

Comhairle Chontae na Gaillimhe
Galway County Council



**Strategic Environmental
Assessment
Environmental Report of
draft Oranmore
Local Area Plan 2012 – 2018
Non-Technical Summary of
Final Report**

Updated November 2012

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Table of Contents

Chapter One	Non- Technical Summary	Page
Section 1.1	Background	1
Section 1.2	Oranmore LAP Area	1
Section 1.3	Structure of Draft Oranmore LAP	2
Chapter Two	Methodology	2
Chapter Three	Relationships to key Plans, Policies and Programmes	3
Section 3.1	Introduction	22
Chapter Four	Baseline Environment	13
Section 4.1	Introduction	13
Section 4.2	Biodiversity, Flora and Fauna	13
Section 4.3	Water Resources	14
Section 4.4	Soil and Geology	15
Section 4.5	Population and Human Health	16
Section 4.6	Air Quality and Climate	17
Section 4.7	Cultural Heritage, Archaeology and Built Heritage	18
Section 4.8	Landscape	19
Section 4.9	Material Assets	20
Chapter Five	Environmental Protection Objectives	23
Section 5.1	Introduction	23
Chapter Six	Consideration of Alternatives	24
Section 6.1	Introduction	24
Chapter Seven	Likely Significant Effects of the draft Oranmore LAP	27
Section 7.1	Introduction	27
Section 7.2	Overview	27
Section 7.3	Biodiversity	27
Section 7.4	Water	28
Section 7.5	Soil and Geology	28
Section 7.6	Population and Human Health	28
Section 7.7	Cultural Heritage	29
Section 7.8	Landscape	30
Section 7.9	Air Quality and Climate	30
Section 7.10	Material Assets	30
Section 7.11	Cumulative Effects	31
Section 7.12	Key Effects of Land use zonings	31
Section 7.13	Discussion of zonings	31
Chapter Eight	Mitigation Measures	34
Section 8.1	Introduction	34
Section 8.2	Mitigation Measures	34
Chapter Nine	Monitoring	48
Section 9.1	Introduction	46
Section 9.2	Conclusion	53

1 Section One: Introduction

1.1 Background

Galway County Council is currently preparing a Local Area Plan (LAP) for Oranmore. This Local Area Plan (LAP) is a land use plan and overall strategy for the development of Oranmore over the period 2012-2018. The successful implementation of the Plan will have a positive impact on Oranmore ensuring that it develops in a proper and sustainable manner, and will also complement the implementation of the Galway County Development Plan 2009-2015. The Oranmore 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 **green, bold and italic font**, and is accompanied by a footnote when additional text was inserted following the consultation processes.

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 Oranmore LAP. SEA is an iterative process and has informed and influenced the preparation of the Draft LAP. The purpose of the Environmental Report is to identify, describe, and evaluate the likely significant effects on the environment of implementing the proposed Draft LAP and should be read in conjunction with the Draft LAP itself. Further detail on items outlined in this Non-Technical Summary can be found in the full SEA Environmental Report. 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.

1.2 Oranmore LAP Area

Oranmore is located 7km east of Galway City centre, at the inner shoreline of Galway Bay. As the pace of development has been significant in recent years, the population of Oranmore has risen rapidly; this is evident from CSO figures for 2006 which saw a population increase of 107% on 2002 figures (3,513 persons). The preliminary Census 2011 indicates a further population figure of 4,321 persons, an increase of 22.7% between 2006 and 2011.

The landscape, topography and natural features of the area have influenced the pattern and form of development of the town over the years. The town is located at a strategic crossroads between national and regional roads with the heart of the town located at the junction of two roads, Main Street and the Old Dublin Road.

Oranmore has been identified as a key town within the Core Strategy of the current Galway County Development Plan and a Galway Metropolitan Area Satellite town and in this regard, it is important that anticipated growth is plan led, so that Oranmore can enhance its vibrancy and grow in a sustainable manner.

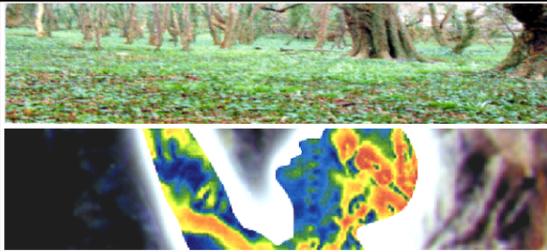
Figure A shows the geographical location of Oranmore and presents the functional area of the town, water resources and transport routes.



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FIGURE A: LOCATION

Galway County Council Oranmore Local Area Plan SEA



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1.3 Structure of draft Oranmore LAP.

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

“To promote Oranmore as a sustainable, self-sufficient and vibrant town, which maintains its unique, attractive character, capitalises on its accessibility strengths - in particular rail, while offering a pleasant environment for a growing community, for living, shopping, business, recreation and tourism, balanced against the need to safeguard and enhance the environmental sensitivities of the area, for present and future generations to come”.

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
- Utilities and Environmental Infrastructure
- Urban Design and Landscape
- Built Heritage and Cultural Heritage
- Natural Heritage and Biodiversity

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

2 Section Two: Methodology

The SEA process can be divided into a number of steps:

1. Screening – This initial step identifies whether or not a particular plan would be likely to have significant environmental effects and would then require a SEA. Under the thresholds provided in the SEA Regulations 2011, it is determined that the LAP for Oranmore is subject to SEA.

2. Scoping – This step helps to identify the range of environmental issues and the level of detail to be included in the Environmental Report, in consultation with the prescribed environmental authorities. Furthermore, submissions made by the public in relation to the preparation of the LAP at pre-draft stage helped to inform the scope of the SEA and Environmental Report.

3. Preparation of the Environmental Report. The Environmental Report describes and assesses the likely significant effects on the environment of Oranmore of implementing the Draft LAP. In preparing this Environmental Report a Geographical Information System was established that mapped relevant environmental data on the town and where relevant on areas outside the town boundary. Available policies and legislation were also referred to.

The Environmental Report details the existing environment, the key trends and environmental issues and outlines how the environment may evolve in the absence of the Draft LAP. It also assesses from an environmental perspective alternative development options for Oranmore over the proposed lifetime of the plan. Once potential impacts of the preferred option are identified through more detailed evaluation, a number of mitigation measures are advanced and

monitoring procedures proposed to monitor the impact of the plan. The following sections provide an overview of these key steps and a summary of the environmental detail contained in the full Environmental Report.

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 Oranmore are provided in Chapter Four, Baseline Environment, and assessed in Chapter 7 Assessment of Effects.

3 Section Three: Relationship to key Plans, Policies and Programmes

The Draft Oranmore 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 (legal) basis for designations and objectives. This chapter of the Environmental Report reviews the consistency of the Draft LAP within this policy and regulatory framework.

EU LEVEL	
Directive/ Plan/ Programme	Summary of Objectives
EU Sixth Environmental Action Programme (1998)	<p>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:</p> <ul style="list-style-type: none"> • Climate Change • Nature and Biodiversity • Environment and Health and Quality of Life • Natural Resources and Waste <p>It calls for the development of Seven Thematic Strategies relevant to the various environmental areas. These strategies constitute the</p>

	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 (Renewable)	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 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).
Birds Directive (79/409/EEC)	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.
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. With 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	It 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 of	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 minimize 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.	The Seveso II Directive, sometimes referred to as COMAH, stipulates certain requirements for storage of relatively large quantities of substances classified as dangerous.
Dangerous Substances Directive 76/464/EEC (S.I. 258 of	Dangerous Substances Directive 76/464/EEC creates a legislative framework for dealing with water pollution caused by an extensive list

1998, S.I. 12 of 2001)	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	
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, before they are approved, where it is believed that the projects are likely to have a significant impact on the environment.

