noted and utilised for this SEA methodology.</p> <p>Noted, further information on the consideration of alternatives is given in Chapter Six of this SEA ER. Each Alternative is assessed against the SEOs and the Environmental Sensitivity Map</p> <p>Noted and addressed in Chapter Four Baseline and Chapter Seven Assessment of Effects.</p>

	<p>- Poor Status River Water Quality - Protection of designated Shellfish Areas Reference is made to a number of new and recent SEA and Natural Heritage Regulations</p>	<p>Noted and included in Chapter Three</p>
<p>Department of Arts, Heritage and the Gaeltacht.</p>	<p>Archaeological Heritage Have regard to the following:</p> <ul style="list-style-type: none"> • The European Convention on Protection of the Archaeological Heritage known as the Valletta Convention of 1992. • National Heritage Plan (2002). • 'Framework and Principles for the protection of the archaeological heritage' (1999). <p><i>Relevant Policies and Plans at County Level</i> County Development Plan and Local Area Plans. Drafts of these documents should always be forwarded to this department for comment. The area's archaeological monuments can be identified from the Record of Monuments and Places for County Galway, the Urban Survey for Galway, the National Monuments Service monuments data on www.archaeology.ie. Increased development pressure increases the potential for impact on the archaeological resource. <i>The Development Plan</i> There should be liaison with National Monuments Section on the drafting of the archaeological content of the plan. The plan should address in detail the potential archaeological impacts of any proposed development</p>	<p>Noted and provided in Chapter Three</p> <p>Noted, information will be sourced from the data list provided and discussed in Chapter Four, Baseline. Noted.</p> <p>The various prescribed bodies were formally consulted as part of the pre-draft stage for the Loughrea LAP. GCC Heritage Officer also contacted the National Monuments Service in relation to archaeology for Loughrea and the outcomes from this have been incorporated into Loughrea LAP in the relevant policies and objectives.</p>

2.4 Baseline Data

Baseline data is essential to establish the current state of the environment and helps to identify, evaluate, and monitor the effects of a plan. Baseline data was collected from current sources for each environmental parameter identified in the SEA Regulations. A Geographic Information System (GIS) was established to map environmental opportunities and constraints associated with this study.

2.5 Flood Risk Assessment

The Planning System and Flood Risk Management Guidelines (DoEHLG 2009) provide a methodology to incorporate flood risk identification and management into land use strategies. It also requires the alignment and integration of flood risk into the SEA process. The core objectives of the Guidelines are to:

- Avoid inappropriate development in areas at risk of flooding;
- Avoid new developments increasing flood risk elsewhere, including that which may arise from surface water run-off;
- Ensure effective management of residual risks for development permitted in floodplains;
- Avoid unnecessary restriction of national, regional or local economic and social growth;
- Improve the understanding of flood risk among relevant stakeholders; and
- Ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management.

Further information on the SFRA and results on Loughrea are provided in Chapter Four, Baseline Environment, and assessed in Chapter 7 Assessment of Effects in the SEA ER.

2.6 Fieldwork

The consultants and area planners undertook a walkover of the functional area of Loughrea on 11th January 2012. The purpose of this fieldwork was to assess the existing habitats and environmental sensitivities within the plan area and gain an understanding of the development activities that have taken place in the plan area (and environs) during the preceding plan period.

2.7 Planning Search and Review

In order to gain more detailed information on the environmental resources and sensitivities of the plan area, the consultants undertook a planning review. The purpose of this was to ascertain baseline information that was prepared as part of large planning applications. This assisted in enhancing the analysis of environmental baseline.

Chapter Three: Relationships to Key Plans, Policies and Programmes.

3.1 Introduction

The Draft Loughrea LAP is situated within a hierarchy of International, National, regional, and county level policy guidelines. In addition, there is an overarching legislative framework which provides the statutory basis for designations and objectives. The Environmental Report reviews the consistency of the Draft LAP within this policy and regulatory framework. Key policies and legislation framework are listed below:

Table 3a below sets out the main plans, policies, programmes and directives identified in an International context and gives a brief summary of their main objectives.

Table 3a: Policy and Regulatory Context

Directive/ Plan/ Programme	National	Regional
EU Sixth Environmental Action Programme (1998) The Environment Action Programme takes a broad look at the challenges of environmental policy and provides a strategic framework for the Commission's environmental policy up to 2012	National Spatial Strategy A 20-year national planning framework to achieve more balanced social, economic and physical development across Ireland. The strategic guidance document is based in concentrating development to key areas across the country. The NSS supports economic growth and diversification across the west, including economies based on sustainable use of natural resources such as scenic landscapes for tourism, fisheries and marine based aquaculture, forestry and renewable energy.	Regional Planning Guidelines for the West Region 2010 – 2022 These guidelines set out a framework for the long term strategic development of counties Galway, Mayo and Roscommon. These guidelines set out the strategic vision, economic development, settlement strategy, infrastructure, environment and amenity, social infrastructure and community development for the West Region.
Kyoto Protocol This international agreement is linked	Planning and Development Acts Under the Planning Acts, each	Western River Basin District Management Plan 2009 -2015 &

to the United Nations Framework Convention on Climate Change and sets binding targets of 37 industrialized countries and the European Community	Local Authority has a responsibility to determine policy in its area through the making of a Development Plan and for applying that policy, through planning control, in deciding on planning applications and enforcing planning.	associated programme of measures. This aims to protect all waters within the district and improve waters and achieve sustainable water use. Water management unit action plans are developed for smaller geographical areas within this river basin district.
Directive 2009/28/EC (Energy) The promotion of use of energy from renewable sources established the basis for the achievement of the EU's 20% renewable energy target by 2020.	Planning Guidelines These guidelines are of relevance to all types of planning applications, as well as applicants and their advisers, on the operation of the planning process. They are also intended to promote best practices within planning authorities	Replacement Waste Management Plan for the Connaught Region 2006-2011 A regional approach to integrated waste management based on the waste hierarchy established by the EU Framework Directive on Waste. Targets to be achieved by 2013 relate to 48% recycling, 33% energy recovery and 19% residual waste disposal. It covers Galway City, Counties Galway, Leitrim, Mayo, Roscommon and Sligo
Convention on Wetlands of International Importance (Ramsar Convention 1971) An intergovernmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources	The Planning System and Flood Risk Management Guidelines, OPW, 2009 These aim to integrate flood risk management into planning system.	Galway County Development Plan 2009 – 2015. This six year plan guides the development and core strategy for County Galway over a six year period. It includes the recent variation on the Core Strategy, a wind energy strategy and policies and objectives for economic development and tourism, housing provision, infrastructure (roads and transportation), infrastructure (water, waste, energy and communications), cultural , social and community development, heritage, landscape and environmental management, agriculture, mariculture and silviculture, development management standards and guidelines
EU Habitats Directive 92/43/EEC A scheme of protection of particular animals and plant species, as well as a selection of habitat. It provides for a network of protected sites known as Natura 2000. Specific protections for the sites, will limit the extent and nature of development, which may have a detrimental effect on the flora or fauna identified therein. Protects over 1000	NRA Spatial Planning and National Roads Guidelines, 2011 The aim of Guidelines is to ensure that roads planning and policy, and development planning and development management processes are appropriately and effectively aligned, in order to guide development to the most suitable locations to maximise the	County Galway Heritage Plan 2009 -2015 A five year plan setting out objectives and actions for a wide range of heritage themes including biodiversity, landscape, archaeology,

animals and plant species and over 200 'habitat types' which are of European importance	investment in the national roads network, while also in overall terms encouraging a shift towards more sustainable forms of travel and transport.	
EU Birds Directive (2009/147/EC)(codified version of Directive) This amended the Birds Directive (79/409/EEC). It provides a common framework for the conservation of naturally occurring species of wild birds and their habitats throughout the EU as listed under the Directive's Annex 1.	Second National Biodiversity Plan 2011 Actions for Biodiversity 2011 -2016 This recently launched plan has been developed in line with the EU and International Biodiversity strategies and policies. The measures Ireland will take are presented as 102 actions under a series of 7 Strategic Objectives.	County Galway Biodiversity Action Plan 2008-2014 Established vision, aims, objectives and actions to enhance and support biodiversity in the County.
E.U. Water Framework Directive 2000 Council Directive 2000/60/EC Aimed at improving the water environment, requiring member governments to take a holistic approach to managing their waters. Member states must aim to achieve good status in all waters by 2015 and must ensure that status does not deteriorate in any waters.	European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) These Regulations consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in the European Court of Justice judgements	Galway City Development Plan 2011-2017
Floods Directive 2007/60/EC The EU Floods Directive on the assessment and management of flood risks entered into force on November 2007	Western River Basin District Management Plan and Shannon International River Basin District Sets out assessment and measures to ensure compliance with Water Framework Directive by 2015. County Galway includes two areas, West, which is west of Lough Corrib and Shannon which is in the east of the County.	Mayo County Development Plan 2008 -2014
Groundwater Directive 80/68/EEC Developed in response to Article 17 of the Water Framework Directive. It requires Member States to apply a system of investigation and authorization to waste disposal and other activities in order to ensure that groundwater is not polluted by dangerous substances.	Framework and Principles for the protection of the archaeological heritage 1999 Sets out archaeological policies and principles that should be applied by all bodies when undertaking or authorizing development	Roscommon County Development Plan 2008 - 2014
Surface Water Directive 75/440/EEC The Directive aims to protect public health by ensuring that surface water abstracted for use as drinking water reaches certain quality standards before it is supplied to the public	Architectural Heritage Protection 2004-Guideines for Planning Authorities These guidelines provide relevant guidance in the context of Part IV of the Planning and Development Act 2000	Clare County Development Plan 2011- 2017
European Convention on the	Draft Landscape and Landscape	Offaly County Development

<p>Protection of the Archaeological Heritage, 1992 (Revised) (the 'Valletta Convention') The aim of the Convention 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</p>	<p>Assessment Guidelines 2000 A Landscape Character Assessment allows for a proactive approach to landscape management. It aids the development management process as it gives indicators of development types which would be suited to certain locations using certain design criteria and consequently the character of the landscape remains intact.</p>	<p>Plan 2009 - 2015</p>
<p>Granada Convention for the Protection of the Architectural Heritage of Europe 1985 This was ratified by Ireland in 1985 and establishes common principles and strategy, which have informed Part IV of the 2000 Planning and Development Act 2000-2004.</p>		<p>North Tipperary County Development Plan 2010-2016</p>
<p>European Landscape Convention 2000 This requires the landscape dimension to feature in a country's spatial planning and environmental policies and for landscape quality objectives to be developed.</p>		<p>Ballinasloe Development Plan 2009 -2015</p>
<p>EU Directive 2002/49/EC (the noise directive transposed into Environmental Noise regulations 2006 S.I. 140) The directive requires that action is taken under each member state with a view to preventing or reducing environmental noise where necessary and particularly where exposure levels can induce harmful effects on human health and to preserve environmental acoustic quality where it is identified as being of good quality.</p>		<p>There are also numerous Local Area Plans for areas within the County</p>
<p>Urban Wastewater Treatment Directive (91/271/EEC) Aimed at protecting the environment from the adverse effects of urban wastewater discharges and discharges from certain industrial sectors.</p>		
<p>The Waste Framework Directive 75/442/EEC (and amending legislation) T This Directive outlines the overall structure for an effective waste management regime within the EU.</p>		

4 Chapter Four: Environmental Baseline

4.1 Introduction

This chapter describes the principal environmental parameters that are of relevance to both the plan area of Loughrea and its environs. This SEA of the draft Loughrea LAP includes a description of the relevant aspects of the current state of the environment, the existing environmental problems, environmental characteristics of the areas likely to be significantly affected, and the likely evolution without implementation of the LAP.

