

Comhairle Chontae na Gaillimhe
Galway County Council



**Strategic Environmental
Assessment
Environmental Report of
Draft Loughrea
Local Area Plan 2012 – 2018
FINAL REPORT**
October 2012

MINOGUE & ASSOCIATES
ENVIRONMENTAL & HERITAGE CONSULTANTS
www.minogueandassociates.com



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This report is prepared for Galway County Council and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

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1 Chapter One: Environmental Report of Loughrea Local Area Plan

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 SEA ER. It is accompanied by the SEA Statement and a Natura Impact Report. New text in the Final SEA ER 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 purpose of SEA is to formally and systematically evaluate the likely significant effects of implementing a plan or programme, in this instance the Draft LAP. SEA is an iterative process and has informed and influenced the preparation of the Draft LAP for Loughrea.

This Environmental Report forms part of the SEA on the Draft LAP. The purpose of this 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.

This 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.

Schedule 2B of S.I. 436 of 2004 details the information to be contained in an Environmental Report. The following section lists the information required and details where this information is contained in this Environmental Report.

(a) an outline of the contents and main objectives of the plan and relationship with other relevant plans; Chapter One Introduction and Chapter Two Methodology outlines contents and main objectives; Chapter Three details the relationship with other relevant plans.

(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan; Chapter Four Baseline Environment provides this information.

(c) the environmental characteristics of areas likely to be significantly affected; Chapter Four Baseline Environment provides this information.

(d) any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Birds Directive or Habitats Directive; Chapter Four Baseline Environment provides this information.

(e) the environmental protection objectives, established at international, European Union or national level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation; Chapter Five: SEA Objectives provides this information.

(f) the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors; Chapter Seven, Significant Effects on the Environment provides this information.

(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan; Chapter Eight, Mitigation Measures provides this information.

(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information; Chapter Six, Alternatives Considered provides this information and difficulties encountered are listed at the end of Chapter Four, Baseline Environment.

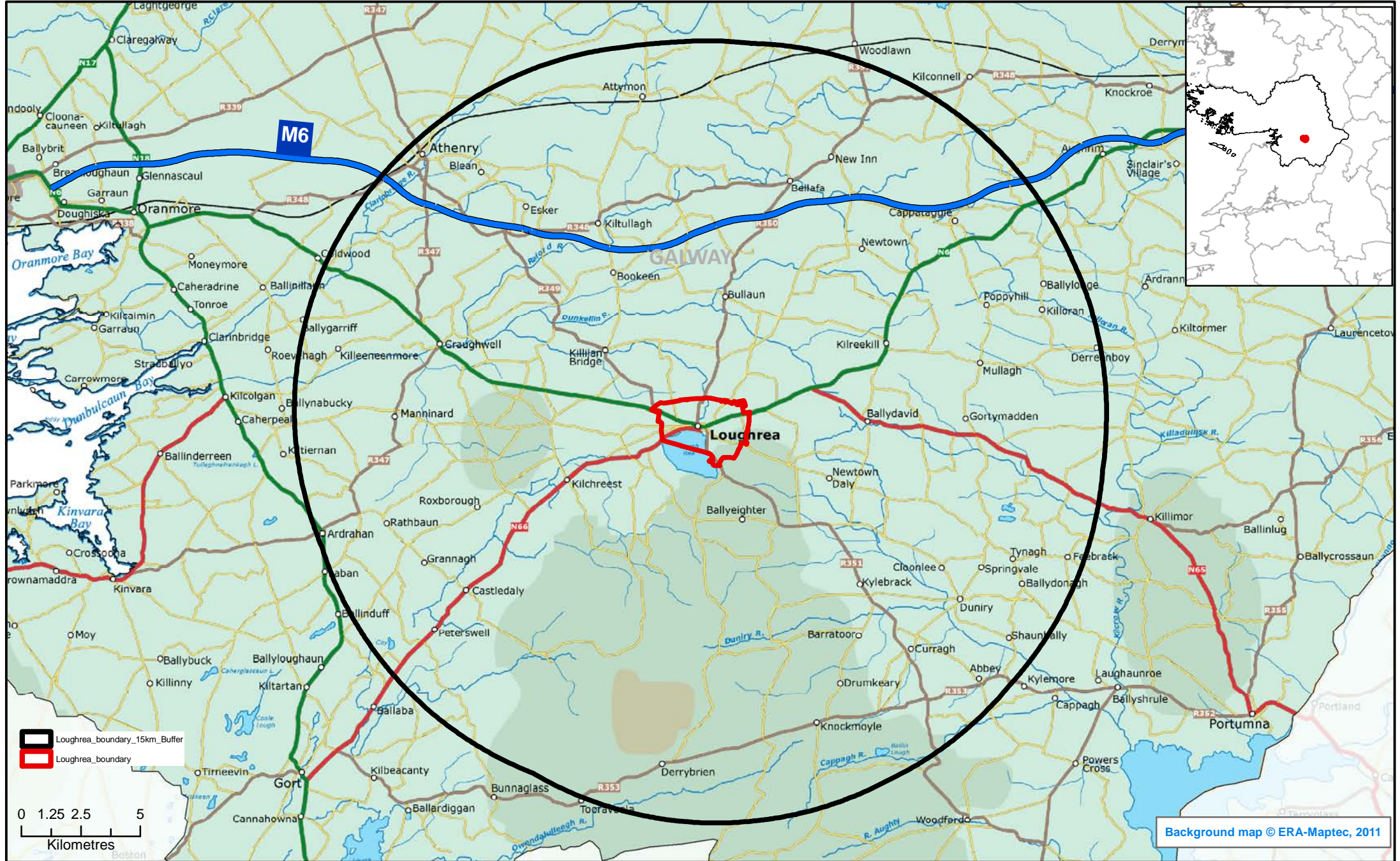
(i) a description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan; Chapter Nine, Monitoring provides this information.

(j) a non-technical summary of the information provided under the above headings. This is provided in a separate document to this Environmental Report but is also available.

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 forms part of the Galway Transportation and Planning Study area, which extends approximately 20-25km around the Galway City boundary and which has experienced significant growth in previous Census periods due to its proximity to Galway City and the concentration of strategic infrastructure and employment opportunities in the area. 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, which opened since the adoption of the previous *Loughrea Local Area Plan 2005-2011*.

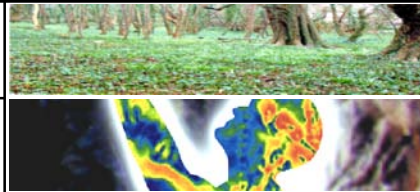
Loughrea is situated along the northern shore of Lough Rea and derives its name from '*Baile Locha Riach*', the 'town of the grey lake'. Loughrea is regarded as dating from 1236, when Loughrea Castle was reputed to have been built by the Anglo-Norman, Richard de Burgo. The town was fortified due to its 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. 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 vernacular and streetscape. 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 functional area of the town, water resources and transport routes.



DATE: 2/4/2012	SCALE: 1:200,000
REF:	SIZE: A4
DRAWN: MFC	APPROVED: RM

FIGURE 1a: LOCATION

Galway County Council Loughrea Local Area Plan SEA



minogue & associates
 Tuamgraney, County Clare
 www.minogueandassociates.com

ERA-MAPTEC
 40 Lwr. O'Connell St.
 Dublin 1 www.era.ie

1.4 Background to LAP of Loughrea.

This draft LAP has been prepared by Galway County Council (GCC) to provide a statutory framework for the future growth, development and improvement of Loughrea that is consistent with the policies and objectives contained in *the Galway County Development Plan (GCDP) 2009-2015* including its *Core Strategy/Settlement Strategy*, and which addresses the needs and requirements of the local community, service providers and other stakeholders. The purpose of the Local Area Plan is to guide future development within the town of Loughrea, in a sustainable and equitable manner and to inform members of the public, the local community, stakeholders, developers and the Planning Authority regarding policies and objectives for the development of the town, including provisions in relation to land use management, community facilities and amenities, transport and infrastructure, urban design, heritage and the environment.

The Plan period is 6 years, from date of adoption by the Council, unless the timeframe is extended by resolution in accordance with Section 12 (d) to (f) of the Planning and Development (Amendment) Act 2010. The Plan area for Loughrea is comprised of the town and its immediate environs. The Plan area is considered to provide an appropriate development envelope for the anticipated growth of Loughrea for the Plan period.

The preparation of the LAP has also included a public consultation process, which involved the publication of a Background Issues Paper to obtain the views of the local community and other stakeholders and the issues raised during this process have been addressed, as appropriate, within this LAP. This SEA and Habitats Directive Assessment (HDA) have informed the LAP through an ongoing iterative process that incorporated environmental considerations and sensitivities throughout the strategy development. The SEA and HDA is being undertaken in line with the Planning and Development (Strategic Environmental Assessment) Regulations 2004 to 2011 (as amended) and the European Union (Natural Habitats) Regulations of 1999 to 2011 (SI 233/1998, SI 378/2005, SI 477 of 2011). In addition the Strategic Flood Risk Assessment (SFRA) carried out for County Galway has further informed the LAP and been assessed through the SEA and HDA process. **Figure 1b** shows the landuse zonings from the previous Loughrea LAP 2005 – 2011.

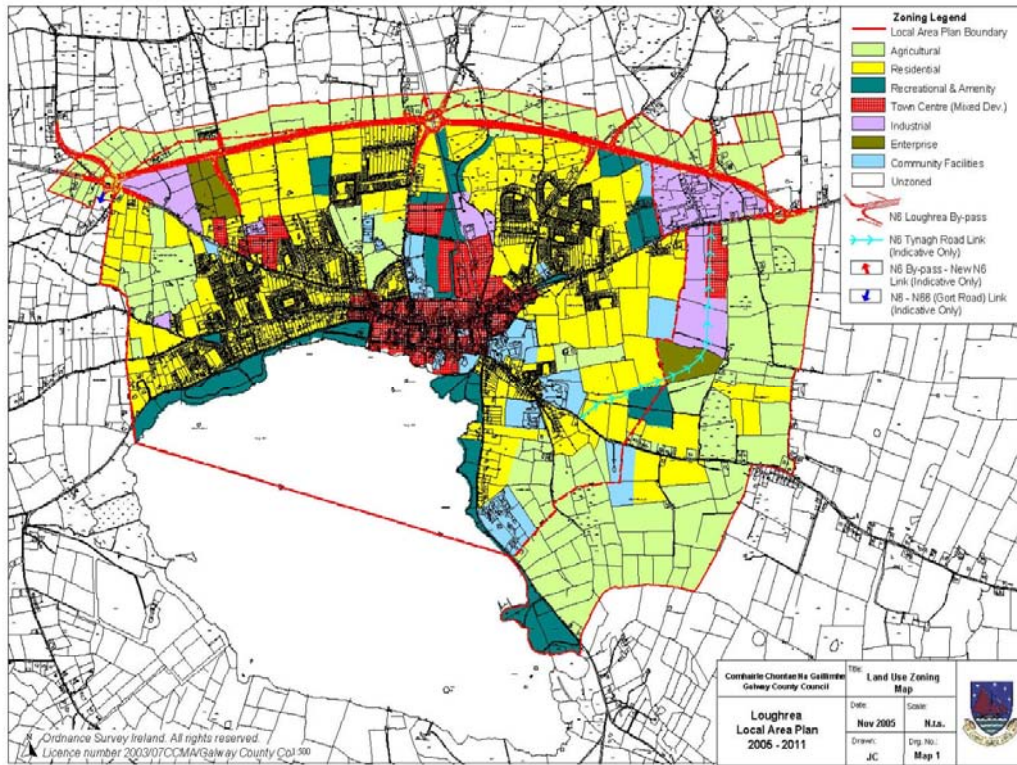


Figure 1b: Zonings in Previous LAP

1.5 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.

1.6 Structure of this Environmental Report

The remainder of this Environmental Report is structured as follows:

Chapter Two:	Methodology
Chapter Three:	Relationship to other policies and plans
Chapter Four:	Environmental Baseline
Chapter Five:	Environmental Protection Objectives
Chapter Six:	Alternatives Considered
Chapter Seven:	Likely Significant Effects on the Environment
Chapter Eight:	Mitigation Measures
Chapter Nine:	Monitoring and Conclusion
Glossary of Terms	
Annex A:	Detailed Evaluation of Draft Policies, Objectives and Land use Zonings
Annex B:	EPA SEA Process Checklist
Annex C:	SEA Screening Reports for Material Alterations to draft Loughrea LAP

2 Chapter Two: Methodology

2.1 Introduction

The methodology used to carry out the SEA of the LAP reflects the requirements of the SEA regulations and available guidance on undertaking an SEA in Ireland, including:

- SEA Methodologies for Plans and Programmes in Ireland – Synthesis Report Environmental Protection Agency (EPA), 2003;
- Implementation of SEA Directive (2001/42/EC) Assessment of the Effects of Certain Plans and Programmes on the Environment – Guidelines for Regional Authorities and Planning Authorities- published by the Department of the Environment, Heritage and Local Government, 2004;
- Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI 436 and SI 435 of 2004);
- Planning and Development (Strategic Environmental Assessment)(Amendment) Regulations 2011 (S.I. No. 201 of 2011);
- Planning and Development (Environmental Assessment of Certain Plans and Programmes) (S.I No 200 of 2011);
- SEA Process Checklist Consultation Draft 2008, EPA 2008 and,
- Circular Letter PSSP 6/2011 Further Transposition of EU Directive 2001/42/EC on Strategic Environmental Assessment.

This chapter presents the methodology in more detail.

2.2 Screening for SEA

The SEA Directive is implemented through the above regulations. The SEA Regulations introduced in 2011 have lowered the population thresholds whereby SEA becomes mandatory for a LAP. Article 14 (b) of the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011 (SI No. 201 of 2011), state that SEA is mandatory for Local Area Plans 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. This equates to 1,133 additional persons, or approximately 436 additional housing units. However, it is also recognised that the growth targets as set out in the Regional Planning Guidelines and the County Development Plan Core Strategy are ambitious in the current economic climate.

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.

2.3 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.

Submission	Environmental Issue	Addressed in SEA
<p>NRA, St Martin's House Waterloo Road, Dublin 4</p>	<p>Have regard to provisions of Spatial Planning and National Roads (Draft) Guidelines. Also reference to Retail Planning Guidelines and Sustainable Rural Housing Guidelines. Loughrea bypassed with new N6 but important to retain capacity and efficiency at M6/N65 junction and to provide access to Loughrea. LAP should reflect this connectivity. Reference to 08/2348 decision by An Board Pleanala and consideration of same. Careful consideration to zoning close to national road network. Seek to minimise local trip generation (in cars) by encouraging integrated development. Recommends traffic and transport assessments be carried out for individual planning applications but this is not a substitute for overall transport assessment of areas where consideration is being given to land use and transportation Traffic and Transport Assessment and Road Safety Audits recommended for planning applications. Noise Regulations (S.I. 140 of 2006). Signage policy.</p>	<p>Material Assets – transport and in combination impacts</p>
<p>Irish Rural Housing/One Off Ireland Campaign</p>	<p>Detailed submission providing information on environmental impacts associated with urban generated one off rural housing. The purpose of the submission is to bring attention to the issues associated with the proliferation of urban generated one off 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.</p>	<p>Noted and environmental issues associated with this type of development activity are acknowledged.</p>
<p>ESB, c/o John Kehoe, Brady Shipman Martin Dundrum Business Park Dundrum Road Dublin 14</p>	<p>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. Alternative supporting zoning would be for light industrial but this would be incompatible with surrounding residential zoning.</p>	<p>Land use zonings will be assessed through SEA and HDA process.</p>

Dublin Airport Authority	No comments at this time.	n/a
The West Regional Authority, 1st Floor, Woodquay Court, Woodquay, Galway	<p>Regional Planning Guidelines identify Loughrea as Key Town.</p> <p>Alignment of Core Strategy and Regional Planning guidelines</p> <p>Population target for Loughrea and residential zonings – current oversupply and requirement to ally with Core Strategy.</p> <p>DoECLG Circular PSSP6/2010 - prioritizing/phasing of residential lands and consideration of alternative objectives.</p> <p>Consider existing vacant housing units and live planning permissions – availability of services such as water, wastewater, pedestrian, cycling and transport access.</p> <p>Loughrea serviced by gas transmission system.</p> <p>Loughrea is included in Water Services Investment Programme 2010 – 2012.</p> <p>IDA developed lands in Loughrea are key locations for enterprise and employment and policies should reflect same.</p> <p>SEA and AA should examine likely impact of implementing the LAP on the Natura 2000 network and other environmental receptors</p>	<p>Policies will be referenced in Chapter Three of SEA ER</p> <p>Zoning of lands will be assessed through SEA and HDA process</p> <p>SEA and HDA will assess the likely impacts of implementing the LAP</p>
Sarah Byrne Shared Services ESB	<p>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.</p> <p>ESB has committed to the rolling out of a pilot national charging infrastructure, including Loughrea. Ireland's target is to have 10% of the national vehicle fleet as EV by 2020.</p> <p>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.</p> <p>Whilst the pilot rollout should be sufficient to cater for demand in the short term, the expected increase in EV volumes in the medium to long term will require a more comprehensive charging infrastructure. This should be considered in the context of the next Loughrea Local Area Plan where, for example, future developments within the jurisdiction should allow for the provision of EV charging at key publicly accessible locations such as on street, retail parks, car parks etc.</p> <p>Other non-charging related initiatives to encourage the uptake of EV's should also be considered including allocation of dedicated and potentially free of charge parking spaces for EV's, use of bus lanes etc.</p>	<p>2020 Renewable Energy targets will be included in Chapter 3 and inform the development of Strategic Environmental Objectives</p> <p>Consideration to pilot scheme for EV will be included in LAP and assessed through SEA process.</p>
Tesco c/o DPP	<p>5 key recommendations</p> <p>LAP should support Loughrea as self-sufficient town.</p> <p>LAP should ensure sufficient amount of appropriately zoned and located sites to support development of industrial sector in town</p> <p>Such zonings should be focused to the east of Loughrea in</p>	<p>Zonings will be assessed through SEA and HDA process</p>

	<p>environs of Dublin Road and IDA park. Flexible approach to zoning matrix as in 2005 LAP should be maintained and carried forward to new plan. Location for delineating plan boundary is to the east of designated IDA lands, north and south of Dublin Road.</p>	
<p>Yvonne Nolan, DAU, Dept of Arts, Heritage and the Gaeltacht, Newtown Rd Wexford</p>	<p>Requirements of EU Habitats Directive. Information given on the following sites, and request that objectives and policies be developed to support same. The Loughrea area supports sites, habitats and species of international to local importance for biodiversity and nature conservation. These elements form ecological networks locally and interconnecting with other parts of the county. The plan 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. Information about these sites, including their locations, site synopses, Natura 2000 standard data forms and qualifying or conservation interests, is available from www.npws.ie. Generic conservation objectives are also available. See also below in relation to appropriate assessment. _ A proposed Natural Heritage Area (pNHA) which, in this case, is now superseded by other nature conservation designations. Importance of ecological networks and key habitats and species. Annex I and Annex II species and habitats. Annex IV species and breeding sites. Stepping stones and ecological corridors. SACs have been selected for the conservation of a range of Habitats Directive Annex I habitats and Annex II species. These are the qualifying interests for the site from which the conservation objectives are derived. Lough Rea SAC has been selected for the conservation of the Annex I habitat, Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. Lough Rea SPA has been selected for the conservation of Shoveler (<i>Anas clypeata</i>), Coot (<i>Fulica atra</i>) and Wetland and Waterbirds.</p> <p>New LAP will require AA screening and screening will suffice only if there are no risks of having significant effects on Natura 2000 sites. Likely impacts on Natura 2000 sites and 15km screening distance is recommended. Some issues of potential concern are water quality in the lake, surface water management in the plan area, and disturbance to wildlife, including birds, arising from amenity and recreational use of the lake and lakeshore, and associated developments. Information on plan level mitigation. Recommended that HDA is presented as a completed report not a draft. NIS or Screening report should conclude with clear statement</p>	<p>All of the points raised will be addressed in the SEA ER, particularly in the biodiversity and water resources sections.</p> <p>AA screening/ NIS will address issues raised in relation to the process and data given.</p> <p>SEA and HDA processes will be integrated</p>

	<p>SEA ER</p> <p>Biodiversity, flora and fauna should be undertaken by/in conjunction with qualified ecologist and integrated with AA</p> <p>Scope of SEA should include:</p> <p>All sites with nature conservation designations.</p> <p>Available information on habitats and habitat indicator mapping.</p> <p>Available information on rare and protected species and their habitats.</p> <p>All watercourses, surface water bodies and associated wetlands including floodplains and flood risk areas.</p> <p>Other sites of high biodiversity value.</p> <p>Local biodiversity areas.</p> <p>Ecological networks, corridors and stepping stones.</p> <p>Generally no lands should be targeted for development without basic information on ecological sensitivities of lands in question including a habitat map.</p> <p>Environmental Protection Objectives should be integrated with other directives such as Habitats Directive, Birds Directive, National Biodiversity Plan etc.</p> <p>Strategic Environmental Objectives should be included for all nature conservation sites, protected species, stepping stones and ecological corridors.</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.</p> <p>Reference to site suitability and guidelines on same</p> <p>Existing schools should be capable of catering for increase in pupil numbers.</p> <p>Primary school site will be required for Gaelscoil of 1.14ha.</p> <p>St Brendans N.S and St Brigits Vocational School have applications in for additional accommodation.</p> <p>St Raphaels has application in and has been granted permission for extension.</p>	<p>Zonings will be assessed through SEA and HDA process and educational provision described in Population and human health section of SEA.</p>
<p>Maura Kelly Stewart, Loughrea</p>	<p>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>Traffic management will be considered in LAP and assessed under material assets in SEA</p>

2.4 SEA Scoping and Consultation

Following the SEA screening process, a scoping exercise was undertaken by Minogue and Associates. 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*.

In addition to the written scoping responses, a meeting was held with NPWS on 16th January 2012 to discuss the scope and extent of the SEA and HDA for Loughrea. This meeting has informed the scope and issues of concern in relation to Loughrea LAP.

2.4.1 Environmental Issues raised during the scoping process

The table below presents the key environmental issues arising from the Scoping Process. It also shows where and how this issue has been addressed in the draft LAP, the SEA ER and/or the HDA.

Table 2b: Environmental Issues raised during the scoping process

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. <ul style="list-style-type: none"> - Ground Water Vulnerability - Poor Status River Water Quality - Protection of designated Shellfish Areas - Consideration should be given to updating the population figures for the Plan area to the recent Census 2011 figures, where available. 	<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>Noted and as these are now available will be used.</p>
	<p>Your attention is brought to the new SEA Regulations, which should be referenced and integrated into the Plan and SEA process. Two amending SEA Regulations were signed into Irish law on 3rd May 2011, amending the original SEA Regulations:</p> <p>European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011, (S.I. No. 200 of 2011), amending the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004), and Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011, (S.I. No. 201 of 2011), amending the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004).</p> <p>You are also referred to the recent DoECLG Circular (PSSP 6/2011) issued on the 26th July 2011 to each</p>	<p>Noted and included in Chapter Three</p>

	<p>County/City Manager, Director of Services and Town Clerk in relation to '<i>Further Transposition of the EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA)</i>' which should also be referred to and integrated into the Plan.</p> <p>European Communities (Birds and Natural Habitats) Regulations 2011</p> <p>You are also referred to the requirements of the recent European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), which should be taken into account in implementing the Plan. 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 CJEU judgements.</p>	
Department of Arts, Heritage and the Gaeltacht.	<p>Archaeological Heritage</p> <p>In preparing the SEA, assessment of impacts on the archaeological heritage should have regard to the following:</p> <p><i>International Conventions</i></p> <p>The European Convention on Protection of the Archaeological Heritage known as the Valletta Convention of 1992.</p> <p><i>National Policies, Plans and Programmes</i></p> <p>National Heritage Plan (2002) - accessible at www.environ.ie. The core objective is to protect our heritage. In this regard, the 'polluter pays' principle and the precautionary principle are operable. Specifically in regard to archaeological heritage the 'Framework and Principles for the protection of the archaeological heritage' document (1999) sets out the archaeological policies and principles that should be applied by all bodies when undertaking or authorising development.</p> <p><i>Relevant Policies and Plans at County Level</i></p> <p>County Development Plan and Local Area Plans. Drafts of these documents should always be forwarded to this department for comment.</p>	Noted and provided in Chapter Three
	<p>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. Any monuments that are National Monuments in State ownership or guardianship and monuments subject to Preservation Orders should be identified and zones of visual amenity defined for them. National Monuments in ownership or guardianship of Local Authorities should also be identified. It should be noted that any direct impacts on national monuments in State or Local Authority care or subject to a preservation order will require the consent of the Minister for the Environment, Heritage and Local Government under Section 14 of the National Monuments Act 1930 as amended by Section 5 of the National Monuments</p>	Noted, information will be sourced from the data list provided and discussed in Chapter Four, Baseline.

	<p>(Amendment) Act 2004. Areas of high archaeological potential including subsurface archaeological structures should be identified. Data sources include: www.excavations.ie. Information on occurrences of chance finds of archaeological objects is also a useful indicator of archaeological potential - information may be obtained from the National Museum and local museums. The archaeological potential of the coastal and inter-tidal zone should be carefully considered, as should potential impacts on riverine archaeology. Any potential impacts on archaeological heritage should be subject to full archaeological assessment.</p>	
	<p><i>Development Issues</i> Increased development pressure increases the potential for impact on the archaeological resource. Impacts can be avoided or lessened by following criteria set out in 'Framework and Principles for the protection of the archaeological heritage'. <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. The Department has no nature conservation observations at this stage. Architectural heritage recommendations, if any, will follow in due course.</p>	<p>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>

2.5 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. These are detailed below:

2.5.1 Environmental Issues collated and analysed using GIS.

Biodiversity, Flora and Fauna: All current natural heritage designations provided under European and National legislation were incorporated into the GIS. These include Candidate Special Areas of Conservation (cSAC), Special Protection Areas (SPA), and Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs).

The following additional habitat data from Galway County Council was also inputted to the GIS:

- National Parks and Nature Reserves
- Limestone Pavement in County Galway, based on available GIS data
- Ecological Network in County Galway, as identified in GCDP 2009-2015
- IPCC database on non-designated peatland habitats (source: Irish Peatland Conservation Council)

A HDA is being carried out in tandem with this SEA to address potential impacts on Natura 2000 sites (cSACs and SPAs).

Water (surface, ground, estuarine): River water quality data, drinking water (surface, groundwater abstraction points and public drinking water remedial lists) in and within a 15km catchment of the functional area of Loughrea were mapped. Any other Natura 2000 water related sites within 15km of the functional area of Loughrea were mapped. Groundwater vulnerability within 5km of the LAP boundary and River Catchment data were mapped using data from the EPA. Water Framework Directive Protected Areas were also mapped. EPA data on bathing water, and estuarine and coastal water quality in addition to shellfish waters were also integrated to the GIS. However, given the distance from Loughrea to the coast, this is unlikely to generate significant impacts.

Soil and Geology: Bedrock geology and drift /quaternary geology data was incorporated into the GIS. Proposed Geological NHAs were mapped for sites within and 5km from the LAP boundary.

Landscape: Landscape policies and designations in the County Galway Development Plan 2009 to 2015 were incorporated into the GIS. These include landscape designations and classifications such as special or unique landscapes. In addition, the County Galway Landscape Character Assessment was integrated to the GIS. Where pertinent, neighbouring counties designations such as scenic routes, or areas of primary amenity were also integrated, this data covered the counties of Clare, Offaly, Mayo, Roscommon and Offaly (up to a 50km buffer from Galway County boundaries).

Cultural Heritage (architectural and archaeological heritage): All sites in the Record of Monuments and Places were mapped, and all sites within the LAP boundary were mapped. The Architectural Conservation Areas within Loughrea was plotted, as were all protected structures from the current County Galway Development Plan 2009- 2015.

Population: Preliminary data from the 2011 Census was accessed but not mapped.

Human health: No direct information was mapped for human health. However, the information developed by the Institute of Public Health 'the Healthwell' was accessed to gain information and data on human health within the Loughrea area.

Air: Any sites with Integrated Pollution Prevention and Control licenses were mapped within the area. The air quality zones relevant for 5km around the LAP boundary were also mapped.

Climatic factors: No climatic data was mapped.

Material assets: Key transport routes were mapped. Wastewater treatment plants and flood risk zones were mapped. Further information on flood risk is provided in the following section.

Environmental Sensitivity Mapping: Preliminary modelling was undertaken of key datasets and environmental resources in Loughrea to help identify potential cumulative impacts with reference to areas identified as potentially more sensitive to development activities. This modelling although basic has helped to identify areas of the town that demonstrate greater overall environmental sensitivity.

2.6 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.

Potential flood issues in the plan area are an important consideration in the preparation of the new Local Area Plan, particularly in zoning lands for various uses and as such the new Local Area Plan has been guided by the Strategic Flood Risk Assessment (SFRA) for County Galway. Further information on the SFRA and results on Loughrea are provided in Chapter Four, Baseline Environment, and assessed in Chapter 7 Assessment of Effects.

2.7 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.

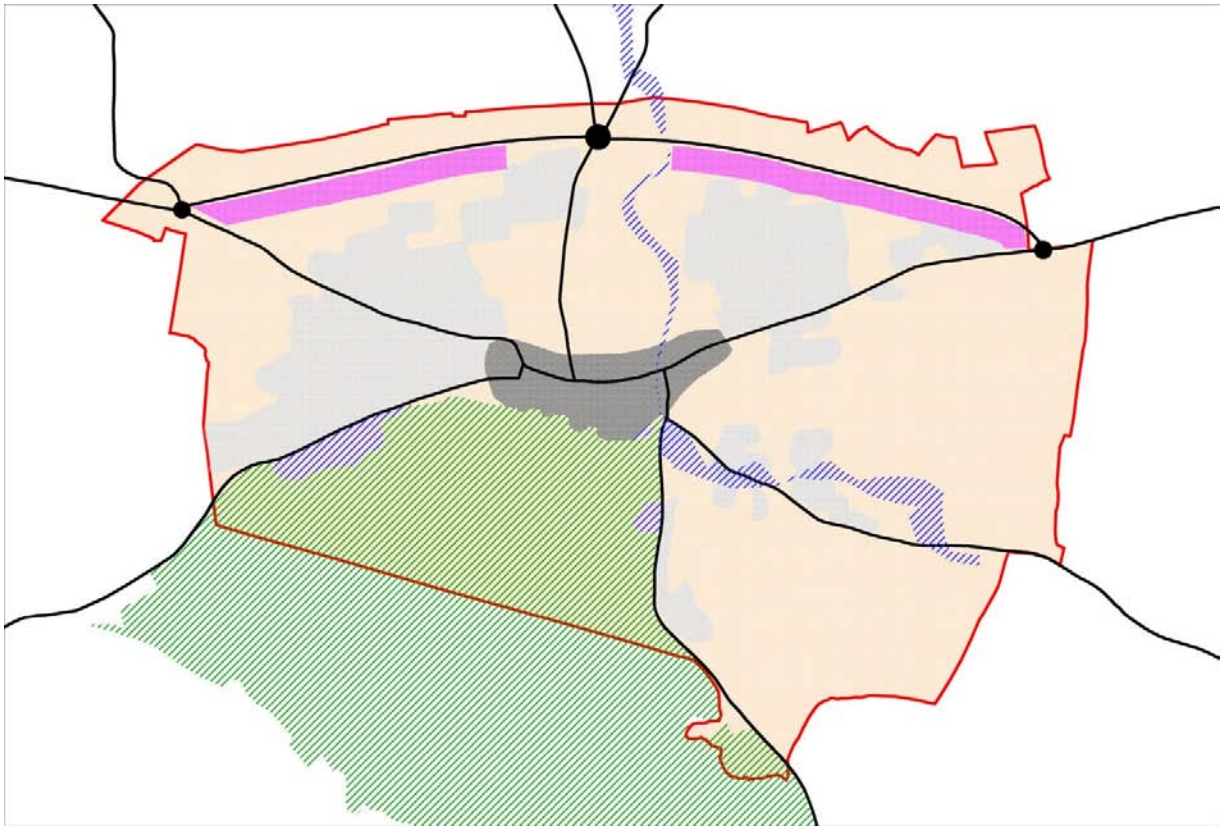
2.8 Planning Search and Review

In order to gain more detailed information on the environmental resources and sensitivities of the plan area, the consultants undertook a planning review of development proposals in the town over the past decade. 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. Where relevant, other proposed large developments which were accompanied by an Environmental Impact Statement / Natura Impact Statement were also researched. Where data has come from such applications, the planning file reference is provided in a footnote.

2.9 Consideration of Alternatives

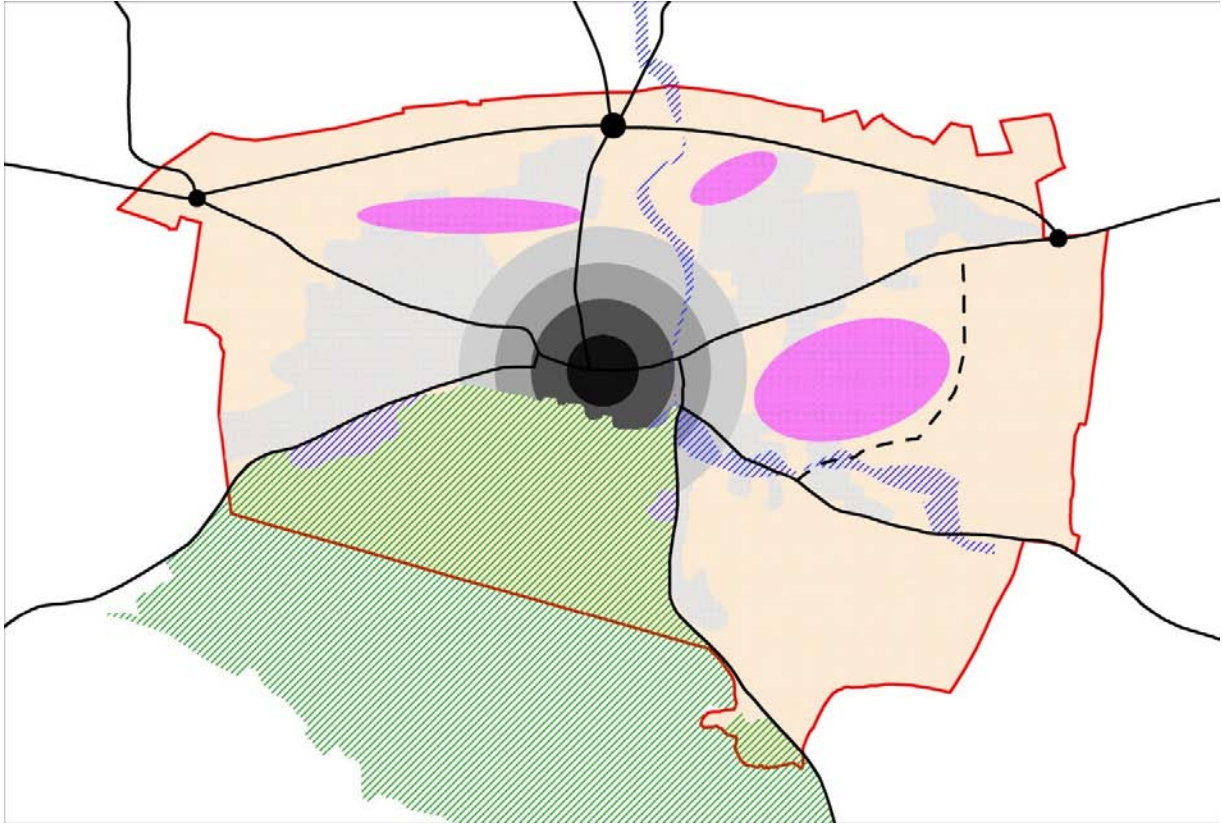
A number of alternative scenarios were considered in preparing the Loughrea LAP and these are briefly discussed below. *Chapter Six, Consideration of Alternatives* presents this information in more detail. Please note the maps below are indicative and are for presentation purposes only.

Option 1: Development along southern edge of new Bypass Road



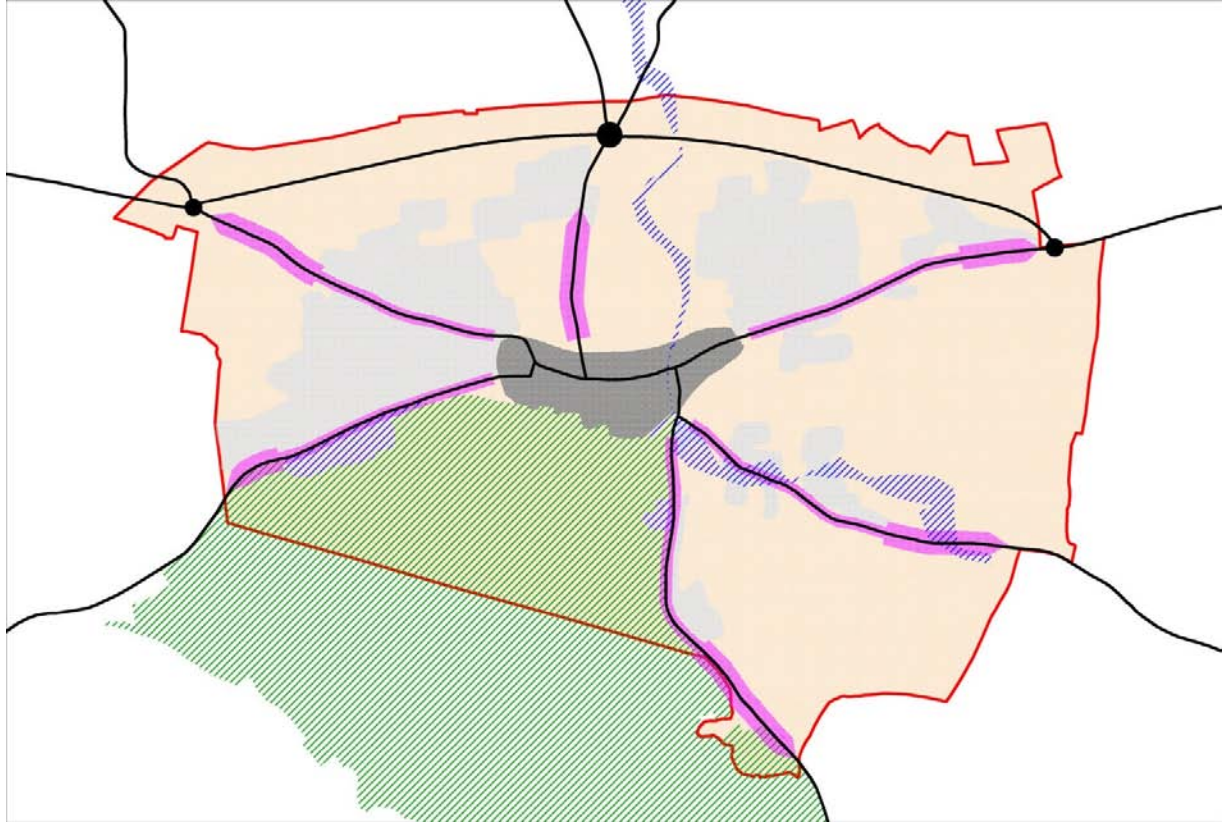
Option 1 provides for the utilisation of the new bypass road to provide access to new development lands to the north of the town along the southern edge of the new road. This scenario would encourage peripheral, car based development on the edge of the town with poor connectivity to the town centre and existing built fabric and out of easy walking distance from the town centre. This option is likely to impact negatively on the vitality and viability of the town centre and on the strategic function of the bypass road as a traffic artery and national/regional route.

Option 2: Consolidate Existing Town Centre, Sequential Development around Established Urban Core and Controlled Eastward Expansion



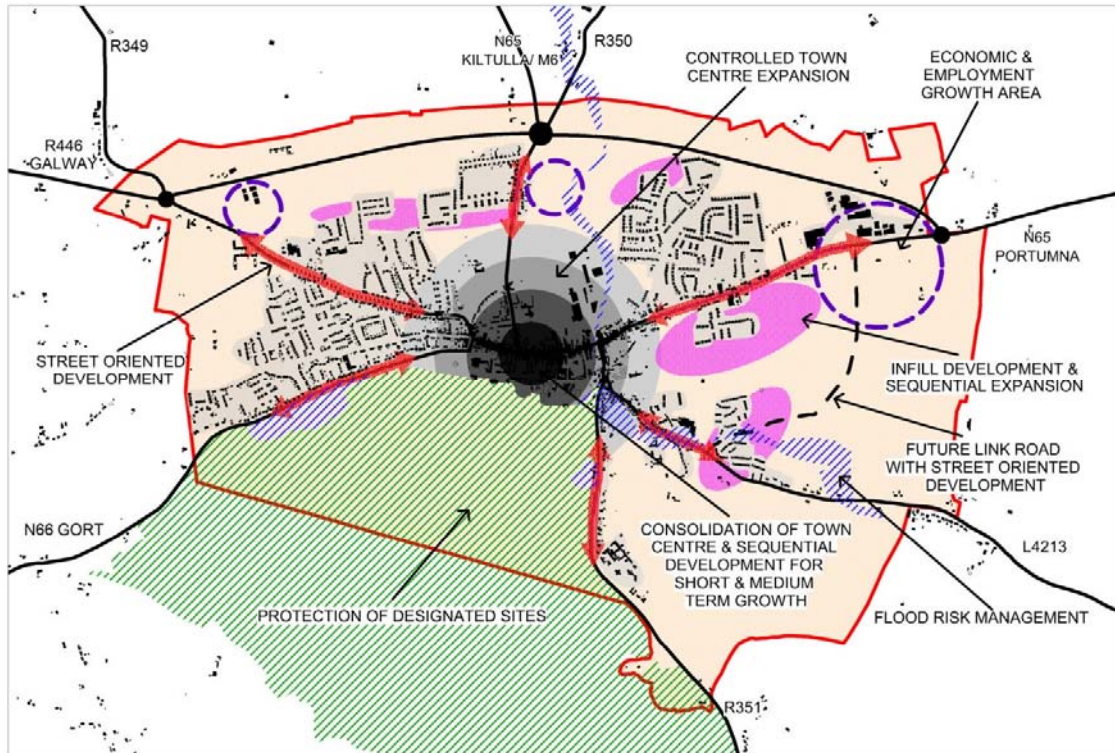
Option 2 provides for the consolidation of the existing town centre, sequential development around the established urban core within the town and controlled eastward expansion as part of a new access and smarter travel improvements in the town. Town centre consolidation is achievable through promoting appropriate densities at the right locations and supporting the redevelopment of brownfield, derelict and back land sites within the urban core. Development within the remainder of the town is encouraged in a sequential manner generally and in an eastward direction in particular, in order to maximise return on investment of services and to ensure the availability of optimal, residential lands to accommodate anticipated growth defined by the Core Strategy requirements. This option will also avoid significant environmental impacts in relation to designated sites and flood risk areas

Option 3: 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. This scenario would encourage ribbon development with associated impacts in terms of poor environmental quality, increased traffic and congestion along the approach roads, increasingly peripheral, car based development and would militate against easy walking distance to the town centre. This option may lead to conflicts between a number of the development corridors and nearby environmental sensitivities, including designated sites and flood risk areas.

2.9.1 Preferred Development Option



The above development options have been assessed against the principles of proper planning and sustainable development and the Environmental Protection Objectives developed for this SEA (please see *Chapter Six, Consideration of Alternatives* of this ER for further detail). On the basis of this assessment, Option 2 is considered the preferred development option for Loughrea. This option supports the consolidation and controlled expansion of the town centre, promotes the infill and sequential development of the town and encourages street-oriented development along the existing urban street network and the new route proposed to the east, including high quality edge treatments, improvements in the public realm and smarter travel opportunities. The preferred development strategy option is informed by the statutorily required environmental assessments and aligns with and aims to deliver on the Core Strategy allocations set out for Loughrea in the Galway County Development Plan. It also supports the objectives of the Regional Planning Guidelines to provide for the sustainable, dynamic development of key towns to a level that can deliver the conditions for critical mass and drive overall regional development.

2.10 Environmental Assessment of the Loughrea Local Area Plan

The likely significant effects on the environment are described in this Environmental Report and measures are identified to avoid, reduce or mitigate any significant effects of the LAP. A framework of objectives has been developed to assess the potential impacts of the policies/objectives proposed in the LAP. The results of this process are summarised in a table called an Evaluation Matrix. This matrix sets out the environmental objectives, with indicators

and columns for undertaking the appraisal of potential impacts on each parameter listed in the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI 436 and S.I 435 of 2004) (as amended). The potential effects within the assessment were categorized, as per the Guidelines, into the following broad environmental impacts:

- _ Positive impact
- _ Indirectly positive impact
- _ Neutral impact
- _ Negative impact
- _ Indirectly negative impact
- _ Uncertain nature of impact.

In addition, the temporal aspect of each impact is considered under the following:

- Short term effects
- Medium term effects
- Long term effects
- Permanent effects
- Temporary effects
- Secondary effects
- Cumulative effects
- Synergistic effects
- Positive effects
- Negative effects

The Impact table is accompanied by more detailed and explanatory text that discusses the level of significance, temporal and type of impacts identified. This is presented in *Chapter Seven, Likely Significant Environmental Effects of the LAP*. A detailed assessment of individual objectives, policies and landuse zonings is presented in *Annex A*.

2.11 Technical Difficulties Encountered

A considerable amount of data was utilised in preparing this Environmental Report. However, there are a number of areas where data is not available and therefore recommendations arise to find out this type of information at project level. Key technical difficulties encountered include:

- Additional habitat information for certain parts of Loughrea and County Galway are not yet available, all other available ecological data has been incorporated
- Information on certain bird movements
- Corine landcover information - The 2006 dataset was used.
- Detailed information on health problems and issues in the county and town are not available.
- It is acknowledged that the timing of the fieldwork in January does not represent the most appropriate season to undertake vegetation surveys etc.

3 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. This chapter of the Environmental Report reviews the consistency of the Draft LAP within this policy and regulatory framework.

3.1.1 International Context

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: International Policy and Regulatory Context

EU LEVEL	
Directive/ Plan/ Programme	Summary of Objectives
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. It identifies four environmental areas for priority actions: <ul style="list-style-type: none"> <input type="checkbox"/> Climate Change <input type="checkbox"/> Nature and Biodiversity <input type="checkbox"/> Environment and Health and Quality of Life <input type="checkbox"/> Natural Resources and Waste It calls for the development of Seven Thematic Strategies relevant to the various environmental areas. These strategies constitute the framework for action at EU level in each of the concerned priorities. It also establishes strategic approaches to meet the environmental goals and sets objectives and priority actions on international issues.
Kyoto Protocol	This international agreement is linked to the United Nations Framework Convention on Climate Change and sets binding targets of 37 industrialized countries and the European Community. The National Climate Change Strategy sets out how Ireland is participating in this process.
Directive 2009/28/EC (Energy)	On 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. Under the terms of the Directive, each member state is set a binding renewable energy target across heat, transport and electricity sectors. Ireland's overall target is to achieve 20% of energy from renewable sources by 2020.
Biodiversity	
European Biodiversity Strategy (1998)	The strategy aims to anticipate, prevent and attack the causes of significant reduction or loss of biodiversity at the source.
UN Convention of Biological Diversity 1992 ratified 1996	Objectives of this Convention were to conserve biological species, genetic resources, habitats and ecosystems; to ensure the sustainable use of biological materials; and to guarantee the fair and equitable sharing of benefits derived from genetic resources.