National Context

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

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.
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
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	
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.
<i>Environmental Objectives (Surface Waters) Regulations 2009' 2009 (S.I. No 272 of 2009)¹</i>	<i>Recently introduced surface water legislation that provides quality objectives for surface water.</i>
<i>Water Quality in Ireland 2007-2009' (EPA, 2011)</i>	<i>The latest report on water quality in Ireland by the EPA has found evidence of improvements in water quality in Ireland, though continued actions across a range of sectors are needed if Ireland is to achieve its European water quality obligations.</i>
<i>EU's Common Implementation Strategy for the Water Framework Directive (2000/60/EC) – Guidance Document No. 20, in particular Section 3.5 Key Issues for Article 4.7.</i>	<i>Under the Water Framework Directive, a Common Implementation Strategy (CIS) was developed in order to address the challenges in a co-operative and coordinated way and a series of guidance documents have been produced addressing a range of topics. Guidance Document No. 20 was not available at the WFD website or the Europa.website.</i>
<i>EC (Good Agricultural Practice for the Protection of Waters) Regulations 2010.</i>	<i>Agricultural regulations that implement Ireland's National Action Programme on the Nitrates Directive.</i>
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	
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.
Strategic Environmental Assessment and Habitats Directive Assessment	
Strategic Environmental Assessment Regulations 2004-2011² 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.

¹ These references were included following a submission from the EPA

² 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).

	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.

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 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 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.
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:

- **Galway City Development Plan 2011-2017**
- **Mayo County Council 2008 -2014**
- **Roscommon County Council 2008 - 2014**
- **Clare County Council 2011- 2017**
- **Offaly County Council 2009 - 2015**
- **North Tipperary County Council 2010-2016**
- **Ballinasloe Development Plan 2009 -2015**

There are also numerous Local Area Plans for areas within the County.

4 Section Four: Environmental Baseline

4.1 Introduction

This chapter describes the principal environmental parameters that are of relevance to both the functional area of Oranmore and its environs. 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. Figure 4a shows the Natura 2000 sites within 15km of the plan area. Natura 2000 sites are areas designated under the Habitats Directive and Birds Directive for habitats or species. Figure 7a shows areas in Oranmore that are more or less environmentally sensitive. The following sections summaries key environmental resources and issues for the Oranmore area.

4.2 Biodiversity, Flora and Fauna

Oranmore is located on the county Galway coastline, and part of the plan area lies within two European designated Natura 2000 sites; the large Galway Bay Complex (SAC code 000268; this is also a designated SPA Inner Galway Bay site code: 4031) and Cregganna Marsh SPA (site number 004142). There are also a number of nationally designated sites of importance including Natural Heritage Areas (NHAs) and Proposed Natural Heritage Areas (pNHAs) within the plan area and within a 15km zone of influence. These are described in detail in the Environmental Report and Natura 2000 sites are shown on Figure B. The various habitats in the County form part of an “ecological network” that allows the movement of species between areas and ensures the effective functioning and survival of the diverse range of habitats and species in the County.

4.2.1 Key Biodiversity, Flora and Fauna Issues

The overall ground water quality status in the Oranmore area is ‘poor’, this can cause significant impact on habitats, species and ecosystems in general. Other pressures on biodiversity include loss of habitat through development on greenfield sites and localised negative impacts on ecological networks through loss or damage to features such as hedgerows, riparian vegetation or stone walls. Habitat fragmentation can also arise due to infrastructural developments including road projects. Recreational pressure may arise with associated disturbance to certain species.

4.2.2 Evolution of biodiversity, flora and fauna in the absence of the LAP³

In the absence of a LAP there would be no framework directing developments to appropriate locations in and around Oranmore 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.

³ This text was included following a submission by the EPA

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 Oranmore, surface water quality overall is classified as good and the ongoing maintenance and enhancement of this status is an integral element of the LAP. However, groundwater within the plan area is classified as poor.

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.

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.

4.3.1 Surface Waters

Oranmore is located primarily within the Clarin Kilcolgan Water Management Unit Action Plan and within the Western River Basin District. The Frenchfort River, the main river body in the plan area, is also classified as good. The surface water quality of the overall plan area is of 'good' status.

4.3.2 Groundwater

Groundwater is a further significant resource and refers to water stored underground in saturated rock, sand, gravel, and soil. Surface and groundwater functions are closely related and form part of the hydrological cycle. The protection of groundwater from land uses is a critical consideration and groundwater

The Water Framework Directive Management Unit identifies much of the groundwater in and to the east, south and north of Oranmore as being of 'poor' status and being at risk of failing to achieve the 2015 'Good' status required under the WFD.

4.3.3 Key Environmental Problems for Water

The following environmental pressures on surface and groundwater quality have been identified for the overall Western River Basin District:

- Wastewater and Industrial Discharges
- Landfills, Mines, Quarries and Contaminated Sites
- Wastewater from Unsewered Properties
- Discharge of Dangerous Substances
- Physical Modifications
- Climate Change
- Local Issues
- Alien Species

- Insufficient water and wastewater treatment

4.3.4 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.

4.4 Soil and Geology

Soil can be considered as a non-renewable natural resource because it develops over very long timescales. 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. The principal soil types identified for Oranmore include:

- Deep well drained mineral
- Made/Built Land
- Peat
- Poorly drained mineral soil with peaty topsoil
- Reed Swamp/Marsh
- Shallow well drained mineral
- Marine/estuarine sediment

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 –around the plan area, consists of limestone which was laid in the carboniferous period, around 280 to 345 million years ago.

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 resources. 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.

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

4.5 Population and Human Health

4.5.1 Population

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. Oranmore lies within three District Electoral Divisions (DEDs): Baile an Teampaill (includes the northern part of the town), Oranmore (the central area and the only DED fully within the plan area), and Clarinbridge (southern part of the town). According to the 2006 Census, the population of the town was 3,513, a 107% increase from the 2002 Census figure. This trend of growth has been continued for Oranmore, with preliminary information on the Census 2011 indicating that the Oranmore Electoral District grew by a further 22.7% between 2006 -2011. Clarinbridge and Baile an Teampaill (DEDs partly within the plan boundary) saw growth of 22.7% and 4.8%² respectively

Oranmore has been identified as a **'Key Town'** within the Core Strategy/Settlement Strategy of the Galway County Development Plan 2009-2015.

4.5.2 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, air 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. Oranmore 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.

4.5.3 Key Environmental Problems for Population and Human health

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

- Air pollution due to areas of heavy traffic along main routes and intersections,
- Population growth and infrastructure capacity constraints results in waste infrastructure incapable of meeting demand, shortages of water supply and poor quality water serving urban and rural areas
- There are pressures on drinking water quality; contamination in public and private water supplies means that water supplies in the Region are not 'safe and secure'
- Increases in population can impact on biodiversity, water quality, landscape and cultural heritage and which would impact on human health
- Flooding may impact on human health, on structures and the safety of water supply
- Additionally, submissions on the pre-draft Oranmore LAP highlighted problems for wheelchair users moving around Oranmore and the lack of ramps for wheelchair users to use around the centre;
- Other consultees also highlighted traffic problems in a number of areas including Maree Road

¹ SEA ER of West Regional Planning Guidelines

² Source: Central Statistics Office, Preliminary Census 2011 Figures. The identical percentage change for Oranmore and Clarinbridge may be amended as figures are only preliminary.

- Finally, consultees highlighted the need for walking/cycling non motorised transport options around Oranmore.

4.5.4 Evolution of Populations and Human health in the absence of the LAP³

The Core Strategy of the Galway County Development Plan has identified a target population growth of up to 1,130 persons for Oranmore to 2015, which results in a requirement for 32.6ha of zoned residential. Given the significant growth patterns in Oranmore 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 planning for the future of Oranmore. 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) (IFA, 2004). 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 manmade 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.

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 green house 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.

4.6.2 Air Quality Standards

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 Oranmore and environs).

The air quality for Zone D (July, 2009) is classified as 'Good' (Mace Head, near Carna, Co. Galway).