4.2 Biodiversity, Flora and Fauna

4.2.1 Designated Sites

County Galway supports a range of designated and undesignated habitats and species. Loughrea is located at the lake of Loughrea, and this is designated as both a Special Protection Area (SPA, site code: 004134) and a cSpecial Area of Conservation (cSAC, site code 000304), reflecting the important ecological resource present in the town (part of the Loughrea SPA and cSAC is outside the functional area of the town boundary). Figure 4a shows the Natura 2000 sites within a 15km buffer of the town of Loughrea. Such sites are designated for a range of habitats and species including bog habitats, turloughs, limestone pavement and bird species including Coot and Shoveler.

The basic National designation for wildlife is the Natural Heritage Area (NHA). This is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. NHAs within the county represent a significant biodiversity resource and again, the range of habitats and species found in these sites vary considerably.

4.2.2 Ecological Networks and land use

The principal land use in the area surrounding the town is pasture, with areas of agricultural land and semi natural and natural vegetation. More generally, for an area surrounded by rural hinterland such as Loughrea, the pasture, hedgerows and water features all offer ecological connectivity. Hedgerows are a familiar landscape feature, as well as providing food and shelter for insects, birds and other animals, hedgerows also act as important corridors. Typically, older, denser hedges support a greater abundance and diversity of wildlife.

4.2.3 Watercourses, surface water bodies and associated wetlands including floodplains and flood risk areas

The Water Framework Directive Website identifies the surface water quality for Loughrea 'good' overall. The management objective is to restore the surface water quality to 'good' by 2021 and it is currently classified as 1a 'At risk' (for not meeting the 2015 Water Framework Directive Objective of Good Status Water Quality). The associated report identifies both point and diffuse source pollutants to the water course as risk factors.

4.2.4 Lakes, Wetlands and Floodplains

Lough Rea itself is of significant ecological importance, as reflected through its statutory designations. This hardwater lake is fed by both springs and a stream and due to the underlying Carboniferous limestone supports a range of species characteristic of calcareous waters. Associated with the lake itself are a range of habitats including reedswamp, wet grassland and wet woodland. The lake also supports nationally important populations of Coot and Shoveler. A Fish stock survey was undertaken in 2010 as part of the monitoring for the Water Framework Directive. A total of six fish species were recorded in Lough Rea during this survey.

4.2.5 Key Biodiversity, Flora and Fauna Problems.

Loughrea contains the internationally important habitats associated with Lough Rea cSAC and SPA, which lies partly within the plan area and is a source of drinking water for the town, as well as an important recreational and amenity area. Pressures associated with these activities include increased human presence around the lake shore and direct disturbance to both habitats and species. Indirect impacts could also arise due to increased surface water runoff, or interference with springs that feed the lake. In addition, occasional pollution incidents¹ such as those reported to the Inland Fisheries in January 2012 can result in impacts to spawning trout in St Clerans River.

4.2.6 Evolution of biodiversity, flora and fauna in the absence of the LAP

In the absence of the LAP there would be no framework directing developments to appropriate locations in and around Loughrea and planning applications would be assessed on an individual site specific basis with flora and fauna, habitats and ecological connectivity protected under a number of higher level policies and objectives. Development proposals would be assessed in a piecemeal manner and cumulative impacts in particular would not be captured adequately.

4.3 Water Resources

As the previous section demonstrates, water quality has a clear interaction with other key environmental parameters and its protection and enhancement is of particular importance. In the instance of Loughrea, surface water quality and groundwater overall are classified as good and the ongoing maintenance and enhancement of this status is an integral element of the LAP.

4.3.1 Surface Waters

Loughrea is located within the Clarin Kilcolgan Water Management Unit (WMU) and within the Western River Basin District. St Cleran's River (also named St Clearan's River in the WMU) is a tributary of the Kilcolgan River. As stated previously the overall status for this river is 'good, with an accompanying management objective of protecting this status..

4.3.2 Groundwater

Groundwater is a further significant resource and refers to water stored underground in saturated rock, sand, gravel, and soil. Surface and groundwater functions are closely related and form part of the hydrological cycle. The protection of groundwater from land uses is a critical consideration and groundwater vulnerability is becoming an important management tool. Groundwater is important as a drinking water supply as well as the supply to surface waters across the Region. Aquifers are exposed in our surface lakes and rivers. Most groundwater originates from the surface but it permeates through the ground to supply (or 'recharge') wells or boreholes. The quality of our drinking water supply, fisheries and terrestrial based habitats is intrinsically linked with groundwater quality. The Geological Survey of Ireland (GSI) aquifer categories are based on their vulnerability to pollution, i.e. the ease at which it can enter the subsurface layers. Aquifers of 'high or extreme vulnerability' are more sensitive to pollution.. For much of the plan area, the groundwater is classified as being of high vulnerability to pollution..

4.3.3 Bathing Waters

Bathing Waters are an important amenity, and are afforded the protection in accordance with the EU Bathing Waters Directive. Bathing waters are defined as surface waters where a large number of people bathe and where there is no permanent bathing prohibition. Lough Rea is a

¹ Please see Water Services Section of Material Assets.

designated Bathing Water area and is compliant with the regulations. The lake is also a Blue Flag lake.

4.3.4 Key Environmental Problems for Water

The principal environmental problems associated with water in the Loughrea area and environs are those associated diffuse sources largely associated with agricultural activities and septic tanks or un-sewered properties. Phosphorus contributes to the pressures on groundwater and nutrient sensitive turloughs.

4.3.5 Evolution of water in the absence of the LAP

If development was to occur without being accompanied by the appropriate waste water infrastructure then it is likely that a number of water bodies would fail to meet WFD commitments in the short or medium term. Also, the extent and severity of adverse impacts with regard to biodiversity and flora and fauna, groundwater and human health as a result of poor water quality would be likely to increase. In the absence of the LAP, the integration of the Strategic Flood Risk Assessment for County Galway 2012 and land use zonings would not occur and incompatible development may occur on flood risk areas, again with permanent and profound negative impacts on biodiversity, water, material assets, population and human health.

4.4 Soil and Geology

Soil can be considered as a non-renewable natural resource because it develops over very long timescales. It is an extremely complex, variable and living medium and performs many vital functions including: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, and nitrogen. Soils in any area are the result of the interaction of various factors, such as parent material, climate, vegetation and human action. The principal soil types indicated around Loughrea include:

- Made/Built Land
- Deep well drained mineral
- Shallow well drained mineral
- Poorly drained mineral soil with peaty topsoil
- Reed Swamp/Marsh.

4.4.1 Bedrock Geology

The basic rock formation of County Galway varies between the eastern and western half of the County. The bedrock geology of the County to the east of Lough Corrib consists of mainly limestone which was laid in the carboniferous period, around 280 to 345 million years ago. The bedrock around Loughrea is Carboniferous Limestone.

4.4.2 Key Environmental Problems for Soil and Geology

Soil erosion can occur with construction activities, agricultural activities and forestry operations, extractive industries, forestry practices, industrial and commercial and road projects and other major infrastructural projects. Surface soil erosion (loose soil) impacts on water quality and fishery resource. Developments can potentially interrupt the natural drainage of an area. Pollution and contamination of soil can occur if not serviced by appropriate waste water infrastructure and excess nutrients on land from agricultural activities (where soil becomes saturated) results in run-off to surface water, eutrophication and poor quality drinking water supplies. Limestone areas are often important sources of groundwater for abstraction and equally the porous characteristics of limestone can make these groundwaters more vulnerable to pollution. Similarly, the extraction of sand, gravel or rock in an area ultimately leads to the

total removal of a resource within a given area and can lead to localised environmental problems.

4.4.3 Evolution of soil and geology in the absence of the LAP

In the absence of the LAP there would be no framework for the direction of growth towards brownfield sites in Loughrea, where such direction is appropriate. As a result greenfield development would be likely to occur on an increased basis and would result in the building upon and thereby sealing off of the non-renewable subsoil and soil resources.

4.5 Population and Human Health

The County of Galway is predominately rural in nature with approximately 15% of the population of County Galway living in towns with a population greater than 1,500². Loughrea lies fully within one DED – Loughrea Urban, and partly within a second DED –Loughrea Rural. The 2006 Census showed a population of 4532 in the urban DED and 885 in the rural DED; the Urban DED increased significantly by 11.6% in the 2011 preliminary census data and now stands at 5057.

4.5.1 Human Health

Human health can be determined by social, environmental and economic factors, among others. Human health may be impacted upon in a variety of ways and by a number of environmental receptors such as water, biodiversity, climate, flooding, air quality and major accidents, etc. The exposure to contaminants or pollutants can have serious implications for human health. Potential impacts on population and human health include inadequate water and wastewater and waste infrastructure, contamination of soils, excessive noise, flooding and poor air quality in areas where there are large volumes of traffic and the associated health impacts of an over exposure to Radon. Loughrea is located within a high radon area with more than 20% of the homes in the 4 x 10km grid square estimated to be above the reference level for Radon.

More generally, a poor quality environment with low quality housing can increase overall health impacts and contribute significantly to fuel poverty.

4.5.2 Key Environmental Problems for Population and Human health

The following is a summary of existing environmental pressures within the wider West Region:

- Air pollution due to areas of heavy traffic along main routes and intersections;
- Population growth and infrastructure capacity constraints results in waste infrastructure incapable of meeting demand, shortages of water supply and poor quality water serving urban and rural areas;
- There are pressures on drinking water quality; contamination in public and private water supplies means that water supplies in the Region are not ‘safe and secure’;
- Increases in population can impact on biodiversity, water quality, landscape and cultural heritage and which would impact on human health;
- Waste generation, old landfills and illegal dumping can impact on human health and biodiversity;
- Flooding impacts on human health, on structures and the safety of water supply, and
- Additionally, submissions on the pre-draft Loughrea LAP highlighted traffic problems in a number of areas around Loughrea.

² SEA ER of West Regional Planning Guidelines

4.5.3 Evolution of Populations and Human health in the absence of the LAP

Loughrea has been identified as a self-sufficient settlement and a 'Key Town' within the Core Strategy/Settlement Strategy of the Galway County Development Plan. The Core Strategy has identified a target population growth of up to 1,133 persons for Loughrea to 2015, which results in a requirement for 32.68ha of zoned land for residential purposes (based on 50% over-zoning). Given the significant growth patterns in Loughrea over the last two Census periods, ensuring appropriate, sustainable settlement patterns including the provision of the necessary planning framework to accommodate educational, community, leisure and recreational facilities to satisfactorily match the level of population growth is a key issue in planning for the future of Loughrea. In the absence of a LAP there would be no framework directing developments to appropriate locations and this would have the potential to result in adverse impacts upon environmental components which could negatively affect human health.

4.6 Air Quality and Climate

4.6.1 Climate

Ireland has an abundance of rainfall with low evapotranspiration, high humidity, mild winters (4.5°C) and cool summers (15.5°C). Climate change refers to changes in climatic conditions whether through natural variations or as a result of man-made influences. It is expected³ that temperature in Ireland will rise, with drier summers, wetter winters and more variable precipitation patterns and temperature in the coming years. All developments, agriculture, energy generation, industry and commercial activity and waste generation contribute emissions to air and greenhouse gas (GHG) emissions; however the emission of pollutants from vehicles is one of the main threats to air quality in Ireland and contributes significantly to the increase of greenhouse gases.

4.6.2 Air Quality Zones

The Air Framework Directive 96/62/EC (CEC, 1996) requires that member states divide their territory into zones for the assessment and management of air quality. There are four zones identified in Ireland. 'Zone A' relates to Dublin and 'Zone B' relates to Cork. Galway City is located in 'Zone C' (one of the 15 biggest towns with population greater than 15,000) and the majority of the 'Zone D' (remainder of country, includes Loughrea and environs). While air quality is generally of good quality in Zone D, localised areas of pollution are likely to occur throughout the County, especially in areas of traffic congestion, along national routes intersections and where demolition and construction is taking place.