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. Each Member State must recognise and preserve internationally important wetlands. Ireland has designated 45 wetlands for inclusion in the Ramsar List of Wetlands of International Importance, the majority of which are owned by the State.
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 animals and plant species and over 200 'habitat types' which are of European importance. It is transposed into Irish law by The European Communities (Natural Habitats) Regulations, 1997 (S.I. 94 of 1997) and as updated thereafter.
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. The most suitable areas for these species are classified as Special Protection Areas (SPA). Ireland is obliged to "take appropriate steps to avoid pollution or deterioration of habitats or any disturbances affecting the birds".
EU Freshwater Fish Directive 1978	The aim of the Directive is to protect fish life from pollution discharge into waters and lays out water sampling and monitoring procedures and definitions. The EU Freshwater Fish Directive (78/659/EEC) was ratified by Ireland with S.I. 293 of 1988, and aims to protect those fresh water bodies identified by Member States as waters suitable for sustaining fish populations. The Directive will be repealed in 2013 by the EU Water Framework Directive.
UN Convention of Biological Diversity 1992	The purpose of this Convention is to conserve biological species, genetic resources, habitats and ecosystems, to ensure the sustainable use of biological materials, and to guarantee a sustainable sharing of benefits derived from genetic resources. In April 2002, the Parties to the Convention committed themselves to achieve, by 2010, a significant reduction of the current rate of biodiversity loss at global, regional and national levels.
OSPAR Convention 1992	To encourage international cooperation to protect the marine environment of the North-East Atlantic. It is required to take steps to prevent and eliminate marine pollution and to protect the maritime area, thereby safeguarding human health and conserving marine ecosystems. Where practicable, damaged marine areas are to be restored. Both the precautionary principle and polluter pays principle are to apply. All possible steps are to be taken to prevent and eliminate pollution from land-based sources, with joint assessments of the quality of the marine environment being undertaken by party states.
Water	
E.U. Water Framework Directive 2000 Council Directive 2000/60/EC was adopted in 2000	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.
Floods Directive 2007/60/EC	The EU Floods Directive on the assessment and management of flood risks entered into force on November 2007. This Directive now

	requires Member States to assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk. This Directive also reinforces the rights of the public to access this information and to have a say in the planning process.
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.
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. The Directive lays down nonbinding 'guide' values and binding 'imperative' values and requires Member States to monitor the quality of surface waters from which drinking water is abstracted and to take measures to ensure that it complies with the minimum quality standards. This Directive has been integrated into the proposed Water Framework Directive.
Quality of Drinking Water Directive (98/83/EC)	The objective is to protect the health of the consumers of the EU and to make sure the water is wholesome and clean. It sets quality standards for drinking water quality at tap. Obliges Member States to monitor drinking water quality and provide consumer with adequate and up-to-date information on their drinking water quality.
Integrated Pollution Prevention and Control (IPPC) Licensing	A system of Integrated Pollution Prevention and Control (IPPC) licensing came into effect in Ireland on 12th July 2004. The primary aims of IPPC licensing are to prevent or reduce emissions to air, water and land, to reduce waste and to use energy efficiently. The IPPC system replaces Integrated Pollution Control (IPC) as the licensing regime applicable to certain industrial activities in Ireland.
Bathing Water Directive (76/160/EEC) S.I. 155 of 1992, S.I. 230 of 1996	Directive 76/160/EEC concerns the quality of bathing water, with the exception of water intended for therapeutic purposes and water used in swimming pools. It lays down the minimum quality criteria to be met for bathing waters.
Natural and Cultural Heritage	
UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage	This covers not only monuments, groups of buildings and sites which have outstanding universal value but also natural sites of major importance. Parties are required to identify these locations and to ensure that they are protected and conserved for future generations.
European Convention on the Protection of the Archaeological Heritage, 1992 (Revised) (the 'Valletta Convention')	Ratified by Ireland in 1997 and as such we are legally bound by it. 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.
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.
Landscape	
European Landscape Convention 2000	Ratified by Ireland in 2002, it requires a commitment to introducing policies to effect landscape protection and management. The underlying purpose of the Convention is to encourage public authorities to adopt policies and measures at local, regional, national and international level to protect and manage landscapes throughout

	Europe. It requires the landscape dimension to feature in a country's spatial planning and environmental policies and for landscape quality objectives to be developed.
Material Assets	
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.
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. The Directive is transposed into Irish law mainly by the Urban Waste Water Treatment Regulations 2001 (S.I. No. 254 of 2001).
The Waste Framework Directive 75/442/EEC (and amending legislation) 15th July 1975	This Directive outlines the overall structure for an effective waste management regime within the EU. It mandates that EU States publish waste management plans. It requires system of permits and registrations to be put in place to minimise all waste management infrastructure, as well as setting down the basic requirements that need to be satisfied for these statutory authorisations to be issued. EU Urban Waste Water Treatment Directive (91/271/EEC) 1991 and Landfill Directive relate to this.
Landfill Directive (1999/31/EC)	Besides setting EU-wide standards for landfill design and operation, the Council Directive on Landfill mandates a series of targets to cause a substantial reduction of the land filling of biodegradable municipal waste by EU countries. Using the amount of waste landfilled by each EU state in 1995 as a baseline, it requires that biodegradable waste passing to landfill sites is reduced progressively to 35% of the 1995 level over a period of some 15 years. A national strategy is required to be published by each EU Member State on how this is to be achieved.
COMAH (Seveso II) Directive – European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations, 2000	Seveso II Directive, sometimes referred to as COMAH, stipulates certain requirements for storage of relatively large quantities of substances classified as dangerous.
EU Major Accident (Seveso II) Directive (96/82/EC) 1996	This Directive aims to prevent major-accident hazards involving dangerous substances. Hazardous sites are identified that may pose a threat and development should be limited in the vicinity of such sites. The control of establishments for the purposes of reducing the risk, or limiting the consequences, of a major accident is a mandatory objective of a Development Plan.
Dangerous Substances Directive 76/464/EEC (S.I. 258 of 1998, S.I. 12 of 2001)	Dangerous Substances Directive 76/464/EEC creates a legislative framework for dealing with water pollution caused by an extensive list of dangerous substances. Member States are required to adopt pollution-reduction programmes that involve binding water quality objectives and a system of authorisations for discharges.
SEA	
Protocol on Strategic Environmental Assessment (SEA)	It develops from the ESPOO Convention by requiring Parties to evaluate the environmental and health related consequences of their official draft plans and programmes using Strategic Environmental Assessment (SEA). It was signed by Ireland in 2003.
SEA – Directive 2001/42/EC Assessment of the effects of certain plans and programmes on the Environment.	This Directive requires plan-makers to carry out an assessment of the likely significant environmental effects of implementing a plan or programme before it is adopted. There are two statutory instruments which transposed the SEA Directive into Irish Law:

	-European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, S.I. No. 435 of 2004 (as amended by S.I. No 200 of 2011) - Planning and Development (Strategic Environmental Assessment) Regulations 2004, S.I. No. 436 of 2004 (as amended by S.I. No. 201 of 2011)
EIA	
ESPOO Convention	The Convention on Environmental Impact Assessment in an international Trans boundary Context is also known as ESPOO (EIA) Convention. It requires Parties/ states to put in place appropriate and effective measures to prevent, reduce and control significant adverse trans boundary environmental impacts from proposed industrial and other activities. Systems is to ensure that specified projects which may cause significant adverse trans boundary impacts are subject to environmental impact assessment (EIA) prior to any formal approval being granted on their commencement.
Environmental Impact Assessment Directive 85/337/EEC (as amended by Directive 97/11/EC)	It requires Member States to carry out environmental impact assessments (EIA) on certain public and private projects, where it is believed that the projects are likely to have a significant impact on the environment.

3.1.2 National Context

The policies and proposals contained in the Draft LAP are further influenced by the objectives of relevant National policies, plans and guidelines. **Table 3b** identifies these at National level and gives a brief summary of their main objectives.

Table 3b: National Regulatory and Policy Context

National Level	
Plan/ Programme/ Guidelines	Summary of Objectives
Sustainable Development	
Sustainable Development: A Strategy for Ireland (1997)	This Strategy minimises the need for good spatial planning and the inclusion of sustainability goals in urban and built environment policies.
Making Ireland Sustainable: Sustainable Development 2002	This reviews progress in Ireland since the Earth Summit in Rio. It outlines priorities for sustainable development action over the following decade.
Health Impact Assessment Guidance, Institute of Public Health, 2009	Seeks to inform and enhance the decision making process in favour of health and health equity. It provides a detailed methodology for completing HIA on plans, programmes or policies, in order to minimise positive health impacts and minimise potential negative impacts of a proposal.
Spatial Development	
National Spatial Strategy 2002-2020	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.
National Development Plan (NDP) (2007-2013)	A €184 million infrastructure investment plan to build a prosperous country for Ireland's population. The funding is to provide for economic and social infrastructure, employment and human resources, productive sector as well as the peace programme.
The Planning and Development Act 2000 (as amended)	Under the Planning Acts, each 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.
Development Management Guidelines (DoEHLG)	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.
Sustainable Residential Development in Urban Areas (Cities, Towns & Villages) Guidelines for Planning Authorities, 2009	These statutory guidelines assist in delivering quality residential development. The objective is to produce high quality sustainable developments.
Climate Change and Energy	
National Climate Change Strategy 2007 -2012	The purpose is to limit growth in greenhouse gas emissions. This strategy sets out how to achieve the targets from the Kyoto Protocol and identify areas where further research and development is needed to meet our 2020 commitment. Measures include increasing renewable energy production and using energy more efficiently.
Delivering a sustainable energy future for Ireland – the Energy Policy Framework 2007 -2020	This sets out energy policy for Ireland and states the commitment to increasing renewable energy
Building Ireland's Smart Economy	Sets out the strategic approach to building a smart economy including renewable energy production
National Renewable Energy Action Plan 2010	This sets out measures on how Ireland will meet the 20% renewable energy target for 2020
Wind Energy Development Guidelines - Guidelines for Planning Authorities (DoEHLG, 2006)	The guidelines intend to ensure a consistency of approach throughout the country in the identification of suitable locations for wind energy development and the treatment of planning applications for wind energy developments. There are no wind energy locations identified in Loughrea LAP.
The Planning System and Flood Risk Management Guidelines, OPW, 2009	Aims to integrate flood risk management into the planning process
Noise	
Noise Regulations 1994	These regulations, relating to the 1992 EPA Act, simplify and strengthen the procedures for dealing with noise nuisance, and give Local Authorities power to take action when they consider that it is necessary to do so in order to prevent or limit noise.
Air Quality	
Air Pollution Act 1987	This Act defines air pollution and enables Local Authorities to require measures to be taken to prevent or limit pollution
Air Quality Standards Regulations 2011 (S.I. No. 180/2011)	These Regulations transpose the Directive on ambient air quality and cleaner air for Europe (CAFE) into Irish law. They introduce a limit value to PM2.5 in addition to the existing limit values for

	PM10, nitrogen dioxide and oxides of nitrogen, sulphur dioxide, lead, ozone, carbon monoxide and benzene.
Transport & Communications	
Guidelines on Telecommunication Antennas and Support Structures, 1996	The Guidelines are intended to assist planning authorities in balancing the need for the comprehensive national provision of telecommunications services against local environmental and public health-related concerns.
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 investment in the national roads network, while also in overall terms encouraging a shift towards more sustainable forms of travel and transport.
Waste	
Changing Our Ways (1998)	Sets out a national policy framework for the adoption and implementation by local authorities of their waste management plans. It reiterates the targets for the progressive reduction of the use of landfill for biodegradable municipal waste which are set down in the EU Landfill Directive, but adds further national targets such as for the reclamation of construction and demolition waste.
National Strategy for Biodegradable Waste, 2006	An aim is to set out how the three progressive landfill diversion targets of the Directive are to have effect. It states that a major increase in recycling and biological treatment capacity is necessary in order to facilitate the EU requirement for the diversion of biodegradable municipal waste away from landfill.
Biodiversity	
National Biodiversity Plan (2002)	It aims to secure the conservation, including where possible the enhancement and sustainable use, of biological diversity in Ireland and to contribute to conservation and sustainable use of biodiversity globally. Ireland is committed to meeting the EU target to halt the loss of biodiversity by 2010.
National Heritage Plan (2002)	The National Heritage Plan 2002 sets out a vision for the management of the National Heritage and its aim is to “ <i>ensure the protection of our Heritage and to promote its enjoyment by all</i> ”. A key objective of the National Heritage Plan is to promote the role that local communities play in protecting and enhancing Local Heritage. This is achieved through the preparation and adoption of Local Heritage Plans by the Local Authority.
Biodiversity Action Plan, EPA, 2010	The EPA's Biodiversity Action Plan presents an explicit action plan for the implementation of its role in the protection of biodiversity. The Plan covers a range of activities in the areas of monitoring, research, assessment and reporting, environmental regulation, climate change and management and communications. The Plan outlines a wide range of significant actions, which will be undertaken by the EPA in relation to the protection of Ireland's biodiversity.
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. Some of the actions within the plan are continuing elements of existing work and many are requirements under existing EU Directives. The objectives cover

	the conservation of biodiversity in the wider countryside and in the marine environment, both within and outside protected areas; the mainstreaming of biodiversity across the decision making process in the State; the strengthening of the knowledge base on biodiversity; increasing public awareness and participation; and Ireland's contribution to international biodiversity issues, including North South co-ordination on issues of common interest.
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.
Water	
Water Services Act 2007	Focuses on management of water 'in the pipe' as opposed to river water quality etc
Local Government (Water Pollution) Acts, 1977 and 1990	This Act and associated regulations set out quality standards for Phosphorus in surface waters, particularly rivers and lakes and makes other provisions for the protection of watercourses.
Water Quality (Dangerous Substances) Regulations 2001.	These Regulations give effect to the Dangerous Substances Directive 76/464/EC and the Water Framework Directive 2000/60/EC. They prescribe water quality standards and aim to ensure that, in relation to a substance present, where the existing condition of a water body does not meet a specific standard there shall be no further reduction in the condition of the water body.
Water Services Investment Programme 2007-2014	As part of the programme the Council has identified the resources needed to upgrade the City's existing water main infrastructure to ensure issues such as leakage and reduced pressure are addressed as a priority.
The Planning System and Flood Risk Management Guidelines 2009	These guidelines are aimed at ensuring a more consistent, rigorous and systematic approach to fully incorporate flood risk assessment and management into the planning system.
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.
Cultural Heritage	
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.
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.
Landscape	
Draft Landscape and Landscape 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.
Issues Paper – National Landscape Strategy Draft	This issues paper was put on public display in 2011 and aims to raise awareness and discussion on the requirements for landscape management under the European Landscape Convention.

Strategic Environmental Assessment and Habitats Directive Assessment	
Strategic Environmental Assessment Regulations 2004-2011¹ as amended.	The objective of the SEA is to provide for a high level of protection of the environment and to promote sustainable development by contributing to the integration of environmental considerations into the preparation and adoption of specified Plans and Programmes. The requirements for SEA in Ireland are set out in the national Regulations stated.
DoECLG Circular (PSSP 6/2011) 26th July 2011 'Further Transposition of the EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA).'	Directs local government in relation to 'Further Transposition of the EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA)'. Provides additional guidance and direction in relation to SEA and highlights key elements of recent regulations.
Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities 2009	These guidelines give advice relating to the implementation of Article 6 of the EU Habitats Directive in relation to plans and projects.
DoECLG Circular NPW1/10, PSSP 2/10 Appropriate Assessment under Article 6 of the Habitats Directive	Guidance for planning authorities on undertaking appropriate assessment under article 6 of the EU Habitats Directive.

3.1.3 Regional Context

The policies and proposals contained in the Draft LAP are further influenced by the objectives of relevant regional policies, plans and guidelines. *Table 3c* identifies and gives a brief summary of their main objectives.

Table 3c: Regional Plans and Programmes

Regional Plans and Programmes	
Regional Planning	
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.
Western River Basin District Management Plan 2009 -2015 & 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.
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
County Galway 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

¹ EC (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011, (S.I. No. 200 of 2011), amending the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004), and Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011, (S.I. No. 201 of 2011), amending the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004).

	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.
Galway County Development Board Strategy 2002 - 2012	A Strategy for Economic, Social and Cultural Development "Working Together Shaping Our Future" 2002- 2012. This Strategy includes eight strategic themes. The County Strategy was reviewed in 2009. Five Strategic Priorities with 45 Priority Actions were agreed for 2009-2012.
County Galway Heritage Plan 2009 - 2014	A five year plan setting out objectives and actions for a wide range of heritage themes including biodiversity, landscape, archaeology,
County Galway Biodiversity Action Plan 2008-2013	Established vision, aims, objectives and actions to enhance and support biodiversity in the County.
Development Plans for neighbouring Local Authorities The following plans set out the development and core strategy for the respective functional areas over a six year period:	
<ul style="list-style-type: none"> • Galway City Development Plan 2011-2017 • Mayo County Development Plan 2008 -2014 • Roscommon County Development Plan 2008 - 2014 • Clare County Development Plan 2011- 2017 • Offaly County Development Plan 2009 - 2015 • North Tipperary County Development Plan 2010-2016 • Ballinasloe Development Plan 2009 -2015 	
There are also numerous Local Area Plans for areas within the County.	

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. This section aims to describe the environmental context within which the LAP will operate and the constraints and targets that this context imposes on the LAP. Finally, any significant gaps in the baseline data are identified and alternative data sources identified. The purpose of this section is to provide enough environmental baseline data to:

1. Support the identification of environmental problems;
2. Support the process of assessing the environmental effects;
3. Provide a baseline against which future monitoring data can be compared.

The following sections provide information on the environmental parameters below:

- Biodiversity – Flora and Fauna
- Water – surface, ground, estuarine
- Soil and Geology
- Population and Human Health
- Landscape
- Cultural Heritage – archaeology and architectural resources
- Air Quality and Climatic factors
- Material Assets including transport, flooding, waste, noise, waste water and water services
- Interrelationship between these parameters

Whilst all environmental parameters are described, certain parameters are identified as being of greater significance and may be subject to greater impacts associated with the implementation of the Loughrea LAP. In addition, certain parameters and key elements of same were identified in predraft and scoping submissions of meriting particular scrutiny; therefore the focus on this chapter reflects these comments.

In particular the following areas¹ are described in some detail:

1. Protection of Biodiversity – disturbance to wildlife including birds arising from amenity and recreational use of lake and lake shore
2. Water Quality (in Lough Rea and surface water management)
3. Archaeology

¹ Please see Table 2a and 2b for further information on these environmental parameters and identification of consultee who proposed same.

4.1.2 Defining the descriptive areas and zones of influence

Through the assessment of zoning, policy and objectives the Draft LAP will aim to support the sustainable development of Loughrea over a six year period. Therefore, the baseline data is principally focused on the functional area of Loughrea and its immediate environs. However, a zone of influence of the draft LAP depends on the environmental parameter described and are detailed within each relevant section. For example, water quality impacts could extend beyond the town boundary for some distance, whilst visual impacts may be identified for areas beyond the County Boundaries; conversely impacts on individual archaeological sites may be site specific.

Information, where relevant, is included from neighboring counties including Galway City, Roscommon, Westmeath, Offaly, Clare, North Tipperary and Mayo. Considering the location of Loughrea, it is considered that the neighbouring counties/administrative areas most likely to be impacted are County Clare and Counties Roscommon or Westmeath; however information will be included subject to the parameter under discussion.

4.2 Biodiversity, Flora and Fauna

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). Consultation with the Department of Arts, Heritage and the Gaeltacht has advised on the scope of the SEA to include the following;

- All sites with nature conservation designations;
- Available information on habitats and habitat indicator mapping;
- Ecological networks, corridors and stepping stones;
- Available information on rare and protected species and their habitats;
- All watercourse, surface water bodies and associated wetlands including floodplains and flood risk areas;
- Other sites of high biodiversity value, and
- Local biodiversity areas

This forms the structure of this section.

4.2.1 Natura 2000 Sites

Reflecting the diversity of habitats and species present within the County, there are a significant number of sites designated at International, National and county level. The HDA assesses in more detail potential impacts of this draft LAP on Natura 2000 sites (Special Areas of Conservation and Special Protection Areas under the EU Habitats Directive). The following table identifies Natura 2000 sites within 15km of the draft LAP functional area. This is also shown in Figure 4a.

Table 4a: Natura 2000 sites within 15km of Loughrea.

cSACs within Loughrea boundary	Summary
000304 Lough Rea cSAC	<p>Lough Rea is a hard water lake, a habitat listed on Annex I of the EU Habitats Directive. It is situated directly south of the town of Loughrea, Co. Galway. The lake is 2.5 km at its longest axis. The underlying geology of the area is of Carboniferous limestone and water transparency is very high. The lake, which is fed by springs and by a stream, reaches a maximum depth of 15 m.</p> <p>Some species of stonewort (a type of alga) characteristic of calcareous waters have been recorded in Lough Rea, including <i>Chara curta</i> and <i>C. contraria</i>. The Red Data Book species <i>C. tomentosa</i> has also been found here. Other aquatic plants present include Slender-leaved Pondweed (<i>Potamogeton filiformis</i>), Lesser Pondweed (<i>P.pusillus</i>), Fennel Pondweed (<i>P. pectinatus</i>), Spiked Water-milfoil (<i>Myriophyllum spicatum</i>), Least Bur-reed (<i>Sparganium minimum</i>), Amphibious Bistort (<i>Polygonum amphibium</i>) and the alga <i>Chaetomorpha incrassaton</i>.</p> <p>On the sheltered western and south-eastern shores of the lake some areas of reedswamp, wet grassland and wet woodland are included in the site. Lough Rea is a hard water lake, a habitat listed on Annex I of the E.U. Habitats Directive. Lough Rea is also important for birds and holds internationally important numbers of Shoveler and nationally important numbers of Tufted Duck and Coot. Ten further bird species are present at levels of regional/local importance. It also supports a population of Brown Trout.</p>
SACs within 15km	
001913 Sonnagh Bog	<p>Sonnagh Bog is located at the northern end of the Slieve Aughty Mountains, approximately 8 km south-west of Lough Rea. The site ranges in altitude from 198m to 317 m. The topography of the site is of a narrow plateau and valleys, one of which is occupied by Lough Belsrah.</p> <p>The slopes of Sonnagh Bog are dominated by tracts of Purple Moor-grass (<i>Molinia caerulea</i>) which cover a carpet of bog mosses (<i>Sphagnum</i> spp.). Distinct flat areas occur on the lower slopes, which are devoid of Purple Moor-grass and dominated by Bog Asphodel (<i>Narthecium ossifragum</i>). A further area devoid of Purple Moor-grass occurs on a wet plateau above 300 m. This area is slightly quaking and supports bog mosses and is similarly dominated by Bog Asphodel, with Deergass (<i>Scirpus cespitosus</i>) and Heather (<i>Calluna vulgaris</i>) also occurring.</p> <p>Mats of algae and hummocks composed of <i>Sphagnum capillifolium</i> and <i>S. fuscum</i> are also found in this area. Sonnagh Bog is important as a good example of an intact, lightly grazed, highland blanket bog. Blanket Bog is a rare, increasingly threatened habitat that is listed on Annex I of the EU Habitats Directive</p>
000322 Rahasane Turlough	<p>This site is located to the northwest of Loughrea approximately 10km from the town boundary. Rahasane Turlough is of major ecological significance as one of only two large turloughs which still function naturally. It is the most important turlough for birdlife in the country.</p>

	<p>It also supports two rare species listed in The Irish Red Data Book. Fen Violet (<i>Viola persicifolia</i>), and Northern Yellow-cress (<i>Rorippa islandica</i>), which is listed in The Irish Red Data Book. Turloughs are a rare habitat type and are given priority status under Annex I of the European Habitats Directive.</p>
000318 Peterswell Turlough 10km	<p>This elongated turlough, running from north to south, lies north-west of Peterswell village and a little below the Loughrea/Gort road. The surrounding land is gently rolling and drift-covered. There is a steep, wooded slope on the south-eastern edge which projects into the turlough from the south. Scattered rocks and boulders occur on the sides of the turlough, with some also on the basin floor. The Owenshee river enters from the north and sinks within the turlough, while a more permanent stream flows west and north.</p> <p>The turlough is basically a dry one, without peat or marl accumulation, and so the vegetation is quite uniform: Grassland with abundant Common Sedge (<i>Carex nigra</i>), Creeping Cinquefoil (<i>Potentilla reptans</i>) and Perennial Rye-grass (<i>Lolium perenne</i>), and a range of herb species. Moisture-loving species are restricted to a pond in the south and to an area where the stream flows out onto the basin floor. Vegetation here includes Water Horsetail (<i>Equisetum fluviatile</i>) and Bottle Sedge (<i>Carex rostrata</i>).</p> <p>In close association with the turlough, on the south-eastern slope, is a fine Buckthorn (<i>Rhamnus catharticus</i>) wood, with Hawthorn (<i>Crataegus monogyna</i>), Ash (<i>Fraxinus excelsior</i>) and Blackthorn (<i>Prunus spinosa</i>). On the branches of trees, there is an abundance of <i>Hypnum cupressiforme</i>, <i>Rhynchostegium murale</i> and <i>Leskea polycarpa</i>, while <i>Cinclidotus fontinaloides</i> covers those branches which receive more light. <i>Thamnobryum alopecurum</i> is abundant on the ground.</p> <p>Two rare plant species, listed in the Irish Red Data Book, occur at the site. Mudwort (<i>Limosella aquatica</i>) colonises muddy areas around the turlough, and Fen Violet (<i>Viola persicifolia</i>) is also found.</p> <p>When flooded, Peterswell provides important habitat for birds. This site is located approximately 10km from Loughrea</p>
000242 Castletaylor Complex	<p>This site is situated approximately 4 km south-east of Kilcolgan and lies in a gently undulating limestone topography. Although relatively small in area, the site contains a diverse range of habitats, including five EU Habitats Directive Annex I habitats - turloughs, limestone pavement, orchid-rich calcareous grassland, alpine heath and juniper scrub.</p> <p>The first three of these are listed as priority habitats under the Directive. This site is located approximately 13km west of Loughrea.</p>
002117 Lough Coy	<p>Lough Coy is situated approximately 6.5 km north-east of Gort and lies close to the Slieve Aughty hills. The site consists of a small permanent lake in the middle of an almost circular turlough basin. There are drift deposits as well as outcropping rocks and boulders on the relatively steep side walls and small areas of scrub towards the top of the basin. Areas of improved grassland above the normal flood line are included in the site for hydrological reasons. The underlying soils consist of alluvial gleys and a gleyed rendzina-like soil.</p> <p>A large swallowhole occurs at one side of the basin slightly above summer water level and water enters and leaves the turlough mostly through this. During the winter the fluctuation in levels is extreme and there are no emergent plants such as Common Club-rush (<i>Scirpus lacustris</i>) or Common Reed (<i>Phragmites australis</i>) in the lake. The turlough experiences a large throughput of water and is dependant on the flows in the tributaries of the Coole River.</p> <p>Lough Coy is an excellent example of a 'riverine' type of turlough, and is in</p>

	<p>essence the floodplain of an underground river. Practically the entire site consists of turlough habitat, an EU Habitats Directive Annex I priority habitat. Lough Coy is located approximately 14km from Loughrea.</p>
0002244 Ardrahan Grassland	<p>This site lies immediately west and north of Ardrahan in south Co. Galway. It is dominated by a large flat limestone area with a mosaic of calcareous habitats including limestone pavement, alpine heath, Juniper scrub and species rich dry grasslands. In contrast, the south west of the site consists of a small marl lake and adjoining fens and marshes with Juniper heath frequent on the higher ground. Soils associated with limestone pavement are generally thin rendzina, deeper pockets are more mineral rich and support limestone grassland and scrub in places.</p> <p>The site contains a good example of limestone pavement, a priority habitat listed on Annex I of the EU Habitats Directive, a small though excellent example of the Annex I habitat alpine heath, along with one other Annex I habitat, Juniper scrub. Of particular note is the abundance of Bearberry (<i>Arctostaphylos uva-ursi</i>) and Juniper (<i>Juniperus communis</i>) in association with a typical Burren flora including such species as Mountain Aven (<i>Dryas octopetala</i>), Spring Gentian (<i>Gentiana verna</i>) and various orchid species including Fly Orchid (<i>Ophrys insectifera</i>). The southern and western part of the area is of significant interest due to the low intensity of management in the area. This site is located just under 15 km to the south west of Loughrea.</p>
002293 Carrowbaun, Newhall And Ballylee Turloughs 14.6km	<p>This complex is a group of three turloughs hydrologically linked in times of high flood. It is situated in the vicinity of the Thoor Ballylee Interpretive Center, 3 km west of Peterswell and 6 km north-east of Gort, in the limestone lowlands of south Co. Galway. The site is at the southern end of a complex of turloughs which includes the SACs Lough Coy (2117) and Peterswell (318). It is the last of these to flood.</p> <p>The site is a candidate SAC selected for turlough, a priority habitat listed on Annex I of the E.U. Habitats Directive.</p> <p>The lowest part of Carrowbaun is at its northern end and an artificial channel links the marsh with the Ballylee River. At the north end of Ballylee there is a swallow-hole (Pollaleen) which introduces water from Lough Coy. The Ballylee River is joined from the south (via the castle) by the Streamstown River and water sinks into the channel floor, or disappears in a tangle of scrub at Pollanoween further south. Newhall lies in a broad peaty depression with gravel deposits at the southern end. At high water-levels Newhall floods into Carrowbaun West. This site is located over 14km from Loughrea.</p>
SPAs within town boundary	Summary
0004134 Loughrea SPA	<p>Lough Rea, a hard water lake, is situated directly south of the town of Loughrea, Co. Galway. The lake is 2.5 km at its longest axis. The underlying geology of the area is of Carboniferous limestone and water transparency is very high. The lake, which is fed by springs and by a stream, reaches a maximum depth of 15 m.</p> <p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Shoveler and Coot. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.</p> <p>Lough Rea is of considerable ornithological interest. Nationally important numbers of Shoveler overwinter at the site (264); numbers of this species at the site have exceeded the international threshold level on two occasions in recent years (1995/96 and 2002/03). Nationally important numbers of Coot (1,172) also occur.</p>

	A further 10 species of waterfowl reach regionally or locally important numbers - all population sizes are the mean of peak counts for the 5 years, 1995/96-99/2000.
SPAs within 15km	Summary
004089 Rahassane Turlough 10km	<p>Rahasane is designated both SAC and SPA and is considered to be the most important turlough in the country for wintering waterfowl. It is a traditional site for Greenland White-fronted Goose, and supports a population of national importance (218 individuals) - all figures are average peaks for the period 1995/96-1999/00.</p> <p>It also has nationally important populations of Whooper Swan (141), Wigeon (3,630), Pintail (21), Golden Plover (6,626), Lapwing (2,220) and Black-tailed Godwit (435). The Shoveler population (29) is very close to the threshold for national importance. The site has the largest inland population of Dunlin (864) in the country, and also supports Mute Swan (76), Teal (367), Tufted Duck (32), Curlew (197), Redshank (149), Mallard (124), Black-headed Gull (280) and Grey Heron (31).</p> <p>As at all turlough sites, numbers of birds present can vary considerably owing to fluctuations in water levels. The site has long been known as an important waterfowl site and has been monitored annually in recent years. This SPA is located approximately 10km from Loughrea.</p>
004168 Sliabh Aughty	<p>The Slieve Aughty Mountains SPA is a very large site that extends southwards from just south of Lough Rea, County Galway to Scariff in County Clare. The site includes many small- and medium-sized lakes, notably Lough Graney and Lough Atorick; several important rivers rise in the site, including the Owendalulleagh and Graney. Lough Derg occurs immediately to the south-east. The Slieve Aughty hills are predominantly comprised of Old Red Sandstone, but outliers of Lower Palaeozoic rocks provide occasional outcrops capping the hills.</p> <p>The site consists of a variety of upland habitats, though approximately half is afforested. The coniferous forests include first and second rotation plantations, with both pre-thicket and post-thicket stands present. Substantial areas of clear-fell are also present at any one time. The principal tree species present are Sitka Spruce (<i>Picea sitchensis</i>) and Lodgepole Pine (<i>Pinus contorta</i>). Almost one-third of the site is unplanted blanket bog and heath, with both wet and dry heath present. Well-developed blanket bog occurs at several locations, notably Sonnagh, Loughatorick South and Glendree.</p> <p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Hen Harrier and Merlin.</p> <p>The SPA is a stronghold for Hen Harriers and supports the second largest concentration in the country. The mix of forestry and open areas provides optimum habitat conditions for this rare bird, which is listed on Annex I of the Birds Directive. The early stages of new and second rotation conifer plantations are the most frequently used nesting sites, though some pairs may still nest in tall heather of unplanted bogs and heath. Hen Harriers will forage up to c. 5 km from the nest site, utilising open bog and moorland, young conifer plantations and hill farmland that is not too rank. Birds will often forage in openings and gaps within forests. In Ireland, small birds and small mammals appear to be the most frequently taken prey.</p> <p>The site also supports a breeding population of Merlin, a species that is also listed on Annex I of the E.U. Birds Directive. The population size is not well known but is likely to exceed five pairs. Red Grouse is found on many of the unplanted areas of bog and heath – this is a species that has declined in Ireland and is now Red-listed. This site is approximately 3km from Loughrea at its nearest point.</p>

Lough Rea cSAC and SPA represents the Natura 2000 sites that can be directly impacted upon by the Loughrea LAP. The extensive Sliabh Aughty SPA is also located at its closest approximately 2.5km from the plan boundary.

Photo 1 below shows Lough Rea from the outside southern boundary of the plan area, and Photo 2 shows the lake from within the plan area.



Photo 1: Lough Rea from south (Woodford Road), outside the plan area



Photo 2: view east across Lough Rea and towards the town centre.

4.2.3 Natural Heritage Areas (NHAs)

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. Table 4b below describes the NHAs and proposed NHAs located within 15km of Loughrea. Figure 4b shows NHAs designations and proposed NHAs, there are no nature reserves within a 5km buffer of Loughrea. Please note that these synopses are based in many cases on old survey data and may not accurately reflect the status of the site at the current time (source: NPWS).

Table 4b: Natural Heritage Areas and Proposed Natural Heritage Areas within 15km of Loughrea.

Site Code and Site Name	Summary
000321 Raford River Bog	<p>9km north Raford River Bog NHA is located approximately 3 km north-west of Bellafa (Ballyfa), mainly in the townlands of Cloonbenes, Crossmacrin and Derrynamangh in Co. Galway. The site comprises a raised bog that includes both areas of high bog and cutover bog. The site is bounded in the north and east by the local road running from Bellafa to Attymon.</p> <p>This site is the remnant of a much larger bog that is now cutover and reclaimed for agriculture. The site is split by a mineral ridge, with the majority of the remaining</p>

	<p>high bog found north of the ridge and a small elongated section to the south. The larger section of high bog has areas of hummocks and pools towards the centre and the mid-western area is wet and quaking. The high bog also has a series of mounds present. There is one flush in the centre of the high bog. Cutover is found around most of the site.</p> <p>Much of the high bog has vegetation typical of a Western Raised Bog, consisting of Ling Heather (<i>Calluna vulgaris</i>), Common Cottongrass (<i>Eriophorum angustifolium</i>), Hare's-tail Cottongrass (<i>E. vaginatum</i>) and Carnation Sedge (<i>Carex panicea</i>). The bog mosses <i>Sphagnum papillosum</i> and <i>S. capillifolium</i> are common on the high bog with some <i>S. magellanicum</i> and <i>S. imbricatum</i> also recorded. Lichen cover (<i>Cladonia</i> sp.) is reasonably high throughout the site.</p> <p>The scarce bog moss <i>S. fuscum</i> has also been recorded at the centre of the site. This NHA is located approximately 11km north of Loughrea.</p>
001229 Sliabh Aughty Bog	<p>Slieve Aughty Bog NHA consists primarily of upland blanket bog and heath habitat and is located immediately west of the village of Woodford and about 8 km west of Lough Derg, Co. Galway. The site comprises six discrete areas of blanket bog, both intact and cutover, at altitudes between 100 m and 230 m and lies in the townlands of Knockauncarragh, Commons East, Moyglass, Derreenamucka, Boleyveena, Drummin, Cullenagh, Derrybrien East and Derrybrien South. Forestry plantations adjoin all six areas and form the majority of the site boundaries, with the remaining areas bounded by rivers, roads and tracks. Bedrock geology is quartzite.</p> <p>The dominant habitat is blanket bog, with the largest tract occurring in the eastern sector. Here the vegetation is generally dominated by Purple Moor-grass (<i>Molinia caerulea</i>), with Deergrass (<i>Scirpus cespitosus</i>), and includes species such as Common Cotton-grass (<i>Eriophorum angustifolium</i>), Carnation Sedge (<i>Carex panicea</i>), Bogmyrtle (<i>Myrica gale</i>), Soft Rush (<i>Juncus effusus</i>), Heath Milkwort (<i>Polygala serpyllifolia</i>), Lousewort (<i>Pedicularis sylvatica</i>), Hare's-tail Cotton-grass (<i>Eriophorum vaginatum</i>), Crossed-leaved Heath (<i>Erica tetralix</i>), Bog Asphodel (<i>Narthecium ossifragum</i>), Tormentil (<i>Potentilla erecta</i>), Star Sedge (<i>Carex echinata</i>), Heath Rush (<i>Juncus squarrosus</i>) and Round-leaved Sundew (<i>Drosera rotundifolia</i>).</p> <p>There are some well-developed wet areas with excellent growths of bryophytes (mosses and liverworts), including a good diversity of bog mosses including <i>Sphagnum capillifolium</i>, <i>S. papillosum</i> and <i>S. subnitens</i>. Moss cover is consistently high at 80% in both hummock and carpet forms. On deep peat areas the vegetation is more characteristic of raised bog and includes Bog Rosemary (<i>Andromeda polifolia</i>) and Cranberry (<i>Vaccinium oxycoccos</i>). Ling Heather bushes (30 cm high) occur here and the substrate is soft and wet underfoot. Extensive lawn areas, with some pools, support White-beaked Sedge (<i>Rhynchospora alba</i>) Bog-myrtle. Grazing pressure is low with some slight poaching.</p> <p>Areas of regenerating cutover are dominated by Deergrass, Purple Moor-grass, cottongrasses and Crossed-leaved Heath. Bog moss cover is lower here (30-40%) and there are cushions of lichen <i>Cladonia portentosa</i>. The adjacent bog surface has scattered Willow (<i>Salix</i> spp.) bushes. This site is located 7km south of Loughrea.</p>
001264 Eskerboy Bog	<p>Eskerboy Bog NHA is situated approximately 4 km north-west of Killimor, Co. Galway, mainly in the townlands of Eskerboy, Gortknappagh and Lurgan More. The site comprises a long, narrow raised bog with areas of high bog and cutover, which lies between two esker ridges.</p> <p>The site has a typical raised bog topography with a small, low domed area in the bog centre, with infilling pools. Three flushes occur, one along the southern margin of the high bog the other two towards the central area. Habitat diversity is increased with the presence of Downy Birch (<i>Betula pubescens</i>) scrub, in association with the central flush. Narrow bands of abandoned cutover occur along the southern and northern bog margins.</p> <p>This is a typical example of the Western/Midland Raised Bog Type, with vegetation</p>

	consisting of Bog Asphodel (<i>Narthecium ossifragum</i>), Ling Heather (<i>Calluna vulgaris</i>), Hare's-Tail Cottongrass (<i>Eriophorum vaginatum</i>), Deergrass (<i>Scirpus cespitosus</i>) and Carnation Sedge (<i>Carex panicea</i>). Cranberry (<i>Vaccinium oxycoccos</i>) has been recorded from the site. The central area of the high bog has pools infilling with Hare's-Tail Cottongrass and there is a good cover of bog mosses (<i>Sphagnum magellanicum</i> , <i>S. capillifolium</i> , <i>S. auriculatum</i> and <i>S. fuscum</i>). Purple Moor-grass (<i>Molinia caerulea</i>), Bog-myrtle (<i>Myrica gale</i>) and Gorse (<i>Ulex europaeus</i>) are found in association with the two small flush areas to the south and centre of the site. The larger flush to the centre of the high bog supports a small grove of scattered Downy Birch. Abandoned cutover areas are dominated by Gorse to the north, with abundant Purple Moor-grass in the southern cutover margins. This site is located 13km east of Loughrea.
Site Code	Summary
000304 Lough Rea	Designated as both cSAC and SPA, a site description is provided in the preceding table.
000322 Rahasanne Turlough	Located approximately 10 km northwest of Loughrea. This is an important turlough and habitat for overwintering birds. It is also designated a SPA and a description is provided in the previous table.
000242 Castletaylor Complex	Designated pNHA. This site is also a SAC and located within approximately 13km west of Loughrea. A description of this site is provided in the previous table.
001913 Sonnagh Bog	This site is approximately 7km southwest . Also designated a cSAC, a description is provided in the preceding table.
000318 Peterswell Turlough	This site is located approximately 10km southwest of Loughrea. Also designated a cSAC, a description is provided in the preceding table.

4.2.4 Habitats, Habitat Indicator Mapping and Ecological Networks.

Figure 4c shows the Corine land use classification for Loughrea and environs. As this shows, the principal land use in the area surrounding the town is pasture, with areas of agricultural land and semi natural and natural vegetation.

The various habitats in the County form part of an “ecological network” that facilitates the movement of species between areas and ensures the effective functioning and survival of the diverse range of habitats and species in the County. Ecological networks provide a spatial, network-based approach to the conservation of biodiversity, which differs from the site-based approach of environmental designations, by using ‘corridors’ or ‘stepping stones’ that support species migration, dispersal and daily movements between the ‘core areas’. This, in turn contributes to a more integrated and functional ecological system. Ecological networks are supported at EU level through the *European Spatial Development Perspective* and *Natura 2000* and underpin the *Pan-European Biological and Landscape Diversity Strategy* (PEBLDS), which has been ratified by Ireland. Research has been carried out into a National Ecological Network for Ireland as part of the preparation of the *National Spatial Strategy 2002-2020* in a report entitled the *Preliminary Study of the Needs Associated with a National Ecological Network 2001*. This study proposes the classification of open space areas according to their ecological functioning or ‘naturalness’ ranging from Class 1 (predominantly natural areas of high biodiversity) to Class 5 (low biodiversity areas such as continuous urban fabric). These classifications have been used to identify the major elements of an ecological network for the County.

Figure 4d shows the ecological network classification for Loughrea and environs. As this map shows all the area is predominantly classified as either class 4 or 3. This classification is based on the Corine 2000 land data and class 4 refers to complex cultivation patterns, whilst class 3

refers to transitional woodland scrub. In terms of ecological significance, 1 ranks the highest and 5 (continuous urban fabric) as the lowest value. The area identified as class 2, adjoining the town boundary in the south, corresponds to the wetlands areas and Lough Rea itself. Ensuring ecological connectivity around and between these habitat types is an important consideration in landuse planning.

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.

As traditional species-rich grasslands decline, grassy roadside verges and other marginal grasslands act as important habitats and ecological networks for many species of wild flowers and the invertebrates they support. Because of a management regime which is generally of low-intensity, many grassy verges growing along roads contain a great variety of wild flowers. In addition, man-made structures such as stone walls, bridges and buildings can also be very important for wildlife and provide feeding, hibernating and roosting sites for many species of invertebrates, birds and bats. A diversity of mosses, lichens and other plants are often found on old stone built structures.

4.2.4 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. Figure 4e presents the data from the River Basin Management Plan 2009 -2015 and shows river sub catchment water quality. This shows the majority of the town is designated as 'good', whilst two areas in the northern part are identified as poor.

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. Figure 4f shows Freshwater Natura 2000 sites within a 15km buffer of Loughrea.

4.2.5 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. Hard water lakes are listed on Annex I of the EU Habitats Directive.

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 and these are shown in the Table 4c below:

Table 4c: Inland Fisheries 2010 Survey of Lough Rea

Site Code	Numbers
<i>Perca fluviatilis</i> Perch	459
<i>Gasterosteus aculeatus</i> Three-spined stickleback	39
<i>Anguilla anguilla</i> European eel	27
<i>Salmo trutta</i> Brown trout	6
<i>Scardinius erythrophthalmus</i> Rudd	6
<i>Esox lucius</i> Pike	1

Turloughs are of international significance and Rahassane Turlough, located approximately 10km west of Loughrea is the most important turlough nationally for wintering wildfowl populations and nesting waders in summer. It supports a number of plants listed on the Irish Red Data book, and is one of few turlough systems remaining in the country to function naturally. Other turloughs within a 15km buffer of the plan area include Peterswell Turlough and Carrowbaun, Newhall And Ballylee Turloughs. A number of bogs are also present within a 15km buffer of the plan area and include Sonnagh Bog, Sliabh Aughty Bog and Raford River Bog.

Further information on flood plains and flood risk (pluvial, fluvial and groundwater) within and near the plan area is provided in the Material Assets Section of this chapter.

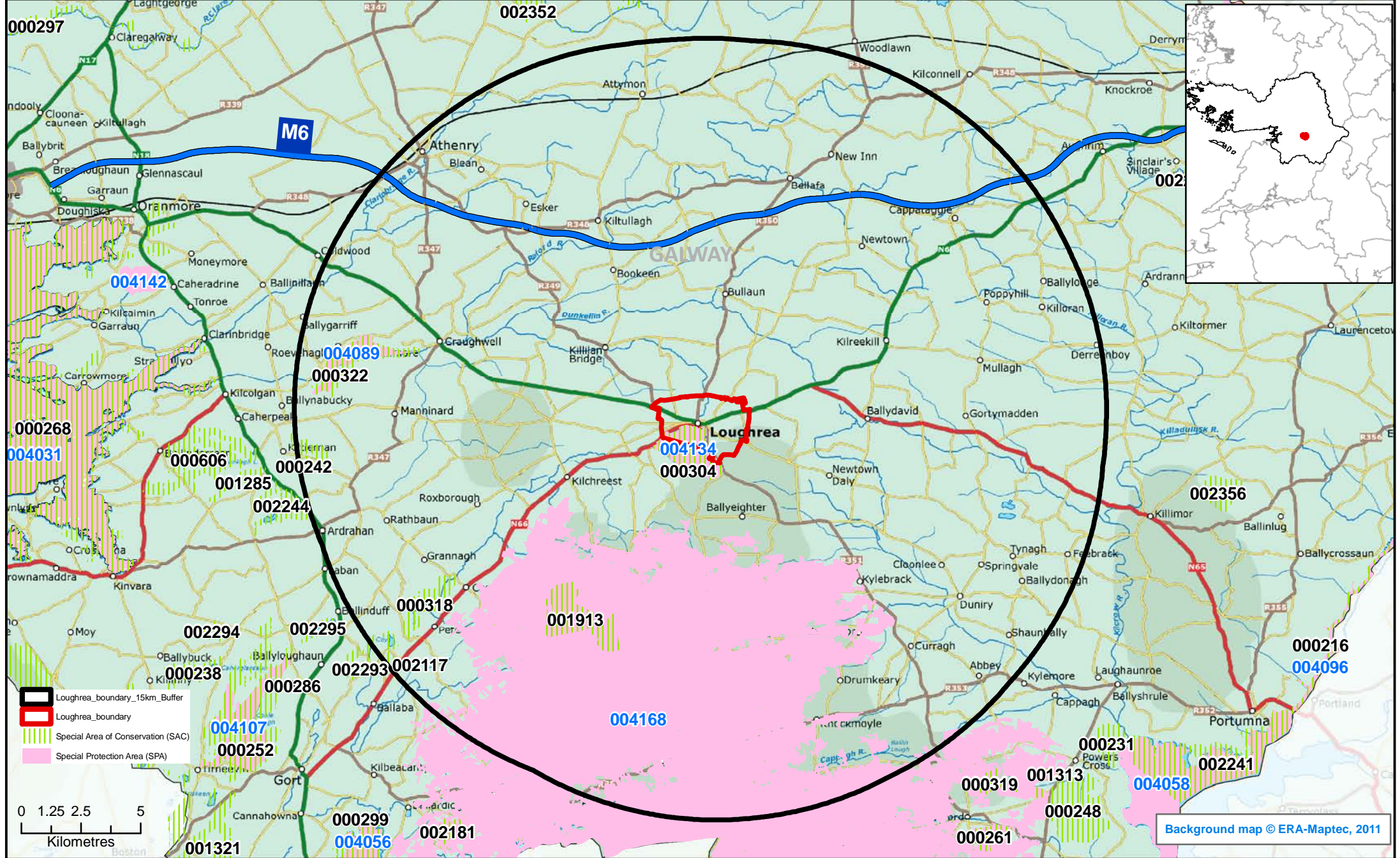
4.2.6 Key Biodiversity, Flora and Fauna Problems.

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 qualifying habitats (such as trampling) and species (eg: disturbance of overwintering birds). Indirect impacts could also arise due to increased surface water runoff, or interference with springs that feed the lake. In addition, occasional pollution incidents² such as those reported to the Inland Fisheries in January 2012 can result in impacts to spawning trout in St Clerans River.