³ This was inserted following a submission from the EPA

While air quality is generally of good quality in Zone C and 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. For Oranmore, this is likely to occur around Maree Road and other localised areas of congestion. In addition, there are three IPPC licensed facilities concentrated around the Deerpark and Carrowkeel part of the town. These are licensed for a range of activities and products but require emission monitoring across a range of parameters.

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.

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

The Draft LAPs set out a settlement and land use strategy for Oranmore 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 Oranmore.⁴

4.7 Cultural Heritage, Archaeology and Built Heritage

Given its strategic coastal location and proximity to the city of Galway, Oranmore supports a rich and diverse cultural heritage.

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.

Oranmore has an abundance of archaeological heritage including an abundance of ringforts, fulacht fia, enclosures, megalithic structures, a castle, houses, holy wells, church, graveyards and burial grounds.

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

⁴ This was inserted following a submission by the EPA

interest. Details of protected structures are entered by the authority in its Record of Protected Structures, which is part of the Development Plan. There are 17 Protected Structures within Oranmore Town Boundary as evident from the Record of Protected Structures in the Galway County development Plan.

Legislation is also provided for Architectural Conservation Areas (ACA). The centre of Oranmore is designated as an ACA and this covers an area of 8.4 hectares.

4.7.3 Key Environmental Problems

Archeology

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 in an important consideration.

4.7.4 Evolution of Cultural Heritage in the absence of the LAP⁵

In the absence of a LAP, development would have no guidance as to where to be directed and 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.

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 in Galway according to their sensitivity, their ability to accommodate change or intervention without suffering unacceptable effects to character and values.

The Landscape Character Assessment for Oranmore situates the town principally in Landscape Character Area Number Area 13-**East Galway Bay (Oranmore to Kinvara Bay and inland to N18 road)**. The LCA provides the following description of this LCA:

'The coastline is intimate and sinuous with many sheltered inlets. The coast is scenic and relatively undeveloped. The landscape adjacent to the coast comprises pastureland in large fields bordered by mature hedgerows. The existing vegetation screens the coastline from roads and properties inland of the N18 road'.

⁵ This was inserted following a submission by the EPA

The northern part of the town grades into LCA 3 -East central Galway (Oranmore, Ballinasloe to Portumna). A small part of eastern Oranmore lies within LCA 4 - **Area 4-Southeast Galway**. This LCA is described as follows: **(Clarinbridge to Gort)**.

4.8.1 Key Environmental Problems for Landscape

Potential issues with regard to the landscape in Oranmore include developments which do not reflect local landscape character, insensitive siting of development and limited screening opportunities along the coastline. The pace and expansion of Oranmore has been significant and combined with some large infrastructural transport projects, the town and environs has seen significant change. In addition, the largely lowlying coastal nature of the landscape in this area increases overall visual sensitivity to large developments such as infrastructural projects.

4.8.2 Evolution of Landscape in the absence of the LAP⁶

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

4.9 Material Assets

4.9.1 Flooding

Oranmore has been subject to flood events historically and in recent years. Areas adjacent to Frenchfort River, Cregganna Marsh SPA, wetlands, coastal and low-lying areas and pockets throughout the town are subject to flooding within an indicative Flood Zone. However, this analysis is not exhaustive and areas not mentioned here could still be at risk of flooding. The identification of flood risk areas and events has informed the land use zonings proposed in the draft LAP.

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. IPPC licensed facilities in Oranmore LAP include Hygeia Chemicals and Coldchon Cold Chon (Galway) Ltd, both located to the north of the plan area).

4.9.3 Water Services Potable and Wastewater

The water supply for Oranmore comes from the Tuam Regional Water Scheme which is undergoing a significant upgrade and capital investment programme. Water for this scheme will continue to be extracted from Lough Corrib to the Luimnagh Water Treatment Plant, where the treatment process produces high quality potable water to the standards in accordance with EU and National legislation.

Until such time as the East Galway Main Drainage Scheme is constructed and operational, Oranmore is served by the Galway City sewerage system at Mutton Island, a modern wastewater collection and treatment system which complies with the E.U. Urban Waste Water Directive. There are network capacity issues at present and this system has been granted a

⁶ Inserted following submission by EPA.

discharge license approval from the EPA, providing for increased capacity. In addition, there are capacity issues with the wastewater pumping station at Oranmore and a range of policies/objectives are proposed to manage this issue.

4.9.4 Transport

Oranmore is at the crossroads to numerous important interconnected routes including the dual carriageway/motorway between Dublin and Galway (M6), the N17 north to Sligo and the N18 south to Limerick. The location of Oranmore as a strategic node in the transport operations of the region has significant impacts on the local road usage of the town itself. In this regard a Proposed Traffic Management Plan for Oranmore is being prepared. It is recommended that both pedestrian and cycle paths are also facilitated within the overall traffic management plan for the town.

The Galway-Dublin rail service runs up to 7 trains daily to/from Dublin through Oranmore but currently there is no facility to stop. Planning permission has been granted for a new railway station at Garraun, to the northwest of the town, as part of the Limerick to Galway Railway project.

4.9.5 Noise

The Environmental Noise Regulations relate to community or environmental noise, which is classified 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.’

Galway City Council produced a Noise Action Plan 2008 – 2013 for the City. The purpose of the Action Plan is to act as a means of managing environmental noise, and to meet the aim of the Directive of preventing, and reducing where necessary, environmental noise through the adoption of action plans. Strategic noise mapping was undertaken in 2007 by the designated noise mapping bodies of the major roads and junctions in the area. Galway County Council also produced a Draft Noise Action Plan for the County (2008) which presents a number of actions and mitigation measures.

4.9.6 Waste Management

The Waste Framework Directive 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. Oranmore has a Bring Bank Centre located in the main car park next to the parish church. This received a National Tidy Towns Award in 2011 for the ‘Best Bring Bank’ nationally and regionally.

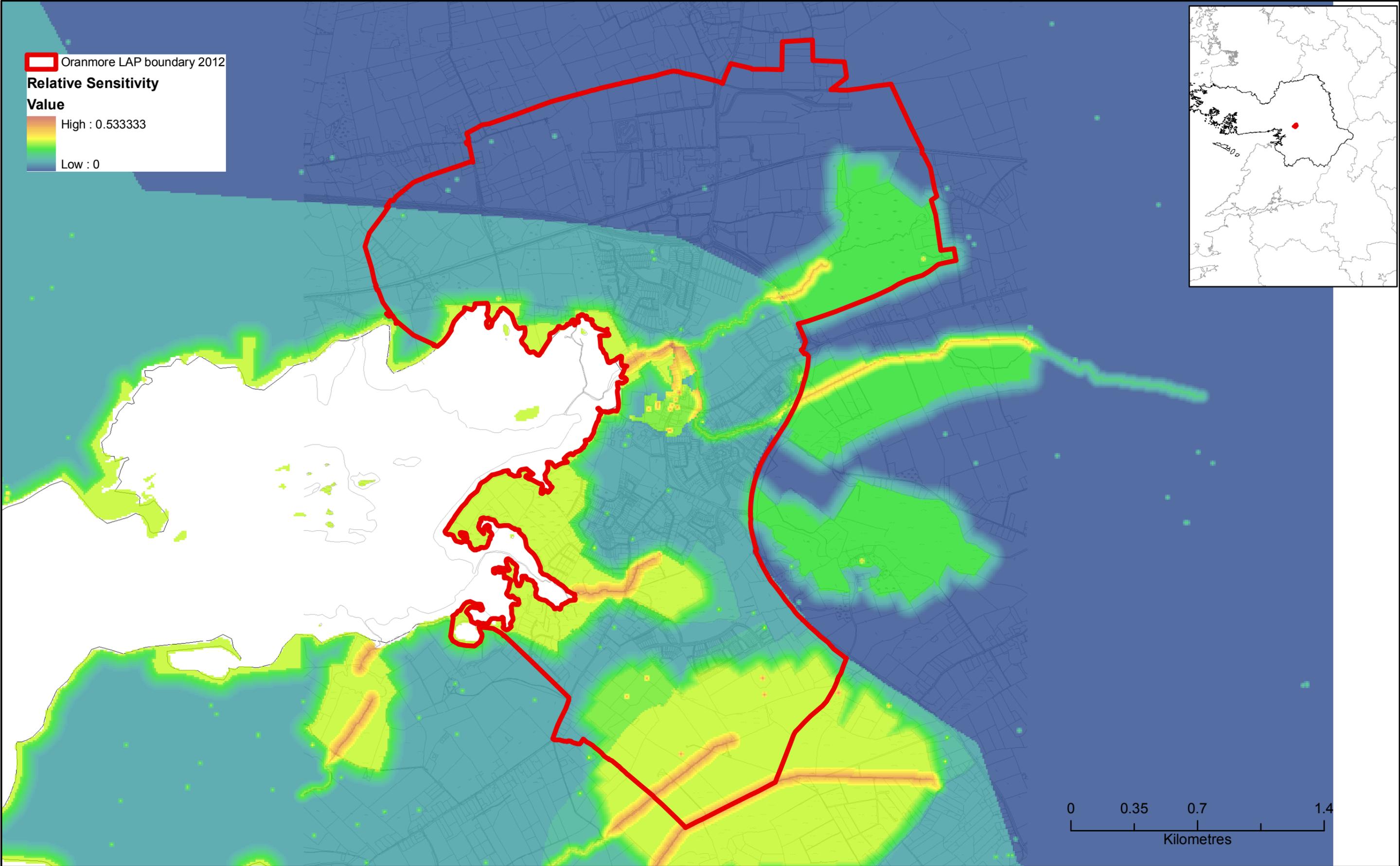
4.9.7 Key Environmental Problems for Material Assets