4.6.3 Key Environmental Problems for Air Quality and climate

There may be localised air pollution from roads and industrial processes which impact on health and quality of life. Transport patterns especially commuter patterns cumulatively impact on air quality with the production of greenhouse gas emissions from traffic. Poor development design results in loss of energy from buildings and energy consumption is higher where there is poor insulation. Climate change has the potential to impact habitats and impact on species distribution. The loss of biodiversity will impact on human health and water resources.

4.6.4 Evolution of Air Quality and Climate in the absence of the LAP

The Draft LAP sets out a settlement and land use strategy for Loughrea and is allied to the County Galway CDP 2009-2015. The LAP consequently can aid the implementation of objectives of the National Climate Change Strategy and various Directives in relation to energy efficiency, settlement patterns and traffic generation, waste generation etc. In the absence of

³ EPA (2009) Climate Change – Refining the Impacts for Ireland

the LAP, there is little strategic direction or policy to facilitate alternative transport modes, or energy efficiency measures for the area around Loughrea.

4.7 Cultural Heritage, Archaeology and Built Heritage

Loughrea is situated along the northern shore of Lough Rea and derives its name from '*Baile Locha Riach*', the 'town of the grey lake'. Loughrea is regarded as dating from 1236, when Loughrea Castle was reputed to have been built by the Anglo-Norman, Richard de Burgo. The town was fortified due to its strategic location on the approach to Galway city. This fortification consisted of a town wall and a moat to the north, east and west, with the lake acting as a natural defence to the south. The medieval town centre is within the area enclosed by the "Walk" to the north, by the St. Cleran's River to the east, by the lake to the south and by the Fairgreen to the west. The only remaining buildings from medieval times are St. Brigids Church in Caherwalter, the Town Gate and the Carmelite Abbey and Graveyard. A strong ecclesiastical presence is still evident within the town.

4.7.1 Archaeological Heritage

County Galway contains significant cultural heritage resources. Built heritage ranges from national monuments to ringforts, stone circles, towerhouses, gates and bridges. There are a range of categories under the National Monuments Acts 1934 to 2004. The range and diversity of archaeological resources in Loughrea is reflected in the sites and monument records. These include a number of crannogs on the lake itself, a mass rock in the townland of Crossmona, a medieval church, graveyard, holy well & ecclesiastical enclosure at Caherwalter and a Charterhouse School at Gorteenapheebera.

4.7.2 Architectural Heritage

The Planning and Development Act (2000) allows for the listing of important structures in County Development Plans in order to provide protection to these structures which must be of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. Details of protected structures are entered by the authority in its Record of Protected Structures, which is part of the Development Plan.

Finally, legislation is provided for Architectural Conservation Areas (ACA). The centre of Loughrea is designated as an ACA. Works materially affecting the character of a protected structure or to the exterior of a building/structure within an ACA require planning permission. Buildings of local significance which retain traditional features also contribute to the local distinctiveness and identity. Many sites and structures can be afforded dual protection under the National Monuments (Amendment) Acts and the Planning Legislation.

4.7.3 Key Environmental Problems

Archaeology

The archaeological and architectural heritage of the area is afforded protection through legislation. However, the cultural heritage of the town can still be impacted upon through development. Development on sites or land adjacent to protected sites can impact upon the context, if not mitigated. Previously unknown archaeology can be damaged as a result of development.

Architectural Heritage

The setting of ACAs and protected structures is another consideration and insensitive or inappropriate developments that negatively impact on these resources may be another potential threat. Conversely promoting the maintenance and viability of older structures can present a challenge and ensuring their continued use as functioning buildings is an important consideration.

4.7.4 Evolution of Cultural Heritage in the absence of the LAP

In the absence of the LAP, planning applications would continue to be assessed on an individual basis with cultural heritage protected under a number of strategic actions relating to archaeological and architectural protection. Cultural heritage would be impacted upon by the nature of permitted applications. In addition, the more intangible aspects of cultural heritage including identity, sense of place and linguistic heritage may not be promoted and supported as strongly in the absence of the LAP.

4.8 Landscape

Landscapes are areas which are perceived by people and are made up of a number of layers: landform, which results from geological and geomorphological history; landcover, which includes vegetation, water, human settlements, and; human values, which are a result of historical, cultural, religious and other understandings and interactions with landform and landcover. Galway County Council's (2003) Landscape Character Assessment classifies landscapes according to their sensitivity, their ability to accommodate change or intervention without suffering unacceptable effects to character and values. The northern part of the town is classified as LCA 3 - East central Galway (Oranmore, Ballinasloe to Portumna). The landscape character is described thus: *'The landscape is flat, coarse grassland, occasional clumps of coniferous forestry between 1-3 km² in size, fields defined principally by stone walls. There are no areas of particular scenic value although the stone walls are quite distinct.'*

The southern part of Loughrea (including the lake) is classified as LCA 25-Lough Rea and described as follows: *'The landscape of Lough Rea is flat, enclosed and intimate. The Lough is screened to the north and the northeast by the town of the same name and to the south by the wooded slopes of the Slieve Aughty Mountains. There are many small vegetated islands in the Lough which add to its high scenic value. Around the banks of the Lough are many recreational facilities including boating, parking and picnic areas, which sit sensitively within the landscape and do not detract from the intimate landscape setting.'*

4.8.1 Key Environmental Problems for Landscape

Potential issues with regard to the landscape in Loughrea include developments which do not reflect local landscape character and insensitive siting of development. Due to the topography of Loughrea, developments can negatively impact if sited on hill tops or are too large for the medium scale landform. The cumulative impact of development can impact on a range of parameters (such as biodiversity and cultural heritage), and in combination these can degrade the overall landscape quality and character.

4.8.2 Evolution of Landscape in the absence of the LAP

In the absence of the LAP there would be no framework directing developments to appropriate locations in and around Loughrea. In addition, the policies around cultural heritage, landuse and urban design in the new LAP contribute to an overall enhancement and stronger protection of the landscape resources in and around Loughrea.

4.9 Material Assets

The EPA SEA Process Draft Checklist (2008) defines material assets as the critical infrastructure essential for the functioning of society. This section will discuss the following:

- Flooding
- Integrated Pollution Prevention Control (IPPC) Licensed Facilities, Waste Licensed Facilities and Seveso II Sites
- Water Services

- Transport
- Noise
- Waste Management

4.9.1 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. The frequency, pattern and severity of flooding are expected to increase as a result of climate change. Development can also exacerbate the problems of flooding by accelerating and increasing surface water run-off, altering watercourses and removing floodplain storage.'*

Whilst the causes of flooding are difficult to control, the management of this risk and exposure to severity and extent of flooding can be addressed through application of flood risk management. The natural features of Loughrea can contribute to greater flood risk; the principal environmental feature is associated with the predominantly limestone bedrock in the area and the town's location at the lake itself. The Preliminary Flood Risk Assessment prepared by the OPW for the area has been supplemented by additional Flood Risk assessment to produce a Draft Flood Risk Management Map for the LAP Area. It is noted that areas adjacent to Lough Rea shoreline and confluence of St Cleran's River, the river itself and an area in the eastern part of the plan area are identified as Flood Risk Zone A. However, this analysis is not exhaustive and areas not mentioned here could still be at risk of flooding.

4.9.2 Integrated Pollution Prevention Control (IPPC) Licensed Facilities, Waste Licensed Facilities and Seveso II Sites

Such facilities are licensed by the EPA who require emission standards (air, water, land, waste, energy) to be achieved and ensure that there will not be a significant adverse impact on the environment. There are 11 IPPC Licensed facilities in County Galway. There are no IPPC licensed facilities within Loughrea, but two IPPC facilities are located at Tynagh, approximately 14km southeast of the town.

4.9.3 Water Services

Loughrea is served by the Loughrea Regional Water Supply Scheme and the town water supply is extracted from Lough Rea with the treated water pumped to two reservoirs on high ground east of the town centre. The existing water supply system has limited capacity and improvements are required to serve the longer term growth needs of the town.

Wastewater Disposal

Loughrea is serviced by a public wastewater collection network with treatment in an activated sludge system at the Loughrea Waste Water Treatment Plant (WWTP), located at Ballygasty over 1km north of Loughrea town. The treated effluent from the WWTP is finally discharged to the St. Cleran's River, which flows from Lough Rea before joining the Craughwell River near Cahirkinmonwee. The upgrade of the Loughrea Sewerage Scheme in 2009 has increased the capacity of the WWTP. However, the sewer collection system in the town still requires upgrading. There is no dedicated surface water sewer network serving Loughrea.

In addition, there have been recent complaints (January 2012) to Inland Fisheries Ireland in relation to a storm outfall St Cleran's River and accumulation of wastewater at this outfall. The ownership of this is not determined but Inland Fisheries has raised concerns in relation to impacts on spawning trout⁴.

4.9.4 Transport

Road

Loughrea town is located at the confluence of a number of significant national and regional roads, including the R446 Dublin to Galway regional route, the N66 national secondary route to Gort and Limerick, the R349 to Athenry, the R350 to Mountbellew and the R351 to Woodford. Loughrea is located in close proximity to the new M6 motorway and is linked to this strategic east-west corridor via a link road and the bypass to the north of the town.

Public Transport

Public transport in Loughrea is limited to bus services, consisting predominantly of interregional services with some specific local services continuing to play an important role in connecting Loughrea and its environs to Galway City, as well as other important national and local destinations. Public bus services are provided by Bus Eireann with some private bus companies serving Loughrea. At present, the only bus stops within Loughrea are on the town centre Main Street.

4.9.5 Noise

Many different noise sources contribute to community/environmental noise, including:

- Roads, railways, airports, industry or recreational activities adjacent to residential properties or noise sensitive premises such as schools or hospitals, or recreational spaces.
- Noisy neighbours, barking dog
- Gardening machinery, construction activities, ice cream vans, street cleaning, delivery vehicles.
- Air-conditioning equipment.
- Public house, nightclubs, restaurants or other recreational activities.
- Industrial operations, workshops and factories.

The location of new residential properties, mixed residential/commercial use buildings or noise sensitive premises such as schools or hospitals, adjacent to existing roads, railways, airports, industry or recreational activities can result in significant noise management issues. Noise sensitive locations such as schools, hospitals, churches, funeral homes, etc have particular requirements for low level noise environments in order to be able to function effectively. There is no noise mapping available currently for the M6 north of Loughrea. However, there may be localised noise issues associated with traffic and construction activities within the plan area.

4.9.6 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. Loughrea has a Bring Bank Centre located in the main car park close to the former Mart. Galway County Council also provide home composters and encourage the composting of household organic waste thus reducing need for landfill.

⁴ Please see the following link: http://www.epa.ie/licences/lic_eDMS/090151b28042139f.pdf

4.9.7 Key Environmental Problems for Material Assets

- Loughrea has been subject to historical flooding in the past; however the recent SFRA and application of relevant guidelines will enhance overall flood risk management and avoidance of developments in flood zones within the LAP boundary.
- Potential issues with regard to the material assets in Loughrea include the absence of a dedicated surface water sewer network, abstraction levels for water from Lough Rea and maintaining the overall 'good'; status of surface and groundwater in the plan area and environs.
- The management of waste and promoting better waste management both in developments and altering people's behavior around waste management and recycling also remains an ongoing issue.
- While well served by the road network, Loughrea has limited public transport options; however a range of policies and objections within the LAP will promote public transport links and non-vehicular transport.