The management and continued functioning of these ecological systems present a considerable challenge. Maintaining good water quality is of paramount importance as both surface and groundwater can all be impacted by inappropriate development or landuse zonings. Pollution due to excessive nutrients causes a decrease in fish populations (such as Salmon species which are particularly sensitive). Effluents enters water bodies from point and diffuse pollution sources such as storm outflows, sewage discharges, engineering works, forestry, agriculture and industrial discharges. This results in eutrophication (overenrichment) and habitat destruction. Certain habitats such as turloughs and marshes are especially sensitive to eutrophication.

Other pressures include loss of habitat through development on greenfield sites and localised adverse impacts on ecological networks through loss or damage to linear features such as hedgerows, riparian vegetation or stone walls. Habitat fragmentation can also arise due to infrastructural developments including road projects.

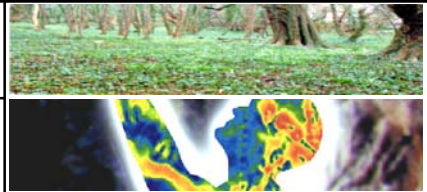
² Please see Water Services Section of Material Assets.

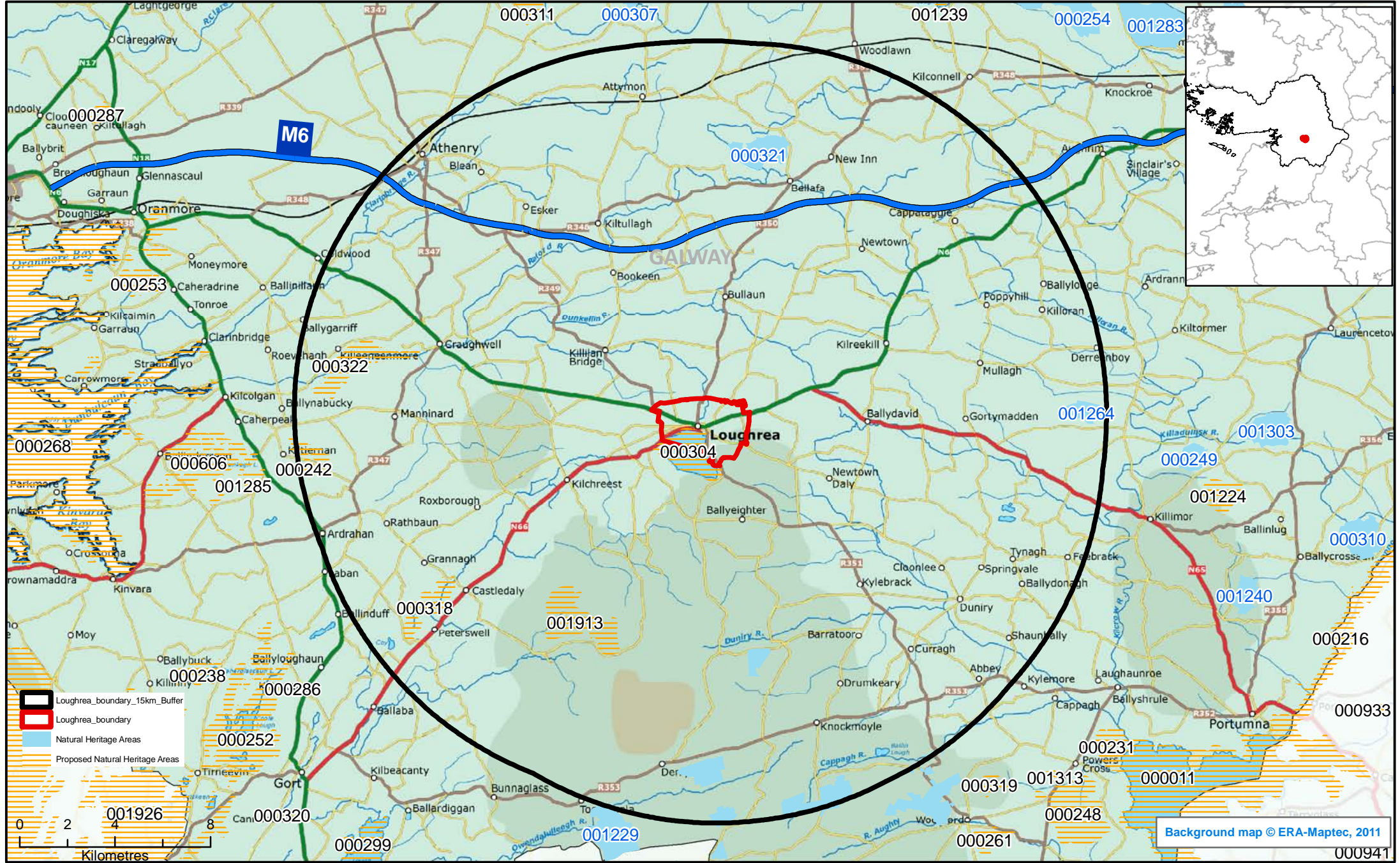


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FIGURE 4a: NATURA 2000 SITES

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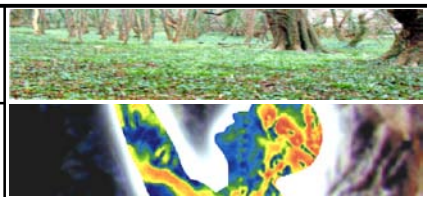


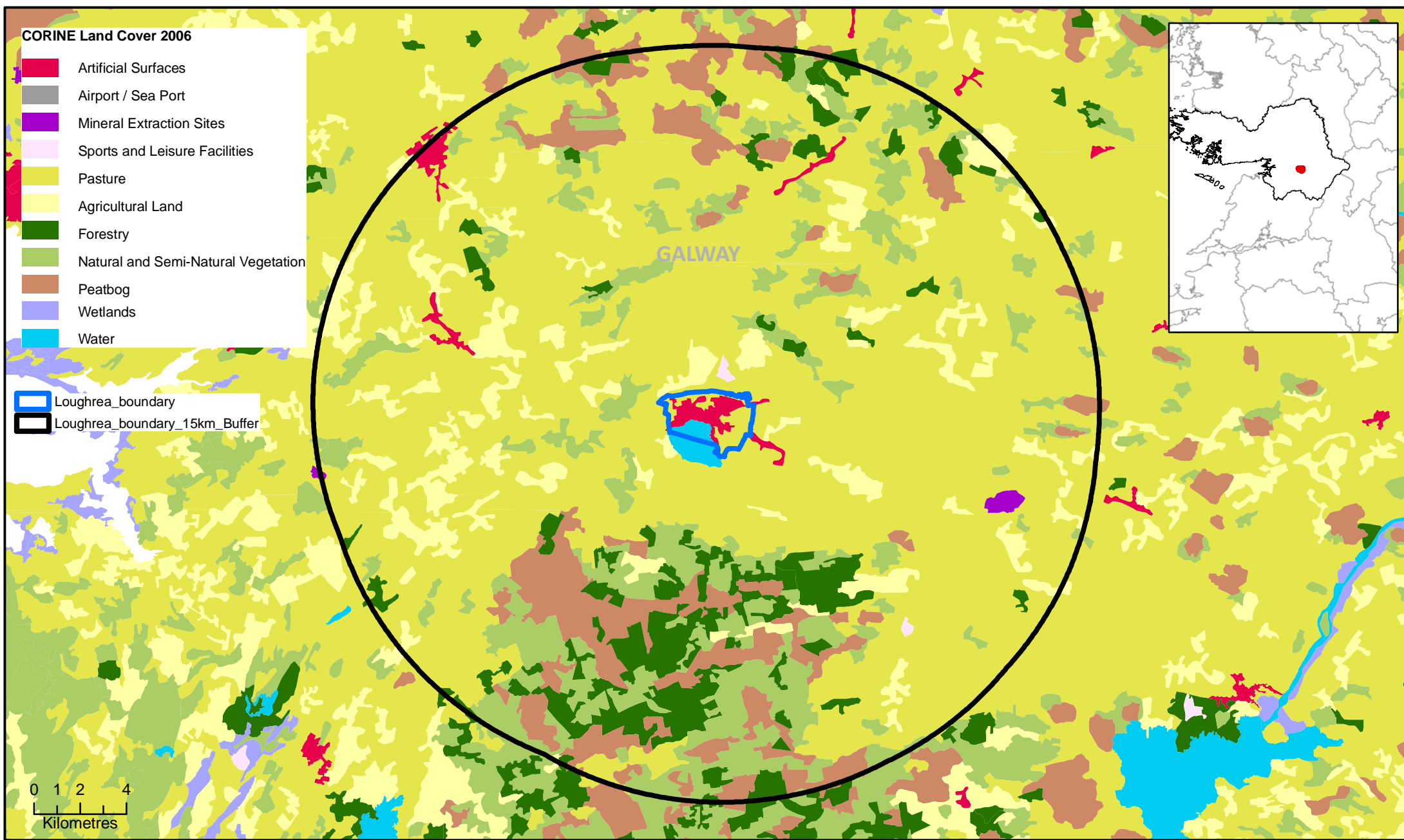


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FIGURE 4b: NHA and pNHA

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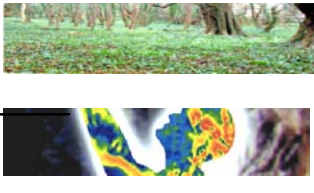




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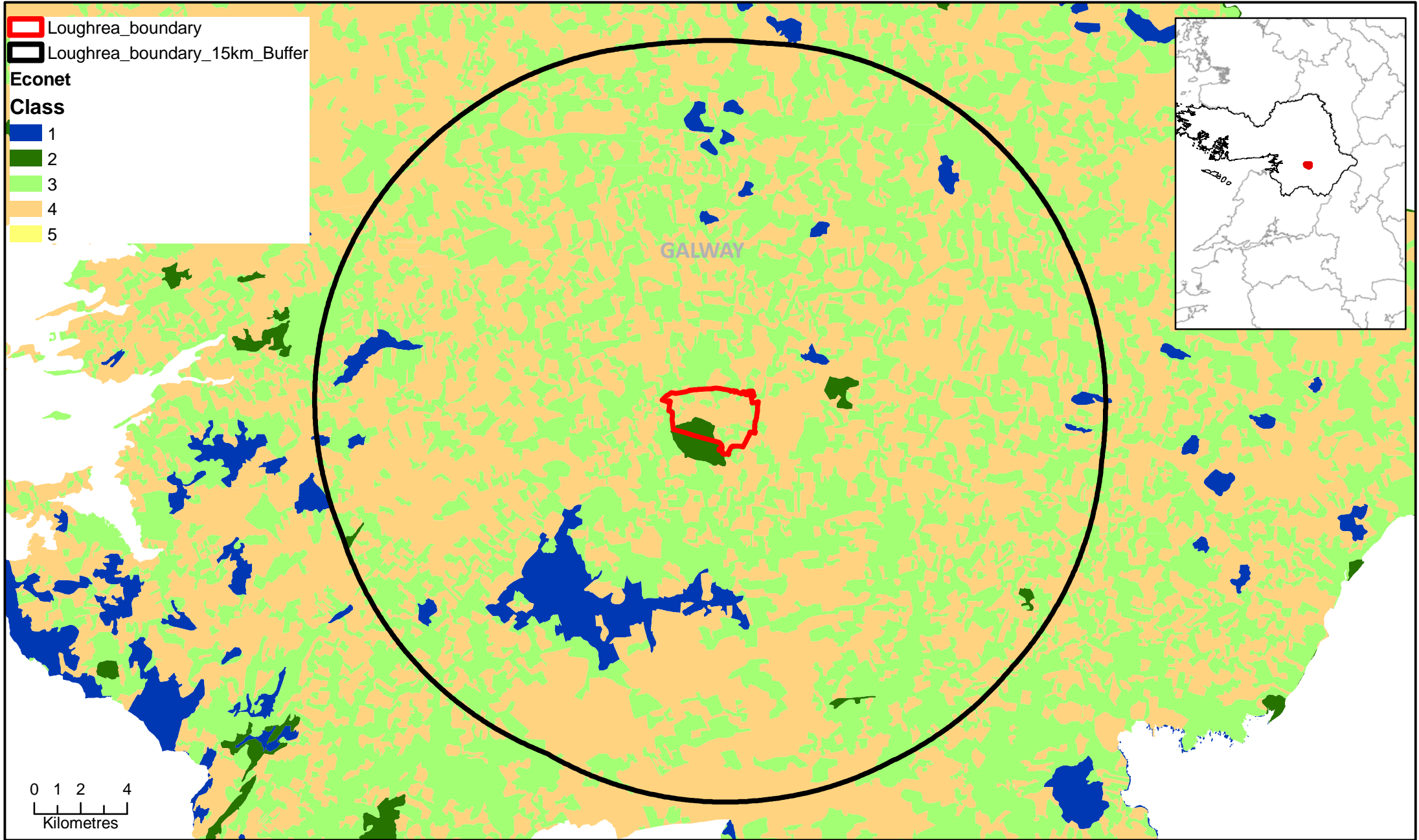
FIGURE 4c: CORINE LANDUSE

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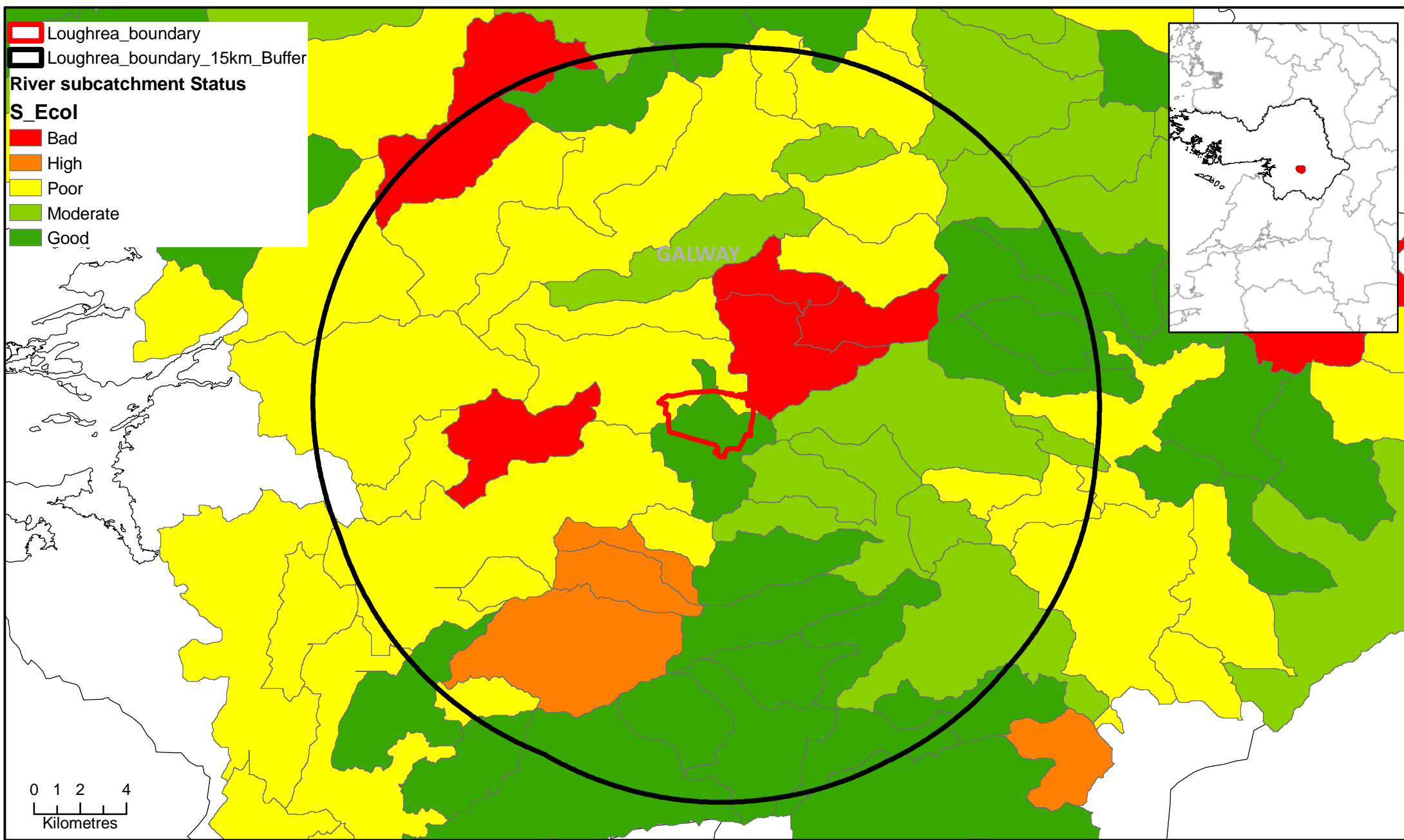
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FIGURE 4d: ECOLOGICAL NETWORK

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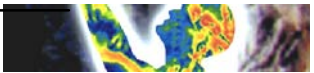
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FIGURE 4e: RIVER SUB-CATCHMENTS WATER QUALITY

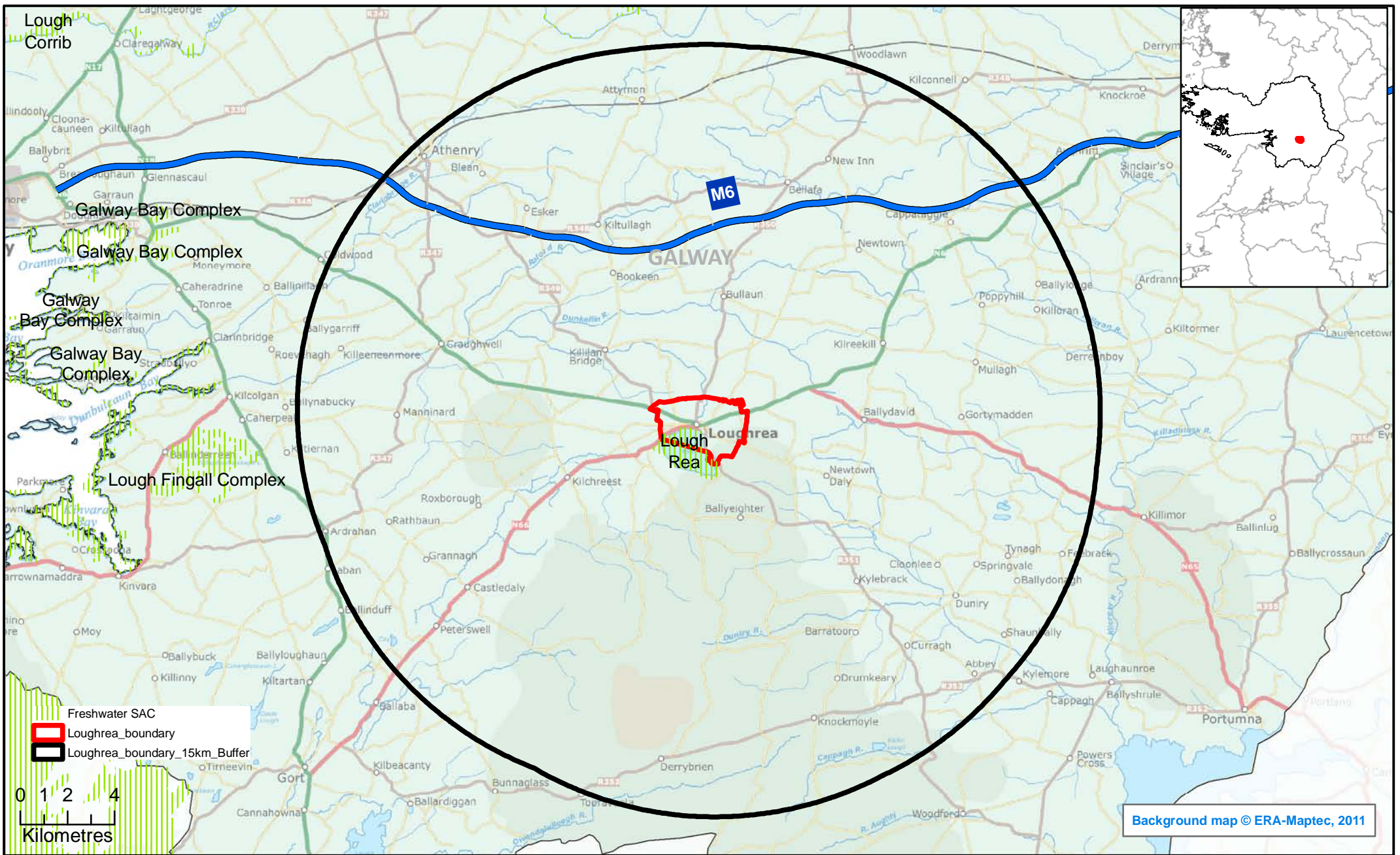
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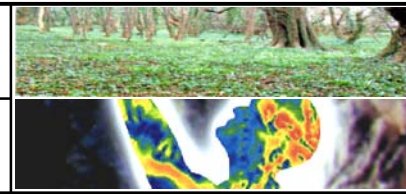
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FIGURE 4f: FRESHWATER HABITATS

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4.2.7 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.

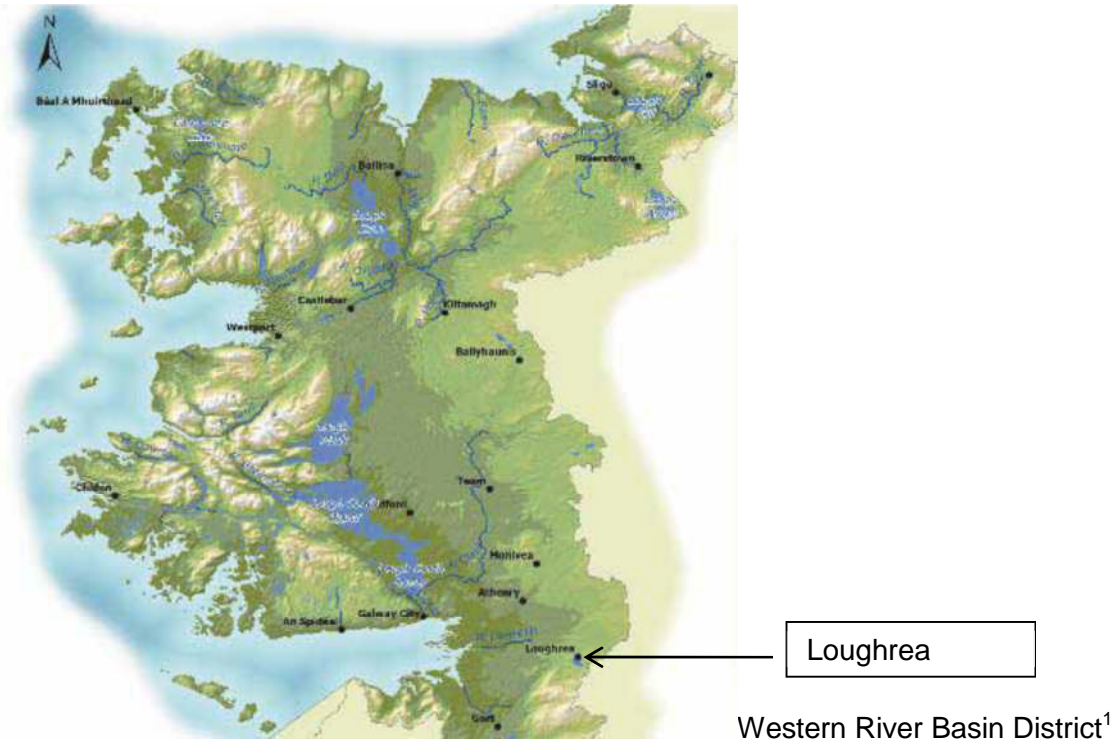
Areas designated as being of natural environmental significance (Natura 2000 network, NHAs, pNHAs, Ramsar etc) and undesignated areas of significant habits and species in the plan area and within a zone of influence of the plan area merits close scrutiny and strategic planning of land uses in order to avoid increasing pressures on this resource.

4.3 Water Resources

As the previous section demonstrates, water quality has a clear interaction and impact 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. Figure 4g shows surface water quality in Loughrea and the wider area.

4.3.1 Water Framework Directive and Flood Directive.

The Water Framework Directive (WFD) is a key initiative aimed at improving water quality throughout the EU. It applies to rivers, lakes, groundwater, and coastal waters. The Directive requires an integrated approach to managing water quality on a river basin basis; with the aim of maintaining and improving water quality. The Directive requires that management plans be prepared on a river basin basis and specifies a structured approach to developing those plans. It requires that a programme of measures for improving water quality be brought into effect by 2012 at the latest. River Basin Management Plans are to be prepared and renewed in six year cycles and the first plans cover the period to 2015. River Basin Management Plans were finalised for each of the 7 river basin districts in July 2010. These plans are a blueprint for the protection and improvement of waters in the period to 2015 and beyond. They cover approximately 800 groundwater bodies and 5,000 surface water bodies (canals, rivers, lakes, transitional and coastal waters). The plans set out the current status of our waters, the objectives to be achieved by 2015, and the programme of measures to be implemented in order to achieve those objectives. County Galway is located entirely within the Western River Basin District and the following image shows the scale and extent of this district.



The Western District is wholly within the Irish Republic. It is bordered to the Northwest by the North Western International River Basin District, to the east and south by the Shannon International River Basin District and to the north and west by the Atlantic ocean. The basin area includes practically all of Mayo and Sligo, the Galway Urban District area, significant portions of Galway and Leitrim counties and smaller portions of Roscommon and County Clare. It also includes offshore islands such as the Aran Islands and Inishboffin. The basin area extends over some 12,193 km² with some 2,700 km of coastline and an extensive off shore area. Large areas of the district have been designated as Special Areas of Conservation (SAC) under the European Union (Natural Habitats) Regulations, 1997 and Natural Heritage Areas (NHA), designated under the Wildlife (Amendment) Act 2000. Special attention must be paid to the needs of these areas where species are dependent on the aquatic habitat resulting in receptor water bodies being designated as more sensitive to pressures.

The basin is dominated in the eastern part (where Loughrea is located), east of the great western lakes, principally by well drained karst limestone overlain by grassland generally used for agricultural purposes. This area stores large quantities of groundwater which both feeds into the lake systems and also provides a significant source of drinking water to the region.

Floods Directive

The EU Directive on the assessment and management of flood risk (the 'Floods Directive' [2007/60/EC]) requires Member States to prepare flood maps for areas of potentially significant flood risk, and to develop flood risk management plans (FRMPs) setting out measures aimed at achieving objectives to manage the risk in these areas. In Ireland, these requirements (transposed into national law through S.I. No. 122 of 2010) are being implemented through the Catchment-based Flood Risk Assessment and Management (CFRAM) Studies. The outputs from the CFRAM Studies will be catchment-based flood risk management plans (CFRMPs) and

¹ Source:Western River Basin District Draft River Basin Management Plan 2008

associated flood maps. The CFRMPs will be valid for the period 2015- 2021 and will be reviewed on a six-yearly basis.

The Directive requires that the PFRA, flood maps and flood risk management plans are prepared in cooperation and coordination with neighbouring states in cross-border river basins, and with the implementation of the Water Framework Directive. The Directive also requires that the PFRA and flood maps are published, and that public and stakeholder consultation and engagement is undertaken in the preparation of the flood risk management plans.

In line with government policy on flood risk management, as adopted in 2004, the OPW is in the process of implementing a Catchment-based Flood Risk Assessment and Management (CFRAM) Study programme as a means of addressing the flooding risk over the long-term in Ireland.

The CFRAM studies have been subject to SEA Screening and a determination that this will be subject to full SEA. A SEA screening report has been produced for CFRAMs and this has highlighted probable potential issues relating to a range of parameters. The CFRMPs will aim to manage flood risk in the study areas in a manner that is compatible with the continued protection of existing habitats and will support the objectives of the WFD with regard to Good Ecological Status/Potential (GES/GEP) of the water bodies within the study area.

In essence, both the WFD and Floods Directive support integrated water management, on a river basin district approach. Clearly there is a strong relationship between flood risk management and meeting and promoting good functioning water systems. The complex relationship between land use and water quality, and the interaction between coastal, surface, groundwater systems and water quality and flood risk is at the core of integrating the WFD and Floods Directive in land use strategies. Further information on flood risk management is provided in the Material Assets Section of this chapter and impacts and mitigation measures related to same are discussed in *Chapters Seven and Eight* of this ER.

4.3.2 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. However, it can be noted that the most recent EPA status classification on rivers in the larger WMU indicates that only 8% of all river channel length is classed as 'good' with no river lengths at 'high' status. Some 7% of river length is classed as 'moderate' with 66% 'poor' and 19% at 'bad' status.

THE WMU Action plan for this unit states that an estimated 90% of Total Phosphorus is diffuse in nature with agriculture accounting for over 70 % & septic tanks for 15 % of Total Phosphorus. The balance of diffuse phosphorus, 5%, comes from natural background contribution. An estimated 10% of phosphorus comes from point sources. Particular measures will be required to address diffuse pollution pressures from agriculture such as the Good Agricultural Practices Regulations, investigations and enforcement. Supplementary measures also apply within WMU for septic tanks (OSWWTS) including compliance with the new binding EPA Code of Practice for Wastewater Treatment Systems and Disposal Systems. The following Box A presents further detail on the Kilcolgan River and its tributaries.

Box A: Summary of Kilcogan River Status from WMU Action Plan

KILCOLGAN – The Kilcolgan river drains most of the WMU area and is comprised of a network of tributary rivers. In its upper reaches the Raford river is classed as Poor (based on fish monitoring data) to where it is joined by the inflowing Ballymabilla which is classed as Moderate. The Q value at station 0300 on the Ballymabilla has improved to Good status (biological monitoring) in the most recent survey, however the water body is classified as Poor (based on available fish monitoring). Below the confluence the river is known as the Dooyërtha river and remains at Poor status to Raford bridge (biological assessment). Below this bridge the river is also known as the Clogheravaun river for a short section before becoming the Craughwell river at Craughwell and subsequently the Dunkellin and Kilcolgan river before entering the sea. All these main sections of the river are classed as Poor status (based on their biological assessment). Above Craughwell the river is also joined by the Toberdooney (also known as the Craughwell river) which is classed as Moderate status (biological assessment). The upper tributaries of this branch of the river known as the Carra stream are classed as Bad status (on the basis of poor fish stock assessment). A further main tributary the St. Clearans river which flows from Lough Rea joins the Craughwell river near Cahirkinmonwee. The status of St. Clearan’s river is Good from Lough Rea to the Raruddy East townland area (based on physico chemical assessment) and thereafter is classed as Poor on the basis of fish stock assessment

In terms of drinking (potable) water, supplies for Loughrea are currently taken from the Loughrea Water Supply Scheme and are considered sufficient. Further information on same is given in Section 4.9 Material Assets.

4.3.3 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. The entire island of Ireland has been designated as a Protected Area for Groundwater under the WFD. 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. Groundwater is exposed to higher concentrations of pollutants that are retained in the layers of rock and soil (Todd, 1980). The exposure to pollutants lasts much longer as groundwater moves at a slower pace through the aquifer. 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. Groundwater that readily and quickly receives water (and contaminants) from the land surface is considered to be more vulnerable than groundwater that receives water (and contaminants) more slowly and in lower quantities. The classification of extreme or high vulnerability means that the groundwater in these areas is very vulnerable to contamination due to hydrogeological and soil factors.

Figure 4h shows groundwater vulnerability zones and the current surface and groundwater abstraction sites within Loughrea and a 15km buffer from the town’s functional area. As the figure shows, for much of the plan area, the groundwater is classified as being of high vulnerability to pollution, with pockets assessed as being of extreme or moderate vulnerability. Moderate areas are also located within the plan area, frequently associated with karst or rock outcrops. For much of the wider area, this extreme or high vulnerability is present. In addition to ecological functions, surface water and groundwater continues to be a significant resource for

residential and agricultural uses notably abstraction. As the figure shows, there are numerous groundwater abstraction sites within the 15km buffer, but none within the actual plan area.

The WFD (see Figure below) identifies much of the groundwater in and around the plan area as being of good status. The area to the north closer to Athenry is identified as being of poor status. Loughrea lies within the Rahasane Groundwater Body and as previously stated, the overall status is classified as good, whilst the overall objective is to protect this status.

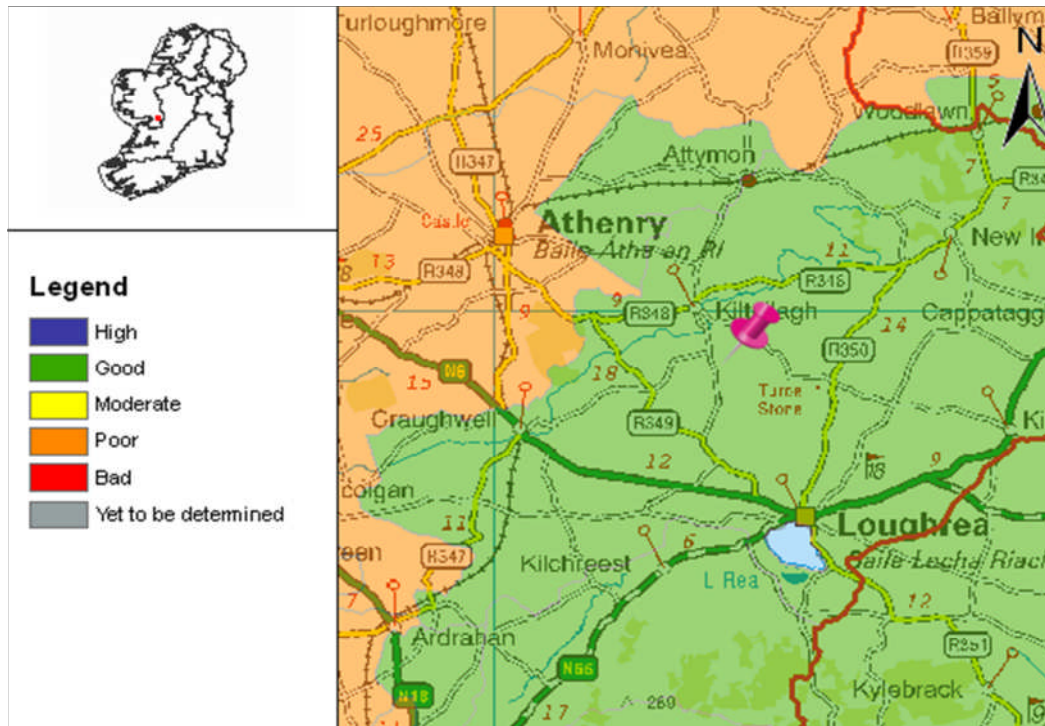


Figure 4h(i) Groundwater status

Correspondingly, in terms of being at risk of failing to achieve the 2015 Good Status required under the WFD, the same areas are identified as being 'probably at risk of not achieving good status'. This is shown in Figure 4i below. The risk sources are identified as follows:

- Groundwater dependant terrestrial ecosystems risk
- General groundwater quality risk
- Risk due to quarries
- Revised risk assessment

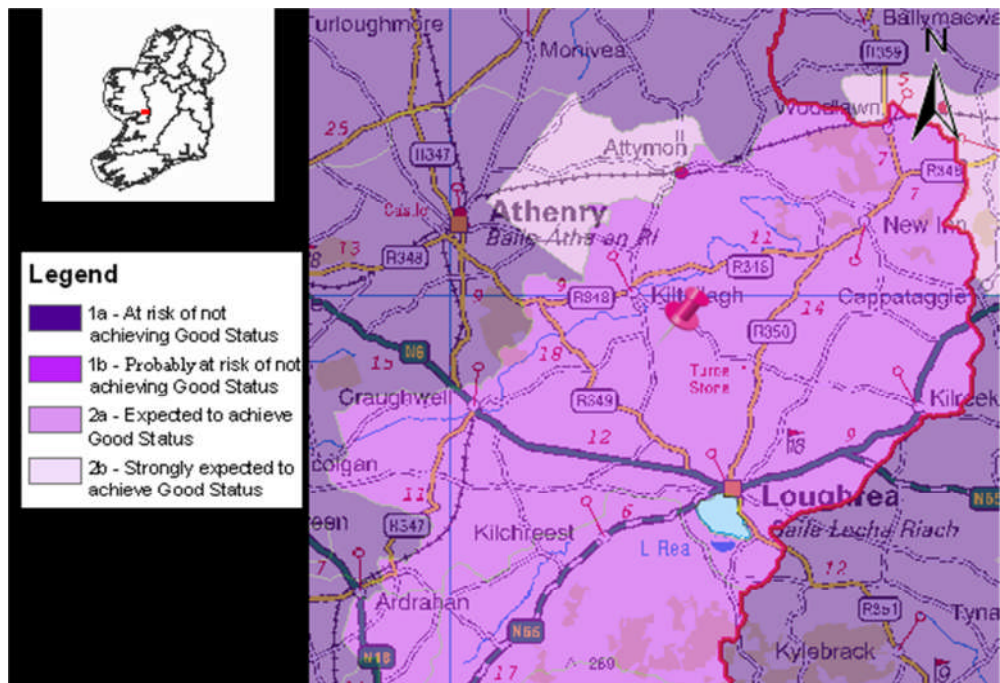


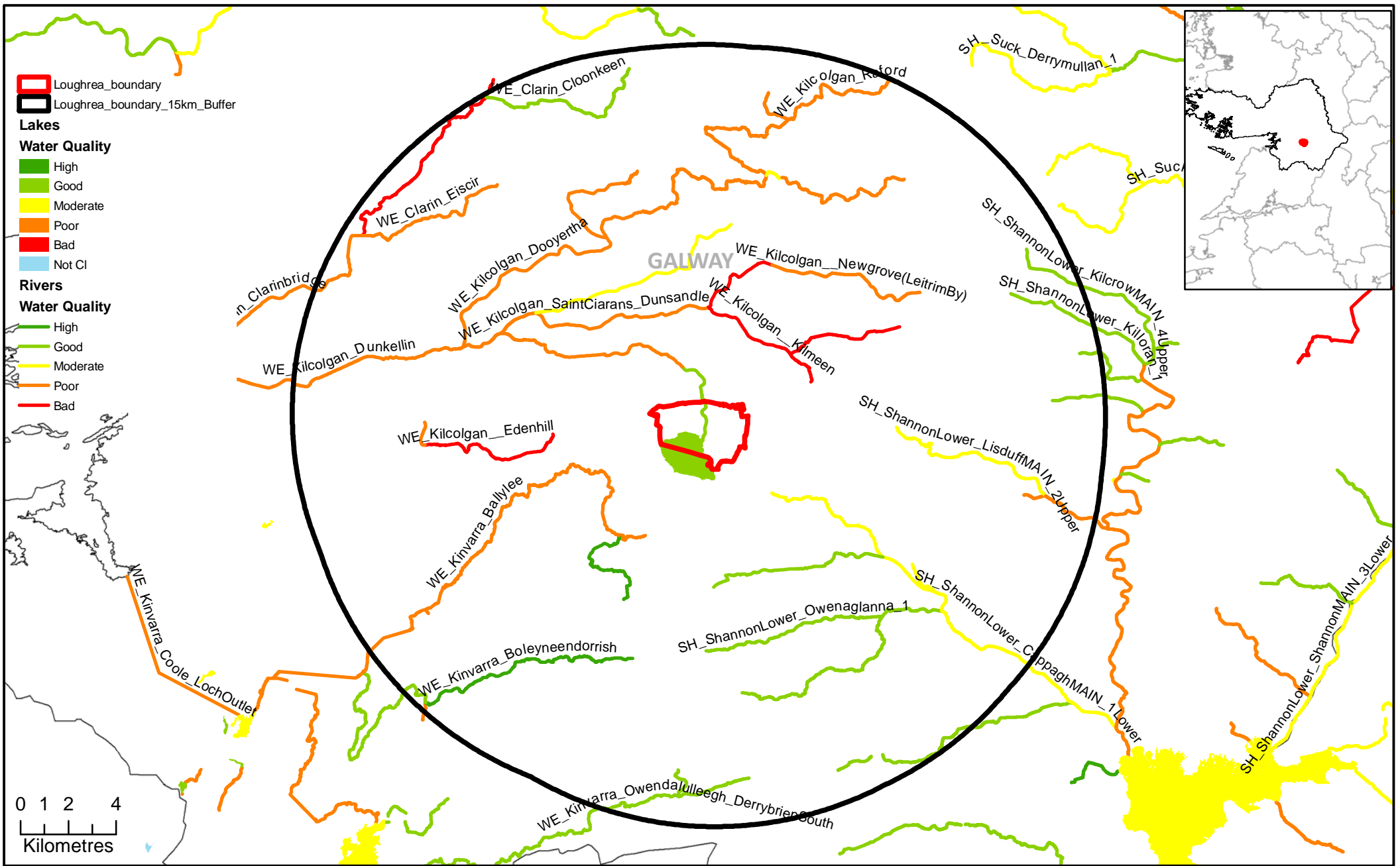
Figure 4i Groundwater Risk Status

4.3.4 Estuarine

A number of areas are already designated as Shellfish Waters in County Galway. This means the European Communities (Quality of Shellfish Waters) Regulations 2006 gives legal protection to a number of shellfish water areas and places an onus on public authorities in Ireland to ensure that the water quality in those areas is protected. The Shellfish Waters Directive is designed to put in place concrete measures to protect waters, including shellfish waters, against pollution and to safeguard certain shellfish populations from various harmful consequences, resulting from the discharge of pollutant substances into the sea. The Directive applies to the aquatic habitat of bivalve and gastropod molluscs only; it does not include crustaceans such as lobsters, crabs and crayfish. Inner Galway Bay supports licensed aquaculture, producing rope mussel and oyster. Designated Shellfish Waters in the wider area include Kinvara/Clarinbridge and Kilkieran Bay. Due to its inland location, there are no designated Shellfish waters within a 15km buffer of Loughrea.

4.3.5 Bathing Waters

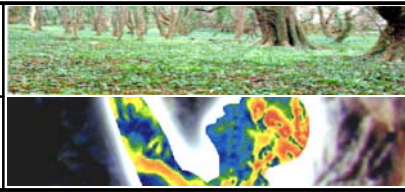
Bathing Waters are an important amenity, and are afforded the protections in accordance with the EU Bathing Waters Directive. The Directive requires that water quality at all designated bathing waters meets stringent microbiological standards in order to protect the health of people who choose to bathe there. The Directive was transposed into Irish Law by the Bathing Water Quality Regulations 2008. Under the 2008 Regulations, local authorities are required to identify bathing waters. 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 designated Bathing Water area and is compliant with the regulations. The lake is also a Blue Flag lake and was assessed in 2011 under 32 different criteria to achieve this status, ranging from water quality to environmental education.



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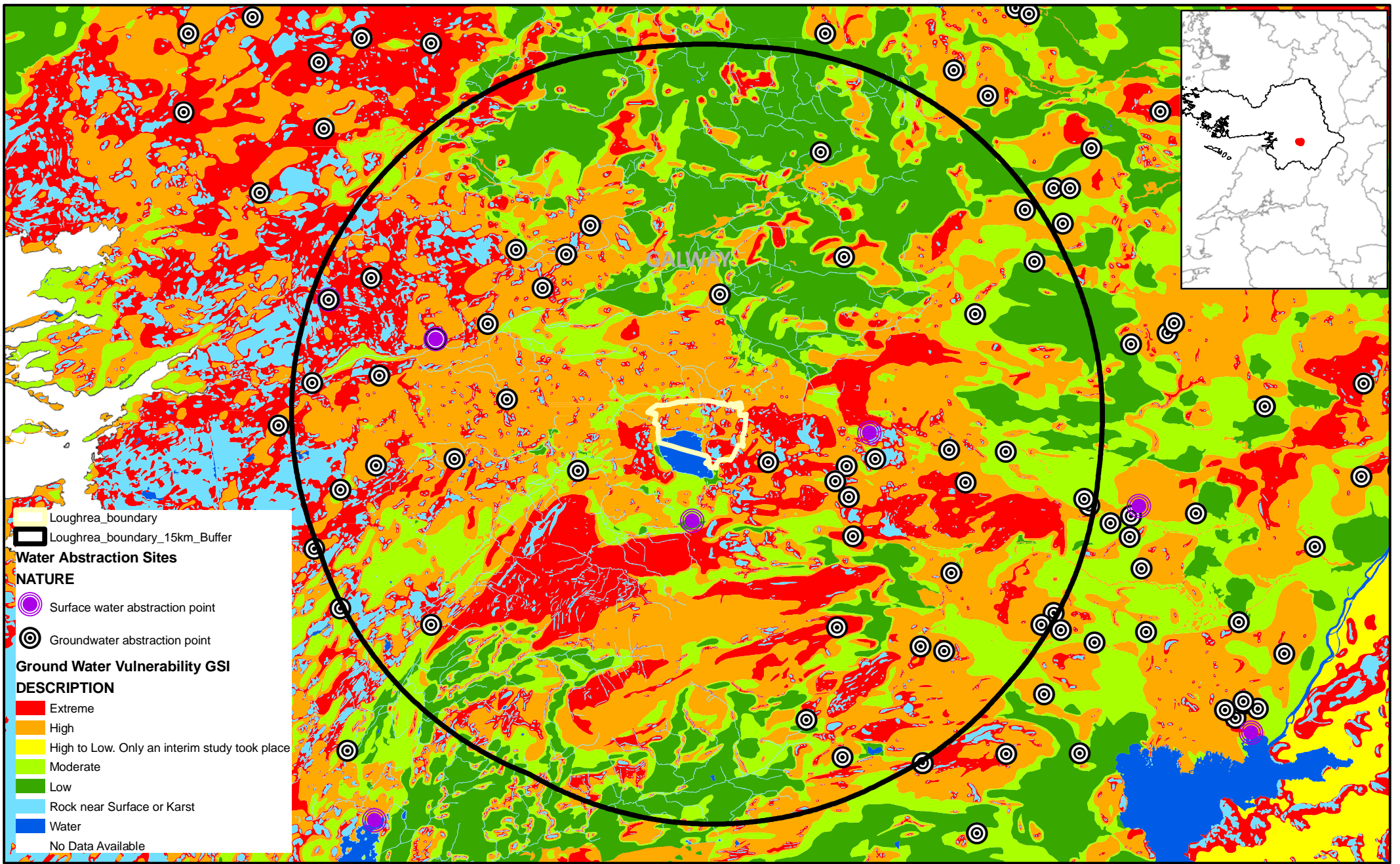
FIGURE 4g: WATER QUALITY

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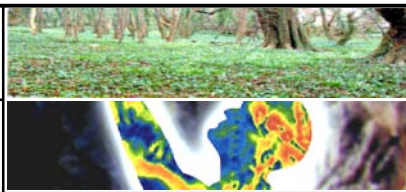
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FIGURE 4h: GROUNDWATER VULNERABILITY (GSI)

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4.3.7 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. Soil has a role as a habitat and gene pool, serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic as well as environmental importance. Soils in any area are the result of the interaction of various factors, such as parent material, climate, vegetation and human action.

Although the EU has produced a Thematic Strategy for Soil Protection, the proposed Framework Directive for Soils has not been established in law and hence not transposed into national legislation yet. Article 5 of the proposed Directive states that, *'for the purposes of preserving the various functions of soil; sealing, the development of artificial surfaces on top of soil resources, should be limited.'*

The proposed Directive suggests that this may be achieved through rehabilitating brownfield sites, thus reducing the depletion of greenfield sites. The proposed Directive also states soil should be used in a sustainable manner which preserves its capacity to deliver ecological, economic and social services, while maintaining its functions so that future generations can meet their needs.

Figure 4j shows the soil map for the Loughrea LAP area including a 15km buffer. The principal soil types indicated 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.

The Irish Geological Heritage (IGH) Programme (Geological Survey of Ireland (GSI) and the National Parks and Wildlife Service (NPWS) aims to identify, document, protect and conserve geological heritage in Ireland, promoting its value with the landowners and the public. A register of County Geological Sites are being undertaken subject to resources being available. County Galway has not been surveyed yet. Some of these sites may be proposed for designation as Natural Heritage Areas.

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 distort 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.

The EPA¹ has identified the main pressures on soil resources nationally to be:

- intensive agriculture and organic waste disposal
- Forestry
- Industry
- Peat extraction and
- Urbanisation and infrastructure development.