- Oranmore has been subject to historical flooding in the past and its coastal location and bedrock increase flood risk; however the recent County 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 Oranmore include the capacity of wastewater treatment at Mutton Island and the capacity of the pumping station at Oranmore. Additionally this has implications on any future development, including the provision of residential developments.
- 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.
- Oranmore has been subject to historical flooding in the past; however it is envisaged that the application of relevant guidelines and use of improved modelling for flood risk should ensure that future flood risk is avoided.
- Oranmore has good public transport links particularly via its railway system; the provision of the railway station should assist in addressing modal shifts in transport patterns and help reduce localised air quality.

4.9.8 Evolution of Material Assets in the absence of the LAP⁷

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

⁷ This was inserted following a submission by the EPA



DATE: 19/1/2012

SCALE: 1:400,000

FIGURE C: Relative Sensitivity

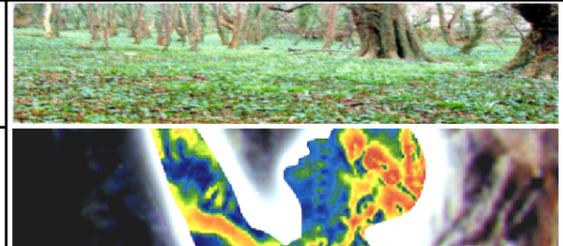
REF:

SIZE: A3

Galway County Council Oranmore Local Area Plan SEA

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APPROVED: RM



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5 Section Five Environmental Protection Objectives

5.1 Introduction

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

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

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), SRBM &POMS.
	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 opposed to demolition and new build (to promote sustainability and reduce landfill).
	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	MAT1 - Reduce risk of flooding through avoidance of development in flood plains or in areas at risk of flooding
Water Services	MAT2 - To ensure that drinking water supplies are free of contamination
	MAT 3: To protect residents from adverse noise levels
	MAT4 - To ensure that all all development is adequately serviced to EPA standards prior to discharge.
Waste	MAT5 – Implement the waste pyramid and encourage reuse/recycling of material wherever possible.
Energy	MAT6 - Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives
Transport	MAT7 – 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

6 Section 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.

Table 6a: Evaluation of Alternatives

Alternative Considered	No likely interaction with EPOs	Likely to improve status of EPOs	Probable conflict with EPOs – unlikely to be mitigated	Potential conflict with EPOs – likely to be mitigated	Uncertain interaction with EPOs	Neutral Impacts with EPOs
Development Option 1 – LAP informed solely by environmental assessments: Informed		Bio1,2,3, 4,5,6 Wat 1,2,3 Soil 2,3		Soil 1 Pop1,2 CH 1,2 Land 1,2,3		

solely by the statutory environmental assessments required for Local Area Plans, including a Flood Risk Assessment, Habitats Directive Assessment and Strategic Environmental Assessment.		AQ1 MAT1		AQ2 Mat 2,3,4,5, 6,7		
<p>This option would likely direct future development away from areas of low lying land and lands with ecological sensitivity In implementing the Core Strategy of the County Development Plan and ensuring the provision of the required level of zoned lands for future residential use, future growth would be directed towards the development and consolidation of appropriate sites from the town centre outwards, with the likely focus for new residential neighbourhoods on lands towards the north and northwest of Oranmore.</p> <p>This option would exclude consideration of the planned railway station at Garraun further northwest of Oranmore and the potential contribution it can make to the future sustainable development of the town.</p> <p>In this regard, whilst this option would improve many of the EPOs, it may act as an unbalanced check on many development proposals. Considering the significant growth of Oranmore and its desirability as a place to live and work, there is likely to be continued demand to facilitate certain development activities.</p>						
Alternative Considered	No likely interaction with EPOs	Likely to improve status of EPOs	Probable conflict with EPOs – unlikely to be mitigated	Potential conflict with EPOs – likely to be mitigated	Uncertain interaction with EPOs	Neutral Impacts with EPOs
<p>Development Option 2 – New development area at Garraun</p> <p>This option proposes a new development area around the rail station at Garraun capitalising on the potential of new public transport infrastructure and the availability of the necessary lands for anticipated population growth, as outlined in the Core Strategy for Oranmore. It also progresses the Regional Planning Guidelines objective of future expansion of the Garraun area.</p>		Mat 7	Soil 1 Ch2	Bio 1,2,3,4,5,6 Wat 1,2,3, Soil 2,3 Pop 1,2 Ch1,		Bio 1, 2,3, Soil 2,3, Pop 3,4
<p>This approach recognises the area as a prime development quarter in terms of integrating land use and public transportation and directs all new development to this area. However, given its strategic importance, a detailed master plan would be necessary to guide development to ensure that it does not progress in an ad hoc and piecemeal manner.</p> <p>Focussing on the growth of a new quarter could have the potential to shift the focus away from the established town of Oranmore, which would compromise the sustainable development of the overall area. Developing a</p>						

detailed master plan for a new development quarter would be beyond the scope of the Local Area Plan process and therefore this option is not considered the most suitable approach to be pursued, at this time. In addition, this option would not encourage reuse of existing buildings within the existing core and may unnecessarily promote greenfield development above infill or consolidated development.

Alternative Considered	No likely interaction with EPOs	Likely to improve status of EPOs	Probable conflict with EPOs – unlikely to be mitigated	Potential conflict with EPOs – likely to be mitigated	Uncertain interaction with EPOs	Neutral Impacts with EPOs
<p>Development Option 3 Consolidation of the Town Centre and Surrounding Areas with a Future Strategic Development Area, Informed by Environmental Assessments</p> <p>Informed also by environmental assessments, this option focuses primarily on the established town of Oranmore, seeking to consolidate the existing town centre and emerging commercial centres and examining the residential provision to meet the requirements of the Core Strategy.</p>		<p>Bio 1,6 Soil 1 Pop 1, 2 Ch1, 2,</p>		<p>Bio 1,2,3,4,5 Wat 1,2, 3, Soil 2,3, Land 1,2,3, AQ1, 2 MAT 1,2,3,4,5 ,6,7</p>		
<p>This development option would promote a managed and co-ordinated approach on a case by case basis to town centre & residential type developments from the centre outwards, based on infrastructure /service provision but in a more flexible manner than Option 2. This option also takes cognisance of the planned railway station at Garraun. It protects the associated surrounding lands through identifying a Strategic Reserve Area subject to future master planning, so as to ensure that the opportunities associated with the development of same is planned in a sustainable and coordinated manner. In the interim, strong sustainable transportation connections between the railway stations, the town centre and remainder of the town are key in establishing important connectivity between the areas, ensuring they are linked and complement each other. <i>The SEA assessed all the options under consideration and Option Three was determined to generate positive impacts on biodiversity, material assets, population and human health, and cultural heritage. Whilst Option 1 would generate more positive direct impacts on biodiversity parameters, it is considered likely that a number of negative indirect impacts would arise including lack of viability of the town centre, increased greenfield development away from the centre in less environmentally sensitive areas, and moreover the loss of opportunity to facilitate integrated landuse and public transport at Garraun. In conclusion, a planned approach to the further development of the area incorporating the principles of sustainable development is the option best suited to Oranmore.</i>¹</p>						

¹ This clarification was provided in response to a submission by the EPA.