4.9.8 Evolution of Material Assets in the absence of the LAP

In the absence of the LAP there would be no framework directing developments to appropriate locations in and around Loughrea. This could result in significant impacts particularly around flooding and damage to human health, biodiversity, water quality and infrastructure.

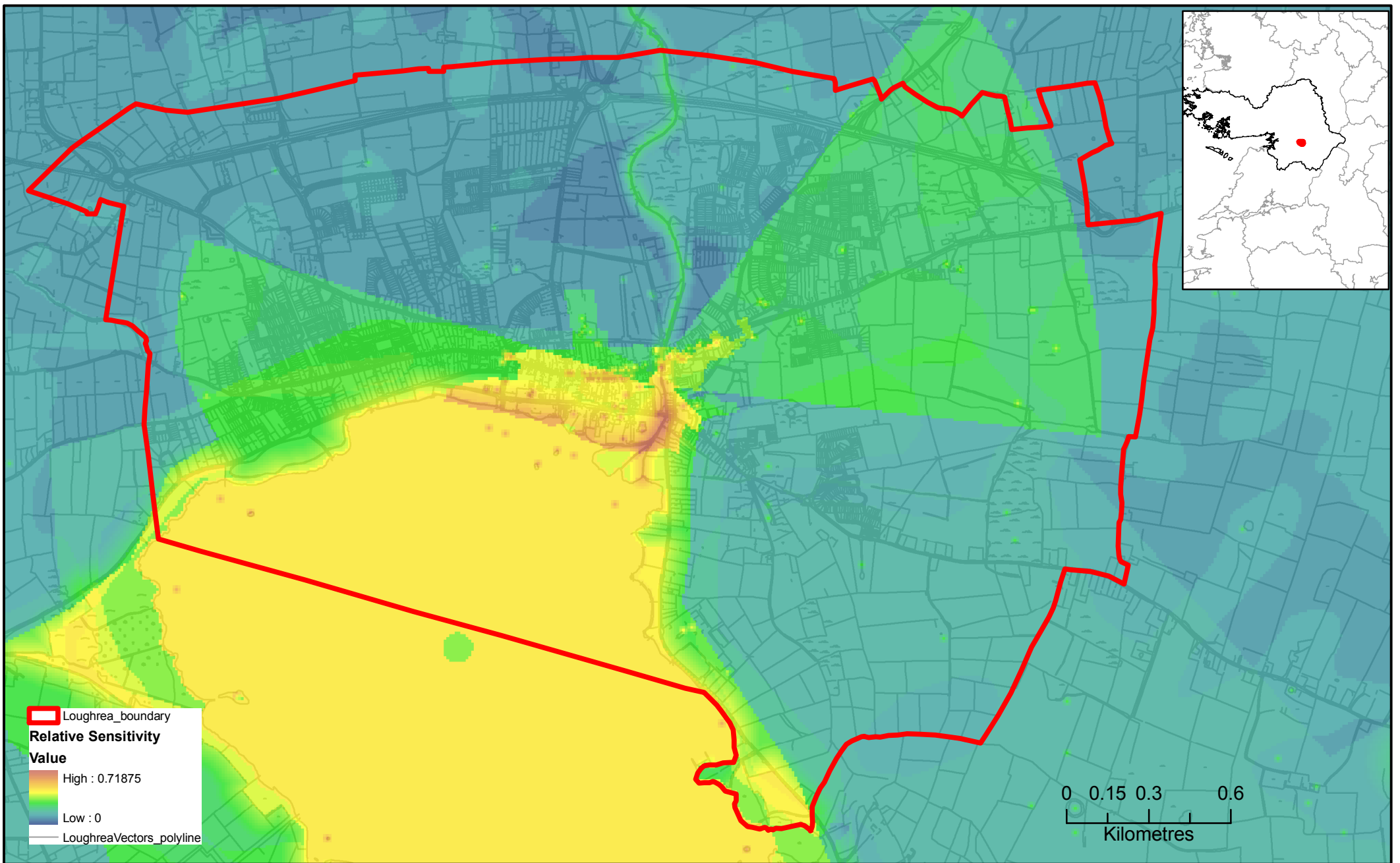
4.10 Environmental Sensitivity Mapping⁵

Sensitivity mapping is a means of assessing the overall vulnerability of an area using many different indicators and key critical data sets. For the present analysis human health, natural habitats and built heritage are the key items which could be affected by planning decisions. For this reason the following data sets were chosen for the sensitivity analysis.

- ***Points (SMR,RPS)- 20m buffer***
- ***River - 50m buffer***
- ***Natural heritage areas - 100m buffer***
- ***Water abstraction points - 200m buffer***
- ***ACA areas***
- ***Viewshed areas***
- ***Ground water vulnerability***
- ***Landscape sensitivity***

Figure 4r shows the Relative Environmental Sensitivity Map for Loughrea. As it shows, and is reflected in the statutory designations, the area around Lough Rea itself, the built environment along the lakeshore and the historic quarter are the areas of highest sensitivity.

⁵ This was inserted from Chapter Seven following a previous EPA submission on another Galway County Council LAP so was moved here for consistency.



DATE: 4/4/2012

SCALE: 1:30,000

FIGURE 4r : Relative Sensitivity

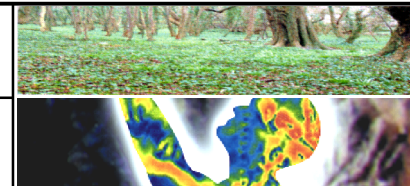
REF:

SIZE: A4

Galway County Council Loughrea Local Area Plan SEA

DRAWN: MFC

APPROVED: RM



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5 Chapter Five: Environmental Protection Objectives

5.1 Introduction

The overall aim of the SEA is to facilitate environmental protection and to allow the integration of environmental considerations into the development of the Draft LAP. To that end, the SEA process assesses the Draft LAP as it evolves in terms of its environmental impacts. This process highlights how improvements can be integrated into the Draft LAP of Loughrea to increase its environmental performance and maintain environmental resources.

Establishing environmental objectives is a key element of SEA as it allows the assessment of the Strategy as it is implemented over time.

Table 5: Environmental Protection Objectives for each environmental topic

SEA Parameter	Biodiversity
	Bio1 – Protect, conserve and avoid loss of the diversity and range of habitats, species and wildlife corridors.
	Bio2 - Protect designated sites including Natura 2000 sites (SACs & SPAs) under Article 6 of the Habitats Directive. Conserve and protect, or maintain and restore Natura 2000 sites and the Natura 2000 Network.
	Bio3 - Conserve and protect other sites with nature conservation sites (NHAs, pNHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries).
	Bio4 – Protect habitats (terrestrial and aquatic) from invasive species.
	Bio5 – Protect the inland and coastal aquatic environment.
	Bio6 – Meet the requirements of the WFD and the RBMP.
	Water
	Wat 1 – 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).
	Wat 2 - Maintain or improve the quality of surface water (including estuarine) to status objectives as set out in the Water Framework Directive (WFD), West River Basin Management & Programme of Measures.
	Wat 3 – Prevent pollution and contamination of ground water by adhering to aquifer protection plans.
	Soils and Geology
	Soil1 – Give preference to the use of derelict, disused and infill sites, rather than Greenfield sites.
	Soil2 – Protect, improve and maintain the quality of soils.
	Soil3 - Conserve, protect and avoid loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites.
	Population and Human Health
	Pop1 – Protect, enhance and improve people’s quality of life based on high quality residential, community, working and recreational environments and on sustainable travel patterns.
	Pop2 - To protect human health from risks or nuisances arising from exposure to incompatible land uses/developments.
	Cultural Heritage
	CH1 – Protect and conserve the cultural heritage including the built environment and settings; archaeological (recorded and unrecorded monuments), architectural (Protected Structures, Architectural Conservation Areas, vernacular buildings, materials and urban fabric) and manmade landscape features (e.g. field walls, footpaths, gate piers etc.).

	CH2 – To ensure the restoration and re-use of existing uninhabited and derelict structures where possible as opposed to demolition and new build (as opposed to demolition).
	Landscape
	Land1 – Protect designated landscapes and scenic views, routes and landscape features of local value.
	Land2 – Conserve and protect cultural landscapes including archaeological and architectural.
	Land3 - Minimise visual impacts through appropriate design, assessment and siting.
	Air Quality and Climate
	AQ1 – Seek to avoid all forms of air pollution and maintain/improve ambient air quality.
	AQ2 – Minimise emissions of greenhouse gases through energy efficiency and promotion of renewable energy.
	Material Assets
Flood Risk	Mat 1 - Reduce risk of flooding through avoidance of inappropriate development in flood plains or in areas at risk of flooding.
Water Services	Mat 2 - To ensure that drinking water supplies are free of contamination.
Noise	Mat 3: To protect residents from adverse noise levels.
Wastewater	Mat 4 - To ensure that all developments are adequately serviced to EPA standards prior to discharge.
Waste	Mat 5 – Implement the waste pyramid and encourage reuse/recycling of material wherever possible.
Energy	Mat 6 - Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives.
Transport	Mat 7 – Maximise sustainable modes of transport , provide for ease of movement for all road users and promote development patterns that support sustainable transport and protect and enhance road safety.

6 Chapter Six: Consideration of Alternatives

6.1 Introduction

This section describes the alternatives considered in the development of the Draft LAP. The consideration of alternatives and the evaluation of their likely environmental impacts is a key function of the SEA process. Each alternative was assessed against the Environmental Protection Objectives (EPOs) and a summary of the assessment is presented in *Table 6a*.

Table 6a: Evaluation of Alternatives

<p>Option One: Development along southern edge of new By-Pass Road</p> <p>Option 1 provides for the utilisation of the new bypass road to provide access to new development lands to the north of the town along the southern edge of the new road.</p> <p>This alternative generates a number of long term negative impacts on the EPOs. The focus on development on the edge of the town would increase car dependency and push localised traffic onto the national road network unnecessarily. An indirect impact associated with this would relate to lack of permeability for residents working and living in these new developed areas. Other negative long term impacts identified for this alternative relate to biodiversity and soil in particular. This alternative would see the conversion of lands currently zoned agricultural to developed lands. In addition, this alternative would see development located along the upper slopes and hills of Loughrea, with a significant change to the current landscape setting of Loughrea, which is one of its principal assets and attractions. This option would fundamentally redirect the historical development of Loughrea, away from the lake itself and create a loss of character and identity in the town. It would also redirect development away from the town centre core and the accompanying decline in town centre activity would have profound long term</p>

effects on the functionality and viability of the town. A declining level of town centre activity would see the vernacular architecture and archaeology of the town being subject to less scrutiny, activity and overall management and essentially the town centre core would decline significantly.

Option Two: Consolidate Existing Town Centre, Sequential Development around Established Urban Core and Controlled Eastward Expansion

Option 2 provides for the consolidation of the existing town centre, sequential development around the established urban core within the town and controlled eastward expansion as part of a new access and smarter travel improvements in the town. This alternative is identified as generating a number of positive long term impacts and a range of impacts that may be mitigated through development control and adherence to policies and objectives within the Loughrea LAP and Galway County Development Plan.

At a general level, the focus on consolidation of the town results in positive impacts associated with a compact, pedestrian friendly town centre; accompanying this is a focus on development on infill sites or reuse of existing building stock – this avoids large scale greenfield development with associated negative impacts on soil and biodiversity.

In addition, this alternative builds on the existing layout of Loughrea and aims to reinforce this development pattern, thus enhancing landscape character and better reflecting the identity of the town. By promoting a compact town, there should be greater opportunities to promote non-vehicular or public transport; this results in positive impacts on air quality and reduction of greenhouse gas emissions from transport. By directing subsequent development eastwards, this alternative also directs many development activities away from the fringes of Lough Rea which is the most sensitive area in the town and also identified as a flood risk area in parts.