Such activities can contribute to soil degradation including loss of organic matter, declining soil fertility, loss of soil stability, soil compaction, contamination, loss of biodiversity and loss of soil to buildings and infrastructure. Because of the complex interrelationship between water, air and soil, declining soil quality can contribute to negative or declining water or air quality and function.

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.

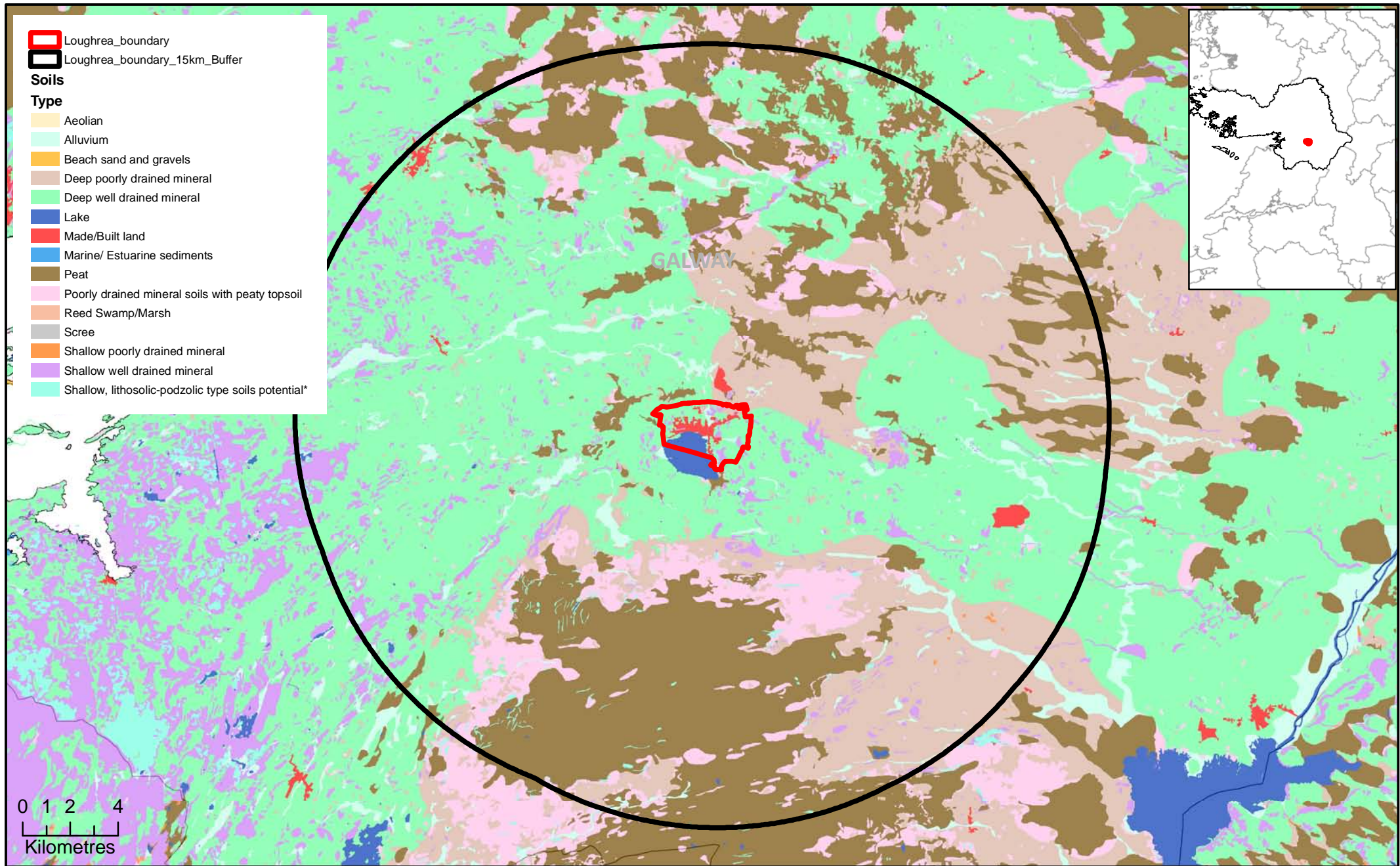
The identification of geological NHAs and County sites of interest will assist in the development of appropriate management regimes for these sites, either through avoidance or mitigation measures.

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

The currently proposed Soil Directive suggests encouraging the rehabilitation of brownfield sites, thus reducing the depletion of greenfield sites. However, 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

¹ EPA discussion document "Towards setting environmental quality objectives for soil: developing a soil protection strategy, 2002.

increased basis and would result in the building upon and thereby sealing off of the non-renewable subsoil and soil resources. In the absence of policies regarding water management and land use objectives, adequate protection would not be given to groundwater protection and associated impacts on soil quality.



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FIGURE 4j: SOILS (Teagasc/FIPS)

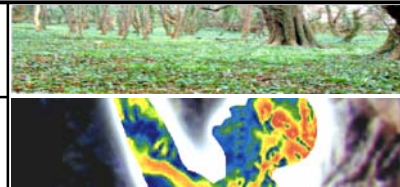
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4.5 Population and Human Health

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 1,500¹. Loughrea lies fully within one DED – Loughrea Urban, and partly within a second DED –Loughrea Rural. See Figure 4k for DEDs and the Loughrea Plan area. The following Table 4d shows the population breakdown between the 2006 and 2011 Census (2011 data is preliminary only).

Table 4d Census Data 2006 and 2011

Loughrea Urban	2006	2011
Total Population	4532	5057
Males		2421
Females		2636
There has been an overall population increase in Loughrea Urban of 11.6% or 525 persons over the five year period.		
Loughrea Rural		
Total Population	885	883
Males		422
Females		461
The Rural DED (of which Loughrea LAP is partly within) has seen a slight population decline of -.0.2% or 2 persons.		

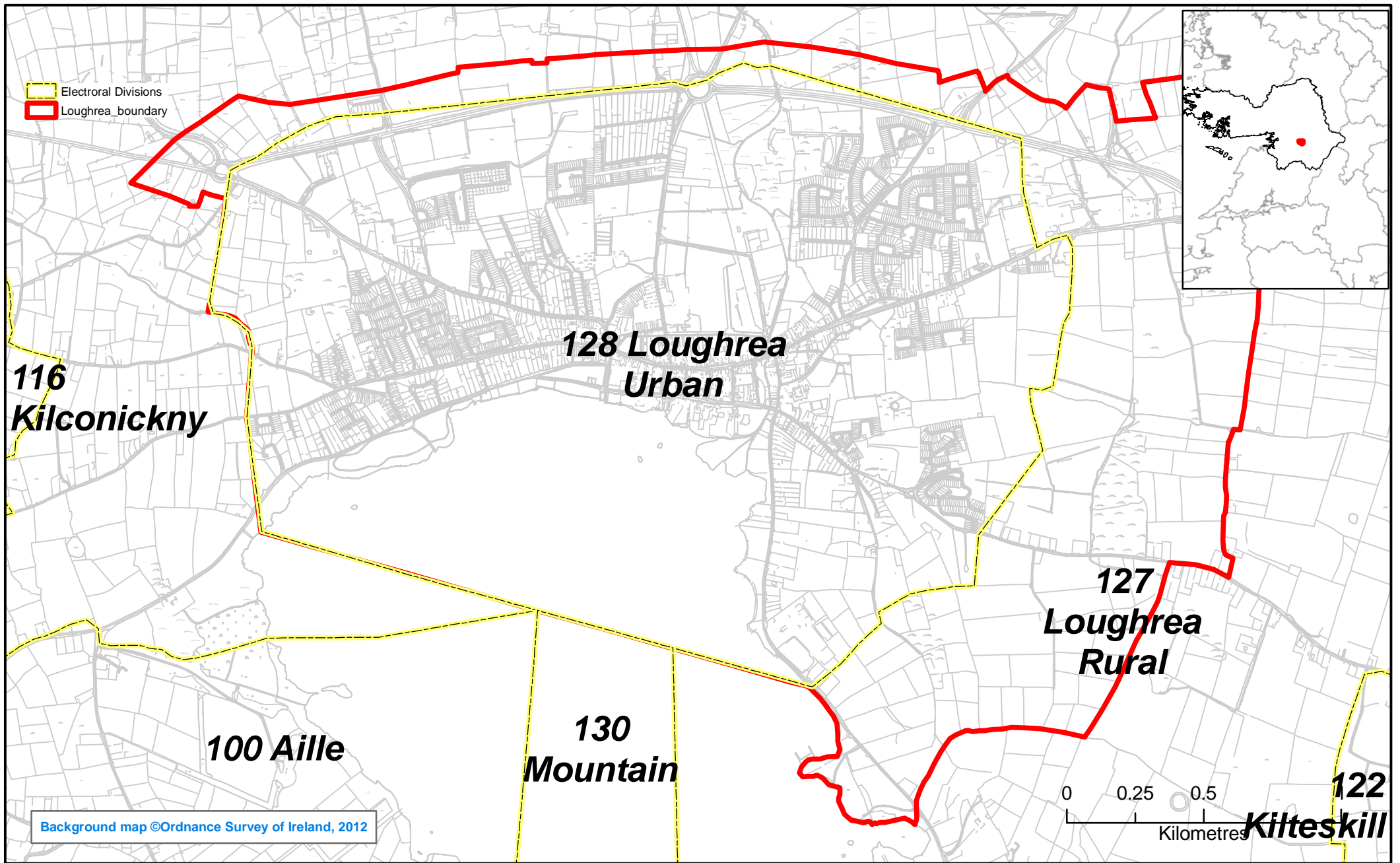
A socioeconomic profile of County Galway was produced in 2008². This analysed Census data from the 2002 and 2006 Census. Clearly the 2011 Census data will provide more up to date information; however the profile below presents a useful snapshot of the socioeconomic profile of Loughrea.

Labour Force Participation Rate. The labour force participation rate is calculated as the sum of those at work, seeking their first job and those unemployed as a percentage of the overall population aged 15 years and over. In 2002, the labour force participation rate was 56.5% in County Galway, just marginally lower than the labour force participation rate in the State of 58.3%. Loughrea Electoral Area had the second highest labour participation rate in the County at 63.4%. Loughrea also had the second lowest unemployment rate in the county in 2006, at 5.9%.

Live Register Figures. The Live Register is not designed to measure unemployment as it includes part time, seasonal and casual workers entitled to Jobseekers Allowance or Jobseekers Benefit. The live register is compiled from returns made from each local Social Welfare office. The following data is shown for the Loughrea Social Welfare office. As this covers areas outside Loughrea, including Athenry, it does not represent an accurate picture of live register figures for the town, but does reflect the general trend of increased numbers on the live register.

¹ SEA ER of West Regional Planning Guidelines

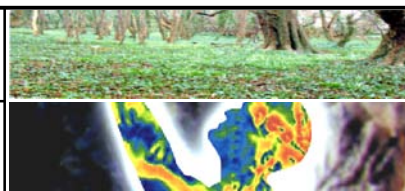
² Socio Economic Profile of County Galway 2008. Galway County Council.



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FIGURE 4k: ELECTORAL DIVISIONS

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Table 4e Live Register Figures Loughrea Social Welfare Office 2008-2012

	2008	2009	2010	2011	2012
Loughrea Live Register Figures	838	1862	2525	2536	2429

Occupation: At electoral area level, Loughrea had the second highest proportion of population in the Combined Professional, Managerial and Technical Social Classes at 35.1%.

Housing: The lowest level of owner occupation in County Galway in 2006 was in the Loughrea Electoral Area at 79.7%.

Nationality: At electoral area level, the Loughrea Electoral Area had the highest proportion of usually resident population whose nationality was other than Irish at 11.1%.

Ethnicity: At electoral area level, Loughrea had 1.2% of the usually resident population that described themselves as travellers. The largest number of people who described themselves as Black or Black Irish were in the Loughrea (144 people or 0.4% of the usually resident population) Electoral Areas. The largest number of people who described themselves as Asian or Asian Irish were in the Loughrea Electoral Area (208 people or 0.5% of the usually resident population).

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.

Ascertaining health related data for a functional area such as Loughrea is difficult and unlikely to exist in the public domain. The Healthwell¹ website provides information on a range of human health parameters at national and county level. Some key indicators for County Galway are provided below:

Table 4f County Galway and National Health Status

Health Status	National	County Galway
Number of suicides occurring per 100,000 population.	10.9	14.3
Number of births to mothers aged 19 years or less per 1,000 female population aged 13 to 19 years.	7.8	10.3
Percentage of the population in receipt of prescriptions for depression and/or anxiety.	8.6	8.2
Rate of admissions to hospital for	4308.6	4861.4

¹ www.thehealthwell.info

circulatory diseases per 100,000 European standard population.		
Life expectancy for females at birth, RoI 2006-2008.	81.7	82.1
Life expectancy for males at birth, RoI 2006-2008.	76.9	77.0

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, further information on human health and air quality is provided in the subsequent section;
- 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.

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). A recent publication from the EPA (2009) ‘Climate Change – Refining the Impacts for Ireland’ outlines predictions in relation to Irish climate and conditions to the end of this century. Climate change refers to changes in climatic conditions whether through natural variations or as a result of anthropogenic influences. It is expected that temperature in Ireland will rise, with drier summers, wetter winters and more variable precipitation patterns and temperature in the coming years. It is explained that the changes

likely to be experienced are due to the increasing amounts of CO² and other greenhouse gases in the atmosphere which are continually rising.

It is estimated that global temperature change by 2100 will be 1.8 – 4°C. Mean annual temperatures in Ireland rose by 0.7°C over the past century. It is expected that mean temperatures will rise by 1.4 – 1.8°C by 2050 and by over 2°C by 2100.

Summer and autumn temperatures will warm more quickly than winter and spring. Winter rainfall is projected to increase by 10% by 2050 and 11-17% by 2080. Reductions in summer rainfall of 12-17% by 2050 and 20-28% by 2080 are expected and there will be a likelihood of longer heat waves, fewer days of frost, longer rainfall events in winter and more intense downpours in summer, and increased likelihood of summer drought (EPA, 2009).

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. Under the Kyoto Protocol Ireland agreed to a target of limiting its greenhouse gas emissions to 13% above 1990 levels by the first commitment period 2008 – 2012 as part of its contribution to the overall EU target.

The 'National Climate Change Strategy 2007-2012' builds on the Government's commitment to sustainable development as outlined in 'Towards 2016' and the 'National Development Plan 2007-2013' and is one of a number of inter-related Government initiatives that will address energy and climate change issues. It sets targets in relation to: energy supply; transport; residential; industry, commercial and services; agriculture, land-use and forestry; waste; public sector; cross sectoral; adaptation to climate change; and implementation, reporting and review.

The National Climate Change Strategy states that 'Local authorities can have a significant influence over emissions in their local areas, both directly in relation to reducing emissions through their own energy use and procurement activities, in raising awareness and stimulating action in local communities, and indirectly through the exercise of their housing, planning and other statutory functions'.

4.6.2 Air Quality Standards

Air quality standards are based on:

- EPA Act 1992;
- (Ambient Air Quality Assessment and Management) Regulations 1999;
- Air Quality Standards Regulations 2002;
- Ozone Regulations 2004 (DoEHLG, 2004) which correspond to EC Directives which came into effect in 2005; and
- Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations 2009 which transposed European Directive 2004/107/EC into Irish law.

Air quality analysis is based on measurements of particulate matter, ozone, NO_x, SO₂, lead, CO and benzene (EPA, 2007). The 'Clean Air for Europe Directive 2008/50/EC' replaces the 'Air Framework Directive' and first three daughter Directives. The following emissions/ pollutants have implications for both human health and the environment:

The following information is sourced from EPA (2008) *Air Quality in Ireland 2007 – Key Indicators of Ambient Air Quality*.

- **Sulphur Dioxide** (SO₂) is formed when fuel (mainly coal and oil) containing sulphur is burned at power plants and homes etc. Depending on concentrations, the gas can have health implications for asthmatics, can aggravate existing cardiovascular disease, respiratory illness and alter the lungs' defences. Sulphur dioxide and nitrogen oxides are the major precursors to acidic deposition (acid rain), which is associated with the acidification of soils, lakes and streams and the accelerated corrosion of buildings.
- **Oxides of Nitrogen** (NO_x) include two pollutants nitric oxide (NO) and nitrogen dioxide (NO₂). Power-generation plants and motor vehicles are the principal sources through high temperature combustion. It contributes to the formation of acid rain and is also a recognised ozone precursor. Short term exposure to NO₂ is associated with reduced lung function and airway responsiveness and increased reactivity to natural allergens. Long term exposure is associated with increased risk of respiratory infection in children.
- **Particulate Matter³⁵** (PM₁₀) is derived from the combustion of solid fuels and road traffic, in particular emissions from diesel engines. Other particulates include dust from roads, industrial emissions and natural substances such as windblown sea salt. The matter is very small and can penetrate deep into the respiratory tract and increase the risk, frequency and severity of respiratory and cardiopulmonary disorders.
- **Black Smoke** consists of fine particles suspended in air which mainly arise from the incomplete burning of fossil fuels, such as coal, oil and peat, in domestic, industrial or transport sectors. Open fires in dwelling houses are a major source of the smoke. The particulates affect the respiratory system and remain there for long periods of time.
Airborne Lead (Pb) levels have dramatically reduced since the introduction of lead-free petrol. Excessive exposure to lead may cause neurological impairments, cause damage to the nervous system of foetuses and young children. It may be a factor in high blood pressure and heart disease; and it can also be deposited on the leaves of plants, presenting a hazard, through ingestion, to grazing animals and subsequently humans.
- Road traffic is the major source of **Benzene** (C₆H₆) in Ireland. Benzene is emitted from burning coal and oil, petrol services stations, motor-vehicle exhaust and cigarette smoke. Acute (short-term) inhalation exposure may cause drowsiness, dizziness, headaches, as well as eye, skin and respiratory tract irritation and, at high levels, unconsciousness. Chronic (long-term) inhalation has caused various disorders in the blood and is also a carcinogen.
- **Carbon Monoxide** (CO) is a colourless and odourless gas, formed when carbon in fuel is not burned completely. It is a component of motor-vehicle exhaust, which accounts for most of the CO emissions nationwide and concentrations are generally higher in areas with heavy traffic congestion. Studies have found that populations who live in areas with polluted air, containing high levels of combustion-derived nanoparticles (fine particulate matter), are more likely to suffer from respiratory and cardiovascular diseases. It reduces oxygen delivery to the body's organs and tissue and is a serious health threat to sufferers of cardiovascular disease. It can be poisonous and result in visual impairment, reduced work capacity, reduced manual dexterity; poor learning ability and difficulty in performing complex tasks are all associated with exposure to elevated CO levels.
- **Ground-level Ozone** is a secondary pollutant formed from the interaction of NO_x, CO and various volatile organic compounds (VOCs) in the presence of sunlight. It is present in air masses and is transported from Atlantic and European regions. It occurs naturally in the stratosphere and provides a protective layer high above the Earth which filters dangerous UV radiation. Higher concentrations of ozone in the air have adverse

implications for human health with potential to affect the respiratory system, crops and other vegetation.

- An EPA (2007) Report 'Dioxin Levels in the Irish Environment: Fifth Assessment (Summer 2007) Based on Levels in Cow's Milk' indicates that **dioxin levels** are below EU limits. Dioxins are of toxicological significance and are sourced from accidental fires, burning of household waste, cement kilns, copper production, forest fires, incineration, production of steel, traffic etc.

EPA 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).

The latest annual report on Air Quality in Ireland (EPA 2011) states that:

'Overall, air quality in Ireland continues to be of good quality and remains the best in Europe. In 2010, measured values of sulphur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), Ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), heavy metals, benzene and polycyclic aromatic hydrocarbons (PAH) were all below limit and target values set out in the CAFE Directive and 4th Daughter Directive.

However, levels of particulate matter and nitrogen dioxide (NO₂) continue to remain of concern and levels of polycyclic aromatic hydrocarbons (PAH) are a possible concern for the future in some areas. PAH arise from domestic fuel burning and vehicle exhaust emissions. Traffic is the primary source of nitrogen dioxide and is also one of the main sources of particulate matter.

Domestic solid fuel use is the other main source of particulate matter in air in Ireland and particularly impacts air quality in areas where the sale of bituminous coal is permitted. As a result, levels of particulate matter in smaller towns are similar or higher than those in cities, where bituminous coal is banned. As such it is important to note the impact that the choice in domestic heating fuel can have on the environment and air quality. To help with this, from 2011 the government is enforcing a regulation that will require that all bituminous coal placed on the market in Ireland for residential use has a sulphur content of no more than 0.7%.'

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 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. These are:

- National monuments in the ownership or guardianship of the Minister or a Local Authority or national monuments which are subject to a preservation order;
- Historic monuments or archaeological areas recorded in the Register of Historic Monuments; or
- Monuments or places recorded in the Record of Monuments and Places.

Figure 4l shows the location of SMR within the plan area. 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. Table 4g below provides a breakdown of the sites and monuments record for Loughrea.

Table 4g: Sites and Monuments Record for Loughrea

ENTITY_ID	MON_NO	CLASS
GA05702	GA105-050----	Ringfort - cashel
GA05724	GA105-069----	Mass-rock
GA05734	GA105-078----	Stone head
GA05751	GA105-099----	Ringfort - rath
GA05752	GA105-099001-	Souterrain
GA05754	GA105-103----	Field system
GA05784	GA105-150----	Historic town
GA05786	GA105-152----	Stone head
GA05787	GA105-153----	Burial

GA05812	GA105-184----	Children's burial ground
GA05816	GA105-189----	Settlement cluster
GA05823	GA105-197----	Crannog
GA05824	GA105-198----	Crannog
GA05825	GA105-199----	Crannog
GA11157	GA105-189001-	Ringfort - cashel
GA11429	GA105-224----	Crannog
GA11433	GA105-228001-	Fulacht fia
GA11434	GA105-228002-	Fulacht fia
GA11444	GA105-198001-	Crannog
GA11445	GA105-198002-	Crannog
GA11446	GA105-198003-	Crannog
GA11596	GA105-150001-	Town defences
GA11602	GA105-150007-	Ritual site - holy well
GA11606	GA105-150011-	Architectural fragment
GA11607	GA105-150012-	Graveslab
GA11610	GA105-150015-	Mill - unclassified
GA12657	GA105-200----	Statue (present location)
GA12898	GA105-049001-	Ecclesiastical enclosure
GA12899	GA105-049002-	Church
GA12900	GA105-049003-	Graveyard
GA12901	GA105-049004-	Ritual site - holy well
GA13194	GA105-151001-	Religious house - Carmelite friars
GA13195	GA105-151002-	Graveyard
GA13196	GA105-150017-	Graveslab
GA13197	GA105-151003-	Graveslab
GA13198	GA105-151004-	Graveslab
GA13199	GA105-151005-	Graveslab
GA13200	GA105-151006-	Graveslab
GA13201	GA105-151007-	Graveslab
GA13202	GA105-151008-	Graveslab
GA13625	GA105-152001-	Architectural feature
GA13626	GA105-152002-	Architectural feature

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. Figure 4m shows protected structures within the town's functional area. The following Table 4f presents information on type of protected

structure found within the plan area. Photo 3 below shows a streetscape in Loughrea that includes vernacular architecture styles.



Photo 3: Streetscapes of Loughrea

Table 4f: Record of Protected Structures within Loughrea Town Boundary

REG_NO	FEATURES	NAME
1272	Limestone front. Mid 19th century shop front.	House
1288	Former Catholic Cathedral in form of barn church.	Kilroy's
318	End-of-terrace three-bay two-storey house with raised basement, double flight of entrance steps and ionic stone doorcase, built c1790. The facade is rough dash rendered. Refenestrated c. 1995. Corner site streetscape.	Dr.J Flaherty's
1257	7 bay, 3 storey house. Late 18th centuryhouse with octagonal bow and limestone door case.	O'Dea's Hotel
1258	3 storey, all 3 bay but one Row of c1800 houses.	4 Houses
1260	5 bay, 3 storey house c.1770 with round headed limestone door case.	House
1261	3 bay, 2 storey house c.1820 with Doric door case.	House
326	Terraced three-bay three-storey house with rough dash rendered facade and round headed Gibbsian stone doorcase with original fanlight, c. 1800. Re-roofed c. 1940. Refenestrated c. 1985. Street frontage.	House
327	Terraced three-bay three-storey house, c. 1800, reroofed c. 1990. Now derelict.	House
1251	U-plan building. Mid 18th Century Public building	Library

321	Declaration 26/04/11 Gothic style, ten-bay two-storey convent with dormer attic, gables and large chapel with tower and spire, designed by J.J. O'Callaghan c. 1880. The limestone facade has cut stone dressings. Interior retains some original architectural features.	Convent of Mercy
315	Seven-bay two-storey former town hall with ground floor blind arcades pierced by window opes and doors. c. 1860, The facade is part ashlar limestone and part rough dash rendered. Corner site. Converted to cinema c. 1940. Now unoccupied.	Town Hall / Cinema
316	Detached three-bay two-storey gable-ended house, c. 1790 The rendered facade has original upper floor fenestration and two later round-headed door opes. Now houses flats over retail outlet, with enlarged ground floor opes, c. 1980.	Farm and Equestrian Centre
1253	2 Bay, three storey house c.1900 decorative facade on earlier house	The Arch Bar
317	Gothic style cruciform plan cathedral has side aisle, tower and spire. The rusticated random squared limestone facade has cut stone dressings. Designed by William Byrne and built 1897-1903. The rich interior has marble arcade shafts, polychrome tiles.	St. Brendan's Catholic Cathedral
1285	5 bay, 3 storey mid 18th century house with high pitched roof.	M. Beatty's
1270	6 bays, 3 storey c. 1930 facade with metal frame.	AIB
1269	5 bay, 3 storey house. Mid 18th century house with stone stacks.	Beatty's
1271	3 bay, 2 storey . Proportion of building important for streetscape.	Irish Permanent
1268	4 bay, 3 storey house c 1800 house.	Xtravision
1267	4 bay , 3 storey house. Mid 18th century house with very high pitched roof and tall stacks.	News & Choose
320	Gothic style cruciform-plan church with crenellated tower and corner pinnacles, dated 1825. Built of ashlar limestone with carved stone dressings. The interior retains some wall memorials. Designed by James Pain. Set within enclosed churchyard.	Library
1284	2 Bay 3 storey House Large 18th Century House.	
1283	4 bays, 3 storey, 19th century house.	Connolly's
1282	2 houses, late 19th century Italianate building.	Bernard Dervan
1277	2 houses, 3 storey from 19th century with tall stone stacks.	Fintan Lalor
1278	3 bay, 3 storey house. Late 18th century with high pitched roof and stone stacks.	Moylans
1276	3 bay 3 storey house, early 19th century house.	Charlies
1275	3 bay, 3 storey house with original slates.	No. 49
1274	3 bay , 3 storey house, 18th century house - original slates.	Martin Fahy
1273	5 bay, 4 storey. Late 18th century house with limestone doorcase.	Pat Loughnane & Donlan
1279	Large 5 bay 3 storey late 18th century house.	L O' Brien
1264	2 bays, 3 storey house. Early 19th century house of good proportions	Nos. 17 & 18
1265	2 bays, 2 storey house Early 19th century house with carriage arch.	Mike Keary Bar

1266	3 bay,3 storey house. Early 19th century house with high pitched roof.	Kinsella
1262	3 bay, 3 storey house. Early 19th century house of good proportions	Shelveys
1263	3 bay , 3 storey house. Mid 18th century house with massive stack.	No. 12 Whiskey Joes
328	End-of-terrace six-bay two-storey house with rendered facade and carriage arch through to rear, c. 1750. Refurbished, PVC casement windows and traditional style timber shop front inserted, c 1990.Street frontage.	Barry and Hayes Medical Hall
1280	3 bay 2 storey house. Mid 19th century house.	Post Office
323	Five-bay two-storey Carmelite monastery with slightly advanced end bays, rendered facade and tripartite stone door stone doorcase with plaque above,built 1829. Adjoining seven-bay three-storey wing, c. 1880. Renovated c. 1990. set within its own grounds	Carmelite Monastery
1254	c.1840 classical court house of limestone ashlar.	Court House
1252	Early 19th Century barracks with wall and gate piers.	Former Barracks
329	Carved stone head; possibly medieval stone fragment inserted in wall over commemorative plaque to Stoney Brennan, c. 1950.	Stoney Brennan Memorial
1259	Late 18th Century 2 storey house with minor 19th Century alterations.	House
314	Terraced seven-bay two-storey house with basement, carved stone eaves course, rendered facade and tall narrow window opes,c1760. The interior has raised and fielded window shutters. 20th cent. timber shopfront. Front railings. Street frontage.	Dolan Electrical Supplies
1281	Late 19th century Italianate building	Former Bank Building
1255	Large 3 storey free standing house Good Georgian facade with doorcase, fanlight and door.	House
1256	3 bay, 3 storey house, classical house of c 1820	House
324	Italian Romanesque style T-plan church with semi-circular apse ,c1865.The limestone facade has arcaded entrance and a rose-window. The interior has an open truss roof, transept arcades, gallery and stained glass. Attached to adjoining monastery.	St Joseph's Church
322	Detached twenty-three-bay three-storey school building, built 1954 - 6; with facade advanced in steps. Set in grounds of convent.	Convent of Mercy National School
319	Terraced two-bay three-storey house with steep pitched roof and nap rendered facade, built c. 1780.Traditional style timber pubfront c1990. Living accommodation over. Renovated c. 1990.	An Teach Beag
325	Group of disused railway buildings, c. 1890, including station house, goods sheds and water tower, with brick dressings. Now derelict.	Loughrea Railway Station
330	Detached nine-bay two-storey monastery with advanced pedimented central and end bays, consecrated 1833. The rendered facade has an Ionic stone doorcase. The chapel interior was renovated 1981 but retains decorative ceiling plasterwork.	St. Joseph's Monastery
309	Standard Tudorbethan style workhouse complex with a five-bay two-storey entrance wing dated 1842 , thirteen-bay two-storey wing with dormer attic to rear, flanked by three-storey wings with lantern-lit dormer attics and two-storey wing behind.	St. Brendan's Hospital

Finally, legislation is provided for Architectural Conservation Areas (ACA). ACAs may be used to protect the following:

- a) Groups of structures of distinctiveness or visual richness or historical importance;
- b) The setting and exterior appearance of structures that are of special interest, but the interiors of which do not merit protection;
- c) The setting of a Protected Structure where this is more extensive than its curtilage;
- d) Designed landscapes where these contain groups of structures as in, for example, urban parks, the former demesnes of country houses and groupings of archaeological or industrial remains;
- e) Groups of structures which form dispersed but unified entities but which are not within the attendant grounds of a single dominant Protected Structure.

The centre of Loughrea is designated as an ACA and is shown on Figure 4m as a hatched area. 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

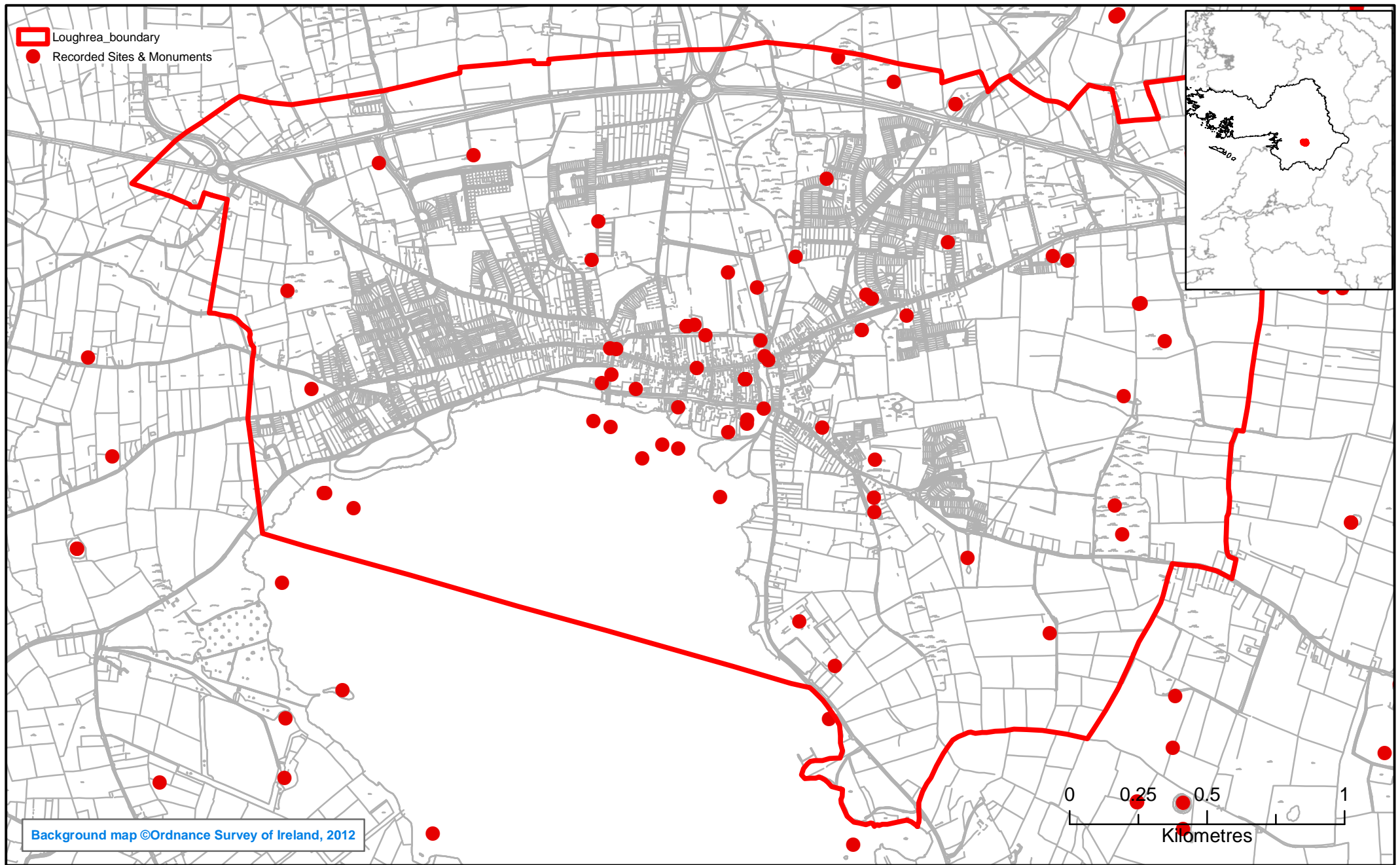
The archaeological and architectural heritage of the area is afforded protection through legislation. However, the cultural heritage of the town can still be impacted upon through development. Development on sites or land adjacent to protected sites can impact upon the context, if not mitigated. Previously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

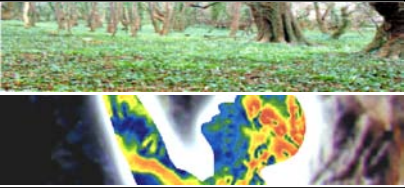
In the absence of the LAP, planning applications would continue to be assessed on an individual basis with cultural heritage protected under a number of strategic actions relating to archaeological and architectural protection. Cultural heritage would be impacted upon by the nature of permitted applications. 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.



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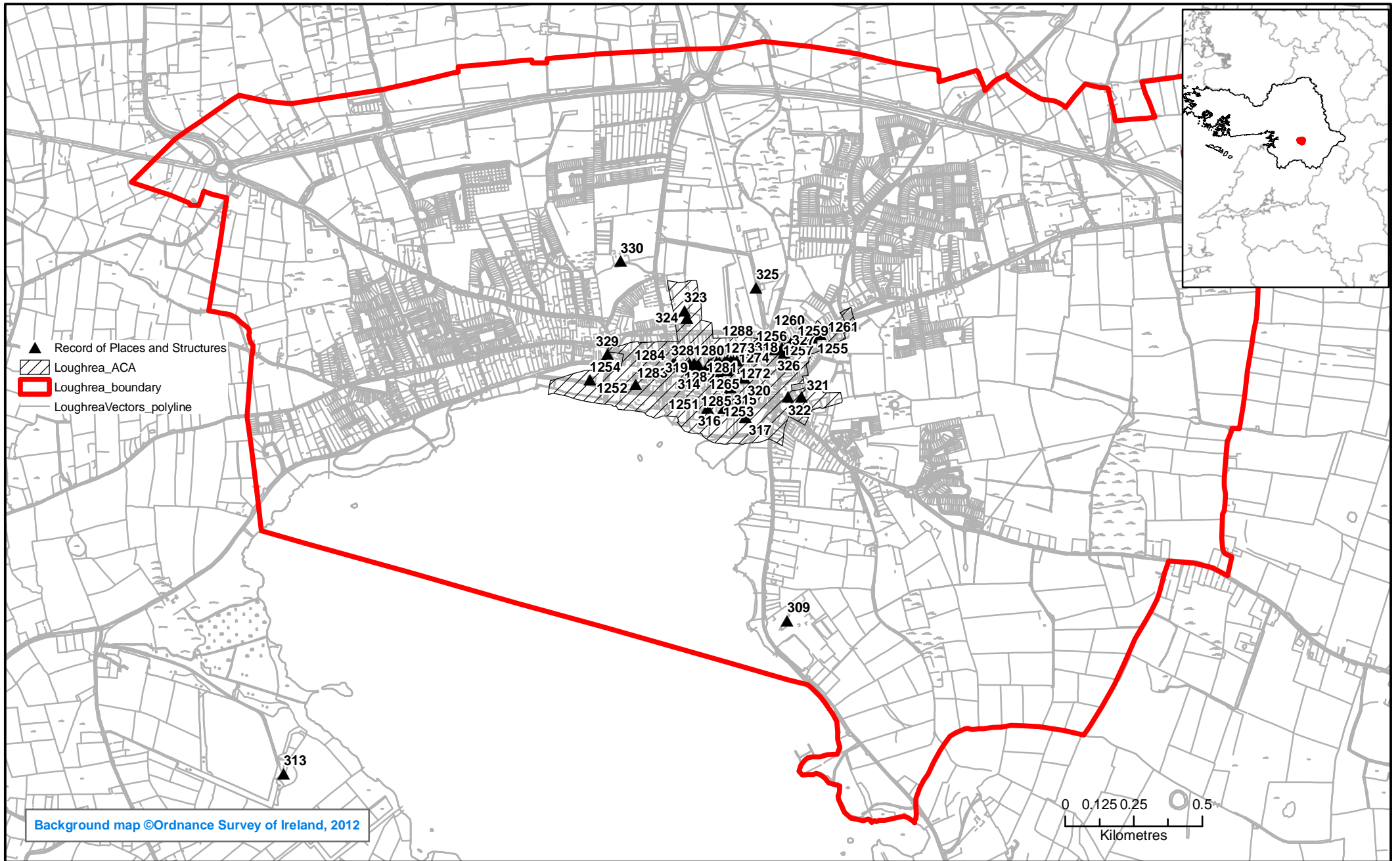
FIGURE 4I: SITES AND MONUMENTS

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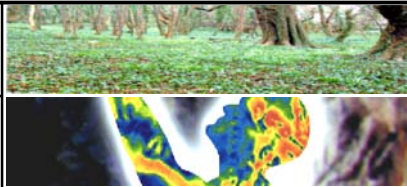
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FIGURE 4m: PROTECTED STRUCTURES

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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 most sensitive landscapes are 'Class 5 - Unique', 'Class 4- Special' and 'Class 3- High' while landscapes of lesser sensitivity are 'Class 2- Moderate' and 'Class 1- Low'. Figure 4n shows the Landscape Character Areas, designated views and viewsheds from the LCA; whilst Figure 4o shows the landscape sensitivity for Loughrea and environs. Figure 4p shows landscape designations (views and routes) within a 30km buffer of the town area, this encompasses Counties Galway and Clare.

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.'*

Advice for this LCA in terms of design and planning are as follows:

- The landscape is flat therefore height restrictions should apply to the built environment to avoid long distant visual intrusion.
- Development is prohibited in the areas (primarily bogs) that carry a nature designation.
- Development in the class 1 area should be either set close to existing medium sized blocks of forestry or screened by either new commercial forestry or mixed deciduous woodland, both of which are present in this area.
- Due to the rural nature of the area scattered development which cannot be screened by forestry should be of natural stone or rendered finish of a colour that is sympathetic to the colours of the landscape. Stonewalls are a distinct element of the character of this area and should be constructed to match traditional style around new development.

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.'*

Advice for this LCA in terms of design and planning are as follows:

- The landscape surrounding Lough Rea is flat; vegetation encloses the water body and has created an intimate setting. Development should be small scale and either set within clumps of existing vegetation or screened by proposed broadleaf planting.

- Development on the waterfront associated with tourism should not intrude upon views from the other side of the Lough and should be screened by earth banks with water edge planting.
- Street furniture i.e. seats, fencing, litter bins should be of timber to reflect the rural natural setting. Large conspicuous, brightly coloured signs will cause visual intrusion within the natural water edge setting and should be replaced with low-key timber signage.
- Development is prohibited in areas covered by statutory nature designations¹.

Photo 4 below shows Loughrea from the hilly areas in the eastern part of the town above Mountpleasant

Photo 4: views over Loughrea town from Mountpleasant.



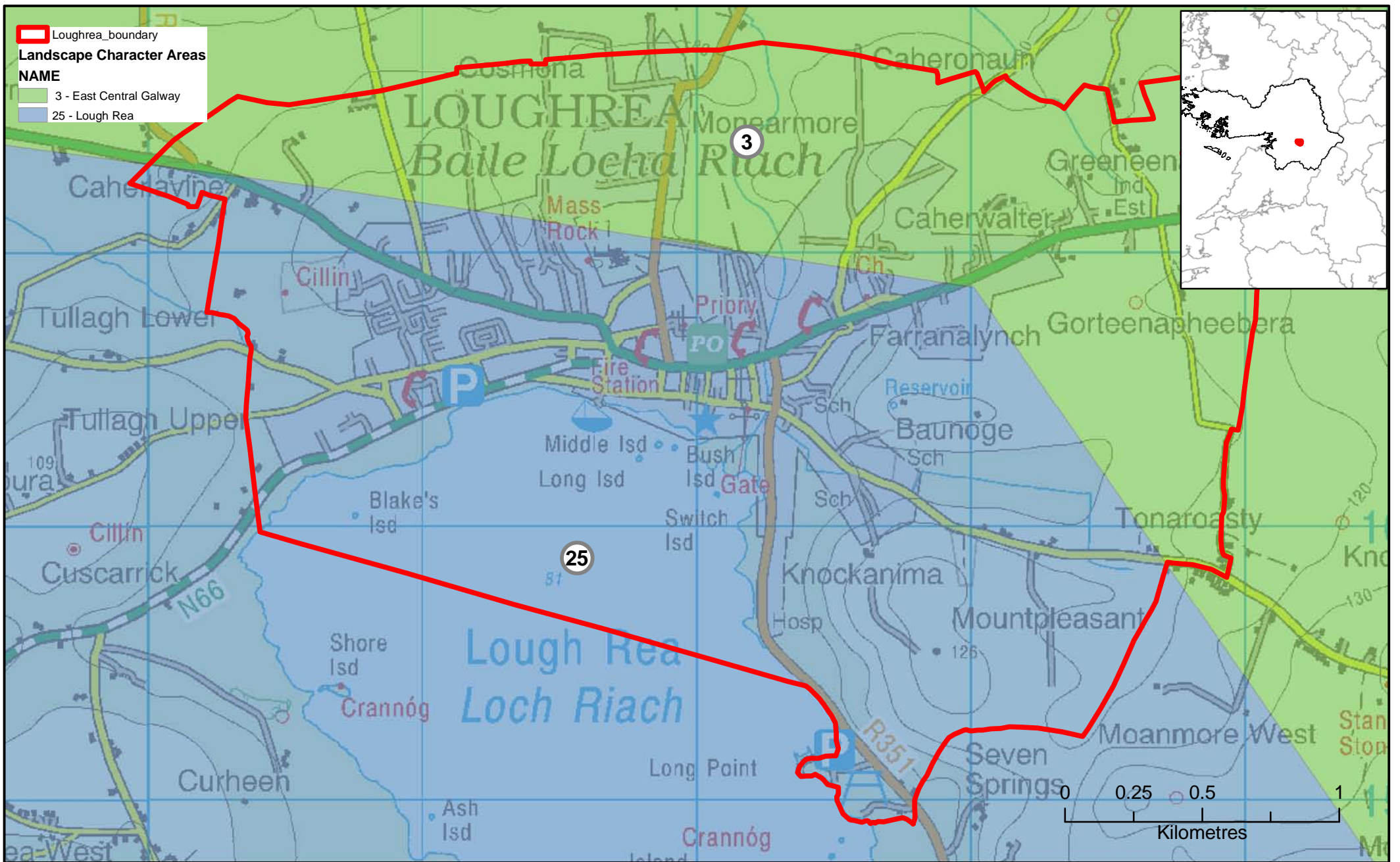
4.8.1 Key Environmental Problems for Landscape

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, land use and urban design in the new LAP contribute to an overall enhancement and stronger protection of the landscape resources in and around Loughrea.

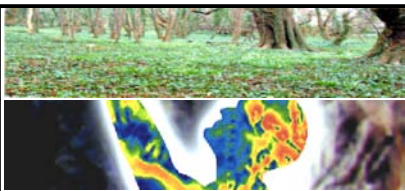
¹ Please note this text is taken directly from the 2002 County Galway LCA, and there is no automatic exclusion of all development within statutory designated areas; the relevant policies and objectives of the Loughrea LAP would apply for any development proposals within designated sites within the plan area.