7 Section Seven: Likely Significant Effects of the Draft Oranmore 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 Oranmore.

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 and objectives and the principal purpose of this chapter is to discuss the evaluation of these.

7.2.1 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 Section Five. This is primarily attributed to the goals of the Draft LAP referencing sustainable development, quality of life, social inclusion and Habitats Directive Assessment. 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.

7.2.2 Significant Biodiversity, Flora and Fauna Impacts

The draft LAP was found to have generally positive impacts for the biodiversity, flora and fauna 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 promote 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, Environment and Landscape, Objective NH5 Biodiversity and Ecological Networks and Objective UD4 Green Networks and Landscape all generate positive impacts on biodiversity.

However, considering the ecological sensitivities around Oranmore, Objective: LU 15 Residential Densities has the potential to generate negative impacts on biodiversity through declining water quality and cumulative impacts associated with same. Additionally, Objective LU8 Open Spaces/Recreation and Amenity merits careful scrutiny in relation to potential disturbance on species, loss of open space and habitat fragmentation and loss of soil as a non renewable resource.

Policy contained within the plan to increase accessibility generally, including pedestrian and cycle access, to the coast and areas of natural recreation 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 Creganna Marsh and Galway Bay Natura 2000 sites, and the associated habitats and species that these areas support.

Finally, policies to support large 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. However, the principal infrastructural development proposed in the LAP relates to the proposed train station which has been subject to project level HDA. For many of the remaining policies/objectives, it is determined that the development management process, associated guidelines and recommendations will provide sufficient mitigation measures to ensure significant impacts on biodiversity as a result of any future development are avoided.

7.2.3 Significant Water Impacts

The draft LAP promotes intensification of town centre, population growth in line with the Core Strategy of the County Galway CDP 2009-2015, economic growth and various landuse zonings. These could impact potentially on water quality. Potable water is currently supplied from the Tuam Scheme and is not considered to be at risk in terms of drinking supply. Nonetheless, conservation measures and increasing water efficiency are appropriate measures to consider in the LAP. 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 longterm);
- 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.

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.

7.2.4 Significant Soil and Geology Impacts

The intensification of the town centre, promotion of reusing existing building stock, waste management and 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 functional or environs. Site specific mitigation measures are required relating to construction activities associated with new developments.

7.2.5 Significant Population and Human Health

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.

Water quality in surface waters is good around Oranmore, whilst groundwater is classed as 'poor'. 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 functional 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 facilitate and encourage economic growth and renewal, to strengthen the town of Oranmore and take advantage of its strategic location on the main road and rail network. 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, reduced emissions and transport modal shifts.

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 Oranmore.

7.2.6 Significant Cultural Heritage Impacts

Overall the impacts of the draft LAP are long term positive in relation to cultural heritage due to the recognition of the value of Oranmore's heritage and the range of cultural heritage features including built heritage and more intangible cultural heritage such as linguistic heritage.

The recognition that Oranmore's cultural heritage has a key role to play in tourism promotion also creates positive impacts for the cultural heritage of the town. Objective ED5 supports the appropriate development of tourism within Oranmore; 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 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.

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 Oranmore is significant so a range of polices and objectives in both Section 3.7: Urban Design and Landscape, and 3.8: Built Heritage and Cultural Heritage generate positive impacts.

7.2.7 Significant Landscape 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 and high quality urban realm provides further positive impacts for the city's landscape resources.

7.2.8 Significant Air and Climatic Impacts

Overall the draft LAP policies and objectives will have significant beneficial impacts on air. Oranmore 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 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.

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

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. A Strategic Flood Risk Assessment has been undertaken for County Galway which considers Oranmore and this has guided the zoning of lands. 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 where necessary removed flood risk areas for future development use in favour of more appropriate alternative locations. The Flood Risk Management policies and objectives are developed in response to the flood risk assessment work strengthen the overall policy response to flood risk in the plan area. The draft LAP also refers to The Planning System and Flood Risk Management Guidelines to Planning Authorities 2009.

For transport, policies and objectives of particular relevance include Policy T11: Sustainable transport, Objectives T14 and 5 (walking and cycling respectively), Improved sustainable transport linkages between the town and city (Objective T112).

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 UI18) and Waste Management Plans at application stage (Objective UI17 Waste Prevention, Reduction and Recycling) also create positive impacts for some of the Material Assets EPOs.

Wastewater Infrastructure and Management in Oranmore is a critical component of the SEA assessment. In this regard the SEA recommends that adequate and appropriate drinking water and waste water treatment infrastructure and capacity are in place prior to any further development within the Plan area. As previously stated the potable water supply from Tuam and the current WWTP at Mutton Island is considered sufficient. However, there is some capacity issues with the pumping station at Oranmore. A range of policies are included in the draft LAP that support water quality and water management, for example Policies UI1 Water Supply, Wastewater and Surface Water Infrastructure, and UI 2 Water Quality.

More positive permanent impacts are associated with indirect policies including Sustainable Urban Drainage Systems and the provision for green infrastructure throughout the plan area. The recognition of the WFD and its roles and responsibilities currently act as a key driver toward long term positive impacts for water quality and water management generally.

7.3 Cumulative and in combination effects

7.3.1 Environmental Sensitivity Mapping

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.

Figure C 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 watercourses within the plan area, their associated habitats including fen areas and the coastal habitats and zone. The LAP has reflected these sensitivities through zoning these areas of greatest sensitivity as Environmental Management (see for example the area adjoining the Business and Technology zoning or the Creganna Marsh area).

The least sensitive areas are identified in the northern part of the plan area, north of the R446 (formerly N6) and zoned for industrial. This area already supports a range of established industrial developments and activities and includes the IPPC licensed facilities within the plan area. The next least sensitive area is identified within the town centre that is intensively used, largely built up and away from the sensitive water features. For much of this area, the zonings are conforming to existing land use or providing opportunities for infill development and community or town centre/commercial use.

7.4 Discussion of Zonings

Environmental Management

The greatest area for zoning in the plan area is Environmental Management. This is identified as a positive impact 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 Natura 2000 sites and flood risk areas, and is reflective of the Natura Impact Report that has been prepared in tandem with the draft LAP and SEA.

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).

Strategic Reserve Area Zoning

The purpose of this zoning is to facilitate the coordinated management of the area associated with the approved train station at Garraun. The train station application was subject to Habitats Directive Assessment and habitat surveys were undertaken for this application.

The purpose of the strategic reserve zoning is to protect this area around the train station from inappropriate and piecemeal development prior to a plan being prepared for the area. Impacts identified were positive for population, air quality and climate and transport EPOs. For the remaining EPOs, most impacts were neutral as the area is not yet subject to a plan so the scale and detail of development proposed is unknown at this stage. A mitigation measure is proposed in Chapter Eight to further ensure any plan is subject to SEA, Habitats Directive Assessment and according to the flood risk guidelines as appropriate.

Residential Zonings Phase 1 and Phase 2

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 within what is now the Environmental Management, 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. In addition, the majority of the R1 land occurring within the Plan area is characterised by existing urban land cover. The habitats associated with this land cover include buildings and artificial surfaces and amenity grassland. Section 5.2.1 of the Natura Impact Report of the Oranmore LAP provides additional information on the habitats and potential impacts on Natura 2000 sites from residential (and other zonings).