Option Three: Extend development out along existing approach roads

Option 3 provides for the intensification and extension of new development along the existing approach roads into the town of Loughrea. This alternative would direct development along the main roads associated with Loughrea. A range of long term negative impacts are identified for a number of environmental parameters. In particular, by promoting intensive development along the roads adjoining the Lough Rea cSAC/SPA/pNHA there may be direct impacts associated with surface water run-off, sealing of soils, disturbance to bird species from increased human presence, traffic, noise and lighting.

Long term negative impacts are also identified for EPO Land 1 as development would focus on a number of approach roads to the town. Also, many of the cultural heritage features of Loughrea are concentrated around the town centre and directing development away from these areas may result in a lack of focus or care of such features that again contribute greatly to a sense of place and identity of Loughrea. Some of these areas are also identified as flood risk areas so are not suitable for intensive development activities; should development occur in these areas, a range of parameters could be impacted in the event of flooding including water quality, biodiversity, population and human health and a number of material assets.

6.2 Preferred Alternative

Option Two, Consolidation of the Town Centre, Sequential Development around Established Urban Core and Controlled Eastward Expansion

This is the development scenario adopted by Galway County Council as it allows for planned development and represents a sustainable approach to planning in the Loughrea LAP area. Development will be focused within zoned and serviced areas. This alternative 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 Galway County Development Plan 2009-2015 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 Loughrea.

7 Chapter Seven: Likely Significant Effects of the Draft Loughrea LAP

7.1 Introduction

The purpose of this section of the Environmental Report is to predict and evaluate as far as possible the environmental effects of this Draft LAP for Loughrea. SEA is an iterative process and the new policies and objectives developed for the Draft LAP have taken consideration of environmental issues raised during the scoping process. These issues have been incorporated into draft policies, objectives and land use zonings and the principal purpose of this chapter is to discuss the evaluation of these. A detailed evaluation of all policies, objectives and land use zonings is presented in Annex A of the SEA Environmental Report.

7.2 Overview

The vision that underpins the draft LAP has been evaluated against all the EPOs and generally evaluated as having a positive impact on achieving the environmental protection objectives detailed in Chapter Five. This is primarily attributed to the strategic vision referencing sustainable development, natural environment, quality of life and phased development on appropriately zoned and serviced lands. For other EPOs, development management and application of relevant guidelines will facilitate significant impacts being mitigated against.

7.3 Biodiversity, Flora and Fauna - Significant Impacts

The draft LAP was found to have generally positive impacts for the biodiversity, flora and fauna resources of the town. The promotion of a compact, sustainable town with support for brownfield development, the policies pertaining to Natura 2000 sites, NHAs, pNHAs and open spaces strengthens the protection of biodiversity resources. Moreover, there is an overarching Objective DS3 Natura 2000 Network and Habitats Directive Assessment that details and promotes protection of the relevant habitats and their sustaining resources in the LAP. A suite of other policies and objectives such as Policy NH1 Natural Heritage and Biodiversity, Objective NH5 Biodiversity and Ecological Networks and Objective UD4 Green Networks and Landscaping all generate positive impacts on biodiversity.

Policies and Objectives contained within the plan to increase accessibility generally such as Objective CF 9 Amenity Network could have the potential to impact adversely on biodiversity resources through disturbance and fragmentation unless mitigation is provided for. This is particularly important in relation to Lough Rea cSAC and SPA, and the associated habitats and species that this area supports. Objective LU15 Residential Densities has the potential to generate negative impacts on biodiversity through declining water quality and cumulative impacts associated with same.

Policies and Objectives to support infrastructural projects could have the potential to generate adverse impacts on biodiversity, with key potential impacts relating to disturbance, disruption, fragmentation and loss of habitats. In this context, Objective T115 Transport Network Improvements is identified as generating potential cumulative and in combination effects in the absence of mitigation measures.

Finally, a range of policies and objectives particularly in Section 3.9 Heritage, Landscape and Environment are identified as creating positive long term impacts for biodiversity, flora and

fauna. In addition, the suite of policy and objectives in Section 3.6 Water Services generate long term positive impacts by improving water quality and management within the plan area and accompanying positive impacts on biodiversity, particularly habitats and species that are dependent on good water quality.

7.4 Water - Significant Impacts

The draft LAP promotes intensification of town centre, population growth in line with the Core Strategy of the County Galway CDP 2009-2015, economic growth and various landuse zonings. These could impact potentially on water quality. Water supply for the town is extracted from Lough Rea and the existing water supply system has limited capacity. Therefore policies and objectives associated with water conservation and efficiency reflect this issue. Whilst the Loughrea Sewerage Scheme was upgraded in 2009 and the wastewater treatment plant has increased its capacity, the sewer collection system in the town still requires upgrading. Collection and disposal of surface water around the town in the absence of a dedicated sewer network requires specific management control to avoid generating ongoing and long term impacts on water quality generally.

The general impacts associated with water (and frequently biodiversity) include:

- A reduction in water quality in groundwater, springs and watercourses associated with the construction phase of new developments (short to medium term impacts);
- Surface water runoff from impermeable surfaces leading to reduced water quality in groundwater springs or surface waters affecting qualifying habitats and species downstream (impacts can range from short to long term);
- Changes in the flow rate of watercourses arising from an increased footprint of impermeable surfaces within the Plan area - increasing the extent of impermeable surfaces will result in a decrease in infiltration and an increase in runoff;
- Inadequate wastewater treatment resulting in pollution of groundwater springs or surface watercourses.

There are a range of policies and objectives developed for the LAP that aim to specifically address the issues discussed above, and these include Policy UI1 Water Supply, Wastewater Disposal and Surface Water Drainage Infrastructure and objectives UI2 Water Services for New Developments, and Objective UI3 Water Supply and Water Conservation.

7.5 Soil and Geology - Significant Impacts

The intensification of the town centre, reuse of existing building stock, waste management, amenity and green corridors all offer positive impacts associated with the soil and geology objectives. Soil quality and function may be enhanced through particular measures associated with water quality and landuse and achieving the Water Framework Directive Objectives. Potential adverse impacts arise if new development occurs on Greenfield sites or major infrastructural developments occur close to the agricultural areas of the plan area or environs. Site specific mitigation measures are required relating to construction activities associated with new developments.

7.6 Population and Human Health - Significant Impacts

The policies of the draft LAP are found to likely improve the status of the EPO's on population and human health. The draft LAP promotes the development of a quality, sustainable,

permeable and distinctive town with policies relating to integrated landuse and transport, environmental protection and energy efficiency balanced with economic vitality.

The maintenance, protection and enhancement of water quality is important and is closely allied to human health generally. It is acknowledged that there is over zoning of lands in the plan area and fewer lands are required in order to achieve the target population in the Core Strategy.

The draft plan emphasises the need to integrate landuse and transportation and sets out a strategy for mixed-use, thriving economic and residential environment underpinned by recreational and community infrastructure provided in a timely fashion, in accessible locations and connected to, or within easy reach of, good public transport networks.

Furthermore, draft policies and objectives facilitate and encourage economic growth and renewal, to strengthen the town centre of Loughrea. The promotion of sustainable development by balancing complex sets of environmental, social and economic goals in planning decisions can prove to be positive for population and human health. Certain transport policies encourage a modal shift from private vehicular to other forms of transport. Accompanying this is positive impacts associated with improved air quality, noise impacts and reduced emissions (see for example Objectives TI4 Walking and TI5 Cycling, and TI12 Amenity/Walking/Cycling Network). In general policies are likely to improve the status of the EPO's on human health. Maximising the use of central urban areas contributes to the conservation and protection of the natural environment for the enjoyment and protection of all. Provision of green corridors, if taken up, will help in public transport provision, economic development strategy and provision of recreational and amenity areas contributing to the health and well-being of the population of Loughrea.

7.7 Cultural Heritage - Significant Impacts

Overall the impacts of the draft LAP are long term and positive in relation to cultural heritage due to the recognition of the value of Loughrea's heritage and the range of cultural heritage features including built heritage and more intangible cultural heritage such as linguistic heritage. The recognition that Loughrea's cultural heritage has a key role to play in tourism promotion also creates positive impacts for the cultural heritage of the town. Objective ED4 Tourism Development supports the appropriate development of tourism within the town; this policy is identified as generating positive impacts relating to cultural heritage, landscape and population. Potential cultural heritage impacts arise once more in relation to transport and landuse, though should any large infrastructural projects be proposed, they will be subject to project level assessment and therefore are not considered significant at strategic level.

Archaeology

Overall, impacts on archaeology are positive in light of a number of specific policies addressing a range of archaeological resources. Potential negative impacts may arise on new developments or infrastructural developments but generally these can be mitigated through the planning process. Loughrea supports a very rich archaeological record and a range of specific objectives recognise this, namely Objective BH4- The Walk, BH11 Town Defences, and BH12 Crannogs.

Architecture

Architectural heritage impacts can be associated with negative long term impacts on the setting of protected structures or construction damage to protected structures such as gate entrances, or bridges. The built heritage of Loughrea is important and contributes to the sense of place and local identity so a range of policies and objectives in both Sections 3.7: Urban Design and Landscape, and 3.8: Built Heritage and Cultural Heritage generate positive impacts.

7.8 Landscape - Significant Impacts

Overall some positive impacts are associated with new policies and objectives that promote key landscape resources, identify key viewpoints and settings and promote landscape character and built environment. The focus on design statements for certain developments, enhancing sense of place and high quality urban realm provides further positive impacts for Loughrea's landscape resources. Cumulative impacts are a particular issue in relation to landscape character, and the degradation and weakening of landscape character over time can present negative long term impacts. The topography and historical character of Loughrea combines to create a strong landscape character and identity so the adherence to, and implementation of, landscape policies such as Policy UD Urban Design and Landscape and Objective UD7 Landscape, Townscape, Views and Prospects are important to protect the landscape resources of the area.

7.9 Air and Climatic factors - Significant Impacts

Overall the draft LAP policies and objectives will have significant beneficial impacts on air. Loughrea does not suffer from poor air quality generally although there may be localised issues arising from transport. There will be significant benefits relating to air quality and climatic factors due to the development of a number of specific policies/objectives addressing these issues. Some short-term impacts on climatic factors will occur (particularly in relation to the emissions of greenhouse gases and use of energy) as a result of increased development and construction however these are considered to be short-term impacts and can generally be mitigated against.

Again, positive impacts are identified for Air Quality and Climate associated with policies and objectives such as enhanced transport policies and promoting alternative transport methods. The policy focus on energy efficiency and buildings is also identified as being positive for air quality and climate EPOs.

7.10 Material Assets - flooding, wastewater, water services, waste management and transport – Significant Impacts

Several transport policies and objectives create positive impacts as they support more sustainable transport options with cumulative and in combination positive impacts relating to human health, biodiversity and air quality. The Flood Risk Management policies and objectives are developed in response to the flood risk assessment work and strengthen the overall policy response to flood risk in the plan area. Policy UI2 Flood Risk Management and Objective UI7 Flood Risk Management and Assessment in particular are identified as generating positive impacts. In addition, as will be discussed in the land use zoning discussion, the application of the SFRA for County Galway during the development of the LAP has resulted in the avoidance of intensive and unsuitable development activities in areas identified as flood risk zones A or B.

For transport, policies and objectives of particular relevance include Policy T11: Sustainable Transport, Walking and Cycling, Objectives T12 Sustainable Transportation, T13 Public Transport, T14 Walking and T15 Cycling. These are identified as generating positive impacts for a number of EPOs including population and human health, air quality and climate and sustainable transport. Waste management is very site specific and is difficult to assess at strategic level. Careful storage and treatment of excavated soils can mean their reinstatement post construction which contributes to a neutral impact. Identifying locations for Bring Banks (Objective UI13) and Waste Management Plans at application stage (Objective UI12 Waste Prevention, Reduction and Recycling) also create positive impacts for some of the Material Assets EPOs.