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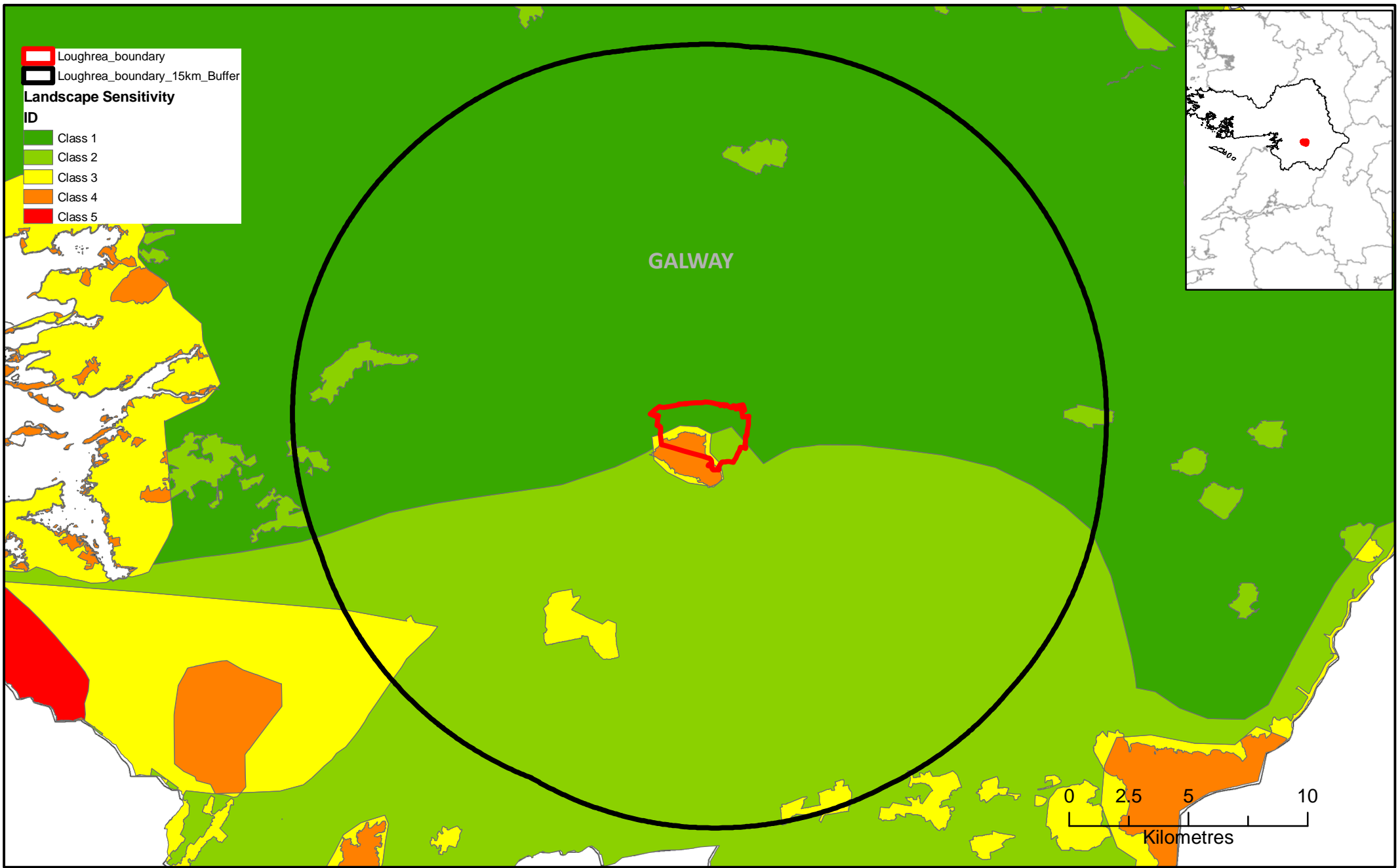
FIGURE 4n LANDSCAPE CHARACTER AREAS

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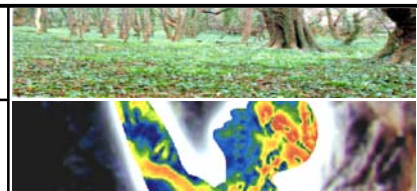
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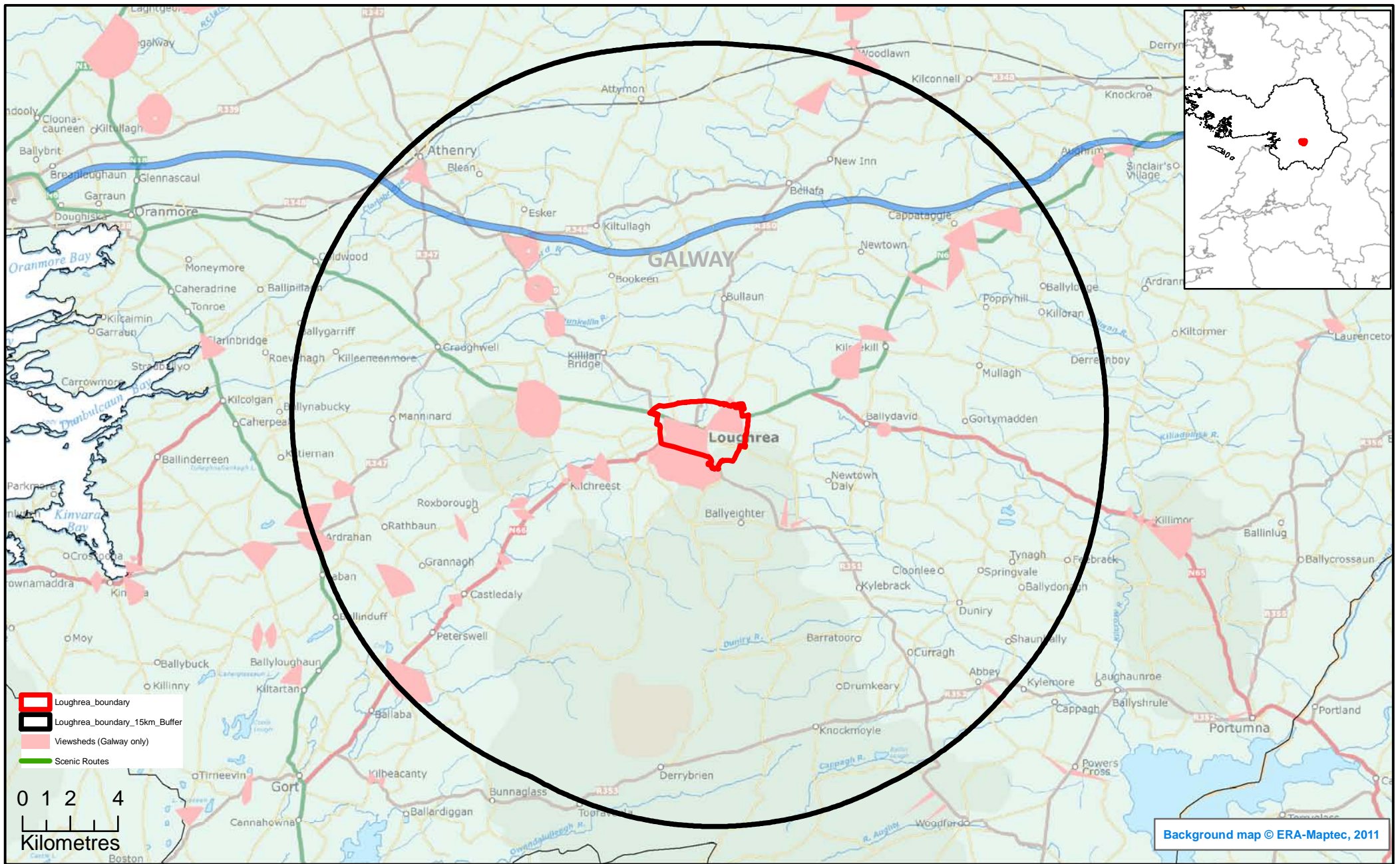
FIGURE 4o LANDSCAPE SENSITIVITY

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FIGURE 4p: SCENIC ROUTES AND VIEWS

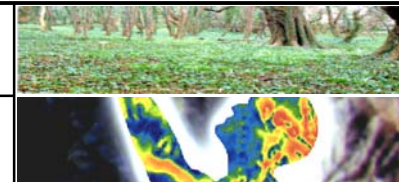
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4.9 Material Assets

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

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

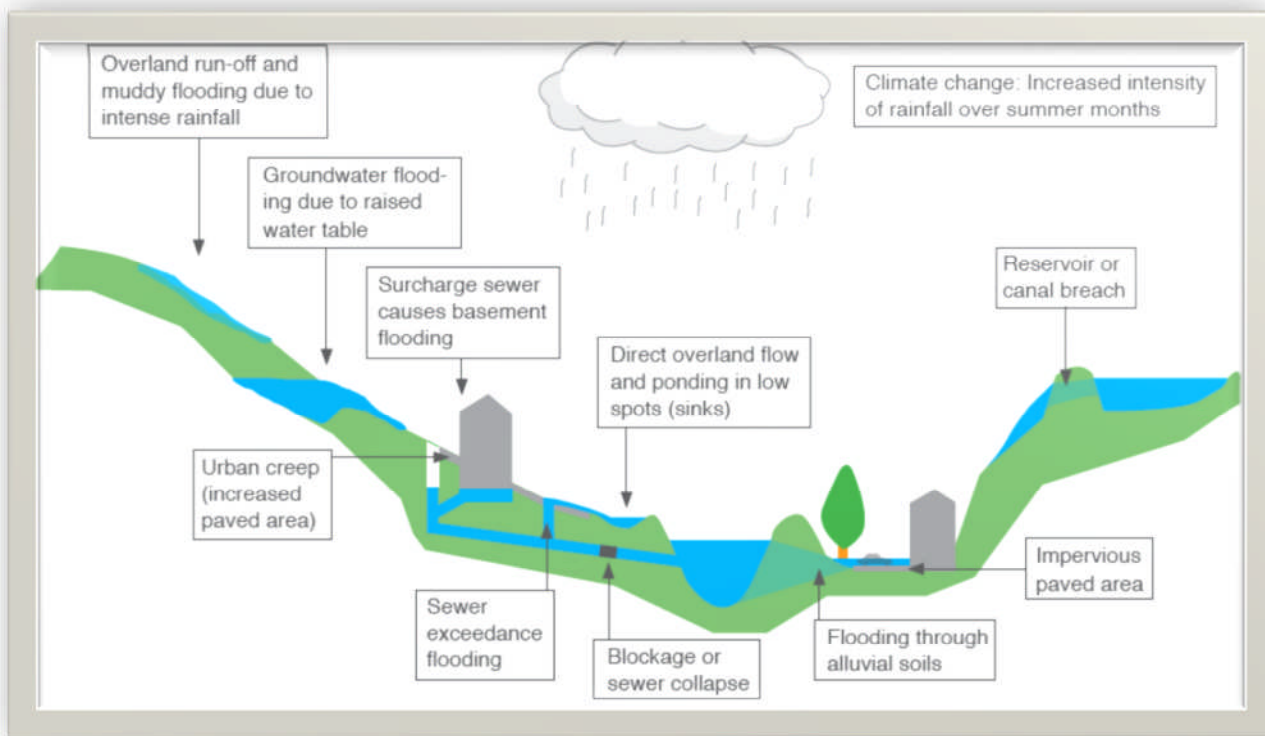
4.9.1 Flooding

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.'

Box B on the following page shows the common causes of flooding.

Box B: Common Causes of Flooding



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 towns location at the lake itself.

'commonly groundwater flooding typically occurs in areas underlain by limestone or other aquifers. It tends to be highly localised of long duration and generally results in significant damage to property. This represents a major issue for the West Region and this is particularly prevalent in South Galway¹.'

The Office of Public Works (OPW) monitors flooding throughout Ireland and records significant flood events. In addition, as part of the preparation of the Draft Regional Planning Guidelines 2010 – 2022, a Regional Flood Risk Appraisal was also prepared in order to:

- Identify strategic flood risk and spatial planning issues for the area covered by the RPGs;
- Set out a policy framework for development plans and local area plans of planning authorities to address the flood risk issues arising at a regional level; and

¹ Source: Regional Flood Risk Appraisal West Regional Authority

- Outline, with due consideration of the national flood risk assessment and management planning programme, any further requirements for flood risk assessments and/or studies.

It also sets out a policy framework for Development Plans and Local Area Plans by ‘signposting’ provisional risk areas in the larger urban centres of the West Region (those identified with population targets) and which are identified in current work on Preliminary Flood Risk Assessment (PFRA) by the OPW. This flags the need for preparing ‘Strategic Flood Risk Assessments’ at local authority level and will require closer analysis and appropriate planning policy at a lower level in the plan-making process.

The Preliminary Flood Risk Assessment prepared by the OPW for the area has been supplemented by additional Flood Risk assessment by consultants on behalf of Galway County Council and a verification exercise was carried out with Local Area Engineering staff on recent /recorded flood events to produce a Draft Flood Risk Management Map for the LAP Area. Figure 4q shows the most up to date information on flood risk in the plan 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 (see below for more information on this flood risk zone). However, this analysis is not exhaustive and areas not mentioned here could still be at risk of flooding. Where potential risk of flooding exists, the OPW Flood Risk Management approach should be considered in consultation with the OPW.

The 2009 Planning Guidelines provide information and guidance on planning implications arising from different flood risk zones and these are shown below. Clearly these have implications for land use zonings within the plan area, and these are discussed in more detail in *Chapters Seven and Eight* of this ER.

Flood zones are geographical areas within which the likelihood of flooding is in a particular range and they are a key tool in flood risk management within the planning process as well as in flood warning and emergency planning.

There are three types or levels of flood zones defined for the purposes of these Guidelines:

- **Flood Zone A** – where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding);
- **Flood Zone B** – where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 year and 0.5% or 1 in 200 for coastal flooding), and
- **Flood Zone C** – where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding). Flood Zone C covers all areas of the plan which are not in zones A or B.

Zone A - High probability of flooding. Most types of development would be considered inappropriate in this zone. Development in this zone should be avoided and/or only considered in exceptional circumstances, such as in city and town centres, or in the case of essential infrastructure that cannot be located elsewhere, and where the Justification Test has been applied. Only water-compatible development, such as docks and marinas, dockside activities that require a waterside location, amenity open space, outdoor sports and recreation, would be considered appropriate in this zone.

Zone B - Moderate probability of flooding. Highly vulnerable development, such as hospitals, residential care homes, Garda, fire and ambulance stations, dwelling houses and primary strategic transport and utilities infrastructure, would generally be considered inappropriate in this zone, unless the requirements of the Justification Test can be met. Less vulnerable development, such as retail, commercial and industrial uses, sites used for short-let for caravans and camping and secondary strategic transport and utilities infrastructure, and water-compatible development might be considered appropriate in this zone. In general however, less vulnerable development should only be considered in this zone if adequate lands or sites are not available in Zone C and subject to a flood risk assessment to the appropriate level of detail to demonstrate that flood risk to and from the development can or will adequately be managed.

Zone C - Low probability of flooding. Development in this zone is appropriate from a flood risk perspective (subject to assessment of flood hazard from sources other than rivers and the coast) but would need to meet the normal range of other proper planning and sustainable development considerations.

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.

- Tynagh Energy Ltd. This facility is a 400 megawatt combined cycle gas turbine power plant that was built on the former Tynagh Mines site. The latest available Environmental Report for the IPPC license is 2011, and there were no breaches, exceedances or non-compliances and one complaint recorded for this year.²
- Sperrin Galvanisers (Irl) Ltd. This site processes non-ferrous metals by thermal means. The latest Environmental Report (2011)³ found the site to be in compliance with the IPPC requirements and no complaints were recorded for 2011.

Other licenses include those issued by the Local Authority under the Local Government (Water Pollution) Act, 1977 and Amendment Act 1990. Section 4 relates to licenses for control point source discharges and section 16 refers to the control and discharge to sewer that might in turn discharge to waters. There are no Section 4 Local Authority Licensed Discharges in the vicinity of Loughrea.

4.9.3 Water Services and Wastewater

Drinking Water

The EPA prepared a list of public water supplies in 2008 where remedial action or management action was required to ensure compliance with Regulations into the future. This list is called the "Remedial Action List for Public Drinking Water Supplies" (RAL). County Galway originally had 34 supplies on this list; this is now reduced to 32. Loughrea water supply was highlighted due to elevated levels of THM's above the current standard in the Drinking Water Regulations.

² IPPC P0700-01

³ IPPC P0658-01

Trihalomethanes (THMs) are formed in drinking water as a result of the disinfection of water that contains organic matter. The latest data from the EPA⁴ shows that this issue has since been addressed, as Loughrea is no longer listed on the Remedial Action List.

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. The upgrade has increased capacity at the plant to cater for biological load from 4,900 p.e. (population equivalent) to 9,500p.e. and a dry weather flow of 2,500m³/d. However, the sewer collection system in the town still requires upgrading. There is no dedicated surface water sewer network serving Loughrea. The following box presents information from the application for a Wastewater Discharge License Application for the Loughrea agglomeration. This application has not yet been finalized.

Box C: WWTP Discharge License (D0194-01)

The Loughrea Waste Water Treatment Plant (WWTP) is located at Ballygasty approximately 1.5km north of Loughrea town. Planning permission was granted in 1998, for the treatment plant under Part X of the Local Government (Planning and Development) Regulations 1994 and construction was completed and the plant was commissioned in September 2001.

The final effluent from the WWTP discharges to the Saint Clerans River at a point approximately 200m north-west of the plant. This discharge is predominantly a treated effluent with occasional untreated effluent also discharged as a result of stormwater overflows. Current emission levels from this primary discharge point are capable of operating to a discharge standard of 10/15 BOD/SS with Phosphorus level of 2mg/l. The current outflows from this pipe are approximately 1,290m³/day which is expected to increase to 3,090m³/day by 2035 in line with population trends and industrial and enterprise growth in the area.

Emissions from the plant are constantly monitored as are the water quality levels in the river both upstream and downstream of the discharge point. This will continue into the foreseeable future.....Lough Rea is a recreational area and is designated as an SAC, an SPA and a proposed NHA but this location is upstream of the treatment plant and the discharge points and will remain unaffected by discharges from these.

There have also been no drinking water abstraction locations identified downstream of the discharge points relating to Loughrea WWTP.

In addition, there have been recent complaints (January 2012) to Inland Fisheries Ireland in relation to a storm outfall St Clerans River and accumulation of wastewater at this outfall. The

⁴ The Provision and Quality of Drinking Water in Ireland. A Report for the years 2008 and 2009. EPA. 2011

ownership of this is not determined but Inland Fisheries has raised concerns in relation to impacts on spawning trout⁵.

In addition to the WWTP, some properties at the fringes of the town are connected to individual septic tanks or proprietary wastewater treatment systems.

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.

Loughrea is also located within the Galway Transport and Planning Study (GTPS) area- this was adopted by Galway County Council and the City Council in 2003 and sets out the spatial planning and transportation strategy for the wider GTPS area.

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. The Local Area Plan supports proposals in the Smarter Travel initiative for Loughrea for improving public transport, including improved bus services and facilities.

4.9.5 Noise

The Environmental Noise Regulations relate to community or environmental noise, which is classified in the draft International Institute of Noise Control Engineering (I-INCE) publication "A Global Approach to Noise Control Policy" (2006) as;

'Community/Environmental Noise

Unwanted sound in a non-occupational setting, indoors or outdoors, caused by sources over which an individual has little or no control, including sounds produced by neighbours.'

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.

⁵ Please see the following link: http://www.epa.ie/licences/lic_eDMS/090151b28042139f.pdf

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. A high standard of insulation can be applied to improve noise attenuation in these buildings but this measure is rendered relatively ineffective when windows are opened. It also does not protect the external environment around the noise sensitive location from community/environmental noise.

The roads identified as major roads in County Galway are:

- N6 (R446) from its junction with the R348 at Derrydonnell to the Galway City Boundary.
- N6 (R446) Ballinasloe from its junction with the R357 Shannonbridge Road to its junction with the L 4602 Pollboy Road.
- N17 from its junction with the N63 Roscommon Road to the Galway City Boundary.
- N18 from Kilcolgan to its junction with the N6(R446) Dublin Road at Oranmore.
- R336 from Bearna to the Galway City Boundary

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 Waste Framework Directive (2008/98/EC) provides for a general framework of waste management requirements and sets the basic waste management definitions for the EU. 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. The Connacht Region Waste Management Replacement Plan 2006-2011 has been developed by the Local Authorities of Galway City and County, Leitrim, Mayo, Roscommon and Sligo to address this issue. The Plan is aimed at securing the best environmental management of waste, including prevention and minimisation where possible and practical. The Plan aims to ensure that waste is used as a resource, resulting in a better solution for the people and the environment in the region.

The 2001 Plan adopted a regional approach to integrated waste management based on the waste hierarchy established in the EU Framework Directive on Waste and set the following targets for 2013 for municipal waste in the Region:



Significant progress has been made towards this target by reaching a municipal recycling rate of 29% in 2004. This can be attributed to the expansion of segregated collection of dry recyclables; provision of additional brings banks and the increased network of recycling centres. The achievements in waste prevention, minimisation and recycling have improved since the appointment of Environmental Awareness Officers by the local authorities.

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.

4.9.7 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 Mapping⁶

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*

⁶ This was inserted from Chapter Seven following a previous EPA submission on another Galway County Council LAP so was moved here for consistency.

Clearly incorporating the flood risk data would contribute further to the sensitivity mapping but this was not possible within the current timeframe and data requirements. It is intended that the flood risk data will be integrated into the sensitivity mapping prior to the adoption of the LAP.

There are two ways of combining this data to produce a sensitivity map. The first involves accumulating the evidence for presence or absence of each of the data types at all points on the map. This is termed 'sums of evidence' and is usually applied using thresholds of sensitivity for each data type. For example Ground Water Vulnerability may be coded as present if high to extreme and not present if below high (low, moderate etc). Point source data is treated by applying a suitable buffer around the points. The problems associated with this approach are the need to decide upon suitable thresholds for each data type and the sharp nature of boundaries between present and absent gives poor gradations in the sensitivity analysis at data boundaries.

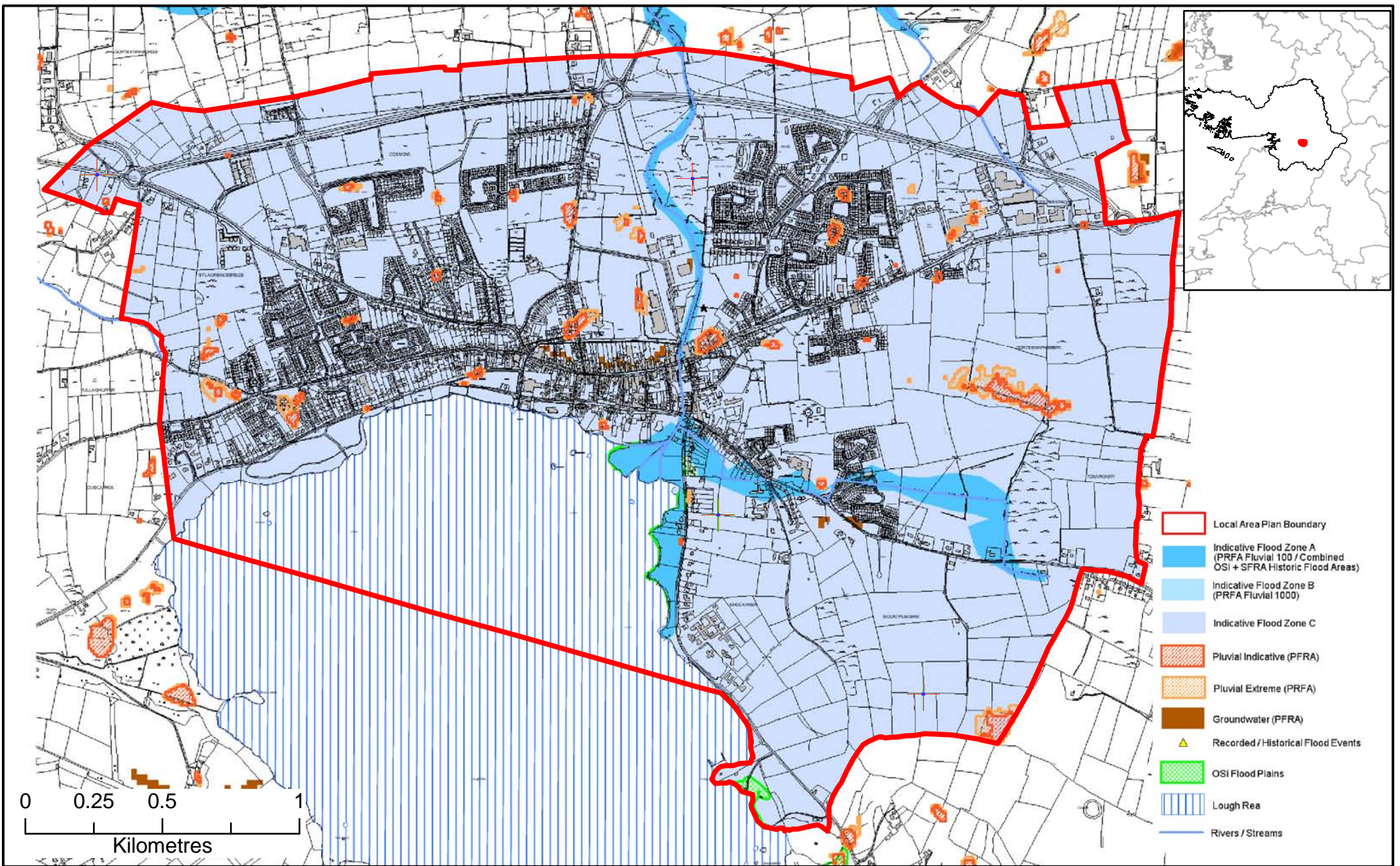
A second approach, applied here, is to calculate relative sensitivities (in the range 0.1) for each data set and then sum these sensitivities to get an overall sensitivity. For point source (SMR, RPS, Geology) and line (rivers) data the relative sensitivities of each data set was proportional to the inverse of the distance from the point to the buffer (that is higher sensitivity closer to the point). For area/polygon data then the relative sensitivity for each polygon with the data set was proportional to the data value (thus for ground water vulnerability 0 = low, 0.5 = moderate and 1.0 = extreme, and so on). The resultant sum of the sensitivities is divided by the number of data types (8 in this case) to get an overall sensitivity score in the range 0.1 (where 0 is low sensitivity and 1 is extreme sensitivity – in practice a total score of 1 would only occur rarely where all the individual data set sensitivity values are at a maximum at the same location). Figure 7a shows the resulting environmental sensitivity map.

4.10.1 Discussion of environmental sensitivities

Figure 4a highlights the areas identified as being of greatest sensitivity. Reflecting the designations and the hydrological regime within the plan area, the areas of greatest environmental sensitivity are the areas fringing Lough Rea, watercourses within the plan area and their associated habitats zone. The LAP has reflected these sensitivities through zoning these areas of greatest sensitivity as Environmental Management (see for example the area along the fringe of Lough Rea). The exception to this is the small area close to the shoreline that supports mature residential properties, in this instance the zoning is Existing Residential in order to conform with the current land use.

Other sensitive areas identified through the mapping exercise are the areas of archaeological density and the ACA within the town centre. Also, the hilly upper eastern parts of Loughrea are identified as sensitive as this area is visually sensitive and overlooks both the town and the lake (with corresponding lakeshore views). The areas of least sensitivity are north and west of the historic town centre, and the lower eastern part of the town.

The majority of areas zoned for Phase 1 Residential now lie within the area of least sensitivity. However, the visually sensitive areas in the north east of the town are proposed for two industrial zonings. The application of relevant policies and objectives in the LAP will be important to avoid undue visual impacts associated with this zoning. For example, Objective LU4 Industrial that specifically requires adequate edge treatments and/or screening.



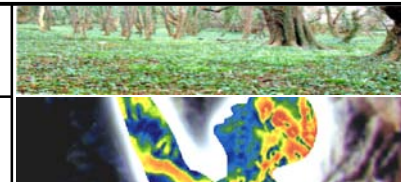
DATE: 4/4/2012 SCALE: 1:30,000

REF: SIZE: A4

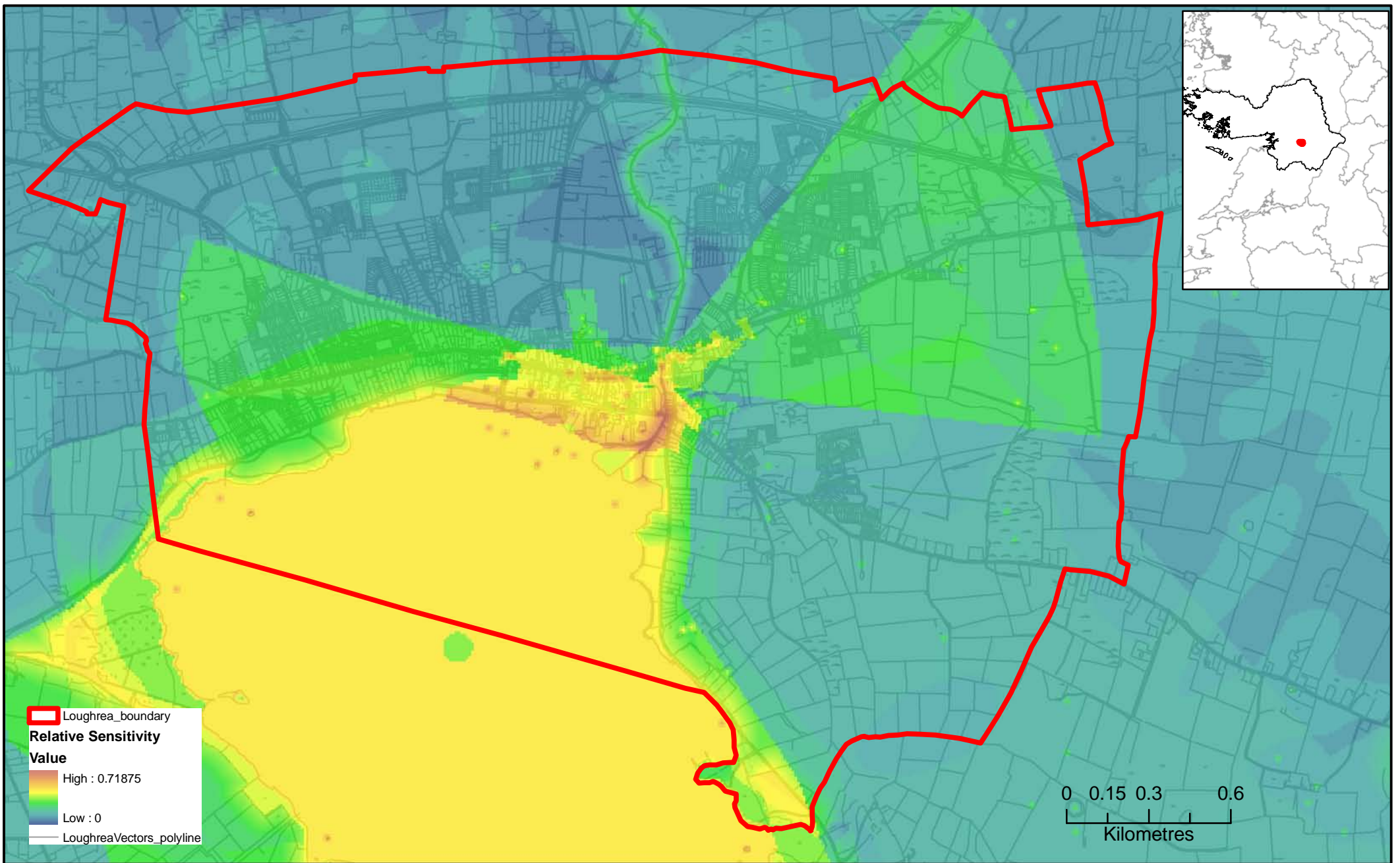
DRAWN: MFC APPROVED: RM

FIGURE 4q: FLOOD RISKS from CAAS Study

Galway County Council Loughrea Local Area Plan SEA



minogue & associates
 Tuamgraney, County Clare
 www.minogueandassociates.com
ERA-MAPTEC
 40 Lwr. O'Connell St.
 Dublin 1 www.era.ie



DATE: 4/4/2012

SCALE: 1:30,000

FIGURE 4r : Relative Sensitivity

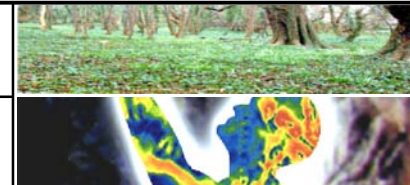
REF:

SIZE: A4

Galway County Council Loughrea Local Area Plan SEA

DRAWN: MFC

APPROVED: RM



minogue & associates

Tuamgraney, County Clare
www.minogueandassociates.com

ERA-MAPTEC

40 Lwr. O'Connell St.
Dublin 1 www.era.ie

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, positive, negative, neutral, cumulative and synergistic and also in terms of duration i.e.: short, medium, long term, temporary, permanent, and secondary effects. This process highlights how improvements can be integrated into the Draft LAP of Loughrea to increase its environmental performance and maintain environmental resources.

A series of environmental objectives are presented in this chapter and are developed into a monitoring programme in the form of targets and indicators which are presented in more detail in *Chapter Nine Monitoring*.

5.2 Environmental Protection Objectives

Establishing environmental objectives is a key element of SEA as it allows the assessment of the Strategy as it is implemented over time. The development of such objectives has been undertaken with regard for International, National and regional policies, the SEA guidelines and consultation.

SEA Objectives are different to objectives detailed in the Draft LAP, however, they are used to assess the development strategies of the LAP and allow its evaluation and identification of where conflicts may occur. This forms the basis of the environmental assessment of the Draft LAP, which is presented in *Chapter Seven Likely Significant Effects*.

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.
	Mat 3: To protect residents from adverse noise levels.
	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 are presented in *Table 6a*. These options are illustrated in Section 2.9 of this ER. The following criteria have been used in the Assessment Matrix:

No likely interaction with EPOs	X	Potential conflict with EPOs – likely to be mitigated	↕
Likely to improve status of EPOs	↑	Uncertain interactions with EPOs	?
Probable conflict with EPOs – unlikely to be mitigated	↓	Neutral Impacts with EPOs	-

Table 6a: Evaluation of Alternatives

Option One: Development along southern edge of new By-Pass Road						
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.						
Comment	X	↑	↓	↕	?	-
<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.</p> <p>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 turn, this would result in sealing of soils and associated issues around surface water run off, loss of greenfield land and ecological connectivity.</p> <p>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.</p> <p>It would also redirect development away from the town centre core and the accompanying decline in town centre activity would have profound long term 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.</p>			Bio 1 Soil 1 Soil 2 Pop 1 Pop 2 CH1 CH2 Land 1 AQ1 Mat 6 Mat 7	Bio 2 Bio 3 Bio 4 Bio 5 Bio 6 Wat 1 Wat 2 Wat 3 Soil 3 Land 2 Land 3 AQ2 Mat 1 Mat 2 Mat 3 Mat 5		

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.

Comment	X	↑	↓	↕	?	-
<p>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.</p> <p>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 long term negative impacts on soil and biodiversity.</p> <p>In addition, this alternative builds on the existing morphology 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 direct and indirect impacts on air quality and reduction of greenhouse gas emissions from transport.</p> <p>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.</p> <p><i>A range of synergistic positive impacts arise by the focus on town centre, serviced development and direction away from the more sensitive areas of the LAP boundary¹.</i></p>		Bio 1 Soil 1 Pop 1 Pop 2 CH 2 Land 1 AQ 2 Mat 1 Mat 7		Bio 2 Bio 3 Bio 4 Bio 5 Bio 6 Wat 1 Wat 2 Wat 3 Soil 2 Soil 3 CH 1 Land 2 Land 3 AQ 1 Mat 2 Mat 3 Mat 4 Mat 5 Mat 6		

¹ This text was inserted in response to the submission by the EPA

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.						
Comment	X	↑	↓	↕	?	-
<p>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.</p> <p>Long term negative impacts are also identified for EPO Land 1 as development would focus on a number of approach roads to the town; in particular, the roads that traverse close to Lough Rea are a defining and attractive element of landscape character and this could be degraded by focusing development along these particular roads.</p> <p>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.</p> <p>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.</p> <p>Indirect impacts associated with this alternative, include increased car dependency and loss of opportunity to promote a compact, central and accessible town. This would also give rise to greater emissions associated with transport and a declining commercial core for Loughrea.</p>			Bio 1 Bio 2 Bio 3 Soil 1 Pop1 Land 1 AQ 2 Mat 1 Mat 7	Bio 4 Bio 5 Bio 6 Wat 1 Wat 2 Wat 3 Soil 2 Soil 3 Pop 2 Land 2 Land 3 Mat 2 Mat 3 Mat 5		

6.2 Preferred Alternative

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

The SEA² assessed all the options under consideration and Option Two was determined to generate positive impacts on biodiversity, material assets, population and human health and water resources whilst still facilitating appropriate and sustainable levels of town centre development to ensure the long term viability of the town of Loughrea. By promoting service led development within the town centre whilst protecting the key environmental resources of Loughrea and its surrounding environment, development is more appropriately concentrated within the urban realm. IN turn, this facilitates better and more efficient infrastructure and can promote viable initiatives such as appropriate streetscapes, walking and cycling strategies etc. Moreover, this option in the longer term directs development to the town centre and immediate environs, and avoids promoting urban generated development within the rural environment.

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.

² This text was included in response to the submission from the EPA

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. The discussion of likely impacts is grouped around each environmental parameter listed in the SEA Regulations:

- Biodiversity, Flora & Fauna
- Water
- Soil & Geology
- Population & Human Health
- Cultural Heritage
- Landscape
- Air & Climatic Factors
- Material Assets

The individual evaluation of each policy/objective and landuse zoning across the draft LAP is presented in Annex A. The identification of impacts through the evaluation matrix and discussion of significant impacts detailed below, in turn informs the development of mitigation measures presented in Chapter Eight, Mitigation Measures.

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. Nonetheless both the SEA and HDA identified a number of policies and objectives that merit additional mitigation measures to enhance environmental protection and compliance with the EPOs, these are discussed in Chapter Eight. The significant impacts on the SEA parameters are discussed in detail below.

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 CF9 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 TI15 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. See **Table 7a** below for a summary of potential impacts of the draft LAP on Biodiversity, Flora and Fauna.

Table 7a: Biodiversity Impacts

LAP Section	Biodiversity Impacts
Section 2: Strategic Vision and Development Strategy	Largely positive impacts associated with reference to national and regional guidelines and plans. Specific reference to Core Strategy and Development Management Guidelines of County Development Plan offer considerable protection of biodiversity through development control.
Section 3.1 Land Use Management	Most policies and objectives generate impacts that can be mitigated on biodiversity, associated with intensification of uses in town centre; many impacts are associated with new development and development management standards are adequate to address these. Concern is raised in relation to Residential Densities with negative medium to long term impacts identified for biodiversity and supporting resources if development is permitted in the absence of sufficient wastewater infrastructure. Finally, Objective LU9 Environmental Management is identified as generating positive impacts on biodiversity.
Section 3.2 Residential Development	Potential adverse impacts on biodiversity are associated with new housing development if it results in Greenfield development or loss of habitats. However, the focus on higher densities, reference to relevant guidelines, and promotion of infill/brownfield development assists in reducing the overall impacts and many impacts are identified as being addressed through mitigation. .
Section 3.3 Social and Community	Again impacts on biodiversity would arise in relation to provision of new facilities on greenfield sites but focus on concentrating such

	activities within town centre or close to residential areas assists in reducing potential impacts, many such impacts would also be mitigated through the development management regime. Positive impacts are identified for biodiversity EPOs for Objective CF6 Open Spaces (retention of existing open spaces).
Section 3.4 Economic Development	Potential adverse impacts relate to new developments and require mitigation at site level. However, focus on concentrating retail activities in town centre will likely have positive impacts on biodiversity due to reuse of brownfield sites, and opportunity for public transport and more sustainable transport options thus reducing need for additional road infrastructure. Overall positive medium to long term impacts particularly in relation to population and focus on service provision and concentrating economic activities in defined areas. However ED4 Tourism Development includes references to Lough Rea and a mitigation measure is recommended to strengthen protection and avoid negative long term impacts on this Natura 2000 site.
Section 3.5 Transportation Infrastructure	Large infrastructural development can impact adversely due to loss of habitat, and potential impacts on water quality and wildlife corridors. Such impacts may be permanent. Several other policies and objectives are considered to have impacts that can be mitigated through development control including Objectives TI4 (Walking) and TI5 (Cycling). Additionally there may be positive indirect impacts on biodiversity arising from modal shift in transport within the town arising from the implementation of these objectives. Impacts associated with cycling and walking provision have potential to impact adversely on biodiversity if located close to sensitive habitats but these are likely to be mitigated.
Section 3.6 Utility and Environmental Infrastructure	Generally, many of the policies and objectives contained in this section provide stronger commitments to improving overall water quality and management in the plan area, and thus are identified as generating positive impacts on biodiversity. Commitments associated with Policy UI1 Water Supply, Wastewater Disposal and Surface Water Drainage Infrastructure, and Objective UI11 Groundwater and Aquifers will strengthen protection of biodiversity through improving water quality and wastewater treatment. Objective UI20 Air Purification generates positive impacts also though promotion of deciduous tree planting to assist air purification and filtering of suspended solids.
Section 3.7 Urban Design and Landscape	Many impacts identified in relation to these policies are likely to be addressed through development control. Many do not relate directly to biodiversity resources as the focus is largely on town centre and built design. However Objective UD4 Green Network and Landscaping generates positive impacts for a number of Biodiversity EPOs.
Section 3.8 Built Heritage and Cultural Heritage	Many impacts identified in relation to these policies are neutral or likely to be addressed through development control. Many do not relate directly to biodiversity resources as the focus is largely on town centre and cultural heritage.
Section 3.9 Heritage, Landscape and Environment.	Overall positive medium to long term impacts on biodiversity relating to commitments to protection of designated sites, (Policy NH1, and Objectives NH1, NH2 and NH3) and Water Resources (Objective NH6 Water Resources). Objective NH 5 Biodiversity and Ecological Networks whilst overall positive, is recommended to include an additional mitigation

	measure to promote planting of indigenous trees of Irish provenance.
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7.4 Water – Significant Impacts

The draft LAP promotes intensification of town centre, population growth in line with the Core Strategy of the 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.

More positive permanent impacts are associated with indirect policies including wildlife corridors, open space provision and Sustainable Urban Drainage Systems. 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. Table 7b summarises the significant impacts for each chapter in relation to water resources.

Table 7b: Water Impacts

LAP Section	Water Impacts
Section 2: Strategic Vision and Development Strategy	As per the biodiversity impacts, maintaining and enhancing overall water quality is the most significant issue. Objective DS3 references EU legislation including Habitats Directive and DS4 Development Management Guidelines in the Galway County Development Plan 2009-2015 which strengthens overall protection of water resources. Objective DS5 Service Led Development should also generate appropriate protection of water quality from wastewater.
Section 3.1 Land Use Management	Objective LU9 Environmental Management Area is identified as generating positive long term impacts on water quality. In addition, the Objective LU12 Flood Risk Areas and Land Use Zones

	strengthen the overall management of flood risk and indirectly water quality through this objective.
Section 3.2 Residential Development	Potential adverse impacts on water resources are associated with new housing development if it results in Greenfield development or loss of habitats. Population increases both within the functional area and neighbouring areas may increase pressure on drinking water and surface water infrastructure/capacity remains an area of concern. However, as stated in Section 7.4 a range of policies and objectives have been developed to address this issue.
Section 3.3 Social and Community	Largely neutral or unlikely to interact with water resources; provision of new facilities, construction activities and increased demand for potable water and wastewater treatment are identified as potential adverse impacts in relation to new facilities but are likely to be mitigated through the development management process and control at site level.
Section 3.4 Economic Development	Provision of new facilities, construction activities and increased demand for potable water and wastewater treatment are identified as potential adverse impacts in relation to new facilities but are likely to be mitigated through development management and control at site level.
Section 3.5 Transportation Infrastructure	Infrastructural development can impact adversely due to potential impacts on water quality, disruption of water hydrology, increased surface run off and complex interactions between impacts on soil and biodiversity. Such impacts may be medium to permanent. For many of the policies and objectives impacts are identified as being mitigated through development management. A number of objectives are identified as having a neutral impact on water quality for example Objective TI7 Walking and Cycling Strategy (preparation of same).
Section 3.6 Utility and Environmental Infrastructure	Overall positive impacts associated with water quality monitoring, requirements of the WFD, wastewater provision, flood risk management and protection of groundwater and aquifers (see Policies UI1 Water Supply, Wastewater Disposal and Surface Water Drainage Infrastructure, Objective UI10 Western River Basin District Management Plan and Protection of Waters, Objective UI11 Groundwater and Aquifers and Objective UI7 Flood Risk Management and Assessment). The development of a specific objective UI6 St Cleran's River Tributary and Drainage Catchment is also identified as generating positive impacts on water quality as it highlights flood risk, surface water drainage and SUDS.
Section 3.7 Urban Design and Landscape	Largely neutral for many policies as they are principally concerned with design and sense of place. Impacts associated with new developments are addressed adequately through development management and control. Objective UD4 Green network and landscaping identifies positive impacts on water quality and resources.
Section 3.8 Built Heritage and Cultural Heritage	Largely neutral impacts on water resources.
Section 3.9 Natural Heritage and Biodiversity	Overall positive impacts on water resources relating to a range of policies and objectives including Policy NH1 Natural Heritage and Biodiversity, Objectives NH6 Water Resources and NH7 Environmental Management Area.

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.

Table 7c: Soil and Geology Impacts

LAP Section	Soil and Geology Impacts
Section 2: Strategic Vision and Development Strategy	Overall, positive impacts associated with sustainable development of Loughrea, focus of quality of life and environmental resources.
Section 3.1 Land Use Management	Key permanent impacts would arise in relation to soil and development on greenfield sites with accompanying sealing of soil and loss of soil function. The focus of the LAP on town intensification assists in reducing these impacts overall. For greenfield developments or other developments many impacts may be mitigated against at project level; nonetheless, greenfield development does represent permanent loss of soil in that particular area. Should a new EU Soil Directive be adopted, this will have positive implications for soil management generally.
Section 3.2 Residential Development	Potential adverse impacts on soil and geology are associated with new housing development if it results in Greenfield development with accompanying loss of soil and sealing of soil. For many of the policies and objectives the impacts are otherwise identified as being addressed through mitigation.
Section 3.3 Social and Community	Again, impacts on soil and geology may arise in relation to provision of new facilities but focus on concentrating such activities within town centre/residential areas assists in reducing potential impacts, many such impacts would be mitigated through the planning regime.
Section 3.4 Economic Development	Potential adverse impacts relate to new developments and require mitigation at site level. However, focus on concentrating retail activities in town centre will likely have positive impacts on soil and geology due to reuse of brownfield sites, and opportunity for public transport and more sustainable transport options thus reducing need for additional road infrastructure. Overall positive impacts relating to intensification and promotion of town centre (avoiding greenfield sites). See for example Policy ED and Objective ED3 Retail Development. Potential adverse impacts identified pertain to new developments and mitigation is required through adherence to development management guidelines.
Section 3.5 Transportation Infrastructure	Principal impacts are associated at site level relating to transport and can be mitigated through development control and management guidelines. Greenfield development for infrastructure generates permanent negative impacts. However, flood risk management and protection and enhancement of open space and corridors can also indirectly impact positively on soil function and integrity.
Section 3.6 Utility and	Objective UI11 Groundwater and Aquifers will result in positive

Environmental Infrastructure	impacts on groundwater quality and function. Maintaining ecological status of water bodies will impact indirectly on soil function and protection which is positive. Waste management policies can also impact positively on soil through reduction of materials to landfill and recycling of construction and demolition waste. Flood Risk Management Policy UI2 and Objectives UI7 and UI8 can also result in positive soil and geology impacts through avoidance of development activities in known flood risk areas.
Section 3.7 Urban Design and Landscape	Largely neutral impacts associated with these policies. Objective UD4 is identified as generating positive impacts on soil resources.
Section 3.9 Built Heritage and Cultural Heritage	Largely neutral to positive impacts on soil and geology, though reuse and promotion of existing buildings enhances soil and geology resources by avoiding new development and resource use – see Policy BH1 Built Heritage
Section 3.9 Natural Heritage and Biodiversity	Overall positive impacts on soil and geology objectives particularly relating to wildlife corridors, and green networks and Environmental Management Areas. Impacts are complex between soil function and biodiversity but several policies should enhance the soil and geological objectives through enhanced management and protection of resources

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 only 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 T14 Walking and T15 Cycling, and T112 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.

Table 7d: Population and Human Health Impacts

LAP Section	Population and Human Health Impacts
Section 2: Strategic Vision and Development Strategy	Significant positive impacts associated with sustainable development of Loughrea with a focus on promoting high quality built and natural environment and quality of life for those residents.
Section 3.1 Land Use Management	Largely positive impacts associated with various land use objectives ranging from housing to enterprise. Objective LU16 Area Actions Plans will assist in the creation of high quality design with consultation, and this is identified as positive for population. This objective is recommended for mitigation to enhance overall environmental protection in relation to the specific areas referenced in the objectives.
Section 3.2 Residential Development	Generally, positive impacts associated with these policies. Potential significant impacts on water quality and associated human health risks if un serviced lands are developed. However Policy RD2 Phased Development on Residential Zoned Lands and Objective RD1 Phased Residential Development assist in addressing these potential impacts. Other Objectives are also positive for human health through encouraging sufficient and suitable provision of open space in residential areas, namely Objective RD4 Open Space in Residential Areas.
Section 3.3 Social and Community	Again, positive permanent impacts for population in relation to housing provision for all sectors of society. Encouraging the establishment of sustainable residential communities and facilitating needs of socially excluded groups including traveller accommodation. Additionally, provision of community facilities in town centre or within established residential areas promotes accessible facilities and indirect impacts arise on human health if this results in more pedestrian or cycle access to such facilities.
Section 3.4 Economic Development	Overall positive impacts associated with these objectives, particularly for EPO Pop1.
Section 3.5 Transportation Infrastructure	Overall, positive permanent impacts associated with public transport policies, walking and cycling. In addition mobility management policies have positive permanent impacts on population and health. The integration of land use and transport (Objective TI1 Integrated Land Use and Planning) and reference to national policy such as Smarter Travel (Policy TI1 Sustainable Transport, Walking and Cycling) promote a modal shift to more sustainable transport patterns, and this generate positive impacts on human health and population generally.
Section 3.6 Utility and Environmental Infrastructure	Long term positive human health impacts are identified in relation to water services, waste management, energy efficiency of homes and commitments regarding the general protection of water resources. The provision of a range of policies relating to flood risk management based on quality flood risk data will also provide positive impacts to human health and population. In turn, these impact positively on the general population of Loughrea.
Section 3.7 Urban Design and Landscape	Overall long term positive impacts identified for population and human health through these objectives by improving urban fabric, consolidating and enhancing a sense of place and quality design and streetscapes (see Objectives UD1 High Quality,

	Context Sensitive Design, UD2 Public Spaces and Streets and UD5 Street Orientated Development and Responsive Frontages for example)
Section 3.8 Built Heritage and Cultural Heritage	Largely positive impacts associated with these policies and objectives in particular the promotion of cultural heritage. Long term positive impacts associated with supporting and enhancing these resources.
Section 3.9 Natural Heritage and Biodiversity	Many policies In particular, positive impacts associated with walks, protection of water resources and Environmental Management Area (Objectives NH6 Water Resources and NH8 Trees, Parkland/woodland and Hedgerows, and NH7 Environmental Management Area).