Business and Technology

The northeastern corner of the Plan area has been zoned for Business and Technology (BT) development. The BT area is bisected by the Galway – Dublin Intercity Railway line which runs east-west through the site. The majority of the undeveloped land occurring to the north of the railway line is associated with an approved planning application² for the development of a Science and Technology Park by IDA Ireland. Habitat surveys undertaken in 2003 at this site as part of the Environmental Impact Statement concluded that the majority of the site was of low ecological value dominated by improved agricultural grassland. A small area of dry calcareous grassland and a pond were noted in the southwest of the proposed site. These features were considered to be of moderate ecological value. Should new development applications arise in relation to this zoning, the SEA identifies that many EPOs can be addressed through mitigation; however any development on greenfield sites can potentially impact negatively and permanently on certain EPOs, principally Soil and Geology, due to the sealing and loss of soil associated with new build and supporting infrastructure.

Business and Enterprise

Only one parcel of Business and Enterprise zoning is located within undeveloped land within the Plan area. It is buffered from an area of qualifying alkaline fen associated with the Galway Bay Complex cSAC by the existing N18. It is located within/adjacent to the site of an existing business and enterprise centre and a review of 2010 Ortho-photography suggests that it consists of recolonising bare ground habitat. 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.

² Planning Reference 05/2030

Industrial

Industrial land use zoned on undeveloped land is restricted to the west of the existing Carrowkeel Industrial Estate in the north of the Plan area. This undeveloped land is characterised by improved agricultural grassland with treeline and hedgerow field boundaries and is located approximately 500m to the north of the boundary of the Galway Bay Natura 2000 Sites. This undeveloped land is also buffered from these Natura 2000 Sites by the R338, agricultural grassland, the Galway Dublin railway line and the R446 (formerly the N6 national primary road). 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.

Agricultural Zonings

The main agricultural zoning is around Oranhill, beside the EM zoning and adjacent to Creganna Marsh SPA. The provision of agricultural land is not of itself a significant change as the land is predominantly improved agricultural grassland in this area, however consideration must be given to the range of uses permitted in principle or open for consideration under this zoning and appropriate measures implemented to avoid disturbance to bird species or water quality in this area. Objective DS3 Natura 2000 Network and Habitats Directive Assessment will assist in ensuring these issues are considered should development applications present for this area. This zoning was found to have positive impacts for several biodiversity, water and soil EPOs.

Community Facilities

Community Facilities (CF) land use has been zoned on three areas within the Draft Plan. 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.

Open Space/Recreation and Amenity

Many of these zonings 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 area is that around the Frenchfort River. Other areas are zoned adjoining the EM zoning for example, south of the coastal road at Garraun, adjoining the town centre and close to the educational facilities, and finally in the Oranhill area in the southern part of the plan area. Impacts identified with such zonings can result in 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). 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.

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.

8.2 Mitigation Measures – Suggested Rewording of Existing Draft Policies

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. Additional text is shown in blue, bold and italic font.

Table 8a Suggested Rewording of Policies and Objectives in Draft Oranmore LAP

Original Draft Policy/Objective	Recommended change	Reason	Policy or Objective in Draft LAP
<p>Objective DS 3 – Natura 2000 Network and Habitats Directive Assessment Protect Natura 2000 sites, including Special Protection Areas and Special Areas of Conservation, that form part of the Natura 2000 network, in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive 1979 79/409/EEC, the European Communities (Natural Habitats) Regulations 1997 (S.I. No 94 of 1997), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 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 knowledge</p>	<p>Additional number point as follows: <i>3. The plan or project will adversely affect the integrity of a priority qualifying habitat or species any Natura 2000 site (that hosts a priority natural habitat type and/or a priority species) but interest. there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, relating to human health or public safety, or where the proposed plan or project is of 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</i></p>	<p>To strengthen and detail requirements of Habitats Directive Assessment</p>	<p>Objective DS3 – Natura 2000 Network and Habitats Directive Assessment 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 Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 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 updated/superseding 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</p>

Original Draft Policy/Objective	Recommended change	Reason	Policy or Objective in Draft LAP
<p>and a Habitats Directive Assessment where necessary, that:</p> <p>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> <p>2. The plan or project will adversely affect the integrity of any Natura 2000 site 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 undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or</p>	<p><i>and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.</i></p>		<p>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> <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. <i>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</i></p>

Original Draft Policy/Objective	Recommended change	Reason	Policy or Objective in Draft LAP
			<i>compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.</i>
Objective DS 5 – Service Led Development Development under the Plan shall be preceded by sufficient capacity in the public waste water infrastructure	Objective DS 5 – Service Led Development Development under the Plan shall be preceded by sufficient capacity in the public waste water <i>and potable water infrastructure</i>	To ensure lands are serviced for both wastewater and potable water in advance of development.	Objective DS 5 – Service Led Development Development under the Plan shall be preceded by sufficient capacity in the public waste water infrastructure <i>and potable water infrastructure</i>
Objective DS 7 – Strategic Reserve Area Protect and safeguard the lands within the designated Strategic Reserve Area from any development that would prejudice their potential as a reserve for the future, longer term strategic growth of Oranmore.	Objective DS 7 – Strategic Reserve Area Protect and safeguard the lands within the designated Strategic Reserve Area from any development that would prejudice their potential as a reserve for the future, longer term strategic growth of Oranmore. <i>Ensure that any future proposals within the Strategic Reserve that have the potential to result in likely significant effects to the environment and/or Natura 2000 Sites are identified and undergo environmental and/or Habitats Directive assessments. Cumulative/in combination effects of such future developments should be evaluated as part of such assessments.</i>	This will highlight the need to undertake cumulative/in combination assessment of developments within the Strategic Reserve Area, including the access road. This is required as there is a hydrological connection between the Strategic Reserve Area and the Galway Bay SAC	Objective DS 7 – Strategic Reserve Area Protect and safeguard the lands within the designated Strategic Reserve Area from any development that would prejudice their potential as a reserve for the future, longer term strategic growth of Oranmore. <i>Ensure that any future plan or project within the Strategic Reserve that has the potential to result in likely significant effects to the environment and/or Natura 2000 Sites undergo environmental and/or Habitats Directive assessments, including the evaluation of the cumulative/in combination effects.</i> Any future plan or project within the Strategic Reserve Area will be subject to the requirements of The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009, as appropriate.
Objective LU 8 – Open Spaces/Recreation & Amenity (OS) Promote the development of open spaces and recreational	Objective LU 8 – Open Spaces/Recreation & Amenity (OS) Promote the development of open	To ensure GCC can determine open space retention and provision	Objective LU 8 – Open Spaces/Recreation & Amenity (OS) Promote the development of open spaces and recreational

Original Draft Policy/Objective	Recommended change	Reason	Policy or Objective in Draft LAP
activities in accordance with best practice on suitable lands with adequate access to the local community and retain existing open space and recreational facilities, unless it can be clearly demonstrated that these uses are no longer required	spaces and recreational activities in accordance with best practice on suitable lands with adequate access to the local community and retain existing open space and recreational facilities, unless it can be clearly demonstrated <i>to the satisfaction of Galway County Council</i> that these uses are no longer required <i>by the community</i>		activities, in accordance with best practice, on suitable lands with adequate access to the local community and retain existing open space and recreational facilities, unless it can be clearly demonstrated <i>to the satisfaction of Galway County Council</i> that these uses are no longer required <i>by the community</i> .
<p>Objective LU 9 – Environmental Management (EM) Promote the sustainable use and management of lands with high biodiversity value and/or environmental sensitivity, including flood risk and those with natural heritage designations such as Special Protection Areas and Special Areas of Conservation.</p>	<p>Objective LU 9 – Environmental Management (EM)</p> <ul style="list-style-type: none"> Promote the sustainable use and management of lands with high biodiversity value and/or environmental sensitivity, including flood risk and those with natural heritage designations. <i>Support the conservation management objectives of natural heritage designations such as Special Protection Areas and Special Area Conservation.</i> 	To provide greater clarity in terms of Habitats Directive requirements and function of Environmental Management Areas	<p>Objective LU 9 – Environmental Management (EM) Protect lands and sites with high biodiversity value and/or environmental sensitivity <i>and promote their sustainable management and use. This will include</i> 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 of these sites <i>and the requirements of the EU Habitats Directive (92/43/EEC).</i></p>
<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 as updated within the lifetime of this plan). Higher residential densities should be</p>	<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>’</p>	Surface run off, water extraction, soil disturbance and inadequate wastewater infrastructure could all impact on Cregganna Marsh and Galway Bay Natura 2000 sites	<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 as updated within the lifetime of this plan). Higher residential densities should be encouraged at</p>