Wastewater and Potable Infrastructure and Management in Loughrea is a critical component of the SEA assessment. A range of policies are included in the draft LAP that support water quality and water management, for example Policy UI1 Water Supply, Wastewater Disposal and Surface Water Drainage Infrastructure, and Objective UI1 Water Services Infrastructure. More positive permanent impacts are associated with indirect policies including Sustainable Urban Drainage Systems and the provision for green infrastructure throughout the plan area. The recognition of the WFD and its roles and responsibilities currently act as a key driver toward long term positive impacts for water quality and water management generally.

7.12 General Discussion of Zonings

The elements of the Draft Plan that have the potential to negatively affect Natura 2000 Sites are outlined in full in the accompanying Natura Impact Report. The main elements of the Draft Plan with the potential to result in such impacts relate to the zoning of development land-use in undeveloped sites adjacent to St Cleran's River, the development of infrastructure such as the Eastern Relief Road or energy infrastructure and the pressures associated with the adequate supply of water throughout the lifetime of the Plan.

The following section discusses the impacts associated with each zoning proposed for the plan area.

7.12.1 Agricultural Zonings

The largest zoning within the plan area, are proposed for agriculture in the draft LAP. The main agricultural zonings are the peripheral areas away from the town centre, ie: the lands straddling the N65/N66 roads, the southeast, east and western fringes of the plan area. Some of these areas were formerly zoned residential such as the eastern part of the plan area, north of Baunoge. The provision of agricultural land is not of itself a significant change as the much of the land proposed for agriculture is predominantly improved agricultural grassland, however consideration must be given to the range of uses permitted in principle or open for consideration under this zoning. The application of a range of policies and objectives contained in the draft LAP including Objective DS3 Natura 2000 Network and Habitats Directive Assessment and Objective DS4: Development Management Standards and Guidelines (amongst others) will assist in ensuring these issues are considered should development applications present for these areas. This zoning was found to have positive impacts for several biodiversity, water and soil EPOs.

7.12.2 Environmental Management

Limited uses open for consideration in this category are: public utilities, cultural activities and renewable/wind energy. This land use zone is identified as generating positive long term impacts for a range of EPOs including Biodiversity, Water, Material Assets (flooding), Soil and Geology and Population and Human health. This is due to this zoning directing development away from environmentally sensitive areas including Lough Rea Natura 2000 site and flood risk areas, and is reflective of the Natura Impact Report that has been prepared in tandem with the draft LAP and SEA.

7.12.3 Residential Zonings Phase 1 and Phase 2

The Core Strategy in the Galway County Development Plan has identified a target population growth of up to 1,133 persons for Loughrea to 2015, which results in a requirement for 32.68ha of zoned land for residential purposes (based on 50% over-zoning). Due to the reduction in land zoned for residential development in line with the County Galway Core Strategy and the removal of lands zoned for residential in what is now open space zoning (see for example the area around Baunoge), most of the impacts identified for residential development zones were

for impacts that can be mitigated at site /project level. This was relevant to a range of EPOs including Population and Human Health, Landscape and Material Assets EPOs amongst others.

7.12. 4 Open Space/Recreation and Amenity

Many of the areas zoned for open space/recreation and amenity are composed of small areas that have either been rezoned following the Flood Risk Assessment or are areas of existing open green space associated with residential development. The largest areas of this zoning are concentrated along the lough shore, adjoining the River St Cleran and an extensive area in the east of the plan area that is identified as Flood Risk Zone A. Impacts identified with such zonings include disturbance to species through increased access and accompanying noise or human presence. However, the land use matrix has curtailed a range of potential uses for this zoning and a limited number of uses are open for consideration (none are permitted in principle). The uses include agricultural buildings, utilities infrastructure, renewable energy, clubhouse and recreational/cultural facilities. Generally, for most of the small zonings, impacts were neutral or positive for a range of parameters including cultural heritage (neutral), population and human health (positive) and landscape (positive).

7.12.5 Community Facilities

Community Facilities land are largely concentrated close to the town centre of Loughrea, frequently adjoining the town centre zonings. This reflects the aim of the LAP to promote a vibrant core to the town, and provide easy access to facilities for the inhabitants of the town. Three of these zonings are identified on the Specific Objectives Map as being indicated for educational facilities to serve the likely increased demand for such facilities over time.

The range of uses permitted in principle for community facilities include schools, childcare, library, and community facilities amongst others. Again on undeveloped lands, negative impacts are identified for biodiversity and soil due to development on greenfield sites, but for many EPOs these can be mitigated through development management and relevant policies and objectives in the draft Plan. Positive impacts are identified for population and human health, transport and air quality for these zonings.

7.12.6 Industrial

Industrial land use zoned on undeveloped land is restricted to the northwest of the plan area (between the Athenry Road and the N66), and the east of the plan area (between the N65 and Dublin Road). These two undeveloped lands are characterised by improved agricultural grassland with treeline and hedgerow field boundaries; the eastern lands are approximately 900m to the north of Lough Rea Natura 2000 site, whilst the north western lands are located approximately 750m north of Lough Rea. For both lands, buffering from the Natura 2000 is provided by a range of existing roads, built development, and agricultural lands.

Three other areas zoned industrial support existing developments (the largest of these is located on the northeast of the plan area; a small area is located just southeast of this whilst the final site is north of the town centre). Again, for many EPOs this zoning was identified as presenting impacts that can be mitigated, principally through development management and policies and objectives contained in the draft LAP.

7.12.7 Business and Enterprise

Three parcels of land are zoned Business and Enterprise within the plan area. Two of these are located adjacent to the industrial lands discussed above in the east and north west of the plan area. The third area is located around Moneamore, south of the N65/66 roundabout. Again, for many EPOs this zoning was identified as presenting impacts that can be mitigated, principally through development management and policies and objectives contained in the draft LAP.

7.12.8 Town Centre/Commercial and Commercial/Mixed Use

The town centre zonings are concentrated in the existing centre of town, and then due north of this area, supporting the sequential and phased development of the town centre. For much of this zoning, the lands are established urban areas; the main undeveloped land zoned town centre is composed of improved agricultural grassland, with hedgerows and treelines.

Commercial/Mixed Use Zonings are proposed for two areas within the plan boundary, close to existing or proposed residential. Whilst many EPOs for these zonings were found to be mitigated through development control, positive impacts were identified for population and human health, and material assets, namely sustainable transport and air quality.

7.12.9 Flood Risk

The majority of areas identified as Flood Zone A or B under the SFRA for County Galway are zoned either EM or Open Space within the plan area, thus avoiding incompatible uses and directing inappropriate development away from these zones. As the Land use matrix for the LAP shows, the only development open for consideration within the EM is Utilities Infrastructure and Public Service Installation. Limited uses are also open for consideration for the open space zoning. Such developments would be assessed in accordance with the Planning System and Flood Risk Management Guidelines (2009). There are small numbers of existing developments that lie within Flood Zone A or B (mainly along the lake shore or close to the River St Cleran); again any redevelopment activities associated with these existing structures would also require application of the above guidelines.

For a number of supporting policies and objectives, the SEA and HDA identified potential impacts and recommended a number of mitigation measures at this level. These are detailed in *Chapter Eight, Mitigation Measures* of the SEA Environmental Report.

8 Chapter Eight: Mitigation Measures

8.1 Introduction

This chapter outlines the mitigation measures that will prevent, reduce, and offset as much as possible any significant adverse effects on the environment of the plan area resulting from the implementation of the Draft LAP. Section (g) of Schedule 2B of the SEA Regulations (as amended) requires:

'The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the Plan'

In addition, many impacts will be more adequately identified and mitigated at project and EIA level. In general terms, all proposals for development will be required to have due regard to environmental considerations outlined in this Environmental Report and Natura Impact 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.

There are also a number of overarching policies and objectives that are provided in the LAP and these will ensure that any project level applications are assessed against these policies and objectives. The principal ones are as follows:

- **Objective DS 3: Natura 2000 Network and Habitats Directive Assessment**
- **Objective DS4: Development Management Standards and Guidelines**
- **Policy RD 1: Residential Development**

- **Objective TI 1: Integrated Land Use and Transport**
- **Objective UI2: Water Services for New Developments**
- **Policy UI2: Flood Risk Management and Objective UI7: Flood Risk Management and Assessment**
- **Objective UI 10- Western River Basin District Management Plan and Protection of Waters**
- **Policy NH 1: Natura 2000 Sites**
- **Objective NH2: Protected Habitats and Species**
- **Objective NH3: Natural Heritage Areas**
- **Objective NH4: Impact Assessment**
- **Objective NH5: Biodiversity and Ecological Networks**
- **Objective NH 6: Water Resources**
- **Objective DS 4: Development Management Standards and Guidelines of the Draft LAP refers to the full application of all guidelines in the Galway County Development Plan 2009 -2015 (GCDP).**

There are also a number of policies/objectives that are identified as potentially generating significant adverse impacts on the environment, and suggested rewording of these policies is put forward for consideration and recommended for adoption.

8.2 Mitigation Measures – Suggested Rewording of Existing Draft Policies and Objectives

Table 8a proposes a number of changes to the draft policies/objectives in order to strengthen protection of environmental resources. These have been informed by both the SEA and the HDA process.

Table 8a: Mitigation Measures for Policies or Objectives in the Draft Loughrea LAP

Original Text	Mitigation Measure
<p>Objective LU 15– Residential Densities</p> <p>Promote a range of residential densities within the Plan Area appropriate to the prevailing development pattern, supporting infrastructure, urban character and heritage resources in accordance with the guidance in ‘Sustainable Residential Development in Urban Areas Guidelines 2009 (or any updated/superseding document). Higher residential densities should be encouraged at locations where it is appropriate to the existing context and density of the Plan Area, for example around the town centre and within convenient walking distance of public transport facilities, and where it will not unduly impact on built or natural heritage. The density of residential developments will generally be in accordance with the guidance set out under <i>DM Guideline LU1</i>, although the Planning Authority may consider higher residential densities where this is considered appropriate to the context and necessary to secure the urban design or other objectives of the Plan. Development will only be permitted where there is capacity and/or adequate services can be made</p>	<p>LU 15 - Residential Densities</p> <p>Promote a range of residential densities within the Plan Area appropriate to the prevailing development pattern, supporting infrastructure, urban character and heritage resources in accordance with the guidance in ‘Sustainable Residential Development in Urban Areas Guidelines 2009 (or any updated/superseding document). Higher residential densities should be encouraged at locations where it is appropriate to the existing context and density of the Plan Area, for example around the town centre and within convenient walking distance of public transport facilities, and where it will not unduly impact on built or natural heritage or impact adversely on the integrity of Natura 2000 sites. The density of residential developments will generally be in accordance with the guidance set out under <i>DM Guideline LU1</i>, although the Planning Authority may consider higher residential densities where this is considered appropriate to the context and necessary to secure the urban design or other objectives of the Plan. Development will only be permitted where there is capacity and/or adequate services can be made</p>