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.

Table7e: Cultural Heritage Impacts

LAP Section	Cultural Heritage Impacts
Section 2: Strategic Vision and Development Strategy	Generally positive impacts associated with sustainable development of town, focus on quality of life and environmental resources.
Section 3.1 Land Use Management	Policy LU and Objective LU1 generates positive impacts on cultural heritage via promotion of active town centre with intensification of uses. Other policies principally identified as

	meriting mitigation through site level/project level development control and national /regional guidelines.
Section 3.2 Residential Development	Most policies have impacts associated with development management at site level. Many of the land zoned R1 are greenfield areas adjoining existing residential development so impacts are likely to be site specific for any archaeology resources.
Section 3.3 Social and Community	Generally, neutral impacts associated with these policies; however site level impacts for new developments will be captured by individual assessments.
Section 3.4 Economic Development	Impacts identified range from likely to be mitigated if new development occurs to uncertain impacts. The consolidation of the town centre for services again supports reuse of brownfield sites and averts Greenfield site development which is a positive impact as it avoids potential disturbance to unknown archaeological resources.
Section 3.5 Transportation Infrastructure	Large infrastructural developments associated with road schemes or transport infrastructure may impact negatively on the setting of built heritage or provide excavation opportunities for archaeological resources. Again, such impacts are likely to be mitigated through the planning process and project assessments. The provision of cycling and walking facilities provide for positive indirect impacts through greater access, enjoyment and participation of cultural heritage and facilities
Section 3.6 Utility and Environmental Infrastructure	Cultural heritage impacts are identified as largely neutral impacts in relation to policies and objectives proposed for utility and environmental infrastructure. Site specific impacts may occur in relation to infrastructure provision but would be addressed at site level and through the development management process.
Section 3.7 Urban Design and Landscape	All of these policies and objectives are identified as creating positive impacts and enhancing the cultural heritage EPOs. Objective UD7 Landscape, Townscape, Views and Prospects result in indirect positive impacts for cultural heritage through the recognition of the landscape setting and character of Loughrea.
Section 3.8 Built Heritage and Cultural Heritage	Overall, positive long term impacts associated with these policies and objectives in particular the ACA Appraisal and Management Plan (Objective BH6). Recognition of importance of vernacular architecture and structures of local interest also generates positive impacts for cultural heritage.
Section 3.9 Natural Heritage and Biodiversity	Largely neutral impacts however, Objective NH9 Trees and Hedgerow contribute to overall setting of town and townscape so is identified as positive impacts on cultural heritage.

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.

Table 7f: Landscape Impacts

LAP Section	Landscape Impacts
Section 2: Strategic Vision and Development Strategy	Significant positive impacts associated with sustainable development of Loughrea, focus on quality of life and environmental resources.
Section 3.1 Land Use Management	Largely positive impacts associated with reference to national and regional guidelines and plans.
Section 3.2 Residential Development	Potential adverse impacts on landscape resources are associated with new housing development if it results in Greenfield development. Reference to guidelines will result in positive landscape impacts associated with appropriate landscaping and planting regimes for new developments.
Section 3.3 Social and Community	Again potential adverse impacts arise in relation to provision of new facilities, but neutral impacts identified for landscape for a range of policies and objectives. Objective CF10 Linear Park along St Cleran's River is identified as generating positive impacts on landscape EPOs
Section 3.4 Economic Development	Policy ED and Objective ED4 Tourism Development are identified as generating positive impacts for landscape in relation to high quality landscape design and reflection of streetscape/townscape/landscape character. For other policies the impacts were identified as subject to mitigation through development control.
Section 3.5 Transportation Infrastructure	Large infrastructural development can impact adversely due to changes in landscape character and views. Site specific mitigation measures through development management can contribute to managing this change.
Section 3.6 Utility and Environmental Infrastructure	Longer term indirect positive impacts on landscape quality can arise due to other environmental services including water quality and wastewater management.
Section 3.7 Urban Design and Landscape	All policies and objectives proposed are identified as generating long term positive impacts on the landscape and streetscapes of Loughrea.
Section 3.8 Built Heritage and Cultural Heritage	Generally positive impacts on landscape resources with focus on landscape character, wildlife corridors and networks. Overall, positive impacts associated with built heritage policies and their contribution to landscape character and a sense of place.

Section 3.9 Natural Heritage and Biodiversity	Positive impacts identified for these policies especially Policy NH1 and Objective NH8 Trees, Parkland/Woodland and Hedgerows.
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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. Energy related carbon dioxide emissions indicate that the transport sector is the single greatest contributor to energy related carbon dioxide emissions. 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.

Table7g: Air Quality and Climate Impacts

LAP Section	Air Quality and Climate
Section 2: Strategic Vision and Development Strategy	Generally positive impacts associated with sustainable development of town, focus of quality of life and environmental resources.
Section 3.1 Land Use Management	Policy LU Land Use Management and Objective LU1 Town Centre by promoting town centre accessibility should enhance pedestrian access and mobility around the town. This will have indirect positive impacts if it results in modal shift in transport patterns around the town centre.
Section 3.2 Residential Development	Largely neutral or unlikely to interact impacts were identified for housing although increased housing densities can indirectly assist in public transport provision and reduction in greenhouse gases. Policy RD1 Residential Development references the Smart Travel “A Sustainable Transport Future 2009 – 2020” and National Cycle Policy Framework 2009 – 2022 which should reduce car dependency with associated air quality benefits.
Section 3.3 Social and Community	Largely neutral impacts associated with these policies and objectives.
Section 3.4 Economic Development	Impacts identified as being likely to be mitigated through existing development management guidelines.
Section 3.5 Transportation Infrastructure	Overall, positive permanent impacts for air quality associated with public transport policies, and encouraging modal shift to more sustainable transport options. Policy TI1 Sustainable Transport, Walking and Cycling generates positive impacts and a number of related objectives promoting alternative travel modes such as Objectives TI3 Public Transport, and Objectives TI4 (walking) and TI5 (Cycling).
Section 3.6 Utilities and Environmental Infrastructure	Long term positive air quality impacts are identified in relation to Policy UI6 Climate Change and Air Quality and Objectives UI19

	Air Quality and UI20 Air Purification.
Section 3.7 Urban Design and Landscape	Objective UD4 has positive long term impacts on air quality through provision of Green Network and Landscape. Other policies and objectives have neutral, uncertain impacts or are addressed through development management mitigation
Section 3.8 Built heritage and cultural heritage	Largely neutral, however by promoting the town centre, and reuse of existing structures, this has an indirect positive impact on air quality and climate by reducing need for new development and associated greenhouse gas emissions.
Section 3.9 Natural Heritage and biodiversity.	Long term positive impacts associated with increased open space, and recreational provision. In turn, indirect positive impacts are associated with high quality biodiversity functions and air quality. Indirect impacts of increasing green space in and around Loughrea and carbon sinks are also identified.

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. Impacts associated with flooding include:

- Impacts on people and communities – Flooding can cause physical injury, illness and loss of life. Deep, fast flowing or rapidly rising flood waters can be particularly dangerous.
- Floodwater contaminated by sewage or other pollutants (e.g. chemicals stored in garages or commercial properties) is particularly likely to cause such illnesses, either directly as a result of contact with the polluted floodwater or indirectly as a result of sediments left behind.
- Flood water may also hide other hazards for wading pedestrians, such as manhole openings where the covers have been lifted by flood flows.
- Sea-water flooding may cause additional damage due to corrosion.
- Impacts on Infrastructure - The damage flooding can cause to businesses and infrastructure, such as transport or utilities like electricity and water supply can have significant detrimental impacts on local and regional economies..
- Flooding of primary roads or railways can deny access to large areas beyond those directly affected by the flooding for the duration of the flood event, as well as causing damage to the road or railway itself. Flooding of water distribution infrastructure such as pumping stations or of electricity sub-stations can result in loss of water or power supply over large areas. This can magnify the impact of flooding well beyond the immediate community.
- The long-term closure of businesses, for example, can lead to job losses and other economic impacts.
- Impacts on the environment - Significant detrimental environmental effects of flooding can include soil erosion, bank erosion, land sliding and damage to vegetation as well as the impacts on water quality, habitats and flora and fauna caused by bacteria and other pollutants carried by flood water. Flooding can however play a beneficial role in natural

habitats. Many wetland habitats are dependant on annual flooding for their sustainability and can contribute to the storage of flood waters to reduce flood risk elsewhere.

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. The draft LAP refers to *The Planning System and Flood Risk Management, Guidelines to Planning Authorities 2009* and Policy UI2 Flood Risk Management supports implementation of these guidelines. These provide for additional identification of flood risk and mitigation measures of same; therefore this increases overall flood risk management in the plan area. Flood risk management is further enhanced through Objectives UI18 Flood Zones and Appropriate Land Uses, and DM Guideline UI1 Flood Zones and Appropriate Land Uses. The SEA has also assessed the lands zoned in the Draft LAP and the flooding history of the area to ensure that identified land for zoning is not within a flood risk area and inappropriate zonings to not apply.

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. Objective T115 Transport Network Improvement is identified as generating potential negative in combination impacts on biodiversity EPOs and a mitigation measure is recommended for same.

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.

Table 7h: Material Assets

LAP Section	Material Assets
Section 2: Strategic Vision and Development Strategy	Positive impacts associated with sustainable development of Loughrea, focus on quality of life and environmental resources.
Section 3.1 Land Use Management	Impacts for material assets vary according to land use objective and type of material assets. EPOs for drinking water, waste management and energy efficiency are identified as being mitigated through existing development management guidelines for Objective LU1 Town Centre and other land use objectives.
Section 3.2 Residential	Overall, the promotion of higher densities can have positive impacts

Development	in relation to transport, for other material assets the impacts are generally associated with project level mitigation.
Section 3.3 Social and Community	Most impacts for material assets in this section are identified as likely to conflict with EPOs but mitigated. In this instance many of the potential impacts and mitigation are more suitable for assessment at project or site level.
Section 3.4 Economic Development	Most impacts for material assets in this section are identified as likely to conflict with EPOs but mitigated. In these instances, many of the potential impacts and mitigation are more suitable for assessment at project or site level.
Section 3.5 Transportation Infrastructure	Transport: a number of policies/objectives are identified as having a long term positive impact on the transport EPO by promoting a modal change to more sustainable forms of transport via smart travel, better public transport provision, walking and cycling facilities. In turn, such a modal shift would result in positive impacts on energy and greenhouse gas emission reductions.
Section 3.6 Utility and Environmental Infrastructure	Wastewater: Policy UI1 Water Supply, Wastewater Disposal and Surface Water Drainage Infrastructure to Objectives UI1 to 6 are likely to enhance Mat 2 and Mat 4. Flooding: The application of the flood management guidelines in Policy UI Flood Risk Management and supporting objectives should result in enhancing Mat 1. Energy: Policies are uncertain or neutral for most policies but Policy U17 Renewable Energy are identified as positive for Mat 6. Waste: Policy UI4 Waste Management and supporting objectives are positive for Mat 5..
Section 3.7 Urban Design and Landscape	These policies and objectives are largely identified as having neutral or uncertain impacts across the Material Assets EPOs. Objective UD4 is identified as positive for Mat 7
Section 3.7 Built Heritage and Cultural Heritage	Largely neutral impacts identified for material assets EPOs in relation to built and cultural heritage.
Section 3.8 Natural Heritage and Biodiversity	Indirect positive impacts on flood risk management may arise due to creation of wildlife corridors ; the linking of recreational space to provide alternative transport modes will also offer positive impacts for sustainable transport provision if a modal shift results. Objective NH7 Environmental Management Area has positive impacts for Mat 1.

7.11 Cumulative and in combination effects

The following section discusses the proposed zonings in more detail, whilst Annex A evaluates each zoning against the EPOs.

7.12 Key effects due to changes in land use zonings in Draft LAP

A number of Zoning Objectives from the previous LAP have been changed to reflect existing/proposed uses. Many of these zoning changes reflect development activity over the past number of years, so for example a number of zonings now relate to constructed residential dwellings in the plan area and these are zoned as Residential (Existing). Within this zoning, there are very small infill strips that may be able to support single residential development. In terms of zoning objectives, the principal change is as follows:

The objective associated with this is as follows:

Objective LU9 – Environmental Management (EM) (refer to Map 1) Protect lands and sites with high biodiversity value and/or environmental sensitivity and promote their sustainable management and use. This will include the protection of the integrity of European sites that form part of the Natura 2000 network, in particular Special Protection Areas and Special Areas of Conservation, in accordance with the conservation objectives for these sites and the requirements of the EU *Habitats Directive (92/43/EEC)*.

Section 2.2.4 of the draft LAP states:

Lands that are located within designated environmental sites have been rezoned as Environmental Management, in particular the fringes of Lough Rea that are designated as a SPA/SAC/pNHA. Greenfield/undeveloped lands not included within designated sites and located within identified flood risk areas (in particular Flood Zone A and B) have generally been rezoned as Open Space in accordance with the Flood Risk Management Guidelines 2009 in order to avoid inappropriate development in high to moderate flood risk areas and to address the potential impacts of climate change. The Plan also includes policies and objectives to ensure that the sensitivities of the various environmental and flood risk areas are adequately considered, protected and managed, as appropriate, in the development management process.

In addition, there is now a differentiation between residential (existing), residential (phase 1) and residential (phase 2). See below:

Policy RD2 – Phased Development on Residential Zoned Lands (refer to Map 1) It is the policy of Galway County Council to encourage orderly, sequential and phased residential development in accordance with the Preferred Development Strategy and the land use management and zoning provisions set out in this Local Area Plan. This shall include a positive presumption in favour of the sequential development of suitably serviced Residential (Phase 1) lands in order to align the Local Area Plan with the Core Strategy/Settlement Strategy in the Galway County Development Plan, subject to compliance with the policies and objectives in this Local Area Plan and the principles of proper planning and sustainable development. There will be a general presumption against residential development on lands zoned Residential (Phase 2) within the lifetime of the Local Area Plan, subject to the exceptions provided for under Objective RD1.

Objective RD1 – Phased Residential Development (refer to Map 1) Support the development of lands designated as Residential (Phase 1) within the lifetime of the Local Area Plan, subject to normal planning, access and servicing requirements, and reserve the lands designated as Residential (Phase 2) for the longer term growth needs of the town. Residential (Phase 2) lands are generally not developable within the lifetime of this Plan, with the exception of the following developments, which may be considered by the Planning Authority within the lifetime of this Local Area Plan subject to a suitable case being made for the proposal:

- a) Single house developments for family members on family owned lands.
- b) Non-residential developments that are appropriate to the site context, any existing residential amenity and the existing pattern of development in the area.
- c) Where it is apparent that Residential (Phase 1) lands cannot or will not be developed within the plan period, residential development may be considered in a phased manner on some Residential (Phase 2) lands.

7.12.1 Summary of zonings

Table 7i presents the total zonings for the plan area.

Table 7i: Total Zonings for Loughrea LAP

Zoning	AREA Hectares¹
Residential (Phase 1)	32.89
Residential (Phase 2)	62.52
Open Space / Recreation & Amenity	52.31
Residential (Existing)	100.48
Agricultural	215.80
Public Utilities	0.26
Industrial	33.90
Environmental Management	13.76
Community Facilities	37.17
Town Centre / Commercial	28.27
Business & Enterprise	14.66
Commercial /Mixed Use	6.04
Transport Infrastructure	63
Lake	107
Total	768.05

7.13 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 NIR. 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 general impacts (in the absence of mitigation measures) to the qualifying interests of Natura 2000 Sites associated with elements of the Draft Plan will include:

- A reduction in water quality in Lough Rea associated with the construction phase of new developments, surface water runoff from impermeable surfaces and the use of the lake as a tourist and amenity attraction.
- Inadequate wastewater (i.e. sewer) collection system resulting in pollution of surface watercourses and Lough Rea.
- Unsustainable abstraction of water from Lough Rea leading to the drawdown of baseline lake levels.
- Disturbance to qualifying habitats and species from increased human presence particularly associated with tourism and amenity activity on Lough Rea.

¹ Clarification of units of measurement used ie: Hectares, was provided following a submission by the EPA

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

7.13.1 Agriculture

The largest zoning within the plan area, just under 216 hectares, 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.

7.13.2 Environmental Management

As can be seen from the preceding tables, the new zoning for Environmental Management covers 13.76 hectares of the total plan area. This rises to 120.6 ha when the freshwater area of the Lough Rea Natura 2000 site that lies within the plan area is included. 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.

7.13.3 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. Section 5.2.1 of the Natura Impact Report of the Loughrea LAP provides additional information on the habitats and potential impacts on Natura 2000 sites from residential (and other zonings).

7.13.4 Open Space/Recreation and Amenity

A total of nearly 53 hectares are zoned for open space/recreation and amenity within the plan area. Many of these areas 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).

7.13.5 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.

7.13.6 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.

7.13.7 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.

7.13.8 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.

7.13.9 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 the following *Chapter Eight, Mitigation Measures*.

Finally, *Table 7k* identifies the key interrelationships of the environmental parameters. Although all such parameters may be considered interrelated and may impact on each other at some level, the purpose of this table is to show the significant relationships only.

Table 7k: Key Interrelationships of environmental parameters

Topic	Biodiversity	Water	Soil	Landscape	Cultural Heritage	Population	Human health	Air	Climatic factors	Material Assets
Biodiversity		√	√	√		√	√	√	√	√
Water	√		√	√	√	√	√	√	√	√
Soil	√	√		√		√	√	√	√	√
Landscape	√				√	√		√	√	√
Cultural Heritage				√		√		√	√	√
Population				√	√		√	√	√	√
Human health	√	√	√			√		√	√	√
Air	√					√	√		√	√
Climatic Factors	√		√		√	√	√	√		√
Material Assets	√	√	√	√	√	√	√	√	√	

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'

Mitigation involves ameliorating significant negative effects. Where the environmental assessment identifies significant adverse effects, consideration is given in the first instance to preventing such impacts or where this is not possible, to lessening or offsetting those effects. Mitigation measures can be generally divided into those that:

- Avoid effects;
- Reduce the magnitude or extent, probability and/or severity of effect;
- Repair effects after they have occurred;
- Compensate for effects, by balancing out negative impacts with positive ones.

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 DS3: Natura 2000 Network and Habitats Directive Assessment

Objective DS4: Development Management Standards and Guidelines

Policy RD1: Residential Development

Objective TI1: 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 UI10- Western River Basin District Management Plan and Protection of Waters

Policy NH1: 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 NH6: Water Resources

Objective DS4: 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). In turn, the GCDP presents a substantial number of mitigation measures under a

range of themes therefore the mitigation measures proposed below take cognisance of these measures but add or strengthen them where significant potential impacts have been identified. In addition, the application of the SFRA has informed zoning, most particularly in avoiding unsuitable landuses and directing intensive developments away from flood risk areas. The provision of the EM zoning further mitigates against inappropriate development in sensitive areas particularly Natura 2000 sites in the plan area.

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.

The mitigation measures detailed in the following section will assist in the development management process. Such mitigation measures could be useful to potential applicants as they provide guidance on the key environmental issues to be addressed.

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 Predraft	Mitigation Measure in blue font
<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 DM Guideline LU1, 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 available.</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 DM Guideline LU1, 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 available.</p>
<p>Objective LU 16- Action Area Plans (refer to Map</p>	<p>Objective LU 16- Action Area Plans (refer to Map 2)</p>

<p>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 Carmelite 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>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 Carmelite 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. 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.</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 DM Guideline LU1, 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 built and natural heritage and urban design objectives and infrastructure capacity. The density of developments will generally be in accordance with the guidance set out under DM Guideline LU1, 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)</p> <p>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 the natural environment.</p>	<p>Objective CF9 – Amenity Network (refer to Map 2)</p> <p>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. Galway County Council will seek to promote the functioning of greenway networks as wildlife corridors and habitats to enhance biodiversity and the natural environment</p>
<p>Objective CF10 – Linear Park along St. Cleran’s River (refer to Map 2)</p> <p>Ensure that the development of lands along St.</p>	<p>Objective CF10 – Linear Park along St. Cleran’s River (refer to Map 2)</p> <p>Ensure that the development of lands along St. Cleran’s</p>

<p>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 Map 2 – Specific Objectives.</p>	<p>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 Map 2 – Specific Objectives.</p>
<p>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</p>	<p>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</p>
<p>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</p>	<p>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</p>
<p>Objective TI15 – 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 and any other appropriately approved transport schemes/improvements to roads and streets in and around the Plan Area: 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</p>	<p>Objective TI15 – 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 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: a) A new relief road/street connecting the north-eastern approach road (R446) to the south-eastern approach</p>

<p>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>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</p> <p>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</p> <p>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 Lough Rea.</p>
<p>Objective NH5 – Biodiversity and Ecological Networks (refer to Map 2)</p> <p>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>Objective NH5 – Biodiversity and Ecological Networks (refer to Map 2)</p> <p>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>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>

Table 8b: Summary Table EPOs and Mitigation Measures²

Strategic Environmental Objective	Principal Mitigation Measures Policies and Objectives
Biodiversity	
Bio 1: Protect, conserve and avoid loss of the diversity and range of habitats, species and wildlife corridors.	New Environmental Management Zoning See Landuse zoning map and Objective NH7 Environmental Management area and a number of other policies and objectives including: Objective DS3 Natura 2000 Network and Habitats Directive Assessment Policy NH1 Natural Heritage, Landscape and Environment. Objective NH5 Biodiversity and Ecological Networks
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.	Principally addressed through Objectives DS3 and NH1 Natura 2000 Network and Habitats Directive Assessment and a range of interrelated and supporting policies and objectives.

² This Table was inserted following a recommendation by the EPA.

Bio 4: Promote the protection of habitats (terrestrial and aquatic) from invasive species.	Objective NH10 Control of Invasive and Alien Invasive Species
Bio 5: Protect the inland aquatic environment.	Water Supply, Wastewater and Surface Water Policies and Objectives, including <ul style="list-style-type: none"> • Policy UI1 Water Supply, Wastewater Disposal and Surface Water Drainage Infrastructure • Objective UI1 Water Services Infrastructure • Objective UI4 Wastewater Disposal • Objective UI5 Surface Water Drainage and Sustainable Drainage Systems • Objective UI6 St Cleran's River Tributary and Drainage Catchment
Bio 6: Meet the requirements of the WRD and the RBMP	Objective UI10 – Western River Basin District Management Plan and Protection of Waters
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) .	Policy UI 3 Water Quality and Objective UI 10 Western River Basin District Management Plan and Protection of Waters.
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.	Policy UI 3 Water Quality and Objective UI10 Western River Basin District Management Plan and Protection of Waters
Wat 3: Prevent pollution and contamination of groundwater by adhering to aquifer protection plans.	Objective UI 11 Groundwater and Aquifer and Objective UI10 Western River Basin District Management Plan and Protection of Waters
Geology and Soil	
Soil 1: Encourage the use of derelict, disused and infill sites rather than Greenfield sites where appropriate.	Objective LU3 Residential Objective BH7 Vernacular Architecture and Structures of Local Interest.
Soil 2: Protect, improve and maintain the quality of soils.	Objective NH5 Biodiversity and Ecological Networks.
Soil 3: Conserve, protect and avoid loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites.	Principally addressed through Objectives DS3 and NH1 Natura 2000 Network and Habitats Directive Assessment. Also Objective NH9 Geological and Geo-morphological systems.
Population and human health	
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.	Policy DS1 Development Strategy and alignment of Land use zonings with Core Strategy requirements and current statutory provisions across a range of topics including social inclusion and sustainable transport.
Pop 2: To protect human health from	Objective UI20 Air Purification and UI21 Radon. In addition,

<i>risks or nuisances arising from exposure to incompatible land uses/developments.</i>	Objective LU3 Residential and a range of flood risk management policies, objectives and zonings.
Cultural heritage	
Cult 1: Protect and conserve the cultural heritage including the built environment and settings; archaeological (recorded and recorded monuments), architectural (protected structures, architectural conservation areas, vernacular buildings, materials and urban fabric) and manmade landscape features (e.g.: field walls, footpaths, gate piers etc.).	Policy BH1 Built Heritage and Objective BH1 Architectural Heritage. A number of supporting objectives including: Objective UD1 High Quality, Context Sensitive Design Objective BH9 Monuments and Places BH11 Town Defences
CH2 To ensure the restoration and reuse of existing uninhabited and derelict structures where possible as opposed to demolition and new build (as opposed to demolition)	Objective BH2 Protected Structures Objective BH7 Vernacular Architecture and Structures of Local Interest.
Landscape	
Land 1: Protect designated landscapes and scenic views, routes and landscape features of local value.	Objective UD7 Landscape, Townscape, Views and Prospects Objective NH8 Trees, Parkland/Woodland and Hedgerows
Land 2: Conserve and protect cultural landscapes including archaeological and architectural landscapes.	Policy BH1 Built Heritage and Policy BH2 Cultural Heritage and supporting objectives.
Land 3: Minimise visual impacts through appropriate design, assessment and siting.	Objective UD7 Landscape, Townscape, Views and Prospects Objective UD4 Green Network and Landscaping Objective NH4 Impact Assessment
Air Quality and Climate	
AQ1 Seek to avoid air pollution and maintain/improve ambient air quality.	Objective UI 20 Air Purification Policy UI6 Climate Change and Air Quality and Objective UI18 Climate Change and Objective UI19 Air Quality
AQ 2: Minimise emissions of greenhouse gases through energy efficiency and promotion of renewable energy.	Policy UI17 Renewable Energy Objective UI15 Energy Conservation and Efficiency and a range of sustainable transport objectives.
Material Assets	
Mat 1: Reduce risk of flooding through avoidance of development in flood plains or in areas at risk of flooding and manage the risk of flooding.	In addition to zonings informed by the Strategic Flood Risk Assessment, a range of other policies, objectives and development management guidelines were included in the Final Plan. These include: <ul style="list-style-type: none"> • Objective LU12 Flood Risk Areas and Land Use Zones • Policy UI2 Flood Risk Management • Objective UI2 Flood Risk Management and Assessment, and • Objective UI8 Flood Zones and Appropriate Land Uses. DM Guideline UI1 Flood Zones and Appropriate Land Uses is another additional development management guideline in the Final LAP.

<p>Mat 2: Ensure that drinking water supplies are free from contamination.</p>	<p>Water Supply, Wastewater and Surface Water Policies and Objectives, including</p> <ul style="list-style-type: none"> • Policy UI1 Water Supply, Wastewater Disposal and Surface Water Drainage Infrastructure • Objective UI1 Water Services Infrastructure • Objective UI4 Wastewater Disposal • Objective UI5 Surface Water Drainage and Sustainable Drainage Systems • Objective UI6 St Cleran's River Tributary and Drainage Catchment
<p>Mat 3: To protect residents from adverse noise levels.</p>	<p>Objective RD7 Compatible Development Objective TI18 Noise.</p>
<p>Mat 4: To ensure that all zoned lands are sufficiently serviced in advance to EPA standards prior to discharge.</p>	<p>Water Supply, Wastewater and Surface Water Policies and Objectives, including</p> <ul style="list-style-type: none"> • Objective DS5 Service Led Development • Objective UI1 Water Services Infrastructure • Objective UI4 Wastewater Disposal •
<p>Mat 5: Implement the waste pyramid and encourage reuse/recycling of material wherever possible.</p>	<p>Policy UI 4 Waste Management and Objective UI12 Waste Prevention, Reduction and Recycling and Objective UI13 Bring Bank Facility.</p>
<p>Mat 6 Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives.</p>	<p>Policy UI17 Renewable Energy Objective UI15 Energy Conservation and Efficiency</p>
<p>Mat 7: Maximise sustainable modes of transport and provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety.</p>	<p>Policy DS1 Development Strategy Policy TI1 Sustainable Transport, Walking and Cycling plus a suite of supporting objectives within this section including Objective TI1 Integrated Landuse and Transport Objective TI2 Sustainable Transportation</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. Monitoring will focus on the aspects of the environment that are likely to be significantly impacted upon by the implementation of the Draft LAP. The targets and indicators are derived from the Environmental Protection Objectives (EPOs) discussed in Chapter Five. The target underpins the objective whilst the indicators are used to track the progress of the objective and targets in terms of monitoring of impacts.

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.

9.1.1 Frequency of Monitoring and Reporting

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).

In turn the list below is subject to review at each reporting stage to reflect new data. 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. In addition, the identification of positive impacts from monitoring should also be reported as this will assist in determining successful environmental policies.

It is recommended that data arising from planning applications, particularly in terms of environmental constraints mapping and Environmental Impact Statements be integrated into the GIS and monitoring system. This will assist in assessing cumulative impacts also, in particular ecology and water quality.

Finally, it is recommended that the monitoring report be made available to the public upon its completion. It is recommended that this data be shared with neighbouring local authorities to assist in monitoring cross county effects should they arise.

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 value in line with Water Framework requirements by 2015. - No reductions in Q value in relevant watercourses	WFD/RBMP/ Local Authority	Local Authority
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. - No reductions in Q values in relevant watercourses	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	Indicators	Targets	Data sources	Responsible Body
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 habitats, geological features, species or their sustaining resources in designated ecological	Impacts to designated geological sites and their sustaining resources	- No impacts on such sites associated with the implementation of the LAP	Local Authority	Local Authority and GSI

Population and human health	Indicators	Targets	Data sources	Responsible Authority
<p>sites.</p> <p>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.</p>	<ul style="list-style-type: none"> - Drinking Water Sources to comply with the EC (Drinking Water) (No.2) Regulations, 2007 and EC (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations, 1989 - 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 - Reduce social exclusion. - Increase participation and accessibility of education to all levels of society 	<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 - Implementation of Social Inclusion measures as proposed in National Anti-Poverty Strategy - Census data / - Population figures - Education Participation rates - Crime rates 	<p>Local Authority Health Service Executive</p>	<p>Local Authority</p>
<p>Pop 2: To protect human health from risks or nuisances arising from exposure to incompatible land uses/developments.</p>	<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 	<p>Local Authority/ HSA</p>	<p>Local Authority</p>

Cultural heritage	Indicators	Targets	Data Sources	Responsible Body
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.).	- % of Protected Structures 'at risk' - No. of ACAs - No. of archaeological sites investigated	- 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 derelict structures where possible as opposed to demolition and new build(as opposed to demolition).	- No. of buildings restored over lifetime of the plan	- To ensure a positive increase in such development over lifetime of LAP.	Local Authority	Local Authority
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	Responsible Body

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 planning permissions incorporating flood risk assessment and conditions requiring appropriate flood resilient measures for new developments Number of Sustainable Urban Drainage Systems and flood defence features required in new planning applications	Compliance with the Floods Directive and with OPW / DoEHLG 'Flood Risk Management in the Planning Process' standards Flood Risk Assessment be carried out for all new Developments within flood risk zones Identify Sustainable Urban Drainage Systems (and features which are identified as having a flood defence function) in all new developments	Local Authority	Local Authority
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 re; noise	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 Tonnes of (methane producing) organic waste diverted from landfill Landfill gas capture rates	% 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
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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 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 this 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.**

9.2.1 Implications for Galway County Council and the Elected Members

This Environmental Report, which identifies the likely significant effects on the environment of implementing the LAP has been submitted to the Elected Members for their consideration and should be read in conjunction with the draft Loughrea LAP and Natura Impact Report. The Environmental Report and Natura Impact Report must be taken account before adopting the Plan.

Annex A –Assessment of Policies, Objectives and Land Use Zonings in the Draft Loughrea LAP 2012-2018

The Policies, Objectives and Land Use Zonings of the Draft Loughrea Local Area Plan 2012-2018 have been assessed in accordance with the Environmental Protection Objectives of the SEA Environmental Report. The following criteria have been used in the Assessment Matrix:

No likely interaction with EPOs	x	Potential conflict with EPOs – likely to be mitigated	⇅
Likely to improve status of EPOs	↑	Uncertain interactions with EPOs	?
Probable conflict with EPOs – unlikely to be mitigated	↓	Neutral Impacts with EPOs	-

Where the HDA or SEA has recommended text inclusion or changes, these are shown in **blue font**. Please note the text below is the assessment of the Draft Policies, Objectives and Landuse Zonings as presented in the published Draft Loughrea LAP in May 2012. For subsequent alterations to the draft LAP please see Annex C SEA Screening of Material Alterations. The SEA Statement refers to the Policies and Objectives in the Final LAP.

Table A: Assessment of Policies and Objectives in the Draft Loughrea LAP

	X	↑	↓	↕	?	-
Development Strategy - Policy & Objectives						
<p>Policy DS – Development Strategy It is the overarching policy of Galway County Council to support and facilitate the sustainable development of the Plan Area in line with the preferred development strategy option, Option 2 – Consolidate Existing Town Centre, Sequential Development around Established Urban Core and Controlled Eastward Expansion, and in a manner that maintains and enhances the quality of life of local communities, promotes opportunities for economic development, social integration and sustainable transport options, protects the cultural, built and natural heritage and environment and complies with relevant statutory requirements</p>		All EPOs				
<p>Objective DS1 – Orderly and Sequential Development Support the orderly and sequential development of the Plan Area, focusing on the consolidation and continued vitality and viability of the town centre and the protection and enhancement of the existing landscape setting, character, heritage and unique identity of the town</p>		Bio 1, 3 Wat 3 Soil 1 Pop 1, 2 Land 3 AQ2 Mat 1, 7		Bio 2, 4, 5, 6 Wat 1,2 Soil 2,3 CH 1, 2 Land 1,2 AQ 1 Mat 2, 3, 4,5		
<p>Objective DS2 – Consistency with Core Strategy (refer to Galway County Development Plan) Ensure that developments permitted within the Plan Area are consistent with the zoned land allocations in the Core Strategy and associated provisions in the Galway County Development Plan</p>		All other EPOs		Bio 1,2,3,4 5,6,		
<p>Objective DS3 – Natura 2000 Network and Habitats Directive Assessment (refer to Map 2 and 4) Protect European sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU <i>Habitats Directive (92/43/EEC)</i>, EU <i>Birds Directive (2009/147/EC)</i>, the <i>Planning and Development (Amendment) Act 2010</i>, the <i>European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011)</i> (and any subsequent amendments or updated legislation) and having due regard to the guidance in the <i>Appropriate Assessment Guidelines 2010</i> (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence and a Habitats Directive Assessment where necessary, that: 1. The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects); or</p>		Bio 1, 2		Bio 3,4,5,6	Uncertain for other EPOS - as type and intensity of developments unknown	

	X	↑	↓	↕	?	-
<p>2. The plan or project will adversely affect the integrity of any Natura 2000 site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or</p> <p>3. The plan or project will adversely affect the integrity of any Natura 2000 site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.</p>						
<p>Objective DS4 – Development Management Standards and Guidelines (refer to Galway County Development Plan) Ensure that the general development management standards and guidelines set out in the Galway County Development Plan are applied as appropriate in the Plan Area. In addition, any specific development management guidelines set out in Section 3 of this Local Area Plan shall also be applied, as appropriate, to development proposals in the Plan Area.</p>				All EPOs		
<p>Objective DS5 – Service Led Development Ensure that development is preceded by sufficient capacity in the public waste water and potable water infrastructure.</p>		Wat 1,2,3 Bio 6		All other EPOs		
<p>Objective DS6 – Residential Development Phasing (refer to Map 1) Direct residential development into appropriately zoned and serviced areas in accordance with the phased development framework set out in Section 3.1 and 3.2 and shown on Map 1 – Land Use Zoning.</p>				All EPOs		
<p>Objective DS7 – Flood Risk Management and Assessment (refer to Map 3) Ensure that proposals for new developments located within identified or potential flood risk areas, or which may exacerbate the risk of flooding elsewhere, are assessed in accordance with the provisions of the <i>Flood Risk Management Guidelines 2009</i> (or any updated/superseding document) and the relevant policies, objectives and guidelines in this Plan.</p>		Mat 1 Pop 1-2 Bio1-5		All other EPOs		
Land Use Management – Policy, Objectives & Guidelines						
<p>Policy LU – Land Use Management (refer to Map 1) It is the policy of Galway County Council to provide a land use zoning framework for the Plan Area to direct the type, density and location of development in a manner that contributes to the consolidation of the town centre, that allows for the orderly and sequential</p>		All other EPOs		Bio 2		

	X	↑	↓	↕	?	-
development of the town, that protects and enhances the existing landscape setting, character and unique identity of the town and that complies with the statutory requirements in the <i>Planning and Development Act 2000</i> (as amended). The land use zoning framework is supported by a residential phasing scheme to ensure compliance with the Core Strategy and to promote the orderly and sequential development of the town						
Objective LU1 – Town Centre/Commercial (C1) (refer to Map 1) Promote the development of the Town Centre as an intensive, high quality, well-landscaped, human-scaled and accessible environment with an appropriate mix of uses, including residential, commercial, service, tourism, enterprise, public and community uses as appropriate, that provide a range of retail, services, facilities and amenities to the local community and visitors to the town. The town centre and associated main streets shall remain the primary focus for retail and service activity in Loughrea.		<i>Pop 1-2 Soil 1, Land 1 AQ1,AQ2 Mat7</i>		<i>Bio4-6 Water 1-3 CH1-2 Land 1-3 Mat 2, 5, 6</i>	<i>Mat 3, 4</i>	<i>Bio 1-3 Soil 2,3 Land 2-3 Mat1</i>
Objective LU2 – Commercial and Mixed Use (C2) (refer to Map 1) Promote the development of commercial and complementary mixed uses on suitable lands that can provide focal points for the provision of services to surrounding neighbourhoods/areas and opportunities for commercial enterprises, retail developments and employment creation and which do not undermine the vitality and viability of the town centre.				<i>All EPOS</i>		
Objective LU3 – Residential (R) (refer to Map 1 and Objective RD1) Promote the development of appropriate and serviced lands to provide for high quality, well laid out and well landscaped sustainable residential communities with an appropriate mix of housing types and densities together with complementary land uses, such as community facilities, local services and public transport facilities, to serve the residential population of the area. Protect existing residential amenities and facilitate compatible and appropriately designed new infill development in accordance with the proper planning and sustainable development of the area. A phasing scheme will apply to residential uses on Residential (R) zoned lands, as set out under Objective RD1 in Section 3.2.2.		<i>Pop1 AQ2 Mat 4, 6</i>		<i>Bio 1, 2,3, 4,5,6 Soil 2, 3 Pop 2, Land 1,2,3 Mat1,2,3,5</i>	<i>Wat 1,2, 3 Soil 1 AQ1 Mat7</i>	<i>CH1,2</i>
Objective LU4 – Industrial (I) (refer to Map 1) Promote the development of industrial and industrial-related uses, including manufacturing, processing of materials, warehousing and distribution, on suitable lands with adequate services and facilities and a high level of access to the major road network and public transport facilities. Adequate edge treatments and/or screening will be required to ensure high quality interfaces with public spaces and any adjoining residential areas or other sensitive land uses, as appropriate.				<i>All EPOs</i>		
Objective LU5 – Business & Enterprise (BE) (Refer to Map 1) Promote the development of business and enterprise uses, light industry/warehousing and the facilitation of enterprise park/office park type uses, incubation/start-up units and Small, Medium Enterprises, on suitable lands with adequate services and facilities and with a high level of access to the major road networks and to public transport facilities.		<i>Pop 1 Mat 7</i>		<i>All other EPOs</i>		

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<p>Objective LU6 – Community Facilities (CF) (Refer to Map 1) Promote the development of community facilities on suitable lands, with a high level of access to the local community, including educational, community, civic, public, institutional, recreational, cultural and other complementary uses, as appropriate.</p>		Pop 1, 2, Mat 7		All other EPOs		
<p>Objective LU7 – Open Spaces/Recreation and Amenity (OS) (refer to Map 1 and Map 3) Promote the development of open spaces and recreational activities in accordance with best practice and on suitable lands with adequate access to the local community and retain existing open space and recreational facilities unless it can be demonstrated to the satisfaction of Galway County Council that these uses are no longer required by the community. Ensure that any flood risk areas within the OS zone are appropriately managed to avoid, reduce and/or mitigate, as appropriate, the risk and potential impact of flooding.</p>		Pop 1, 2 Mat 1, 7		All other EPOs		
<p>Objective LU8 – Agriculture (A) (refer to Map 1) Protect the rural character of the area from inappropriate development and provide for agricultural and appropriate non –urban uses.</p>		Pop 1,2, Land 1, 2,3		All other EPOs		
<p>Objective LU 9 – Environmental Management Area (EM) (Refer to Map 1) Protect lands and sites with high biodiversity value and/or environmental sensitivity and promote their sustainable management and use. This will include the protection of the integrity of European sites that form part of the Natura 2000 network, in particular Special Protection Areas and Special Areas of Conservation, in accordance with the conservation management objectives for these sites and the requirements of the <i>EU Habitats Directive (92/43/EEC)</i>.</p>		Bio 1, 2,3, 4,5,6 Wat 1,2 Soil 3 Pop 1,2 Mat 1		Wat 3 Soil 2 Land 2	Soil 1 CH1, 2 Land 1,3 AQ1,2 Mat 2,3,4,5,6 7	
<p>Objective LU 10 –Public Utilities (PU) (Refer to Map 1) Facilitate the provision and maintenance of essential public utility infrastructure, together with necessary ancillary facilities and uses, as appropriate.</p>		Pop 1,2, Land 1, 2,3		All other EPOs		
<p>Objective LU 11 – Transport Infrastructure (TI) (Refer to Map 1) Facilitate the provision and maintenance of essential transportation infrastructure, including public roads, footpaths, cycle ways, bus stops and landscaping, together with any necessary associated works, as appropriate.</p>		Mat 7		All other EPOs		
<p>Objective LU12 – Flood Risk Areas and Land Use Zones (Refer to Map and Map 3) Ensure that any proposed development that may be compatible with the land use zoning objectives/matrix but which includes a use that is not appropriate to the Flood Zone (as indicated on Map 3 – Flood Risk Management) and/or that may be vulnerable to flooding is subject to flood risk assessment, in accordance with <i>Flood Risk Management Guidelines 2009</i> and the relevant policies, objectives and guidelines of this Plan.</p>		Mat 1 Bio 1-4 Water 1,2		All other EPOS		
<p>Objective LU13 – Land Use Zoning Matrix (refer to DM Guideline LU2) Direct different land uses into the appropriate land use zone/s in accordance with the land use zoning objectives and the land use zoning matrix set out under DM Guideline LU2. Ensure that proposed land uses are compatible with existing land uses and in keeping with the character of the area.</p>		All EPOs				

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<p>Objective LU14 – Development Densities (refer to DM Guideline LU1) 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 built and natural heritage and urban design objectives and infrastructure capacity. The density of developments will generally be in accordance with the guidance set out under DM Guideline LU1, 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>		Pop 1,2 Mat 7 AQ2 Land 1				All other EPOs
<p>Objective LU 15– Residential Densities 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 <i>'Sustainable Residential Development in Urban Areas Guidelines 2009</i> (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 DM Guideline LU1, 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 available.</p>		Pop 1, 2 Mat 7 AQ 2		All other EPOS		
<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> <ul style="list-style-type: none"> 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. b) Action Area Plans for the integrated development of backlands to the rear of the primary streets of Loughrea. <p>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.</p>		Land 1,2,3 CH1,2 Pop 1,2		All other EPOs		
<p>DM Guideline LU1 – Development Densities The development of higher densities will need to be appropriate to the context and will be assessed based on the merits of the proposal and subject to good design, compliance with both qualitative and quantitative</p>						All EPOs

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standards, location, capacity of the site and infrastructure to absorb development, existing character of the area, established densities on adjoining sites, protection of residential amenities, proximity to public transport, etc. The Planning Authority may use its discretion in varying these density standards. The development density guidance in the tables below indicate the range of densities generally considered appropriate in the various land use zones and in different residential locations within the Plan Area.						
DM Guideline LU2 – Land Use Zoning Matrix The land use zoning matrix indicates the types of land uses that are Permitted in Principle (P), Open for Consideration (O) and Not Normally Permitted (N), for the land use zones designated in Section 3.1.2 above. Whilst the matrix does not provide an exhaustive list of potential uses, the uses listed in the matrix should be considered by applicants to provide a clear indication of the overall acceptability of a particular land use within a specific zoning category. Where a use is proposed that is not listed in the matrix, development proposals will be assessed on their individual merits in accordance with the general guidance provided by the matrix and having regard to the nature of existing and proposed uses, to the general policies and zoning objective/s for the area in the Local Area Plan and to the principles of proper planning and sustainable development. Where there is no perceived conflict between existing and proposed uses, favourable consideration will be given to the proposed development, subject to all other normal requirements and to the principles of the proper planning and sustainable development of the area				All EPOs		
Residential Development – Policies & Objectives						
Policy RD 1 – Residential Development It is the policy of the Galway County Council to support the creation of sustainable communities and high quality residential areas at appropriate locations, with a range of housing options and adequate support services, facilities and amenities, having regard to the guidance contained in the following policy/guidance documents or any updated/amended versions: <ul style="list-style-type: none"> • Joint Galway County Council and Ballinasloe Town Council Housing Strategy 2009-2015. • <i>Sustainable Residential Developments in Urban Areas: Guidelines for Planning Authorities, 2009</i> and the accompanying guidance document <i>Urban Design Manual: A Best Practice Guide – A Companion Document to the Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas, 2009</i>. • Galway Clustered Housing Guidelines, where appropriate, in the assessment of any proposals of new multiple unit housing developments within the Plan area. • <i>Galway County Council Traveller Accommodation Programme</i>. • <i>Smarter Travel A Sustainable Transport Future - A New Transport Policy for Ireland 2009-2020</i> including the <i>National Cycle Policy Framework 2009-2022</i> and any other related national documents. • EU Water Framework Directive, EU Floods Directive and <i>The Planning System and Flood Risk Management, Guidelines for Planning Authorities 2009</i>. 		Pop 1		All other EPOs		
Policy RD 2 – Phased Development on Residential Zoned Lands (refer to Map 1) It is the policy of Galway County Council to encourage orderly, sequential and phased residential				All EPOs		

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development in accordance with the Preferred Development Strategy and the land use management and zoning provisions set out in this Local Area Plan. This shall include a positive presumption in favour of the sequential development of suitably serviced Residential (Phase 1) lands in order to align the Local Area Plan with the Core Strategy/Settlement Strategy in the current Galway County Development Plan, subject to compliance with the policies and objectives in this Local Area Plan and the principles of proper planning and sustainable development. There will be a general presumption against residential development on lands zoned Residential (Phase 2) within the lifetime of the Local Area Plan, subject to the exceptions provided for under the Residential Development Objective RD1.						
<p>Objective RD1 – Phased Residential Development (Refer to Map 1 A/1B Land Use Zoning)</p> <p>Support the development of lands designated as Residential (Phase 1) within the lifetime of the Local Area Plan, subject to normal planning, access and servicing requirements, and reserve the lands designated as Residential (Phase 2) for the longer term growth needs of the town. Residential (Phase 2) lands are generally not developable within the lifetime of this Plan, with the exception of the following developments, which may be considered by the Planning Authority within the lifetime of this Local Area Plan subject to a suitable case being made for the proposal:</p> <ol style="list-style-type: none"> 1. Single house developments for family members on family owned lands. 2. Non-residential developments that are appropriate to the site context, any existing residential amenity and the existing pattern of development in the area. 3. Where it is apparent that Residential (Phase 1) lands cannot or will not be developed within the plan period, residential development may be considered in a phased manner on some Residential (Phase 2) lands. <p>The above exceptions will be subject to compliance with the Core Strategy in the Galway County Development Plan, the policies and objectives in this Local Area Plan, the principles of proper planning and sustainable development and to meeting normal planning, access and servicing requirements. Developments will only be permitted where a substantiated case has been made to the satisfaction of the Planning Authority and the development will not prejudice the future use of the lands for the longer term growth needs of the town.</p>		Pop 1 Mat 7		All other EPOs		
<p>Objective RD2 – Quality Housing Environments</p> <p>Encourage the development of sustainable residential communities through the promotion of innovative, high quality building design and appropriate layouts, that prioritise walking, cycling and public transport options and provide for a high level of permeability, accessibility and connectivity to the existing built environment, services and facilities. In this regard, future residential development proposals will be in accordance with the principles set out in the DEHLG document ‘Sustainable Residential Development in Urban Areas 2009’ and its companion document ‘Urban Design Manual: A Best Practice Guide for Planning Authorities 2009’ (or any updated/superseding documents).</p>		Pop 1,2 Land 3 Mat 7		All other EPOs		
<p>Objective RD3 – Housing Options</p> <p>Require that a suitable variety and mix of dwelling types and sizes are provided in developments to meet</p>		Pop 1		All other EPOs		