Original Draft Policy/Objective	Recommended change	Reason	Policy or Objective in Draft LAP
<p>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</p>	<p>(or as updated within the lifetime of this plan). 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, natural heritage <i>or impact adversely on integrity of Natura 2000 sites.</i></p>		<p>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 <i>or impact adversely on the integrity of Natura 2000 sites.</i> 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 RD 9 – Strategic Reserve Area Protect and safeguard the lands designated as the Strategic Reserve Area from any development that would prejudice their potential as the land reserve for the future strategic growth of Oranmore. The development of these lands shall be realised in a plan led manner and must be subject to master planning, prior to their development being considered.</p> <p>It is an objective of Galway County Council to bring forward a master plan for a new development area, centred on the proposed rail stop and any future integrated transport hub at Garraun, which will assist in realising the full long-term potential of the Ardaun/Garraun area, in a plan led manner. Any masterplan undertaken shall be subject to the requirements of the Habitats Directive, as</p>	<p>Objective RD 9 – Strategic Reserve Area Protect and safeguard the lands designated as the Strategic Reserve Area from any development that would prejudice their potential as the land reserve for the future strategic growth of Oranmore. The development of these lands shall be realised in a plan led manner and must be subject to master planning, prior to their development being considered.</p> <p>It is an objective of Galway County Council to bring forward a master plan for a new development area, centred on the proposed rail stop and any future integrated transport hub</p>	<p>As this area has hydrological connections to the Galway Bay SAC and will be subject to a masterplan, it is recommended reference be made to the relevant Habitats Directive Assessment and SEA Regulations.</p>	<p>Objective RD 9 – Strategic Reserve Area Protect and safeguard the lands designated as the Strategic Reserve Area from any development that would prejudice their potential as the land reserve for the future strategic growth of Oranmore. The development of these lands shall be realised in a plan led manner and must be subject to master planning, prior to their development being considered.</p> <p>It is an objective of Galway County Council to bring forward a master plan for a new development area, centred on the proposed rail stop and any future integrated transport hub at Garraun, which will assist in realising the full long-term potential of the Ardaun/Garraun area, in a plan led manner. Any masterplan undertaken shall be subject to the requirements of the Habitats Directive, <i>and SEA Regulations 2004-2011</i> as appropriate</p>

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appropriate	at Garraun, which will assist in realising the full long-term potential of the Ardaun/Garraun area, in a plan led manner. Any masterplan undertaken shall be subject to the requirements of the Habitats Directive, <i>and SEA Regulations 2004-2011</i> , as appropriate		
<p>Objective CF 9 – Riverside Networks Encourage and support the development of riverside walkways and cycleways throughout the plan area where feasible and ensure that such proposals are considered or incorporated into the development of adjacent lands, as appropriate. Refer to Map 2 - Specific Objectives.</p>	<p>Objective CF 9 – Riverside Networks Encourage and support the development of riverside walkways and cycleways throughout the plan area where feasible and ensure that such proposals are considered or incorporated into the development of adjacent lands, as appropriate. <i>Impacts on natural heritage and designated conservation area arising from recreational activities will be considered as part of any proposals.</i></p>	Potential disturbance to bird and mammal species may arise along riverside habitats so requirement to highlight this as a potential consideration.	<p>Objective CF 9 – Riverside Networks Encourage and support the development of riverside walkways and cycleways throughout the plan area where feasible and ensure that such proposals are considered or incorporated into the development of adjacent lands, as appropriate. <i>Impacts on natural heritage and designated conservation areas arising from recreational activities will be considered as part of any proposal.</i></p>
<p>Objective CF 10 – Coastal Park Encourage and support the development of a coastal park in Oranmore for the purpose of passive and active recreation, having regard to flood risk. Refer to Map 2 - Specific Objectives.</p>	<p>Objective CF 10 – Coastal Park Encourage and support the development of a coastal park in Oranmore for the purpose of passive and active recreation, having regard to flood <i>risk and requirements under the Habitats Directive. Such developments will be encouraged and supported by the Plan where they will not result in likely significant effects to the integrity of Galway Bay cSAC and SPA</i></p>	As above	<p>Objective CF 10 – Coastal Park Encourage and support the development of a coastal park in Oranmore for the purpose of passive and active recreation, having regard to flood risk <i>and requirements under the Habitats Directive. Such developments will be encouraged and facilitated where they will not result in likely significant effects to the integrity of Galway Bay cSAC and SPA.</i></p>

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<p>Objective CF 11 – Coastal Walkway/Cycleway Facilitate the development of a coastal amenity walkway/cycle route and ancillary development along Galway Bay (or in close proximity to the coast) towards Galway City. This walk/cycle way will link to the town centre and other recreation/amenity/community facilities, and shall be carried out in an environmentally sensitive manner, in consultation with all relevant stakeholders.</p>	<p>Refer to Map 2 - Specific Objectives.</p> <p>Objective CF 11 – Coastal Walkway/Cycleway Facilitate the development of a coastal amenity walkway/cycle route and ancillary development along Galway Bay (or in close proximity to the coast) towards Galway City. This walk/cycle way will link to the town centre and other recreation/amenity/community facilities, and shall be carried out in an environmentally sensitive manner in consultation with all relevant stakeholders. <i>Such developments will only be facilitated where they will not result in likely significant effects to the integrity of the Galway Bay SAC and SPA.</i></p>	<p>As above</p>	<p>Objective CF 11 – Coastal Walkway/Cycleway Facilitate the development of a coastal amenity walkway/cycle route and ancillary development along Galway Bay (or in close proximity to the coast) towards Galway City. This walk/cycle way will link to the town centre and other recreation/amenity/community facilities, and shall be carried out in an environmentally sensitive manner, in consultation with all relevant stakeholders. <i>Such developments will only be facilitated where they will not result in likely significant effects to the integrity of Galway Bay SAC and SPA.</i></p>
<p>Objective TI 32– Access Road to Rail Station Provide for a new access road with pedestrian and cycling facilities, from the R338 Coast Road to serve the rail stop, which makes provision to pass/cross the rail line and which continues north to the R446 linking to the proposed road interchange on the R446. Route considerations will be informed by ecological impact assessment/ habitats directive assessment as appropriate</p>	<p>Objective TI 32– Access Road to Rail Station Provide for a new access road with pedestrian and cycling facilities, from the R338 Coast Road to serve the rail stop, which makes provision to pass/cross the rail line and which continues north to the R446 linking to the proposed road interchange on the R446. <i>Route considerations will be informed by ecological impact assessment/ habitats directive assessment as appropriate</i></p>	<p>As above</p>	<p>Objective TI 32– Access Road to Rail Station Provide for a new access road with pedestrian and cycling facilities, from the R338 Coast Road to serve the rail stop, which makes provision to pass/cross the rail line and which continues north to the R446 linking to the proposed road interchange on the R446. <i>Route considerations shall be informed by an ecological impact assessment or Habitats Directive Assessment, as appropriate.</i></p>