available.	available.
<p>Objective LU 16- Action Area Plans (refer to Map 2) Require the preparation of Action Area Plans for the development of strategic or significant lands. This will include development proposals in the following areas and other locations where the Planning Authority considers it necessary or appropriate:</p> <p>a) An Action Area Plan for the sensitive development of land in the vicinity and to the west of the north mound, the rear of main street, the mart and to the eastern end of the Carmellite fathers in consultation with landowners and relevant stakeholders.</p> <p>b) Action Area Plans for the integrated development of backlands to the rear of the primary streets of Loughrea.</p>	<p>Objective LU 16- Action Area Plans (refer to Map 2) Require the preparation of Action Area Plans for the development of strategic or significant lands. This will include development proposals in the following areas and other locations where the Planning Authority considers it necessary or appropriate:</p> <p>a) An Action Area Plan for the sensitive development of land in the vicinity and to the west of the north mound, the rear of main street, the mart and to the eastern end of the Carmellite fathers in consultation with landowners and relevant stakeholders.</p> <p>b) Action Area Plans for the integrated development of backlands to the rear of the primary streets of Loughrea.</p> <p><i>Action Area Plans may be subject to Habitats Directive Assessment where appropriate, depending on the scale and intensity of development proposed and the likelihood of significant effects on the Lough Rea SPA/SAC or any other Natura 2000 site.</i></p>
<p>Objective LU14 – Development Densities (refer to DM Guideline LU1)</p> <p>Ensure that the density of new development is appropriate to the land use zone and site context, is in keeping with the development pattern of the area, does not unduly impact on the amenities of the area and that it results in a positive relationship between new developments and any adjoining public spaces. Promote the development of higher density development in appropriate locations, such as suitable sites within the town centre and adjacent to public transport facilities, where such development is compatible with heritage and urban design objectives and infrastructure capacity. The density of developments will generally be in accordance with the guidance set out under <i>DM Guideline LU1</i>, although the planning authority may consider higher density developments where this is considered appropriate to secure the urban design or other objectives of the Plan.</p>	<p>Objective LU14 – Development Densities (refer to DM Guideline LU1)</p> <p>Ensure that the density of new development is appropriate to the land use zone and site context, is in keeping with the development pattern of the area, does not unduly impact on the amenities of the area and that it results in a positive relationship between new developments and any adjoining public spaces. Promote the development of higher density development in appropriate locations, such as suitable sites within the town centre and adjacent to public transport facilities, where such development is compatible with <i>built and natural</i> heritage and urban design objectives and infrastructure capacity. The density of developments will generally be in accordance with the guidance set out under <i>DM Guideline LU1</i>, although the Planning Authority may consider higher density developments where this is considered appropriate to secure the urban design or other objectives of the Plan.</p>
<p>Objective CF9 – Amenity Network (refer to Map 2) Support the establishment of an accessible network of greenway linkages and amenities that provide safe and attractive circulation routes for pedestrians and cyclists for the enjoyment and recreational use of the entire community. This network will link together community facilities, amenities and built heritage features in the Plan Area and surrounding areas and will help to reinforce the ecological network and support the ecological biodiversity and functioning of</p>	<p>Objective CF9 – Amenity Network (refer to Map 2) Support the establishment of an accessible network of greenway linkages and amenities that provide safe and attractive circulation routes for pedestrians and cyclists for the enjoyment and recreational use of the entire community. This network will link together community facilities, amenities and built heritage features in the Plan Area and surrounding areas. <i>Galway County Council will seek to promote the functioning of greenway networks as wildlife corridors and habitats to enhance</i></p>

the natural environment.	biodiversity and the natural environment.
Objective CF10 – Linear Park along St. Cleran’s River (refer to Map 2) Ensure that the development of lands along St. Cleran’s River incorporates a linear park and amenity walkway in the identified flood risk area associated with the river. The existing river, riparian vegetation and nearby tree lines should be retained as part of the park and any new development along the river will be required to have a positive relationship with the park, including high quality streetscapes, overlooking development and active/responsive ground floor uses, where appropriate. This will include the lands zoned Open Space (OS) and Town Centre (C1) east of St. Cleran’s River in the vicinity of the Station Road Car Park and as shown on <i>Map 2 – Specific Objectives</i> .	Objective CF10 – Linear Park along St. Cleran’s River (refer to Map 2) Ensure that the development of lands along St. Cleran’s River incorporates a linear park and amenity walkway in the identified flood risk area associated with the river. The existing river, riparian vegetation and nearby tree lines should be retained as part of the park and any new development along the river will be required to be compatible with the aim of achieving good ecological status for the River St. Cleran as well as having a positive relationship with the park, including high quality streetscapes, overlooking development and active/responsive ground floor uses, where appropriate. This will include the lands zoned Open Space (OS) and Town Centre (C1) east of St. Cleran’s River in the vicinity of the Station Road Car Park and as shown on <i>Map 2 – Specific Objectives</i> .
Objective ED4 – Tourism Development (refer to Map 2) Encourage and facilitate the development of the tourism potential of Loughrea in a manner that respects, builds on, protects and enhances the cultural, built and natural heritage of the town and the local amenities within the Plan Area. Key projects and initiatives that will be supported will include: a) Protect and enhance the quality and amenity of the blue flag beach and public amenity area at Long Point, Lough Rea. b) Support the development of water-based recreational facilities and activities that will benefit the local community and visitors to the area and enhance the tourism infrastructure in an environmentally sustainable manner. c) Seek to develop a strategy for information signage to structures or buildings of historical importance and tourism	Objective ED4 – Tourism Development (refer to Map 2) Encourage and facilitate the development of the tourism potential of Loughrea in a manner that respects, builds on, protects and enhances the cultural, built and natural heritage of the town and the local amenities within the Plan Area. Key projects and initiatives that will be supported will include: a) Protect and enhance the quality and amenity of the blue flag beach and public amenity area at Long Point, Lough Rea. b) Support the development of water-based recreational facilities and activities that will benefit the local community and visitors to the area and enhance the tourism infrastructure in an environmentally sustainable manner that recognises the Water Framework Directive water quality and Natura 2000 conservation management objectives for Lough Rea c) Seek to develop a strategy for information signage to structures or buildings of historical importance and tourism
Objective UI 3 – Water Supply & Water Conservation Ensure that new developments are adequately serviced with a suitable quantity and quality of drinking water supply, promote water conservation to reduce the overall level of water loss in the public supply and require that new domestic developments provide for water supply metering.	Objective UI 3 – Water Supply & Water Conservation Ensure that new developments are adequately serviced with a suitable quantity and quality of a sustainably sourced drinking water supply, promote water conservation to reduce the overall level of water loss in the public supply and require that new domestic developments provide for water supply metering.
Objective T115 – Transport Network Improvements (refer to Map 2) Support the improvement of the road and street network in and around the Plan Area, subject to normal planning and environmental considerations. This will include the following new routes and projects	Objective T115 – Transport Network Improvements (refer to Map 2) Support the improvement of the road and street network in and around the Plan Area, subject to normal planning and environmental consideration including in combination effects under the EU Habitats Directive

<p>and any other appropriately approved transport schemes/improvements to roads and streets in and around the Plan Area:</p> <p>a) A new relief road/street connecting the north-eastern approach road (R446) to the south-eastern approach road (L4213) in the eastern portion of the Plan Area. This new route should be designed to provide adequate access points to adjacent lands with adjacent street-oriented development and will provide opportunities for smarter travel improvements within the town.</p> <p>b) The proposed western bypass of the town connecting the N66/R446/R349 junction in the northwest of the plan area to the N66 route to the southwest of the Plan Area.</p> <p>c) Carry out road improvement, widening and realignment of the Coarsing field road which links the Portumna road and the existing N6 Dublin road.</p> <p>d) Acquire the lands of the old railway line, used as a link road between Bride Street and the Loughrea/New Inn road.</p> <p>e) Improve culverts and all roadside drainage, maintain and renew pavements, widen and improve existing roads, improve road signage and facilitate the provision of new roads/streets within Loughrea, as the need arises and as resources permit.</p> <p>Require proposed developments to incorporate provisions for busways, footpaths and cycleways where properties bound main arterial routes, new link routes or other routes determined by the NRA. Prohibit development on lands that are reserved for proposed road/street corridors and associated buffers and where development would affect a route, line, level or layout of any proposed new roadway or any junction required between a proposed and existing road.</p>	<p>Assessment as appropriate. This will include the following new routes and projects and any other appropriately approved transport schemes/improvements to roads and streets in and around the Plan Area:</p> <p>a) A new relief road/street connecting the north-eastern approach road (R446) to the south-eastern approach road (L4213) in the eastern portion of the Plan Area. This new route should be designed to provide adequate access points to adjacent lands with adjacent street-oriented development and will provide opportunities for smarter travel improvements within the town.</p> <p>b) The proposed western bypass of the town connecting the N66/R446/R349 junction in the northwest of the plan area to the N66 route to the southwest of the Plan Area.</p> <p>c) Carry out road improvement, widening and realignment of the Coarsing field road which links the Portumna road and the existing N6 Dublin road.</p> <p>d) Acquire the lands of the old railway line, used as a link road between Bride Street and the Loughrea/New Inn road.</p> <p>e) Improve culverts and all roadside drainage, maintain and renew pavements, widen and improve existing roads, improve road signage and facilitate the provision of new roads/streets within Loughrea, as the need arises and as resources permit.</p> <p>Require proposed developments to incorporate provisions for busways, footpaths and cycleways where properties bound main arterial routes, new link routes or other routes determined by the NRA. Prohibit development on lands that are reserved for proposed road/street corridors and associated buffers and where development would affect a route, line, level or layout of any proposed new roadway or any junction required between a proposed and existing road.</p>
<p>Objective UD1 – High Quality, Context Sensitive Design Ensure that new developments are responsive to their site context and in keeping with the character, amenity, heritage, environment and landscape of the area. New development proposals will be required to complement the existing character of the town centre/area in terms of scale, height, massing, building line, urban grain and definition and through high quality design proposals for buildings/structures/shop fronts, the use of high quality, appropriate materials and the provision of appropriate signage, lighting, landscaping proposals and other such details.</p>	<p>Objective UD1 – High Quality, Context Sensitive Design Ensure that new developments are responsive to their site context and in keeping with the character, amenity, heritage, environment and landscape of the area. New development proposals will be required to complement the existing character of the town centre/area in terms of scale, height, massing, building line, urban grain and definition and through high quality design proposals for buildings/structures/shop fronts, the use of high quality, appropriate materials and the provision of appropriate signage, lighting, landscaping proposals and other such details. External lighting and light spill will be minimised in general and the use of lighting in areas of ecological sensitivity avoided and/or minimised where possible. Lighting should not be directed at St. Cleran’s River or</p>

<p>Objective NH5 – Biodiversity and Ecological Networks (refer to Map 2) Support the protection and enhancement of biodiversity and ecological connectivity within the Plan Area, including woodlands, trees, hedgerows, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife where these form part of the ecological network:</p> <p>a) Seek to retain and/or incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors and stepping stones.</p> <p>b) Protect and enhance the water quality and ecology of St. Cleran’s River and its tributary to the east, and their function as ecological corridors, by maintaining the existing banks and channel and ensuring that new developments are set back at least 10m from the top of the bank of the stream.</p> <p>c) Ensure greater biodiversity through the appropriate planting of native trees, shrubs and hedgerow indigenous to the Loughrea area in public and private areas and in new developments.</p>	<p>Lough Rea.</p> <p>Objective NH5 – Biodiversity and Ecological Networks (refer to Map 2) Support the protection and enhancement of biodiversity and ecological connectivity within the Plan Area, including woodlands, trees, hedgerows, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife where these form part of the ecological network:</p> <p>a) Seek to retain and/or incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors and stepping stones.</p> <p>b) Protect and enhance the water quality and ecology of St. Cleran’s River and its tributary to the east, and their function as ecological corridors, by maintaining the existing banks and channel and ensuring that new developments are set back at least 10m from the top of the bank of the stream.</p> <p>c) Ensure greater biodiversity through the appropriate planting of native trees, shrubs and hedgerow indigenous to the Loughrea area and of Irish provenance in public and private areas and in new developments.</p>
<p>Objective NH7 – Environmental Management Area (refer to Map 2) Ensure that new development proposals on the lakeshore and around the lake that may be impact on the Lough Rea SAC/SPA/pNHA are adequately assessed and any impacts identified can be avoided, reduced and/or mitigated, as appropriate, in accordance with applicable environmental legislation and policy prior to any consent being given. This will include any amenity proposals on open space lands around the lake and development proposals on zoned lands around the lake or that drain towards the lake.</p>	<p>Objective NH7 – Environmental Management Area (refer to Map 2) Ensure that new development proposals on the lakeshore and around the lake that may be impact on the Lough Rea SAC/SPA/pNHA are adequately assessed, undergo environmental and/or Habitats Directive assessments, including the evaluation of cumulative/in combination effects, and any impacts identified can be avoided, reduced and/or mitigated, as appropriate, in accordance with applicable environmental legislation and policy prior to any consent being given. This will include any amenity proposals on open space lands around the lake and development proposals on zoned lands around the lake or that drain towards the lake.</p>

9 Chapter Nine: Monitoring and Conclusion

9.1 Introduction

It is proposed, in accordance with the SEA Directive, 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 monitoring programme will consist of an assessment of the relevant indicators and targets against the data relating to each environmental component. Similarly, monitoring will be carried out frequently to ensure that any changes to the environment can be identified. It is proposed that the SEA monitoring reporting should go parallel with the reviewing of the draft LAP. However, in some

cases as data becomes available, the Planning Authority may prepare an additional SEA Monitoring Report. In particular, should new data or the following occur, additional monitoring will be required:

- Significant unauthorised development (either large scale or cumulative small scale)
- Illegal waste activity
- Water pollution incidents (not resulting from oil spills).