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different needs, having regard to demographics and social changes, social inclusion, life time changes, smaller household sizes, lower formation age, immigration, etc.						
Objective RD4 – Open Space in Residential Areas Ensure the provision of adequate areas of high quality, safe and overlooked and suitably landscaped open space within residential developments and support the provision of play and multi- purpose recreational areas in all new large residential developments. The minimum public open space required in new multiple unit residential developments will be 15% of the total site area and this open space shall be located in central, useable and suitably overlooked locations.		Pop 1, 2 Land 3		All other EPOs		
Objective RD5 – Social and Affordable Housing Require that 20% of all new eligible residential sites are set aside for the development of new social and affordable units, unless addressed through suitable alternative arrangements by agreement with the Planning Authority, in accordance with Galway County Council’s <i>Housing Strategy 2009-2015</i> (and any updated/superseding document) and Part V of the Planning and Development Act 2000 (as amended).		Pop 1		All other EPOs		
Objective RD6 – Traveller Accommodation Provide adequate accommodation facilities for the traveller community in accordance with the <i>Traveller Accommodation Programme 2009-2013</i> (or any updated/superseded document).		Pop 1		All other EPOs		
Objective RD7 – Compatible Development Facilitate the development of appropriate, compatible uses within residential areas, subject to ensuring that adequate Residential zoned lands are retained and can be developed for residential uses to meet the growth needs of the town within the plan period. Non-compatible uses include those uses that may generate large amounts of traffic, emissions, pollution, noise, odour, etc., or uses that can impact negatively on residential amenity.		Pop 1,2 AQ 1		All other EPOs		
Objective RD8 – Other Residential Development There shall be a general presumption in favour of the development of nursing homes and retirement facilities and community/day care centres on residential zoned lands or adjacent to the established town centre or as suitable re-use for protected structures or other buildings (e.g. institutional or educational buildings) that would have limited re-development potential given their size and architectural character, subject to normal planning, access and servicing requirements.		Pop 1,2 CH1,		All other EPOs		
Objective RD9 – Agricultural Zoned Lands There will be a general presumption against residential development on Agricultural (A) zoned lands, with the exception of single house developments for family members on family owned lands, which may be considered subject to compliance with the Policy RD1, as appropriate, normal planning, access and servicing requirements and the principles of proper planning and sustainable development. Developments will only be permitted where a substantiated case has been made to the satisfaction of the Planning Authority and the development will not prejudice the future use of the lands for the longer term growth needs of the town. An enurement clause will be applied in the case of any permissions for single house developments for family members on family owned lands.				All EPOs		

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DM Guideline RD1 – Open Access Fibre Ducting Request that all new build residential developments have open access fibre connections installed for high speed technologies, where practicable, in accordance with the Department of Communications Energy and Natural Resources document <i>Recommendations for Open Access Fibre Ducting and Interior Cabling for New Residential Buildings ‘Making Homes Fibre Ready’, 2011.</i>		Pop1		All other EPOs		
Social and Community Development– Policies						
Policy CF1 – Social Inclusion and Universal Access It is the policy of Galway County Council to support the principles of social inclusion and universal access and to ensure that all individuals have access to goods, services, facilities and buildings in order to assist them to participate in and contribute to social and cultural life within Loughrea.		Pop 1, 2			All other EPOs	
Policy CF2 – Community Facilities and Amenities It is the policy of the Council to support the provision of an adequate level and equitable distribution of community facilities and amenities in the plan area that: <ul style="list-style-type: none"> • Meets the needs of the local community as they arise and as resources permit. • Are located in appropriate, accessible locations to serve the residential population in the plan area. • Are clustered or linked together wherever facilities and amenities are complementary and it is practicable to do so, to allow for shared and multi-purpose use of facilities. Community facilities and amenities projects will be facilitated in appropriate locations following an assessment of each proposal and, where appropriate, subject to cooperation and consultation with the local community and other relevant stakeholders, including the Department of Education and Skills, and available resources.		Pop 1, 2		All other EPOs		
Social Inclusion and universal Access Objectives						
Objective CF1 – Social Inclusion Support the implementation of the provisions of the <i>Galway County Council Social Inclusion Action Plan 2010</i> and <i>Social Inclusion Work Programme 2011</i> (and any subsequent updates to these documents).		Pop 1				All other EPOs
Objective CF2 – Universal Access Ensure that housing developments, community facilities, public spaces, public roads, public footpaths and transport services give due consideration to the needs of disabled or mobility impaired people and the requirements of the <i>Disability Act 2005</i> , the Council’s <i>Disability Action Plan 2007-2015</i> , and <i>Traffic Management Guidelines 2003</i> (and any updated/superseding to these documents).		Pop 1				All other EPOs
Community Facilities & Amenities Objectives						
Objective CF3 – Lands for Community Facilities and Amenities (refer to Map 1 and Map 2) Ensure that there are adequate zoned and serviced lands to cater for the establishment, improvement or expansion of educational, community, recreation and amenity facilities within the Plan Area. This will include the following: a) Reserve lands for existing community facilities and for the expansion and provision of additional community facilities adjacent to existing community facility lands.		Pop 1, 2		All other EPOs		

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b) Reserve lands for the provision of community facilities adjacent to large blocks of residentially						
<p>Objective CF4 – Educational Facilities (refer to Map 2)</p> <p>Support the provision of adequate educational facilities for the local community including primary, post primary, third level outreach programmes, Research and Development facilities, and other training facilities, to meet the widest range of residents within Loughrea and its environs.</p> <p>Galway county Council is positively disposed towards the provision of new school facilities in appropriate locations/s and has identified a number of areas considered to be generally suitable for new school provision. The indicative locations of areas considered suitable for new school provision are shown in Map 2 – Specific Objectives. Other sites may also be considered where these are considered suitable in terms of location, access, servicing etc.</p>		Pop 1, 2		All other EPOs		
<p>Objective CF5 – Childcare Facilities</p> <p>Facilitate and promote the development of childcare facilities in suitable locations and in accordance with national policy including the DEHLG <i>Childcare Facilities-Guidelines for Planning Authorities’ 2001</i>, (or any updated/superseded document).</p>		Pop 1, 2		All other EPOs		
<p>Objective CF6 – Open Spaces(refer to Map 2)</p> <p>Protect existing open spaces from inappropriate development, so as to maintain their role in providing places for active and passive recreation, social interaction and civic activities, visual relief from the built environment and enhancing the residential and overall character of the town. Facilitate the development of open spaces, including local parks, civic spaces and amenity areas, at suitable locations within the Plan Area.</p>		Pop 1, 2 Soil 2 Land 1,				All other EPOs
<p>Objective CF7 – Sports, Play and Recreation Facilities</p> <p>Support the provision of new sports, play and recreational facilities to service the needs of the local community, require the provision of play/recreation facilities in new large residential developments, and facilitate the development of same in other appropriate locations in the town, including supporting public/community initiatives to provide same.</p>		Pop 1, 2		All other EPOs		Bio 1,2,3
<p>Objective CF8 – Community, Recreation and Amenity Facilities (refer to Map 1)</p> <p>Retain existing community, recreation and amenity facilities and lands zoned for such uses, and prevent their change of use or redevelopment, unless it can be clearly demonstrated to the satisfaction of the planning authority that the facility/land is no longer required and that the new use or development contributes to the overall community, recreation and amenity needs of the Loughrea area.</p>		Pop 1		All other EPOs		
<p>Objective CF9 – Amenity Network (refer to Map 2)</p> <p>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 the natural environment. Galway County Council will seek to promote the functioning of greenway networks as wildlife corridors and habitats to enhance biodiversity</p>		Pop 1, 2 Mat 7 Land 1 AQ2				All other EPOs

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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 be compatible with the aim of achieving good ecological status for St. Cleran’s River 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 Map 2 – Specific Objectives		<i>Pop 1,2 Land 1-3 AQ 2 Wat 1-3 Mat 1, 7</i>				
Economic Development Policy, Objectives & Guidelines						
Policy ED – Economic Development It is the policy of Galway County Council to support economic development and employment creation in Loughrea through the identification of appropriately located and adequately serviced lands for business and enterprise, retail, industrial, commercial and tourism developments, the promotion of investment in transportation and other support infrastructure and the creation of a high quality environment to encourage economic investment. The promotion of economic development and employment creation will be appropriately guided to ensure the protection of residential amenities, built and natural heritage, landscape/townscape/streetscape character and the vitality and viability of the town centre. Support the aims, objectives and recommendations, where appropriate in the context of Loughrea, of the following (and any updated/superseding documents). <ul style="list-style-type: none"> Galway County Development Board Strategy for Economic, Social and Cultural Development entitled Working Together, shaping our Future 2002-2012 Galway City and County Development Board Tourism Strategy entitled Development Sustainable Tourism in Galway: A framework for Action 2003-2012 West Regional Authority Regional Planning Guidelines 2010 - 2022 		<i>Pop 1 Land 1</i>		<i>All other EPOs</i>		
Objective ED 1 – Employment & Economic Development Support the Economic Development Strategy of the West Regional Authority Regional Planning Guidelines 2010-2022 and the economic development and tourism policies and objectives as set out in the current County Development Plan (and updated/superseding documents).		<i>Pop 1</i>		<i>All other EPOs</i>		

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<p>Objective ED3 – Retail Development</p> <p>Support the development of appropriate types, scales and patterns of retail development in suitable locations within the town and with high quality designs that:</p> <ul style="list-style-type: none"> • Support the vitality and viability of the existing town centre and associated main streets and/or do not undermine their vitality and viability • Protect investment in strategic roads and infrastructure and are easily accessible, particularly in terms of public transport. • Comply with the <i>Retail Planning Guidelines 2005</i> and <i>Draft Retail Planning Guidelines 2011</i> (and any updated/superseding document, including the forthcoming Best Practice Design Manual), including the application of a sequential approach to retail development. • Contribute to the creation of a high quality retail environment. <p>The Town Centre (C1) zoning will remain the primary focus for the location of new retail development and on Commercial/Mixed Use (C2) zoning where appropriate. The Planning Authority will ensure that the location of future retail development is consistent with the key policy principles and order of priority as set out under Section 5.4 of the <i>Draft Retail Planning Guidelines 2011</i> (and any updated/superseding document) and will require Retail Impact Assessments, including details of the sequential approach and Design Statements, where appropriate, for retail developments in accordance with the Retail Planning Guidelines and DM Guideline ED1 and ED2.</p>		Pop 1 Mat 7		All other EPOs		
<p>Objective ED4 – Tourism Development</p> <p>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 for the town and the local amenities within the Plan Area. Key Projects and initiatives that will be supported will include:</p> <ol style="list-style-type: none"> a) Protect and enhance the quality and amenity of the blue flag beach and public amenity area at Long Point, Loughrea 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 value and investigate the provision of a tourist/information centre within the town centre. 		Pop 1 CH1,2 Land 2		All other EPOs		
<p>Objective ED5 – Quality Working Environments</p> <p>Encourage the provision of high quality designs (including variations in design and scale), layout, boundary treatment and arrival views of development within Industrial (I), Business and Enterprise (BE) and Commercial/Mixed Use (C2) zonings, in order to positively contribute to the character and visual amenity of the area.</p>		Pop 1, 2 Land 3		All other EPOS		

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<p>Objective ED6 – Non Conforming Uses Facilitate the relocation of existing uses that do not conform with the land use zoning objectives or matrix in the plan to more suitable and appropriately zoned lands.</p>				All EPOs		
<p>Objective ED7 – Proliferation of Individual Uses Protect and enhance the vitality and viability of the town centre by ensuring that it remains the primary retail, commercial and mixed use centre in the town and prohibit a proliferation of any individual use that, in the opinion of the Planning Authority, does not contribute to the vitality and viability of the town centre.</p>		Pop1,2 Mat 7 AQ 1,2		All other EPOs		
<p>DM Guideline ED1 – Retail Impact Assessments Retail Impact Assessments will be required with planning applications for large retail developments (such as shopping centres or large food/grocery chain stores), mixed use developments with a large retail component, developments that may have a significant effect on the vitality and viability of the town centre or as otherwise considered appropriate by the Planning Authority. Retail Impact Assessments will be in accordance with the Retail Planning Guidelines, including details of the sequential test.</p>		Pop 1, 2				
<p>DM Guideline ED2 – Design Statements Design Statements may be required with planning applications for major retail proposals, retail proposals that are located within a sensitive area or as otherwise considered appropriate by the Planning Authority. Design Statements should address the issues raised in Section 6.4 of the <i>Draft Retail Planning Guidelines 2011</i> (and any updated/superseding document), including an appraisal of the character of the area adjoining the site and proposals for high quality design that integrates successfully with the context. Design Statements should also take account of the design and layout guidance set out in the forthcoming <i>Best Practice Design Manual</i>.</p>		Pop 1,2 Land 1,2,3				All other EPOs

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Transport – Policy & Objectives						
<p>Policy T11 – Sustainable Transport, Walking and Cycling</p> <p>It is the policy of Galway County Council to promote the use of public transport, walking and cycling as safe, convenient and environmentally sustainable alternatives to private transport and to implement the key goals, policy guidance and relevant actions set out in the Department of Transport’s policy document <i>Smarter Travel: A Sustainable Transport Future – A New Transport Policy for Ireland 2009-2020 and the National Cycle Policy Framework 2009-2020</i> (and any updated/superseding documents), any forthcoming guidance in relation to street design and cycling facilities and any Smart Travel Plan(s) that may be adopted by Galway County Council.</p>		<p>Pop 1, 2 AQ 1, 2 Mat 7</p>		<p>All other EPOS</p>		
<p>Objective T11 – Integrated Land Use and Transport</p> <p>Ensure that land use planning is integrated with transportation planning and reduce the need to travel, particularly by private transport, by:</p> <ul style="list-style-type: none"> • Promoting the consolidation of development; • Encouraging intensification and mixed use development along public transport corridors and at public transport hubs and nodes; • Prioritising walking, cycling and public transport within, and providing access to, new development proposals, as appropriate; • Ensuring that land use and zoning are fully integrated with the provision and development of a comprehensive, sustainable, efficient, high quality transportation network that accommodates the movement needs of residents, businesses and visitors. 		<p>Pop 1, 2 Mat 3 AQ 1, 2 Mat 6, 7</p>		<p>All other EPOs</p>		
<p>Objective T12 – Sustainable Transportation</p> <p>Facilitate any Smarter Travel initiatives that will improve sustainable transportation within the plan area and facilitate sustainable transportation options including public transport, electric vehicles, car clubs, public bike schemes, park and ride/park and stride facilities, improved pedestrian and cycling facilities as appropriate.</p>		<p>Pop 1, 2 AQ 1, 2 Mat 6, 7</p>		<p>All other EPOs</p>		
<p>Objective T13 – Public Transport</p> <p>Support the provision of improved and enhanced public transport facilities and services, including bus stops, shelters and services, the Rural Transport Initiative, park and ride/park and stride facilities and all associated ancillary requirements, in consultation with the relevant public transport providers.</p>		<p>Pop 1, 2 AQ 1, 2 Mat 6, 7</p>		<p>All other EPOs</p>		
<p>Objective T14 – Walking</p> <p>Facilitate the improvement of the pedestrian environment and network so that it is safe and accessible to all through the provision of the necessary infrastructure such as footpaths, lighting, pedestrian crossings etc. New development shall promote and prioritise walking, shall be permeable, adequately linked and connected to neighbouring areas, the town centre, recreational, educational, residential and employment destinations and shall adhere to the principles contained within the national policy document <i>Smarter Travel A Sustainable Transport Future 2009-2020</i>, (and any updated /superseding document).</p>		<p>Pop 1, 2 AQ 1, 2 Mat 6, 7</p>		<p>All other EPOs</p>		

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Objective T15 – Cycling Facilitate the improvement of the cycling environment/network so that it is safe and accessible, through adequate traffic management and the provision of the necessary infrastructure, such as surface treatment, junction treatment, cycle track/s, cycle lane/s, lighting, road crossings etc. New developments shall promote and prioritise cycling, shall be permeable, adequately linked and connected to neighbouring areas, the town centre, recreational, educational, residential and employment destinations and shall adhere to the principles contained within the national policy document <i>Smarter Travel A Sustainable Transport Future 2009-2020</i> , and the <i>National Cycle Policy Framework</i> document (and any updated/superseding documents).		Pop 1, 2 AQ 1, 2 Mat 6, 7		All other EPOs		
Objective T16 – Bicycle Parking Ensure that adequate levels of bicycle parking as required within the Plan area, in accordance with the standards as set out in the current County Development Plan, and ensure that new developments provide adequate safe, secure and sheltered bicycle parking facilities.		Pop 1, 2 AQ 1, 2 Mat 6, 7				All other EPOs
Objective T17 – Walking & Cycling Strategy Support the preparation of a County Walking & Cycling Strategy and the implementation of any specified objectives for the town of Loughrea and its environs, as resources permit.		Pop 1, 2 AQ 1, 2 Mat 6, 7				All other EPOs
Objective T18 – Pedestrian Crossings Facilitate the provision of pedestrian crossings adjacent to schools and at other appropriate locations within the Plan area, as required.		Pop 1, Mat 6,7 AQ1,2				All other EPOs
Objective T19 – Mobility Management Plans Require Mobility Management Plans for all medium to large scale residential, commercial, mixed use or business/enterprise or industrial developments, as appropriate.		Pop 1, 2 AQ 1, 2 Mat 6, 7				All other EPOs
Objective T110 – Charging Points for Electric Vehicles Facilitate the provision and delivery of recharging points for electric powered vehicles within public car parks and at other appropriate locations in Loughrea for domestic, transition and end of journey type travel.		Pop 1, 2 AQ 1, 2 Mat 6, 7				All other EPOs
Objective T111 – Bus Facilities and Services (refer to Map 2) Support the improvement of bus facilities and services within Loughrea, including the following: <ol style="list-style-type: none"> Facilitate the provision of bus shelters at existing bus stops in the town centre and at any other bus stops that may be provided in the future Consult with bus operators regarding the provision of additional bus stops serving Loughrea, including stops on Dublin Road, Portumna Road and Atherny Road Investigate the potential of developing a Public Transport Node at the Station Road Car Park, or other suitable locations/s to provide a facility for transferring between one transport service or mode and another Carry out a feasibility study and investigate the provision of a bus depot in the vicinity of the Mart. 		Pop 1, Mat 6,7 AQ1,2		All other EPOs		
Objective T112 Amenity/Walking/Cycling Network (refer to Map 2) Support the progressive improvement of the amenity/walking/cycling network, to include existing and enhanced public footpaths along the main streets and providing linkages to existing and future schools,		Pop 1, 2 AQ 1, 2 Mat 6, 7				All other EPOs

cycling routes where possible and amenity corridors linking town centre, residential, community facility, public amenity, commercial and transport nodes, as shown on Map 2 Specific Objectives					
Roads, Streets and Parking – Policies & Objectives					
<p>Policy T12 – Roads, Streets and Parking</p> <p>It is the policy of Galway County Council to ensure that the road and street network is safe and convenient, that it has adequate capacity to accommodate motorised traffic and non-motorised movements, that it has a high environmental quality with appropriate adjacent development and built form, particularly in the case of urban streets and streetscapes, and that adequate parking facilities are provided to serve the needs of the town. This policy and its associated objectives will be guided by relevant national policy, including the <i>Spatial Planning and National Roads Guidelines 2012</i>, the <i>Sustainable Residential Development in Urban Areas Guidelines</i> and accompanying <i>Urban Design Manual</i>, the <i>Traffic Management Guidelines 2003</i>, the <i>Traffic and Transport Assessment Guidelines 2007</i> (and any updated/superseding documents) and any forthcoming guidelines in relation to street design and cycling facilities.</p>		<p>Pop 1, 2 Mat 7 Land 2, 3</p>		<p>All other EPOs</p>	
<p>Objective T113 – National Road Network</p> <p>Protect the national road network and safeguard the efficiency, safety, capacity and strategic investment in the N65 and N66 national routes. Direct access from future development to these national roads should be avoided outside of the speed limit zones for the town and there will be a presumption against large retail centres located adjacent or close to existing, new or planned national roads. Proposals for large scale developments will be required, where appropriate, to submit Traffic and Transport Assessments to assess the impact of the proposed development and associated traffic movements on the efficiency, safety and capacity of the national road network.</p>		<p>Pop 1, 2 Mat 7</p>		<p>All other EPOs</p>	
<p>Objective T14 – Urban Street Network</p> <p>Support the treatment of the route network within the built areas of the town as urban streets that prioritise the needs of pedestrians, that facilitate cyclists wherever possible and that support public and private transport movements, stopping and parking, as appropriate. Where appropriate, new developments will be required to facilitate the extension of the urban street network and/or the provision of improved connectivity and permeability, particularly for pedestrians and cyclists.</p>		<p>Pop 1 CH 1 Land 3 AQ1 Mat 7</p>		<p>All other EPOs</p>	
<p>Objective T115 – Transport Network Improvements (refer to Map 2)</p> <p>Support the improvement of the road and street network in and around the Plan Area, subject to normal planning and environmental considerations including in combination effects under the EU Habitats Directive 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>Mat 7</p>		<p>All other EPOs</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 T116 – Galway County Development Plan Policies, Objectives & Development Management Standards</p> <p>Ensure that new developments including developments proposed onto and in proximity to National and Class II Controlled roads shall be assessed, as appropriate, in relation to details including the provision of a safe means of access/egress, provision of sightlines, car and bicycle parking, loading bay provision, building setbacks from routes/roads etc., in accordance with the policies, objectives and Development Management Standards set out in the current County Development Plan.</p>				<i>All EPOs</i>	
<p>Objective T117 – Road Safety Audits, Traffic Impact Assessment</p> <p>Require all proposed new commercial, industrial and retail developments (or where significant changes are proposed to existing commercial, industrial or larger retail developments) and residential developments greater than 4 units, to submit Road Safety Audits and Traffic Impact Assessments as part of their planning application documentation.</p>		<i>Pop 1,2 Mat 7</i>		<i>All other EPOs</i>	
<p>Objective T118 – Noise</p> <p>All new proposed development, within 300m of roadways with traffic volumes greater than 8,220AADT, to include a noise assessment and mitigation measures if necessary with the planning application documentation.</p>		<i>Pop 1, 2 Mat 3</i>		<i>All other EPOs</i>	
<p>Objective T119 – Schools</p> <p>Promote and facilitate greater ease of traffic movement and safe routes to schools in partnership with local schools and ensure that schools have a safe drop off/collection facilities for pedestrians, cyclists and vehicles and adequate and appropriately located staff parking.</p>		<i>Pop1 AQ2</i>			<i>All other EPOs</i>
<p>Objective T20 Parking Facilities (refer to Galway County Development Plan)</p> <p>Ensure that existing parking facilities in the town centre are managed appropriately and additional parking facilities are provided in suitable locations within the Plan Area to serve the needs of the town in accordance with applicable standards and guidelines. Provide disabled car parking facilities at appropriate locations throughout the town and ensure that all new developments have adequate car parking, disabled parking and cycling facilities. Requirements for car parking are contained in the Galway County Development Plan.</p>		<i>Pop 1, AQ2</i>		<i>All other EPOs</i>	

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<p>Objective TI21 – Traffic Safety and Access (refer to Galway County Development Plan) Ensure that all new developments are properly located in terms of traffic safety and adequately address issues of traffic safety and access.</p> <p>a) Provide adequate facilities for people with special mobility needs to create a safe and accessible environment by providing parking facilities on ground floor level, tactile crossing points, audio facilities on traffic lights and ramped kerbs.</p> <p>b) Encourage new developments to use existing access junctions that enter onto major traffic routes rather than allowing a proliferation of new individual vehicular access points.</p> <p>c) Require developers to bear the cost of improvements to junctions, road widening and the provision of footpaths in association with public lighting requirements where these will facilitate or benefit the proposed development.</p> <p>d) Require, where possible, the provision of adequate off-street parking and adequate loading/ unloading facilities as part of each development to ensure that parked vehicles do not cause a traffic hazard, obstruct vehicle or pedestrian movement or create a negative visual impact. Underground car parking will be considered in the Town Centre (C1) zone, where it would not conflict with residential amenity, geological, natural heritage or archaeological sensitivities or traffic safety.</p>		Pop 1,		All other EPOs		
<p>Objective TI22 – Loughrea Bypass (refer to Map 2) Protect and enhance the capacity and visual amenity of the Loughrea Bypass:</p> <p>a) Prevent new accesses onto the N6 Loughrea Bypass route that have not been accommodated in the bypass design in the interest of traffic safety.</p> <p>b) Ensure that new developments along the bypass respond positively to the route in terms of high quality building designs and elevation/boundary/landscaping treatments, as appropriate, facing onto the bypass route.</p> <p>c) Facilitate the development of a walking/cycling/amenity corridor along the southern edge of the bypass route and ensure that new developments incorporate and connect to this corridor, as appropriate.</p>		Pop 1,2 Mat 7 Land 1,2,3 AQ1,2		All other EPOs		
<p>Objective TI23 – Access Points (refer to Map 2) Reserve access points for future development of backlands. This will include those shown on Map 2 – Specific Objectives and any other access points that may be identified for reservation by the planning authority during the plan period.</p>		Pop 1,2 Mat 7		All other EPOs		

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Water Supply, Wastewater, Surface Water - Policies & Objectives						
<p>Policy UI1 – Water Supply, Wastewater Disposal And Surface Water Drainage Infrastructure</p> <p>It is the policy of Galway County Council to support the provision and maintenance of adequate wastewater disposal, water supply and surface water drainage infrastructure, to service the development of Loughrea in accordance with EU Directive, national legislation and applicable standards. This will include the provision of adequate capacity in the public wastewater sewer network, wastewater treatment plant and storm water sewer network, an adequate quantity and quality of water supply and the promotion of Sustainable Drainage System approaches and techniques within the Plan Area.</p>		<p>Pop 1, 2</p> <p>Mat 4</p> <p>Bio 5</p>		<p>Bio 1,2,3, 4,6</p> <p>Wat 1,2,3</p> <p>Mat 1, 2, 3</p> <p>Land 3</p> <p>Soil 2</p> <p>Mat 5,6</p>		<p>CH1,2,</p> <p>Land 1,2</p> <p>Soil 1, 3</p> <p>Mat 7</p>
<p>Objective UI1 – Water Services Infrastructure (refer to Map 2)</p> <p>Support the maintenance, improvement and monitoring of the public water supply, wastewater disposal and surface water drainage infrastructure, as necessary to address any deficiencies in infrastructure capacity and/or service the development needs of the town. This will include the following and any other projects approved during the period of the Plan:</p> <p>a) Progress the upgrading of the existing wastewater sewer network for the town.</p> <p>b) Progress the Loughrea Regional Water Supply Scheme in order to improve the quality of supply to consumers within the town and extend supply to surrounding areas.</p> <p>c) Continue to carry out improvements to the existing infrastructure and quality of the town’s water supply system, including the provision of an upgraded water treatment plant, additional storage and the connection of the Loughrea pump station with the Long point pump station.</p> <p>d) Monitor the capacity of the updated wastewater treatment plant as development takes place.</p> <p>e) Improve and maintain an adequate surface water drainage system throughout the Plan Area.</p>		<p>Bio 5,6</p> <p>Wat 1,2,3</p> <p>Pop 1,2</p> <p>Mat 2,4</p>		<p>All other EPOs</p>		
<p>Objective UI2 – Water Services for New Developments</p> <p>Require all new developments to be adequately serviced with water supply, wastewater disposal and surface water drainage in accordance with applicable legislation, standards and guidelines and to submit the necessary documentation with their planning applications to confirm same. Encourage only as much development, both in terms of quantity and type of development, that can be provided for based on the utility services available and prohibit any proposed development that cannot be adequately serviced, that would lead to significant environmental effects or that would pose an unacceptable threat to the capacity of water, wastewater or surface water infrastructure in the Plan Area.</p>		<p>Bio 5,6</p> <p>Wat 1,2,3</p> <p>Pop 1,2</p> <p>Mat 2,</p>		<p>All other EPOs</p>		
<p>Objective UI3 – Water Supply & Water Conservation</p> <p>Ensure that new developments are adequately serviced with a suitable quantity and quality of 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.</p>		<p>Pop 1, 2</p> <p>Mat 2</p> <p>Bio5</p>		<p>Bio 1,2,3, 4,6. Wat 1,2,3. Mat 1, 2, 3. Land 3</p> <p>Soil 2</p> <p>Mat 5,6</p>		<p>CH1,2,</p> <p>Land 1,2</p> <p>Soil 1, 3</p> <p>Mat 7</p>

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<p>Objective UI4 – Wastewater Disposal. New developments shall only be permitted where it can be clearly demonstrated that they can be serviced and that there is adequate capacity in the wastewater disposal infrastructure in accordance with applicable requirements and standards, including urban wastewater treatment disposal standards, in order to protect the Galway Bay Complex and its qualifying interests.</p>		Pop 1, 2 Mat 4 Bio5		Bio 1,2,3, 4,6 Wat 1,2,3 Mat 1, 2, 3 Land 3 Soil 2 Mat 5,6		CH1,2, Land 1,2 Soil 1, 3 Mat 7
<p>Objective UI5– Surface Water Drainage and Sustainable Drainage Systems Maintain, and enhance as appropriate, the existing surface water drainage system in the Plan Area, ensure that new developments are adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems in new developments. Surface water runoff from development sites will be limited to pre-development levels and planning applications for new developments will be required to provide details of surface water drainage and Sustainable Drainage Systems proposal.</p>		Pop 1, 2 Mat 4,1 Bio 5 Land 1 Wat 1		Bio 1,2,3,4,6 Wat 2,3 Mat 1, 2, 3 Land 3 Soil 2 Mat 5,6,7		CH1,2 Land 2 Soil 1, 3
<p>Objective UI6 – St. Cleran’s River Tributary and Drainage Catchment (refer to Map 2) Require new development proposals within the catchment of the St. Cleran’s River tributary or that potentially drain towards this tributary to include full details of proposals to address the high probability of flooding associated with the tributary and the need to provide adequate surface water drainage, including the incorporation of Sustainable Drainage Systems proposals.</p>		Bio 5,6 Wat 1,2,3 Pop 1,2 Mat 1		All other EPOs		
Flood Risk Management- Policies & Objectives						
<p>Policy UI2 – Flood Risk Management It is the policy of Galway County Council to support, in co-operation with the OPW, the implementation of the EU <i>Flood Risk Directive (2007/60/EC)</i>, the <i>Flood Risk Regulations (SI No. 122 of 2010)</i> and the DEHLG/OPW publication <i>Flood Risk Management Guidelines 2009</i> (and any updated/superseding legislation or policy guidance). Galway County Council will also take account of the <i>Catchment Flood Risk Management Plans (CFRAMs)</i>, <i>Preliminary Flood Risk Assessment (PFRA)</i> and <i>County Galway Strategic Flood Risk Assessment 2012</i> and any recommendations and outputs arising from same that relate to or impact on the Plan Area.</p>		Pop 1, 2 Mat 1,2 Bio 5, 6 Wat 1				All other EPOs
<p>Objective UI7 – Flood Risk Management and Assessment (refer to Map 3) Ensure the implementation of the DEHLG/OPW publication <i>Flood Risk Management Guidelines 2009</i> (or any updated/superseding document) in relation to flood risk management within the Plan Area. This will include the following: a) Avoid, reduce and/or mitigate, as appropriate in accordance with the <i>Flood Risk management Guidelines 2009</i>, the risk of flooding within the flood risk areas indicated on Map 3 – Flood Risk Management, including fluvial, coastal/tidal, pluvial and groundwater flooding, and any other flood risk areas that may be identified during the period of the Plan or in relation to a planning application. b) Development proposals in areas where there is an identified or potential risk of flooding or that could give rise to a risk of flooding elsewhere will be required to carry out a Site-Specific Flood Risk Assessment, and justification test where appropriate, in accordance with the provisions of the <i>Flood Risk Management</i></p>		Wat 1, 2,3 Bio 5, 6 Pop 1, 2 Mat 1, 2,				All other EPOs

<p><i>Guidelines 2009</i> (or any superseding document). Any flood risk assessment should include an assessment of the potential impacts of climate change, such as an increase in the extent or probability of flooding, and any associated measures necessary to address these impacts.</p> <p>c) Development that would be subject to an inappropriate risk of flooding or that would cause or exacerbate such a risk at other locations shall not normally be permitted.</p> <p>d) Where certain measures proposed to mitigate or manage the risk of flooding associated with new developments are likely to result in significant effects to the environment or Natura 2000 sites downstream, such measures will undergo environmental assessment and Habitats Directive Assessment, as appropriate.</p>					
<p>Objective UI8 – Flood Zones and Appropriate Land Uses (refer to Map 3) Protect Flood Zone A and Flood Zone B from inappropriate development and direct developments/ land uses into the appropriate Flood Zone in accordance with the <i>Flood Risk Management Guidelines 2009</i> (or any superseding document) and the guidance contained in DM Standard UI1 – Flood Zones and Appropriate Land Uses. Where a development/land use is proposed that is inappropriate within the Flood Zone, then the development proposal will need to be accompanied by a Development Management Justification Test and Site-Specific Flood Risk Assessment in accordance with the criteria set out under the <i>Flood Risk Management Guidelines 2009</i></p>		<p><i>Wat 1, 2,3</i> <i>Bio 5, 6</i> <i>Pop 1, 2</i> <i>Mat 1, 2,</i></p>			<p><i>All other EPOs</i></p>
<p>Objective UI9 – Waterbodies and Watercourses (refer to Map 2 and Map 3) Protect waterbodies and watercourses within the Plan Area from inappropriate development, including the lake, rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include a 10m environmental management buffer on either side of St. Cleran’s River and its tributary in the east of the Plan Area, measured from the near river bank. Promote the</p>		<p><i>Bio 5,6</i> <i>Wat 1,2,3</i> <i>Soil 3</i> <i>Pop 1, 2</i></p>		<p><i>All other EPOs</i></p>	

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Water Quality – Policy & Objectives						
Policy UI3 – Water Quality It is the policy of Galway County Council to protect and improve water quality in conjunction with other agencies and stakeholders and in accordance with the EU <i>Water Framework Directive (2006/60/EC)</i> , EU <i>Groundwater Directive (2006/118/EC)</i> and associated national legislation and to support the implementation of the Western River Basin District Management Plan, including the actions and measures that form part of the Clarin/Kilcolgan Water Management Unit Action Plan. Galway County Council will take account of the above requirements to protect and improve water quality when considering new development proposals.		Bio 1, 2, 4,5,6 Wat 1, 2, 3 Soil 3 Pop 2 Mat 1,2,4		Bio 3		All other EPOs
Objective UI10 – Western River Basin District Management Plan and Protection of Waters Support the protection of water quality in accordance with the EU <i>Water Framework Directive (2006/60/EC)</i> and the <i>European Communities (Water Policy) Regulations 2003 (SI No. 722 of 2003)</i> (as amended) (or any updated legislation), including the implementation of the relevant recommendations and measures as outlined in the <i>Western River Basin District Management Plan 2009-2015</i> , including the <i>Clarin/Kilcolgan Water Management Unit Action Plan</i> (and any updated/ superseding documents). Development will only be permitted where it can be clearly demonstrated that the proposal would not have an unacceptable impact on the water environment, including surface water, groundwater quality and quantity, river corridors and associated wetlands. Galway County Council is statutorily obliged to protect the existing good quality status of the waters in Loughrea (including Lough Rea, St. Cleran’s River and tributary and the Clarin/Kilcolgan drainage area).		Bio 1,2,4,5,6 Wat 1, 2, 3 Soil 3 Pop 2 Mat 1,2,4		Bio 3		All other EPOs
Objective UI11– Groundwater & Aquifers Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the EU <i>Groundwater Directive 2006/118/EC</i> and the <i>European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010)</i> (or any updated legislation). Protect the locally important aquifer that under lays the Plan Area from risk of environmental pollution and have regard to any groundwater protection schemes and groundwater source protection zones where data has been made available by the Geological Survey of Ireland.		Bio 1, 2,3, 4,5,6 Wat 1, 2, 3 Soil 3 Pop 2 Mat 1,2,4		All other EPOs		All other EPOs
Waste Management – Policy & Objectives						
Policy UI4 – Waste Management It is the policy of the Galway County Council to support sustainable waste management through the prevention, reduction and recycling of waste and by facilitating the provision of adequate waste infrastructure, such as bring banks, at locations that will not adversely affect residential amenities		Pop 1,2 Mat 5 Soil 1				All other EPOs
Objective UI12 – Waste Prevention, Reduction & Recycling Promote the prevention, reduction and recycling of waste in new developments. New development proposals shall be required to submit proposals demonstrating how this is to be achieved with their planning applications.		Mat 5				All other EPOs

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Objective UI 13 – Bring Bank Facility Facilitate the installation of bring bank(s) at suitable locations within the Plan area and where they will not adversely affect residential amenities.		Pop 1, Mat 5				All other EPOs
Energy and Communications Infrastructure – Policy & Objectives						
Policy UI 5 – Energy and Communications It is the policy of Galway County Council to support the provision of adequate energy and communications infrastructure to service developments including gas, electricity, broadband, and telephone services. In particular, the Council supports the increased development and use of renewable energy and the aims of sustainable energy use and conservation in building design and construction.		AQ 1, 2 Mat 2 Pop1				All other EPOs
Objective UI14— Electricity & Gas Supply Facilitate the provision of an adequate supply of electricity and gas to developments in the Plan Area, to the requirements of the relevant service provider, and in accordance with the principles of proper planning and sustainable development. <i>(SEA Note: Uncertain interactions with EPOs due to infrastructural requirements not yet designed or planned)</i>		Pop 1, 2			All other EPOs Uncertain	
Objective UI15 – Energy Conservation & Efficiency Continue to implement Galway County Council’s Energy Action Plan regarding energy efficiency and conservation in existing and future residential, commercial and industrial buildings within Loughrea. Ensure that new buildings are sustainable in their siting, orientation, design and construction. Passive solar design techniques, high energy efficiency, low impact construction methods and the use of local/sustainable building materials, recycling aggregates and local craftsmanship will be encouraged to ensure that new developments minimise their environmental impacts and long term costs.		Pop 1, 2 AQ 2, Mat 6 Land 3				All other EPOs
Objective UI16 – Broadband & Telecommunications Facilitate the provision of adequate telecommunication infrastructure within the Plan Area, including telephone and broadband services, to the requirements of the relevant service providers and in accordance with the principles of proper planning and sustainable development.		Pop 1, 2			All other EPOs	
Objective UI17— Renewable Energy Promote and facilitate the development of renewable sources of energy within the Plan area and encourage the integration of micro-renewable energy sources into the design and construction of new developments, as appropriate.		Pop 1, 2 AQ 2,				All other EPOs
Climate Change & Air Quality – Policy & Objectives						
Policy UI16 – Climate Change & Air Quality It is the policy of Galway County Council to support and promote, in conjunction with other agencies, local, national and international initiatives for limiting/reducing emissions of greenhouse gases and encouraging the development of renewable energy sources in accordance with The ‘National Climate Change Strategy 2007-2012’, the EU Ambient Air Quality and Cleaner Air for Europe (CAFÉ) Directive (2008/50/EEC) and the Air Quality Standards Regulations 2011 (SI No180 of 2011) (or any updated/superseding documents).		AQ1, 2 Mat 7,6 Bio 1,2,3, 4,5,6 Pop 1,2			All other EPOs	

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<p>Objective UI18 Climate Change Support the implementation of the National Climate Change Strategy 2007 -2012 (or any updated/superseding document) and continue to implement Galway County Council’s Energy Action Plan regarding energy efficiency and conservation in existing and future buildings, in energy use and procurement activities and in raising awareness and stimulating action within local communities.</p>		AQ1, 2 Mat 7,6 Bio 1,2,3, 4,5,6 Pop 1,2			All other EPOs	
<p>Objective UI19 –Air Quality Promote the preservation of best ambient air quality compatible with sustainable development throughout the Plan Area in accordance with the EU Ambient Air Quality and Cleaner Air for Europe (CAFÉ) directive (2008/50/EC) by seeking to protect and maintain the regulatory standards contained with the EPA’s Air Quality in Ireland 2009 <i>Key Indicators of Ambient Air Quality 2010</i> (or any updated/superseding document) and by ensuring that all air emissions associated with new developments are within Environmental Quality Standards as set out in the Air Quality Standards Regulations 2011 (SI No 180 of 2011) (or any updated/superseding documents).</p>		AQ1, 2 Mat 7,6 Pop1,2			All other EPOs	
<p>Objective UI10 – Air Purification Encourage landscaping and deciduous tree planting in an environmentally sensitive manner within the Plan Area as a means of air purification, the filtering of suspended particles and the improvement of Loughrea’s micro- climate.</p>		AQ1, 2 Mat 6 Pop1,2 Bio 1			All other EPOs	
<p>Objective UI11 – Radon Have regard, in accordance with Galway County Council’s statutory role under the Building Control Act 2007, to the specific guidance on radon prevention measures for new homes as contained within the Building Regulations.</p>		Pop 1,2				All other EPOs
Development Management Guidelines						
<p>DM Guideline UI1 – Flood Zones and Appropriate Land Uses The table below indicates the types of land uses that are appropriate in each of the Flood Zones identified within the Plan Area, in accordance with the <i>Flood Risk Management Guidelines 2009</i>. Where developments/land uses are proposed that are considered inappropriate to the Flood Zone, then a Development Management Justification Test and Site-Specific Flood Risk Assessment will be required in accordance with the <i>Flood Risk Management Guidelines 2009</i>.</p>		Bio 5,6 Wat 1,2,3 Soil 3 Pop 1, 2 Mat 1,2			All other EPOs	
<p>DM Guideline UI2 – Waterbodies and Watercourses Require all relevant applications, which are located in close proximity to waterbodies or watercourses (including Lough Rea, St.Cleran’s River and tributaries), to submit measures to reduce and prevent pollution to the waterbody/watercourse, both during construction and after completion of the scheme.</p>		Wat 1-6 Bio 1-3			All other EPOs	
<p>DM Guideline UI3 – Energy Statements All proposals for new non-residential developments with a floor area of 1,000m² or more and residential developments comprised of 10 or more units may be required to submit an energy Statement outlining the methods proposed to minimise energy use in the development, such as building orientation and passive solar design, materials and insulation, renewable/alternative energy sources etc.</p>		Pop 1,2 AQ1,2			All other EPOs	

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Urban Design & Landscape – Policy & Objectives						
<p>Policy UD1 – Urban Design and Landscape</p> <p>It is the policy of Galway County Council to promote the use of sustainable urban design principles and approaches that will help to create high quality built and natural environments appropriate to the context and landscape setting of the town, having regard to the guidance contained in the <i>Sustainable Residential Development in Urban Areas Guidelines 2009</i> and the accompanying <i>Urban Design Manual 2009</i> (or any updated/superseding guidance documents). This will focus on the development of a high quality, well landscaped and appropriately scaled built environment with a strong civic and commercial core, responsive building frontages, appropriate building forms, heights, designs and materials and high quality civic, community, recreational and amenity facilities. The creation of a high quality natural environment will also be supported through the protection of the landscape sensitivities, views and prospects in the town and the promotion of the development of a green network and high quality landscaping.</p>		<p>Pop 1, 2 Land 1, 2,3 CH1 Bio 1</p>		<p>All other EPOs</p>		
<p>Objective UD1 – High Quality, Context Sensitive Design</p> <p>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 Lough Rea.</p>		<p>Pop 1, 2 CH1,2, Land 1,2,3</p>		<p>All other EPOs</p>		
<p>Objective UD2 – Public Spaces and Streets</p> <p>Promote the development of high quality public spaces consisting of streets, squares, parks and amenities connected by a network of pedestrian and cycling routes. Public spaces should have a high standard of design and street furniture that will create a coherent character for the area. This would include appropriately designed and located park benches, bus shelters, cycle storage facilities, refuse bins, signage, street sculpture, etc. but should avoid the over-proliferation of different elements and/or cluttering of public spaces.</p>		<p>Pop 1, 2 CH1,2, 3 Land 1,2,3 Mat</p>		<p>All other EPOs</p>		
<p>Objective UD3 – Spatial Definition and Animation</p> <p>Ensure that new developments are designed to provide spatial definition and animation to public spaces and streets through the use of appropriate building lines and built forms, responsive building frontages and passive surveillance and high quality streetscapes and/or landscaping edges to enclose and address public spaces. Perimeter block typologies provide a useful approach in generating good spatial definition, adequate enclosure and a high quality public realm and the creation of focal points, such as landmark buildings and gateways, help to improve spatial definition and legibility and will be encouraged in appropriate locations.</p>		<p>Pop 1, 2 CH1,2 Land 1,2,3 AQ2</p>		<p>All other EPOs</p>		




	X	↑	↓	↕	?	-
<p>Objective UD4 – Green Network and Landscaping Support the development of a network of amenities, open spaces and natural areas that support biodiversity, that incorporate existing landscape features such as local rivers, streams, trees, stone walls and hedgerows, that provide pedestrian and cycling linkages and active and passive recreation opportunities, that help to structure and provide relief from the built environment and that can provide areas for surface water attenuation and flood risk management.</p>		Pop 1, 2 Bio 1, Wat 1, Soil 1 Land 1,3 AQ 1, 2 Mat 1, 7				All other EPOs
<p>Objective UD5 – Street-Oriented Development and Responsive Frontages Promote street-oriented development along the urban street network within the built areas of the town and along the approach routes to the town. This will include improved facilities for pedestrians, cyclists and public transport as appropriate. Buildings and spaces should be designed to provide a human scale along street frontages with the use of appropriate building heights and responsive ground floor treatments. Intensive, fine-grained developments will generally be encouraged to provide a diversity of building forms and public spaces.</p>		Pop 1, 2 CH1,2, Land 1,2,3 Mat 7 AQ2		All other EPOS		
<p>Objective UD6 – Design Statements Require design statements with all large scale or sensitively located development proposals, such as in close proximity to an Architectural Conservation Area, protected structure, natural heritage designation, significant public amenity, elevated position or visually vulnerable area, and in the case of any other development proposals where this is considered necessary by the planning authority. Design statements should include a site appraisal examining the location, context, landscape/townscape setting, accessibility, features and characteristics of the development site, which should be used to inform the selection of appropriate development forms and design responses and the incorporation and provision of any important landscape features in the layout and design of the development. Design statements should be succinct documents that include both text and supporting graphics demonstrating how the site context and characteristics and design principles, policies and objectives have been addressed in the design and layout of the development proposal.</p>		Pop 1,2 CH1, 2 Land 1, 2,3		All other EPOs		

	X	↑	↓	↕	?	-
<p>Objective UD7 -Landscape, Townscape, Views and Prospects (refer to Map 2 and Galway County Development Plan)</p> <p>Protect the landscape character, values, sensitivities, focal points and views in the Plan Area, including those identified in the Galway County Development Plan and included in the Landscape and Landscape Character Assessment for County Galway 2002 and as shown on Map2– Specific Objectives. This will include, inter alia, the following:</p> <ol style="list-style-type: none"> Ensure that new developments are responsive to the high and special sensitivity of the Lough Rea lake and surrounds, to the moderate sensitivity of the elevated lands to the east of the town and to any other elevated sites, visually vulnerable areas or locally important townscape contexts. Require Visual Impact Assessment for developments with the potential to impact on areas of significant landscape character, value or sensitivity, including both urban and natural features, such as Lough Rea, significant townscapes and historic buildings, as appropriate Prohibit development that will block or interfere with a significant view or prospect. Where it is considered that a development may impact on views or prospects, have regard to the significance of any such impact and any appropriate mitigation measures that should be incorporated. 		Land 1,2,3 Pop 1,2				All other EPOs
Built Heritage & Cultural Heritage – Policies & Objectives						
<p>Policy BH1 – Built Heritage</p> <p>It is the policy of Galway County Council to support the protection and conservation of the architectural and archaeological heritage, including the Protected Structures, Architectural Conservation Area, Recorded Monuments and Places and other important features of architectural or archaeological heritage within the Plan Area. Galway County Council will ensure the implementation of the legislative, statutory and policy provisions relevant to the conservation of built heritage including the following (and any updated/superseding documents):</p> <ul style="list-style-type: none"> Legislative provisions in the Planning and Development Act 2000 (as amended) and National Monuments Act 1930 (as amended). Statutory provisions in the Galway County Development Plan, including the Record of Protected Structures. Policy guidance in <i>Government Policy on Architecture 2009-2015, the Architectural Heritage Protection Guidelines 2004, the Archaeology and Development: Guidelines for Good Practice for Developers.</i> 		CH 1,2,3 Pop 1,2 Land 1,2,3				All other EPOs

	X	↑	↓	↕	?	-
<p>Policy BH2 – Cultural Heritage It is the policy of Galway County Council to acknowledge and promote awareness of the origins, historical development and cultural heritage of the town, to support high quality developments that relate to local heritage and to ensure that new development respects and is responsive to the cultural heritage of Loughrea.</p>		CH 1,2 Pop 1, 2				All other EPOs
<p>Objective BH1 – Architectural Heritage Ensure the protection of the architectural heritage in the Plan Area, in particular by implementing the relevant legislative provisions of the <i>Planning and Development Act 2000</i> (as amended) in relation to architectural heritage and policy guidance contained within the <i>Architectural Heritage Protection Guidelines 2004</i>, (or any updated/superseding document).</p>		CH 1,2 Pop 1, 2 Land 1, 2, 3				All other EPOs
<p>Objective BH2 – Protected Structures (refer to Galway County Development Plan) Ensure the protection and sympathetic enhancement of structures included and proposed for inclusion in the Record of Protected Structures (RPS) that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, together with the integrity of their character and setting.</p>		CH 1,2 Pop 1, 2 LAND 1, 2, 3				All other EPOs
<p>Objective BH3 – Architectural Conservation Area (refer to Map 1 and 2) Protect, conserve and enhance the essential character of the Architectural Conservation Area (ACA), through the appropriate management and control of the design, location and layout of new development, alterations or extensions to existing structures, and/or modifications to the character or setting of the Architectural Conservation Area.</p>		CH 1,2 Pop 1, 2 Land 1, 2, 3				All other EPOs
<p>Objective BH4 – ‘The Walk’ (refer to Map 2) Protect and enhance ‘The Walk’ to the rear of the main street, including the restriction of access to ‘The Walk’ to pedestrians and ensure that new development in close vicinity to the moat respects its character and setting.</p>		CH 1,2 Pop 1, 2 Land 1, 2, 3				All other EPOs
<p>Objective BH5 Development/Works relating to Protected Structures and Architectural Conservation Areas Ensure that any development, modifications, alterations, or extensions materially affecting the character of a Protected Structure, or a structure adjoining a Protected Structure or structure within or adjacent to an Architectural Conservation Area (ACA), is sited and designed appropriately and is not detrimental to the character or setting of the Protected Structure or the ACA. This will include the following: a) Works materially affecting the character of a Protected Structure or the exterior of a building/structure within an ACA will require planning permission. b) Any works/development carried out to a protected structure or the exterior of a building/structure within an ACA shall be in accordance with best conservation practice and use sustainable and appropriate materials. c) Works/development within the Architectural Conservation Area shall ensure the conservation of traditional features and building elements which contribute to the character of the area. d) New proposals shall have appropriate regard to scale, plot, form, mass, design, materials, and colours and function.</p>		CH 1,2 Pop 1, 2 Land 1, 2, 3 Soil 1		All other EPOs		

	X	↑	↓	↕	?	-
<p>Objective BH6 – Architectural Conservation Area Appraisal and Management Plan Prepare and publish an ACA Appraisal and Management Plan for Loughrea over the lifetime of the Plan, to preserve, protect and enhance the character of this area, including the public realm and implement any recommendations arising from same.</p>		CH 1,2 Pop 1, 2 Land 1, 2, 3				All other EPOs
<p>Objective BH7 – Vernacular Architecture & Structures of Local Interest Recognise the importance of the contribution of vernacular architecture to the character of Loughrea and ensure the protection, retention, and appropriate revitalisation and use of vernacular heritage, including structures of local interest that contribute to the local distinctiveness, built heritage and/or streetscape character of Loughrea and resist the demolition of these vernacular structures.</p>		CH 1,2 Pop 1, 2 Land 1, 2, 3				All other EPOs
<p>Objective BH8 – Archaeological Heritage Ensure the protection and sympathetic enhancement of archaeological heritage in the Plan Area, in particular by implementing the relevant provisions of the <i>Planning and Development Act 2000</i> (as amended), the <i>National Monuments Act 1930</i> (as amended), the <i>National Policy on Town Defences 2008</i> and the <i>Archaeology and Development: Guidelines for Good Practice for Developers</i>.</p>		CH 1,2 Pop 1, 2 Land 1, 2, 3				All other EPOs
<p>Objective BH9 – Monuments and Places Ensure the protection and sympathetic enhancement of the monuments and places included and proposed for inclusion in the Record of Monuments and Places (RMP), together with the integrity of their character and setting, in particular by implementing the relevant provisions of the <i>Planning and Development Act 2000</i> (as amended) and the <i>National Monuments Act 1930</i> (as amended), the <i>National Policy on Town Defences 2008</i>, and the <i>Archaeology and Development: Guidelines for Good Practice for Developers</i>. This will include the protection of all Monuments on the list provided by the National Monument Service, Department of Arts, Heritage and the Gaeltacht, which has statutory responsibility in this area.</p>		CH 1,2 Pop 1, 2 Land 1, 2, 3				All other EPOs
<p>Objective BH10 –Zones of Archaeological Potential (refer to Map 1 and 2) Ensure that all planning applications for new developments and all proposed infrastructure projects/schemes in close proximity (30m) to Recorded Monuments and Places (RMPs), and within the Zones of Archaeological Potential (ZAPs) are referred to the Department of Arts, Heritage and the Gaeltacht (DAHG) and take account of the archaeological heritage of the area, any advice received from the DAHG and the need for archaeological assessments and, where appropriate</p>		CH 1,2 Pop 1, 2 Land 1, 2, 3		All other EPOs		
<p>Objective BH11- Town Defences (refer to Map 2) Protect and enhance the medieval town defences of Loughrea, including the remaining town walls, moat and gate, having due regard to the <i>National Policy on Town Defences 2008</i>. This will include the enhancement of the appearance of the original town moat, the restriction of development of new bridges over the Moat and the repair of existing bridges in a sensitive manner.</p>		CH 1,2 Pop 1, 2 Land 1, 2, 3				All other EPOs
<p>Objective BH12- Crannogs (refer to Map 2) Protect crannogs in the Lough from insensitive and inappropriate water based leisure activities.</p>		CH 1,2 Pop 1, 2 Land 1, 2, 3				All other EPOs

	X	↑	↓	↕	?	-
ObjectiveBH13– Local Place Names Protect local place names as an important part of the cultural heritage and unique character of the Plan Area. Support the use of appropriate names for new developments that reflect the character and heritage of the area and that contribute to the local distinctiveness of the village. New developments will be required to consult with <i>Coiste Logainmneacha Chontae na Gaillimhe</i> , the Galway County Council ‘Placename Committee’, and to identify an appropriate name for new developments that reflect the local character and heritage of the area.		CH 1,2 Pop 1, 2 Land 1, 2, 3				All other EPOs
Natural Heritage & Biodiversity – Policies & Objectives						
Policy NH1 – Natural Heritage and Biodiversity It is the policy of Galway County Council to support the conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of Natura 2000 sites, the protection of Natural Heritage Areas and proposed Natural Heritage Areas and the promotion of the development of a green/ecological network within the Plan Area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment. The protection of natural heritage and biodiversity, including Natura 2000 sites, will be implemented in accordance with relevant EU environmental directives and applicable national legislation, policies, plans and guidelines, including the following (and any updated/superseding documents): <ul style="list-style-type: none"> • EU Directives, including the <i>Habitats Directive (92/43/EEC)</i>, the <i>Birds Directive (2009/147/EC)</i>, the <i>Environmental Impact Assessment Directive (85/337/EEC)</i>, the <i>Water Framework Directive (2000/60/EC)</i> and the <i>Strategic Environmental Assessment Directive (2001/42/EC)</i>. • National legislation, including the <i>Wildlife Act 1976</i>, the <i>European Communities (Environmental Impact Assessment) Regulations 1989 (SI No. 349 of 1989)</i> (as amended), the <i>Wildlife (Amendment) Act 2000</i>, the <i>European Union (Water Policy) Regulations 2003</i> (as amended), the <i>Planning and Development Act 2000</i> (as amended) and the <i>European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011)</i>. • National policy guidelines, including the <i>Landscape and Landscape Assessment Draft Guidelines 2000</i>, the <i>Environmental Impact Assessment Sub-Threshold Development Guidelines 2003</i>, <i>Strategic Environmental Assessment Guidelines 2004</i> and the <i>Appropriate Assessment Guidelines 2010</i>. • Catchment and water resource management plans, including the <i>Western River Basin District Management Plan 2009-2015</i>. • Biodiversity plans and guidelines, including <i>Actions for Biodiversity 2011-2016: Ireland’s National Biodiversity Plan</i>, the <i>Biodiversity Action Plan for County Galway 2008-2013</i> and the <i>Biodiversity Guidelines</i> produced by Galway County Council. 		Bio 1,2,3, 4,5,6 Pop 1,2 Wat 1,2,3 Soil 2,3				All other EPOs
	X	↑	↓	↕	?	-

<p>Objective NH1 – Natura 2000 Sites (refer to Map 2) Protect European sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU <i>Habitats Directive (92/43/EEC)</i>, EU <i>Birds Directive (2009/147/EC)</i>, the <i>Planning and Development (Amendment) Act 2010</i>, the <i>European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011)</i> (and any subsequent amendments or updated legislation) and having due regard to the guidance in the <i>Appropriate Assessment Guidelines 2010</i> (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence and a Habitats Directive Assessment where necessary, that:</p> <ol style="list-style-type: none"> 1. The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects); or 2. The plan or project will adversely affect the integrity of any Natura 2000 site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or 3. The plan or project will adversely affect the integrity of any Natura 2000 site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000. 		<i>Bio 1, 2, 4, Soil 3</i>		<i>All other EPOs</i>		<i>CH1, 2</i>
<p>Objective NH2 – Protected Habitats and Species Support the protection of protected habitats and species listed in the annexes to the EU <i>Habitats Directive 1992 (92/43/EEC)</i> and the <i>Birds Directive (2009/147/EC-codified version of Directive)</i>. This includes the protection of bats and their roosts, and the maintenance of woodland, hedgerows, treelines, ecological networks and corridors which serve as feeding areas, flight paths and community routes for bats.</p>		<i>Bio 1,2,3 Soil 3 Wat 1</i>				<i>All other EPOs</i>
<p>Objective NH3 –Natural Heritage Areas (refer to Map 2) Protect Natural Heritage Areas and proposed Natural Heritage Areas in accordance with the requirements of the <i>Wildlife Act 1976</i>, the <i>Wildlife (Amendment) Act 2000</i> and the <i>Planning and Development Act 2000</i> (as amended). Where a proposed development within the Plan Area may give rise to likely significant effects on any Natural Heritage Area or proposed Natural Heritage Area an Ecological Impact Assessment or an Environmental Impact Assessment may be required.</p>		<i>Bio 1,2,3 Soil 3 Wat 1</i>				<i>All other EPOs</i>
	X				?	-

<p>Objective NH4 – Impact Assessments Ensure full compliance with the requirements of the EU <i>Habitats Directive (92/43/EEC)</i>, <i>SEA Directive (2001/42/EC)</i> and <i>EIA Directive (85/337/EEC)</i>, and the associated <i>European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011)</i>, <i>European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004-2011</i>, <i>Planning and Development (Strategic Environmental Assessment) Regulations 2004-2011</i> and the <i>European Communities (Environmental Impact Assessment) Regulations 1989-2011</i> (or any updated/superseding legislation). Planning applications for proposed developments within the Plan Area that may give rise to likely significant effects on the environment and/or any designated site may need to be accompanied by one or more of the following: an Environmental Impact Statement, an Ecological Impact Assessment Report, a Habitats Directive Assessment Screening Report or a Natura Impact Statement, as appropriate. Ensure that Natura Impact Statements and any other environmental or ecological impact assessments submitted in support of proposals for development are carried according to best practice methodologies and contain all necessary baseline assessments.</p>		<i>Bio 1,2,3,5, Wat 1,2 Soil 2, 3 Pop 1,2 Land 1, 3 Mat 1</i>			<i>All other EPOs</i>
<p>Objective NH5 – Biodiversity & Ecological Networks (refer to Map 2) Support the protection 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 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 new developments.</p>		<i>Bio 1,2,3,5, Wat 1,2 Soil 2, 3 Pop 1,2 Land 1, 3 Mat 1</i>			<i>All other EPOs</i>
<p>Objective NH6 – Water Resources Protect all water resources in the Plan Area, including Lough Rea, St Cleran’s River, its tributaries and downstream waterbodies, other streams, springs, surface water and groundwater quality, in accordance with the requirements and guidance in the EU <i>Water Framework Directive 2000 (2000/60/EC)</i>, the <i>European Union (Water Policy) Regulations 2003</i> (as amended) and the <i>Western River Basin Management Plan 2009-2015</i> (including any superseding versions of same). Support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development in the Plan Area.</p>		<i>Bio 1,2,3, 4,5,6 Wat 1,2,3 Soil 2, 3 Pop 1,2 Land 1, Mat 1,2,3</i>			<i>All other EPOs</i>

	X	↑	↓	↕	?	-
<p>Objective NH7 – Environmental Management Area (refer to Map 2) Ensure that new development proposals on the lakeshore and around the lake that may 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>		Bio 1,2,3, 4,5,6 Wat 1,2,3 Pop 1,2		All other EPOs		
<p>Objective NH8 – Trees, Parkland/Woodland and Hedgerows Protect important tree clusters and hedgerows in the Plan Area and ensure that development proposals take cognisance of significant trees/tree stands. Seek to retain natural boundaries including stone walls, hedgerows and tree boundaries, wherever possible and replace with a boundary type similar to the existing boundary where removal is unavoidable.</p>		Bio 1, 4,5 Wat 1, 2 Pop 1, 2 Land 1				All other EPOs
<p>Objective NH9 – Geological and Geomorphological Systems Protect and conserve geological and geomorphological systems, sites and features from inappropriate development that would detract from their heritage value and interpretation and ensure that any plan or project affecting karst formations are adequately assessed with regard to their potential geophysical, hydrological, hydrogeological or ecological impacts on the environment.</p>		Bio 1-6 Wat 1,3 Soil 3				All other EPOs
<p>Objective NH10 – Control of Invasive and Alien Invasive Species Seek to prevent the spread of invasive and alien species and promote measures to achieve this objective. Require a landscaping plan to be produced for developments near waterbodies and ensure that such plans do not include alien invasive species.</p>		Bio 1 -6 Wat 1,		All other EPOs		
<p>Objective NH 11 – Consultation with Environmental Authorities Ensure that all development proposals are screened to determine whether they are likely to have a significant direct, indirect or cumulative effect on the integrity or conservation objectives of any Natura 2000 site and, where significant effects are likely or uncertain, there will be a requirement for consultation with the relevant environmental authorities as part of any Habitats Directive Assessment that may be required.</p>		Bio 1 -6		All other EPOs		

Table B: Assessment of land use zonings.

The following table assesses the land use zonings proposed for the draft Loughrea LAP. The Functional Area has been divided into 9 areas, bounded by the road network. Please see Figure Annex A for reference.

Table B: Assessment of Land Use Zonings

Area 1: South East Plan Area Between R351 (Woodford Road) and L4213	X	↑	↓	⚡	?	-
Agriculture		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ2 Mat 1				All other EPOs
Community Facilities Note: this zoning confirms the existing use as a nursing home/community hospital.		Pop 1, 2 Mat 7		All other EPOs		
Existing Residential Note: all EPOs are identified as likely to be mitigated as infill sites remain within the existing residential zoning so there may be some limited infill residential development				All EPOs		
Residential Phase 1		Pop 1, 2 AQ2		All other EPOS		
Residential Phase 2				All EPOs		
Open Space		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ2				Soil 1 CH1, 2 Land 1-3 AQ1 Mat

		Mat 1				2,3,4,5,6,7
Transport Infrastructure		Pop 1 Mat 7		All other EPOs		
Area 2: Area fringing Lough Rea between N66 and R351 and lake	X	↑	↓	↕	?	-
Environmental Management		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ2 Mat 1				Soil 1 CH1, 2 Land 1-3 AQ1 Mat 2,3,4,5,6,7
Community Facilities		Pop 1, 2 Mat 7		All other EPOs		
Town Centre		Pop 1, Mat 7		All other EPOs		
Open Space		Bio 1-6, Wat 1-3 Soil 2,3, Pop 1,2 Aq2,Mat 1		All other EPOs		
Transport Infrastructure		Pop 1 Mat 7		All other EPOs		
Existing Residential Note: this existing residential refers to three mature residential properties.				All EPOs		

Area 3:Eastern part of Loughrea between L4213 and N65	X	↑	↓	↕	?	-
Agriculture		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ2 Mat 1				All other EPOs
Industrial		Pop 1, Pop 2		All other EPOs		
Business and Enterprise		Pop 1,2		All other EPOs		
Open Space		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ2 Mat 1		All other EPOs		
Residential Phase 1		Pop 1, 2, AQ2		All other EPOS		
Residential Phase 2				All EPOs		
Existing Residential Note: all EPOs are identified as likely to be mitigated as infill sites remain within the existing residential zoning so there may be some limited infill residential development				All EPOs		
Community Facilities		Pop 1, 2		All other		

		Mat 7		EPOS		
Town Centre		Pop 1 Mat 7		All other EPOs		
Transport Infrastructure		Pop 1 Mat 7		All other EPOs		
Public Utilities		Pop 1, 2		All other EPOs		
Area 4: North Eastern part of Loughrea between N65 and L4196	X	↑	↓	⚡	?	-
Industrial		Pop 1, 2		All other EPOs		
Open Space		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ2 Mat 1		All other EPOs		
Residential Phase 2				All EPOS		
Community Facilities		Pop 1, 2 Mat 7		All other EPOS		
Public Utilities		Pop 1, 2		All other EPOs		
Transport Infrastructure		Pop 1		All other		

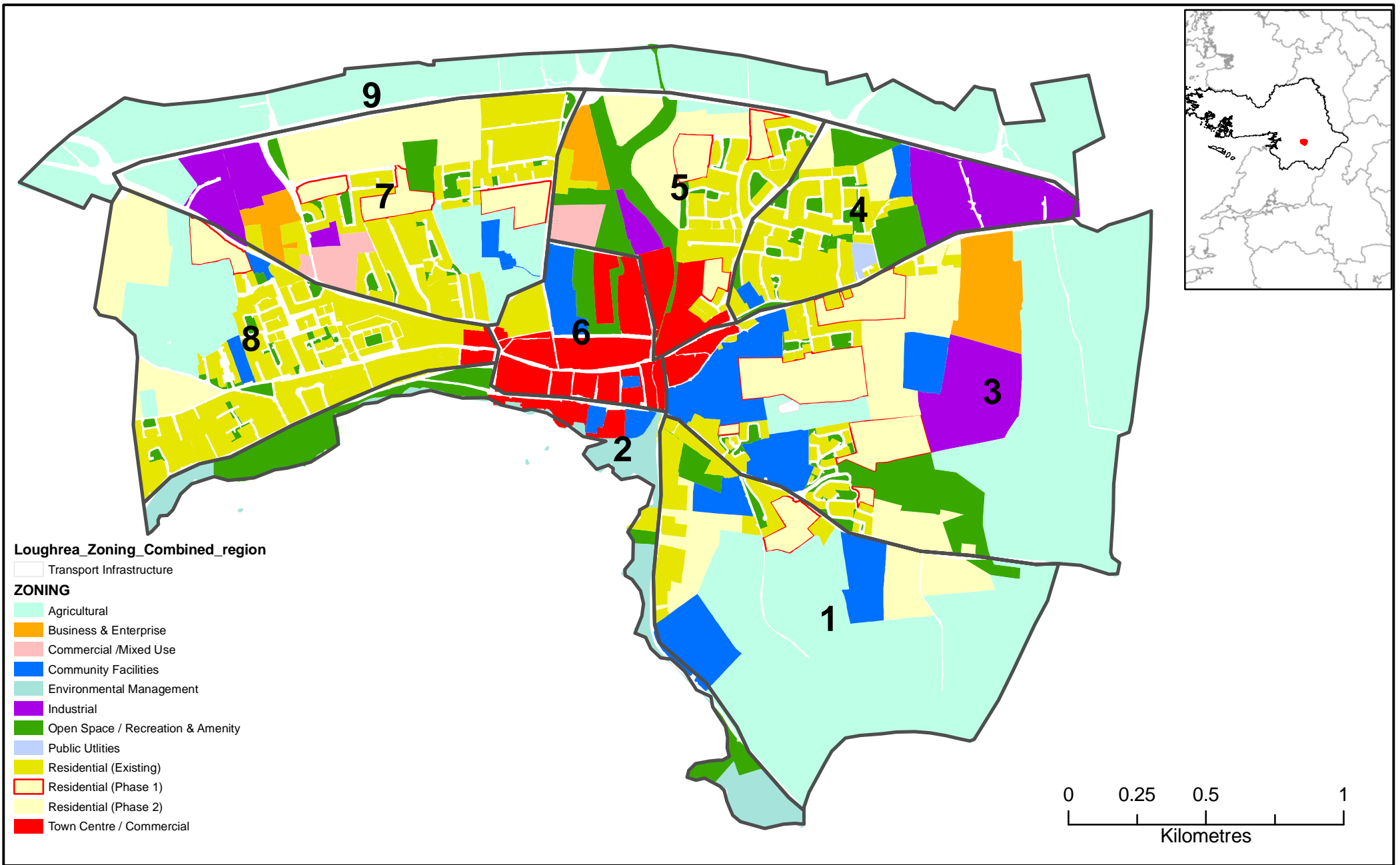
		Mat 7		EPOs		
Existing Residential				All EPOS		
Area 5: North central Loughrea, between N65 and L4194	X	↑	↓	↕	?	-
Agriculture		Bio 1-6 Wat 1-3 Soil 2,3, Pop 1,2 AQ2 Mat 1				All other EPOs
Open Space		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ 2 Mat 1		All other EPOs		
Residential Phase 2				All EPOs		
Residential Phase 1		Pop 1, 2 AQ 2		All other EPOS		
Existing Residential Note: all EPOs are identified as likely to be mitigated as infill sites remain within the existing residential zoning so there may be some limited infill residential development				All EPOs		
Business and Enterprise		Pop 1,2		All other		

				EPOs		
Commercial /Mixed Use		Pop 1, 2		All other EPOs		
Industrial		Pop 1, 2		All other EPOs		
Transport Infrastructure		Pop 1 Mat 7		All other EPOs		
Town Centre/Commercial		Pop 1, 2 Mat 7		All other EPOs		
Area 6:Town Centre Between N66 and L4194	X	↑	↓	⚠	?	-
Open Space		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ2 Mat 1		All other EPOs		
Town Centre/Commercial		Pop 1, 2 Mat 7		All other EPOs		
Community Facilities		Pop 1, 2 Mat 7		All other EPOS		
Transport Infrastructure		Pop 1 Mat 7		All other EPOs		
Existing Residential Note: all EPOs are identified as likely to be mitigated as infill sites remain within the existing residential zoning so there may be some limited infill residential development				All EPOs		

Area 7: North West Loughrea South of N66 and L82712 and L4194. Town Centre	X	↑	↓	⚠	?	-
Residential Phase 2				All EPOs		
Existing Residential Note: all EPOs are identified as likely to be mitigated as infill sites remain within the existing residential zoning so there may be some limited infill residential development				All EPOs		
Residential Phase 1		Pop 1, 2 AQ2		All other EPOS		
Agriculture		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ2 Mat 1				All other EPOs
Industrial		Pop 1, 2		All other EPOS		
Business and Enterprise		Pop 1, 2		All other EPOS		
Community Facilities		Pop 1, 2 Mat 7		All other EPOS		
Commercial /Mixed Use		Pop 1, 2		All other EPOS		
Open Space		Bio 1-6 Wat 1-3 Soil 2,3		All other EPOS		

		Pop 1,2 AQ2 Mat 1				
Area 8 : South West Loughrea between N66 and L82712	X	↑	↓	⊘	?	-
Residential Phase 2				All EPOs		
Agriculture		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ2 Mat 1				All other EPOs
Existing Residential Note: all EPOs are identified as likely to be mitigated as infill sites remain within the existing residential zoning so there may be some limited infill residential development				All EPOs		
Residential Phase 1		Pop 1, 2 AQ2		All other EPOS		
Open Space		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ2 Mat 1		All other EPOs		
Area 9: North of N66 and N65	X	↑	↓	⊘	?	-

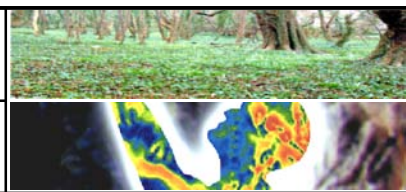
Agriculture		Bio 1-6 Wat 1-3 Soil 2,3 Pop 1,2 AQ2 Mat 1				All other EPOs
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DATE: 2/4/2012	SCALE: 1:30,000
REF:	SIZE: A4
DRAWN: MFC	APPROVED: RM

Annex A Landuse Zonings

Galway County Council Loughrea Local Area Plan SEA



minogue & associates
 Tuamgraney, County Clare
 www.minogueandassociates.com

ERA-MAPTEC
 40 Lwr. O'Connell St.
 Dublin 1 www.era.ie



ANNEX B: EPA CHECKLIST

ENVIRONMENTAL REPORT AND NON-TECHNICAL SUMMARY

Note: This section provides an overview of the compliance of the ER with the requirements of the SEA Directive and the SEA Regulations. Where non-compliance has been highlighted in previous sections of the SEA Process Checklist, actions taken to resolve non-compliance should be highlighted in the 'Comment' section.

Minimum Requirements Question		Yes, No, Comment	Statutory Basis
11.1	Does the ER contain all of the aspects listed in Annex 1 of the SEA Directive and Schedule 2 and 2B of S.I. 435 and 436 of 2004 (as amended) ?	Yes	SEA Directive Article 5 Annex 1 S.I. Nos 435 & 436 of 2004
11.2	Does the ER include a non-technical summary?	YES	SEA Directive Article 5 Annex I (j) S.I. Nos 435 & 436 of 2004
11.3	Does the non-technical summary clearly summarise the following:		SEA Directive Article 5 Annex I (j) S.I. Nos 435 & 436 of 2004
		Y/N	Comment
	a) Contents and main objectives of the draft P/P	Y	Yes, chapter one and detailed in Annex A
	b) Current state of the environment and evolution	Y	Chapter Four
	c) Environmental characteristics of area significantly affected	Y	Chapter Four
	d) Existing environmental problems	Y	Chapter Four
	e) Environmental protection objectives	Y	Chapter Five
	f) Significant effects on the environment	Y	Chapter Seven
	g) Mitigation measures	Y	Chapter Eight
	h) Alternatives	Y	Chapter Six

i) Monitoring	Y	Chapter Nine
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Additional Recommended Tasks

	Question	Yes, No. Comment	
11.4	Has a description been provided in the ER of the screening process and subsequent determination?	Yes Chapter Two discusses screening	
11.5	Have the responses to the scoping exercises been included in the ER? Has an explanation been given as to how these responses were considered?	Yes, Chapter Two	
11.6	Is the Non-Technical summary concise and easy to understand?	Yes	DoEHLG Guidelines S.4.41
11.7	Has a description of the outcome of all consultations (including transboundary) been documented in the ER?	Scoping Consultation described in Chapter Two	
11.8	Have relevant references, glossary of terms and scaled maps (with source identified) been included?	Yes, mainly in Chapter Four and Glossary at end of report	

Strategic Environmental
Assessment Screening
Report on Material
Alterations to Draft
Loughrea LAP

26th July 2012

Minogue and Associates

Addendum Screening Report on proposed Material Alterations to the draft Loughrea Local Area Plan 2012 -2018.

1.1 Introduction

In accordance with Section 20(d) of the Planning and Development Acts, 2000-2010, notice is hereby given that Galway County Council are proposing alterations to the Draft Loughrea Local Area Plan 2012-2018. These alterations have arisen following the review of the Manager's Report on submissions received during the public display period of the Draft Loughrea Local Area Plan 2012- 2018 by the Elected Members of the Council on 13th July 2012.

The purpose of this report is to consider whether the material alterations to the Local Area Plan will have any likely significant environmental effects, and as such, would therefore require the preparation of a Strategic Environmental Assessment (SEA). The SEA process is the formal systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt the plan or programme. The key indicator that will determine if an SEA is required is if they are likely to have significant environmental effects on the environment or not. Screening is the technique applied to determine whether a particular Plan would be likely to have significant environmental effects, and would thus warrant a SEA.

In accordance with Section 14A of the Planning & Development (Strategic Environmental Assessment) Regulations 2004 - 2011, the Draft Loughrea Local Area Plan was 'screened' for environmental impacts in April 2012. This screening report is included as an addendum to the SEA Environmental Report.

The proposed material alterations to the Draft Local Area Plan are outlined in Section 2.1 presented in the order they appear in the Local Area Plan and should be read in conjunction with the Draft Loughrea Local Area Plan 2012-2018. The likely significant environmental effects or potential impacts of all alterations are screened and assessed in Table 2a. Please also refer to the Material Alterations Map to locate the proposed rezonings.

This screening report concludes that these material alterations will not result in significant impacts on the environment, therefore the proposed material alterations to the Draft Loughrea Local Area Plan 2012-2018 would not warrant a full SEA.

2.1 Assessment in terms of Schedule 2A: Criteria for determining whether a plan is likely to have significant effects on the environment

The following assessment has been conducted in accordance with the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004). The Screening of the proposed material alterations is undertaken using specified criteria for determining the likely significant environmental impacts of a variation as set out in Schedule 2a of SEA Regulations (S.I. 435 of 2004) and replicated in Section 2.1.2 below.

2.1.2 Characteristics of the Effects and of the Area Likely to be Affected

The effects have been determined having regard to:

1. The area likely to be affected,
2. The probability, duration, frequency and reversibility of effects,
3. The cumulative nature of the effects,
4. The transboundary nature of the effects,
5. The risk to human health or the environment (e.g. due to accidents),
6. The magnitude and spatial extent of the effect (geographical area and size of the population likely to be affected),
7. The value and vulnerability of the area likely to be affected due to:
 - special natural characteristics or cultural heritage,
 - exceeded environmental quality standards or limit values, and
 - intensive land use.
8. The effects on areas or landscapes, which have recognised national, European Union or international protection status.

Table 2a: Material Alteration and Assessment of Environmental Effects.

Alteration	Consideration
Section 1.3.2 Statutory Process. Paragraph 2 and 3 as follows: Environmental assessments have also been undertaken to assess the potential impacts of the Local Area Plan on the environment and on European sites that form part of the Natura 2000 network, including a Strategic Environmental Assessment	This text provides clarification and appropriate terminology in line with the EU Habitats Directive. Positive impacts for the following EPOs: Bio 1-6, Wat 1, Soil 3. For remaining EPOs, neutral impacts are identified.

<p>(SEA) and a Habitats Directive Assessment (HDA).</p> <p>A HDA (also referred to as an ‘Appropriate Assessment’ or ‘AA’) is required to determine whether a plan or project will have a significant adverse effect, either individually or in combination with other plans or projects, on the integrity of any European sites that form part of the Natura 2000 sites network, in view of its conservation objectives. In the case of Loughrea, this includes the Lough Rea candidate Special Area of Conservation (cSAC) and Special Protection Area (SPA) and other European sites within 15km of the Local Area Plan area. The relevant recommendations and mitigation measures from the HDA process and Natura Impact Report have been incorporated into the Plan.</p>	
<p>Section 1.4.1 Plan Informants</p> <p>Strategic Planning Context</p> <p>the <i>Retail Planning Guidelines 2005/Draft Retail Planning Guidelines 2014 2012</i>.</p>	<p>This text updates the relevant guidelines and has a neutral impact on all EPOs</p>
<p>Heritage and Environment – Promoting and facilitating appropriate growth of the town, while protecting the built, cultural and natural heritage of Loughrea in accordance with applicable legislation and policy. This also includes consideration of the environmental designations adjacent to and within the plan boundary (Lough Rea cSAC/SPA), some of which were partly zoned for residential and amenity uses in the previous Local Area Plan</p>	<p>Highlighting the European site Lough Rea cSAC/SPA provides additional clarity to potential applicants, this is identified as a neutral impact to all EPOs, and a positive impact to Bio 1, Bio 2.</p>
<p>Amend Objective DS3 and NH1 as follows:</p> <p>Protect European sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU <i>Habitats Directive (92/43/EEC)</i>, EU <i>Birds Directive (2009/147/EC)</i>, the <i>Planning and Development (Amendment) Act 2010</i>, the <i>European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477</i></p>	<p>This textual changes are on foot on a submission by the Department of Arts, Heritage and the Gaeltacht, and again provide clarity and better reflect legislative terminology in the EU Habitats Directive. Positive impacts on Bio 1, Bio 2. Neutral impacts for other EPOs.</p>

<p>of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the <i>Appropriate Assessment Guidelines 2010</i> (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence, screening for appropriate assessment, and a Habitats Directive Assessment where necessary, that:</p> <ol style="list-style-type: none"> 1. The plan or project will not give rise to significant adverse direct, indirect or secondary impacts effects on the integrity of any Natura-2000 European site (either individually or in combination with other plans or projects); or 2. The plan or project will have significant adversely affect effects on the integrity of any Natura-2000 European site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or 3. The plan or project will have significant adversely affect effects on the integrity of any Natura-2000 European site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000. 	
<p>Objective LU15 – Residential Densities (refer to DM Guideline LU1) Promote a range of residential densities within the Plan Area appropriate to the</p>	<p>As above.</p>

<p>prevailing development pattern, supporting infrastructure, urban character and heritage resources in accordance with the guidance in the <i>Sustainable Residential Development in Urban Areas Guidelines 2009</i> (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 European sites that form part of the Natura 2000 sites network. The density of residential developments will generally be in accordance with the guidance set out under DM Guideline LU1, 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 adequate infrastructural capacity and services can be provided.</p>	
<p>Objective LU16 – 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> <ul style="list-style-type: none"> • 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. • Action Area Plans for the integrated development of backlands to the rear of the primary streets of Loughrea. • An Action Area Plan for the sensitive and appropriate development of industrial zoned lands at the western approach to the town with high quality building frontages and/or landscaping treatments along all public roads. <p>These 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 European site that forms part of the Natura 2000 site network.</p>	<ol style="list-style-type: none"> 1. This additional text is identified as generating positive impacts for the following EPOs: Land 1, Land 3Pop 1 For other EPOs, impacts are identified as being mitigated through existing Development Management Guidelines, and Policies and Objectives in the draft LAP. 2. This textual changes are on foot on a submission by the Department of Arts, Heritage and the Gaeltacht, and again provide clarity and better reflect legislative terminology in the EU Habitats Directive.
<p>Objective ED3 – Retail Development Support the development of appropriate types, scales and patterns of retail development in suitable locations within the town and high quality designs that:</p>	<p>Additional text reflects the Retail Design Manual 2012 and may improve Land 3 and Mat 7 should applications arise. Other impacts identified as neutral for all other EPOs.</p>

<ul style="list-style-type: none"> • Support the vitality and viability of the existing town centre and associated main streets and/or do not undermine their vitality and viability. • Protect investment in strategic roads and infrastructure and that are easily accessible, particularly in terms of public transport. • Comply with the provisions of the <i>Retail Planning Guidelines 2005-2012</i> and <i>Draft Retail Planning Guidelines 2012</i> (and any updated/superseding documents, including the forthcoming <i>Best Practice Design Manual</i>), including the application of a sequential approach to retail development, the policies and objectives of any future Retail Strategy for Galway that may be adopted in the lifetime of the Local Area Plan and the guidance in the <i>Retail Design Manual 2012</i> (and any updated/superseding documents). • Contribute to the creation of a high quality retail environment <p>The Town Centre (C1) zoning will remain the primary focus for the location of new retail development and on Commercial/Mixed Use (C2) zoning where appropriate. The Planning Authority will ensure that the location of future retail development is consistent with the key policy principles and order of priority as set out under Section 5.4 of in the <i>Draft Retail Planning Guidelines 2011-2012</i> (and any updated/superseding document) and will require Retail Impact Assessments, including details of the sequential approach, and, where considered necessary, Transport Impact Assessments and/or Design Statements, where appropriate, for retail developments in accordance with the Retail Planning Guidelines, the <i>Retail Design Manual</i> and DM Guideline ED1 and ED2.</p>	
<p>DM Guideline ED2 – Design Statements</p> <p>Design Statements may be required with planning applications for major retail proposals, retail proposals that are located within a sensitive area or as otherwise considered appropriate by the Planning Authority. Design Statements should address the issues raised in Section 6.4 5.3 of the <i>Draft Retail Planning Guidelines 2011-2012</i> (and any updated/superseding document), including an appraisal of the character of the area adjoining the site and proposals for high quality design that integrates successfully with the context. Design Statements should also take account of the design and layout guidance set out in the forthcoming <i>Best Practice Retail Design Manual</i>.</p>	<p>Updates to text reflect the 2012 Retail Planning Guidelines. Largely neutral impacts on all EPOs.</p>
<p>Objective UI4 – Wastewater Disposal</p>	<p>This additional text is on foot on a submission from the EPA and aims</p>

<p>Restrict development that does not connect to the public sewer and discourage the proliferation of individual septic tanks and treatment plants in order to protect groundwaters, consolidate the town structure and control ribbon development along the approach roads into Loughrea. Ensure that any trade effluent from new development is managed properly and discharged to sewer in accordance with relevant discharge licenses, where appropriate.</p>	<p>to address trade effluent in addition to residential effluent. This results in positive impacts for the following EPOs: Water 1, Wat 2, Wat 3, Bio 5, Bio 6 and Pop 2. For other EPOs, impacts are identified as neutral.</p>
<p>Objective UI7 – Flood Risk Management and Assessment (refer to Map 3) Ensure the implementation of the DEHLG/OPW publication <i>Flood Risk Management Guidelines 2009</i> (or any updated/superseding document) in relation to flood risk management within the Plan Area. This will include the following ..</p> <p>(d)Where certain measures proposed to mitigate or manage the risk of flooding associated with new developments are likely to result in significant effects to the environment or Natura 2000 European sites downstream, such measures will undergo environmental assessment and Habitats Directive Assessment, as appropriate</p>	<p>This textual changes are on foot on a submission by the Department of Arts, Heritage and the Gaeltacht, and again provide clarity and better reflect legislative terminology in the EU Habitats Directive</p>
<p>Section 3.8.1 Context. Last Paragraph The Department of Arts, Heritage and the Gaeltacht's full database of archaeological monuments can be accessed at www.archaeology.ie.</p>	<p>This additional text is on foot of a submission by the Department of Arts, Heritage and the Gaeltacht and provides additional information on relevant archaeological data sources. Positive impacts for CH1, Ch 2; neutral impacts on other EPOs.</p>
<p>Objective BH13 – Local Place Names Protect local place names as an important part of the cultural heritage and unique character of the Plan Area. Support the use of appropriate names for new developments that reflect the character and heritage of the area and that contribute to the local distinctiveness of the village town. New developments will be required to consult with Coiste Logainmneacha Chontae na Gaillimhe, the Galway County Council 'Placename Committee', and to identify an appropriate name for new developments that reflect the local heritage and character of the area.</p>	<p>Neutral impacts on all EPOS through change of text from village to town.</p>
<p>Section 3.9.1 Context Natural Heritage Areas and Associated Legislation The national designation for wildlife and nature conservation is the Natural Heritage Area (NHA), and designated established established Natural Heritage Areas and proposed proposed Natural Heritage Areas (pNHA) are protected under the Wildlife (Amendment) Acts,</p>	<p>These textual changes are on foot on a submission by the Department of Arts, Heritage and the Gaeltacht, and again provide clarity and better reflect legislative terminology in the EU Habitats Directive. Positive impacts are identified for Bio 1, Bio 2, Bio 3 in particular. Neutral impacts for remaining EPOs.</p>

<p>1976-2000. These areas are considered important for the habitats present or hold species of plants and animals whose habitat need protection under national legislation. NHAs and proposed NHAs may also be regarded as stepping stones or ecological corridors in the context of Article 10 of the EU Habitats Directive. Lough Rea is designated as a proposed NHA and the Local Area Plan includes policies and objectives to protect the site in accordance with applicable legislation and policy.</p>	
<p>Policy NH1 – Natural Heritage and Biodiversity It is the policy of Galway County Council to support the conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European sites that form part of the Natura 2000 sites network, the protection of Natural Heritage Areas and proposed Natural Heritage Areas and the promotion of the development of a green/ecological network within the Plan Area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment. The protection of natural heritage and biodiversity, including Natura 2000 European sites, will be implemented in accordance with relevant EU environmental directives and applicable national legislation, policies, plans and guidelines, including the following (and any updated/superseding documents):</p>	As above
<p>Objective NH1 – proposed changes identical to text shown for Objective DS 3 above</p>	Please see response to DS 3.
<p>Objective NH2 – Protected Habitats and Species Support the protection of protected habitats and species listed in the annexes to and/or covered by the EU Habitats Directive (92/43/EEC, as amended) and Birds Directive (2009/147/EC), and species that are protected under the Wildlife Acts, 1976-2000. This includes the protection of bats and their roosts, and the maintenance of woodland, hedgerows, treelines, ecological networks and corridors that serve as feeding areas, flight paths and commuting routes for bats</p>	These textual changes are on foot on a submission by the Department of Arts, Heritage and the Gaeltacht, and again provide clarity and better reflect legislative terminology in the EU Habitats Directive. Positive impacts are identified for Bio 1, Bio 2, Bio 3 in particular. Neutral impacts for remaining EPOs.
<p>Objective NH4 – Impact Assessment Ensure full compliance with the requirements of the EU <i>Habitats Directive</i> (92/43/EEC), <i>SEA Directive</i> (2001/42/EC) and <i>EIA Directive</i> (85/337/EEC) (2011/92/EU), and the associated legislation/ regulations, including the <i>European Communities (Birds and Natural Habitats) Regulations 2011</i> (SI No. 477 of 2011), <i>European Communities (Environmental Assessment of Certain Plans and</i></p>	This text will provide additional clarity and better reflect recent legislation. Positive impacts are identified for Bio 1, Bio 2, Bio 3 in particular. Neutral impacts for remaining EPOs.

<p><i>Programmes) Regulations 2004-2011, the Planning and Development (Strategic Environmental Assessment) Regulations 2004-2011 and the European Communities (Environmental Impact Assessment) Regulations 1989-2011 (or any updated/superseding legislation). Planning applications for proposed developments within the Plan Area that may give rise to likely significant effects on the environment and/or any designated site may need to be accompanied by one of more of the following: an Environmental Impact Statement, an Ecological Impact Assessment Report, a Habitats Directive Assessment Screening Report or a Natura Impact Statement, as appropriate. Ensure that Natura Impact Statements and any other environmental or ecological impact assessments submitted in support of proposals for development are carried out in accordance with best practice methodologies and contain all necessary baseline assessments.</i></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 and/or may be considered as ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive:</p> <ul style="list-style-type: none"> • Seek to retain and/or incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors and stepping stones. • 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. • Ensure greater biodiversity through the appropriate planting of native trees, shrubs and hedgerows indigenous to the Loughrea area and of Irish provenance in public and private areas and in new developments. 	<p>Reference to stepping stones and ecological corridors under Article 10 of the Habitats Directive is provided on foot of the submission by the Department of Arts, Heritage and the Gaeltacht. Positive impacts are identified for Bio 1, Bio 2, Bio 3 in particular. Neutral impacts for remaining EPOs</p>
<p>Objective NH6 – Water Resources (refer to Map 2) Protect the water resources in the Plan Area, including Lough Rea, St. Cleran’s River, its tributaries and downstream waterbodies, other streams, springs, surface water and groundwater quality, in accordance with the requirements and guidance in the EU <i>Water Framework Directive 2000 (2000/60/EC)</i>, the <i>European Union</i></p>	<p>Additional clarity provided by reference to all relevant EU Directives. Positive impacts on Wat 1, Wat 2, Wat 3 Bio 5 in particular. For most other EPOs, impacts can be mitigated against or neutral impacts are identified.</p>

<p>(Water Policy) Regulations 2003 (as amended) and the Western River Basin District Management Plan 2009-2015 and other relevant EU Directives, including associated national legislation and policy guidance (and any updated/superseding documents). Support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development in the Plan Area.</p>	
<p>Objective NH11 – Consultation with Environmental Authorities Ensure that all development proposals are screened to determine whether they are likely to have a significant direct, indirect or cumulative effect on the integrity or conservation objectives of any Natura 2000 European site in view of its conservation objectives and, where significant effects are likely or uncertain, there will be a requirement for to prepare and submit a Natura Impact Statement, including prior consultation with the relevant environmental authorities as part of any Habitats Directive Assessment that may be required</p>	<p>These textual changes are on foot on a submission by the Department of Arts, Heritage and the Gaeltacht, and again provide clarity and better reflect legislative terminology in the EU Habitats Directive. Positive impacts are identified for Bio 1, Bio 2, Bio 3 in particular. Neutral impacts for remaining EPOs.</p>
<p>Land Use Zoning Changes</p>	<p>Consideration.</p>
<p>MA4. Change zoning from Agriculture to Industrial.</p>	<p>This site is located in a visually prominent position on the periphery of the town boundary and concerns were raised about potential landscape and visual impacts associated with industrial development. The provision of a specific objective for LU16 Area Action Plans will provide additional protection of landscape resources as this objective now specifically highlights the requirement for an area action plan and appropriate landscaping treatments. The additional text is as follows:</p> <p>An Action Area Plan for the sensitive and appropriate development of industrial zoned lands at the western approach to the town with high quality building frontages and/or landscaping treatments along all public roads.</p> <p>Impacts are identified as being mitigated against through development control and LAP policies and objectives for all the EPOS.</p>
<p>MA 9: Change zoning from Community Facilities to Residential Phase 2.</p>	<p>The LAP states that there will be a general presumption against development of Residential Phase 2 lands within the lifetime of the LAP with the exception of the following:</p>

	<p>Single house developments for family members on family owned lands.</p> <p>Non-residential developments that are appropriate to the site context, any existing residential amenity and the existing pattern of development in the area.</p> <p>Where it is apparent that Residential (Phase 1) lands cannot or will not be developed within the plan period, residential development may be considered in a phased manner on some Residential (Phase 2) lands. The area in question is located on a hill on the eastern part of the town and any developments would be subject to the application of relevant policies and objectives in the LAP.</p> <p>Therefore the impacts are identified for all EPOS as being mitigated against through development control and LAP policies and objectives.</p>
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2.2 Screening Decision

The Draft Loughrea Local Area Plan 2012-2018 and the proposed material alterations have been assessed in the context of environmental criteria set out in Schedule 2(A) of the 2004 Regulations. It is concluded that the Draft Plan and the associated material alterations will not result in significant environmental impacts. It is concluded that Strategic Environmental Assessment is not necessary for the material alterations proposed for the draft Loughrea Local Area Plan 2012- 2018.