Should the monitoring regime identify significant impacts (such as impacts on designated sites) early on in the Draft LAP implementation, this should trigger a review of the Draft LAP and monitoring regime. Finally, it is recommended that the monitoring report be made available to the public upon its completion every two years and data be shared with neighbouring local authorities to assist in monitoring cross county effects should they arise. An overview of the proposed monitoring regime is presented in Table 9a below. Please see the SEA ER for the full monitoring table.

Table 9a: Monitoring Table

Topic and SEA Objective	Indicators	Targets	Data sources	Responsible Body
Biodiversity				
Bio 1: Protect, conserve and avoid loss of the diversity and range of habitats, species and wildlife corridors	Habitat Loss	- No net habitat loss	NPWS/ Local Authority	Local Authority
Bio 2: Protect designated sites including Natura 2000 (SACs and SPAs) under Article 6 of the Habitats Directive. Conserve and protect, or maintain and restore Natura 2000 sites and the Natura 2000 network.	Habitat loss Compliance with Conservation Site Objectives for Natura 2000 sites	- Total area of designated sites (Natura 2000 and pNHA's) - Total area of Conservation Areas	NPWS/Local Authority	Local Authority
Bio 3 - Conserve and protect other sites with nature conservation sites (NHAs, pNHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries).	Habitat loss	Total area of designated sites	NPWS/Local Authority	Local Authority
Bio 4: Protect habitats (terrestrial and aquatic) from invasive species	Spread of invasive species	- Survey and monitor extent and distribution of invasive species	NPWS/Local Authority	Local Authority
Bio 5: Protect the inland and coastal aquatic environment.	Biotic Quality Rating (Q Values) and Risk assessment	- Improve Q value status for river bodies in plan area and zone of influence - Aim to achieve Q4	WFD/RBMP/ Local Authority	Local Authority

		value in line with Water Framework requirements by 2015.		
Bio 6 – Meet the requirements of the WFD and the RBMP	Status of waterbodies Compliance with RBMP	Aim to achieve WFD requirements by 2015. Comply with RBMP	WFD/RBMP/ Local Authority	Local Authority
Water	Indicators	Targets	Data Sources	Responsible Body
Wat 1 - 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)	Biotic Quality Rating (Q Values) and Risk assessment	- Improve Q value status for river bodies in plan area and zone of influence - Aim to achieve Q4 value in line with Water Framework requirements by 2015.	WFD/RBMP/ Local Authority	Local Authority
Wat 2 - Maintain or improve the quality of surface water (including estuarine) to status objectives as set out in the Water Framework Directive, WRBM and POMS	Biotic Quality Rating (Q Values) and Risk assessment	- No severe pollution incident - Appropriate WWT Infrastructure in plan area	WFD/ Local Authority/ Western RBD Project	Local Authority
Wat 3 - Prevent pollution and contamination of groundwater by adhering to aquifer protection plans	Risk Assessment	-No change or improvement in groundwater quality associated with development	EPA / WRBD Project	Local Authority
Geology and Soil				
Soil 1: Encourage the use of derelict, disused and infill sites rather than Greenfield sites where appropriate	Number of developments granted for brownfield sites (or area)	-Infill developments on brownfield sites over lifetime of the plan.	Local Authority	Local Authority
Soil 2: Protect, improve and maintain the quality of soils	Specific soil management plans for large developments as part of construction management plans.	- No recorded soil contamination incidents - No invasive species due to poor soil management or topsoil	EPA and Local Authority	Local Authority
Soil 3: Conserve, protect and avoid loss of diversity and integrity of designated	Impacts to designated geological sites and	- No impacts on such sites associated with the	Local Authority	Local Authority and GSI

habitats, geological features, species or their sustaining resources in designated ecological sites.	their sustaining resources	implementation of the LAP		
Population and human health	Indicators	Targets	Data sources	Responsible Authority
Pop 1: Protect, enhance and improve people's quality of life based on high quality residential, community, working and recreational environments and on sustainable travel patterns.	<ul style="list-style-type: none"> - Drinking Water Sources to comply with the EC (Drinking Water) - All water bodies to achieve good status, or maintain high status, by 2015 as required by the EU WFD 2000/60/EC - Increase population and average net densities in new residential / mixed-use schemes. While also promoting employment opportunities and the development of Loughrea in line with Core Strategy 	<ul style="list-style-type: none"> - Status of drinking water and drinking water sources - Ecological status of water bodies - Average density of new residential development - Average of densities in new developments - Live register figures 	<ul style="list-style-type: none"> Local Authority Health Service Executive 	Local Authority
Pop 2: To protect human health from risks or nuisances arising from exposure to incompatible land uses/developments	<ul style="list-style-type: none"> - No. of complaints relating to noise, odour, water quality and visual issues. 	<ul style="list-style-type: none"> - Promote compatible land use where possible 	Local Authority/ HSA	Local Authority
Cultural heritage				
CH1: Protect and conserve the cultural heritage including the built environment and settings; archaeological (recorded and unrecorded monuments), architectural (Protected Structures, Architectural Conservation Areas, vernacular buildings, materials and urban fabric) and manmade landscape features (e.g. field walls, footpaths, gate piers etc.).	<ul style="list-style-type: none"> - % of Protected Structures 'at risk' - No. of ACAs - No. of archaeological sites investigated 	<ul style="list-style-type: none"> - Ensure that the cultural heritage of the town is maintained and protected from damage and deterioration 	Local Authority	Local Authority
CH2: To ensure the restoration and reuse of existing uninhabited and	<ul style="list-style-type: none"> - No. of buildings restored over lifetime 	<ul style="list-style-type: none"> - To ensure a positive increase in such development 	Local Authority	Local Authority

derelict structures where possible as opposed to demolition and new build(as opposed to demolition).	of the plan	over lifetime of LAP.		
Landscape	Indicators	Targets	Data Sources	Responsible Authority
Land 1: Protect designated landscapes and scenic views, routes and landscape features of local value.	- Developments impacting on scenic views and routes	Promote, enhance landscape character through policy implementation	Local Authority	Local Authority
Land 2: Conserve and protect cultural landscapes including archaeological and architectural landscapes	- Number of developments requiring landscape impact assessment	Maintain cultural landscapes associated with Loughrea	Local Authority	Local Authority
Land 3: Minimise visual impacts through appropriate design, assessment and siting	- Number of developments requiring a visual impact assessment	Minimal negative visual impacts from new developments	Local Authority	Local Authority
Air Quality and Climate	Indicators	Targets	Data sources	Responsible Body
AQ1: Seek to avoid air pollution and maintain/improve ambient air quality	Maintenance of air quality standards and values	No decline in overall air quality	Local Authority	Local Authority
AQ2: Minimise emissions of greenhouse gases through energy efficiency and promotion of renewable energy	Average energy consumption of new residential housing stock Tonnes of CO2 /capita/year	Decrease Greenhouse gas emissions in line with 2020 commitments	EPA, Local Authority, SEAI	Local Authority
Topic and SEA Objective Material Assets	Indicators	Targets	Data sources	
Mat 1: Reduce risk of flooding through avoidance of inappropriate development in flood plains or in areas at risk of flooding and manage the risk of flooding	Number of planning permissions compliant with the Floods Directive and OPW / DoEHLG's 'Flood Risk Management in the Planning Process' standards Number of Sustainable Urban Drainage Systems and flood defence features required in	Compliance with the Floods Directive and with OPW / Identify Sustainable Urban Drainage Systems (and features which are identified as having a flood defence function) in all new developments	Local Authority	Local Authority

	new planning applications			
Mat 2: Ensure that drinking water supplies are free from contamination	% compliance in potable water quality monitoring % compliance in wastewater discharges from municipal treatment	100% compliance with water quality monitoring	Local Authority /EPA	Local Authority
Mat 3: To protect residents from adverse noise levels	% complaints	Targets as set out in Draft Noise Action Plan	Local Authority	Local Authority
Mat 4: Ensure that all developments are adequately serviced to EPA standards prior to discharge	% compliance in wastewater discharges from municipal treatment	Improved % compliance	Local Authority	Local Authority
Mat 5: Implement the waste pyramid and encourage reuse/recycling of material wherever possible	% of waste recycled Tonne of waste per capita per year	% recycling from regional waste strategy	Local Authority	Local Authority
Mat 6: Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives	Average energy consumption of new residential housing stock Tonnes of CO2 /capita/year	Decrease Greenhouse gas emissions in line with 2020 commitments	EPA, Local Authority, SEAI	Local Authority
Mat 7: Maximise sustainable modes of transport, provide for ease of movement for all road users and promote development patterns that protect and enhance road safety.	% change in modal split	Extension and improvement of the cycling and walking network	Local Authority	Local Authority

9.2 Conclusion

The Draft Loughrea LAP sets out an overall strategy, policies and objectives for the period 2012 to 2018 which seeks to provide for the long term planning and overall benefit of the town. This SEA Environmental Report demonstrates how environmental parameters have been addressed in the LAP preparation process to date. Consultation has been undertaken for the Scoping of the Environmental Report, and current baseline information has been described for all SEA parameters. This NTS and the ER forms a key part of the consultation process and is accompanied by the Habitats Directive Assessment (HDA) and draft Loughrea LAP which is subject to public display.

Policies, objectives and land use zonings were assessed in terms of the impacts on the environment and mitigation measures proposed through rewording of the policies/objectives or

rezoning where necessary. The mitigation measures proposed for the policies/objectives through the SEA and HDA process have been incorporated into the draft LAP.

The SEA and HDA have informed the Draft LAP through an ongoing iterative process that incorporated environmental considerations and sensitivities throughout the LAP development. The SEA and HDA has been undertaken in line with the Planning and Development (Strategic Environmental Assessment) Regulations 2004 to 2011 (as amended) and the European Communities (Natural Habitats) Regulations 2011. **Subject to the full and proper implementation of the mitigation measures outlined in the SEA Environmental Report (and subsequently incorporated into the Loughrea Draft Local Area Plan), including appropriate site level investigations, it is considered that significant adverse impacts on the environment will be avoided.**