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<p>Objective UI 9 – Climate Change & Air Quality Continue to implement Galway County Council's <i>Energy Action Plan</i> 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. Promote the preservation of best ambient air quality compatible with sustainable development throughout the Plan Area by seeking to protect and maintain the regulatory standards contained with the EPA's <i>Air Quality in Ireland 2009 Key Indicators of Ambient Air Quality</i> (Environmental Protection Agency 2010, or any superseding document).</p>	<p>Objective UI 9 – Climate Change & Air Quality Continue to implement Galway County Council's <i>Energy Action Plan</i> 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. Promote the preservation of best ambient air quality compatible with sustainable development throughout the Plan Area by seeking to protect and maintain the regulatory standards contained with the EPA's <i>Air Quality in Ireland 2009 Key Indicators of Ambient Air Quality</i> (Environmental Protection Agency 2010, or any superseding document) and ensure that all air emissions associated with new developments are within Environmental Quality Standards as set out in statutory regulations, namely SI 180/2011 Air Quality Standards Regulations 2011</p>	<p>Reference to recent 2011 Statutory Instruments strengthens air quality protection and makes reference to specific standards.</p>	<p>Objective UI 9 – Climate Change & Air Quality Continue to implement Galway County Council's <i>Energy Action Plan</i> 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. Promote the preservation of best ambient air quality compatible with sustainable development throughout the Plan Area by seeking to protect and maintain the regulatory standards contained with the EPA's <i>Air Quality in Ireland 2009 Key Indicators of Ambient Air Quality</i> (Environmental Protection Agency 2010, or any superseding document) and ensure that all air emissions associated with new developments are within Environmental Quality Standards as set out in statutory regulations, namely SI 180/2011 Air Quality Standards Regulations 2011</p>
<p>Objective UI 15 – Coastal Flooding Require development proposals in the coastal zone identified in the Flood Risk Assessment as vulnerable to flooding, to consider the implications of predicted sea-level rise and prohibit development that will</p>	<p>Objective UI 15 – Coastal Flooding Require development proposals in the coastal zone identified in the Flood Risk Assessment as vulnerable to flooding, to consider the implications of predicted</p>	<p>Oranmore has a history of tidal flooding, therefore in addition to highlighting application of flood management</p>	<p>Objective UI 14 – Coastal Flooding Ensure that any development proposals within/near areas at risk of coastal flooding, assess the implications of predicted sea level rise, and prohibit development that would be at unacceptable risk from coastal</p>

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<p>be at risk from coastal erosion or inundation in the future, or that may result in an increase in coastal erosion or increase the risk of inundation, either at the subject site or at another location in the vicinity.</p>	<p>sea-level rise and prohibit development that will be at risk from coastal erosion or inundation in the future, or that may result in an increase in coastal erosion or increase the risk of inundation, either at the subject site or at another location in the vicinity. Adherence to the following will be a requirement:</p> <ul style="list-style-type: none"> • Planning Guidelines for Flood Risk Management • Habitats Directive Assessment • Water Framework Directive 	<p>guidelines, associated legislative provision is highlighted including Habitats Directive and Water Framework Directive</p>	<p>erosion or inundation, or that may result in an increased risk in coastal erosion or inundation elsewhere.</p> <p>Adherence to the following will be a requirement:</p> <ul style="list-style-type: none"> • The Planning System and Flood Risk Management Guidelines 2009 (or any superseding document) • Habitats Directive • Water Framework Directive
<p>Objective NH 1– Natura 2000 Sites Protect Natura 2000 sites, including Special Protection Areas and Special Areas of Conservation, that form part of the Natura 2000 network, in accordance with the requirements in the EU <i>Habitats Directive</i> (92/43/EEC), <i>EU Birds Directive 1979 79/409/EEC</i>, the <i>European Communities (Natural Habitats) Regulations 1997</i> (S.I. No 94 of 1997), the <i>Planning and Development (Amendment) Act 2010</i>, the <i>European Communities (Birds and Natural Habitats) Regulations 2011</i> (S.I. No. 477 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,</p>	<p>Additional number point as follows:</p> <p>3. The plan or project will adversely affect the integrity of a priority qualifying habitat or species any Natura 2000 site (that hosts a priority natural habitat type and/or a priority species) but interest. there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, relating to human health or public safety, or where the proposed plan or project is of 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,</p>	<p>To strengthen and detail requirements of Habitats Directive Assessment</p>	<p>Objective DS3 – Natura 2000 Network Sites 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</i> (92/43/EEC), <i>EU 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</i> (SI No. 477 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 updated/superseding guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County</p>

Original Draft Policy/Objective	Recommended change	Reason	Policy or Objective in Draft LAP
<p>based on scientific knowledge and a Habitats Directive Assessment where necessary, that:</p> <p>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> <p>2.The plan or project will adversely affect the integrity of any Natura 2000 site 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 undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000;</p>	<p><i>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></p>		<p>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. <i>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</i>

Original Draft Policy/Objective	Recommended change	Reason	Policy or Objective in Draft LAP
			<p><i>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></p>
<p>Objective NH 7 – Wetlands, Springs, Rivers and Streams Seek to preserve the wetlands of Oranmore, identify and protect natural springs, streams/rivers, where possible</p>	<p>Objective NH 7 – Wetlands, Springs, Rivers and Streams Seek to preserve the wetlands of Oranmore, identify and protect natural springs, streams/rivers, where possible and <i>ensure that any plans/projects with the potential to adversely affect groundwater, springs, streams or rivers, identify the presence of these features and adequately assess the impacts to them.</i> Protect springs identified on Ordnance Survey mapping <i>or any springs newly identified during project development assessments</i> so that they are not impeded</p>		<p>Objective NH 7 – Wetlands, Springs, Rivers and Streams Seek to preserve the wetlands of Oranmore, identify and protect natural springs, streams/rivers, where possible and <i>ensure that any plans/projects with the potential to adversely affect groundwater, springs, streams or rivers, identify the presence of these features and adequately assess the impacts to them.</i> Protect springs identified on Ordnance Survey mapping or any springs newly identified during project development assessments so that they are not impeded.</p>
<p>Objective NH 8 – Frenchfort Stream Ecological Corridor Protect land for an Ecological Corridor linking two disjoint parts of the Galway Bay Complex cSpecial Area of Conservation and proposed Natural Heritage Area, along Frenchfort Stream (and require an Ecological Management Plan to be produced for any new development along this area). Refer to the Map 2 - Specific Objectives Map.</p>	<p>Objective NH 8 – Frenchfort Stream Ecological Corridor Protect land for an Ecological Corridor linking two disjoint parts of the Galway Bay Complex cSpecial Area of Conservation and proposed Natural Heritage Area, along Frenchfort Stream (and require a HDA and Ecological Management Plan to be produced for</p>		<p>Objective NH 8 – Frenchfort Stream Ecological Corridor Protect land for an Ecological Corridor linking two disjoint parts of the Galway Bay Complex cSpecial Area of Conservation and proposed Natural Heritage Area, along Frenchfort Stream (and require a Screening for Appropriate Assessment and/or Natura Impact Statement <i>and an Ecological Management Plan</i> to be produced for any new development along this area). <i>The Ecological Management</i></p>

Original Draft Policy/Objective	Recommended change	Reason	Policy or Objective in Draft LAP
	any new development along this area, <i>The Ecological Management Plan will ensure no disruption to the conservation management objectives of the N2K Sites and pNHA</i> Refer to the Map 2 - Specific Objectives Map.		<i>Plan will ensure no disruption to the conservation management objectives of the Natura 2000 sites and pNHAs. Refer to the Map 2 - Specific Objectives Map.</i>
New Objectives proposed for LAP from SEA and HDA process			
New Objectives		Reason	Policy or Objective in Draft LAP
Objective NH 10 – 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	Objective NH 10 – 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 <i>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.</i>	To strengthen overall protection of such features and systems.	Objective NH 10 – 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 <i>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.</i>
<i>Objective NH 11 – Summer Botanical Survey for Lands at Moneyduff</i> <i>Ensure that a Summer Botanical Survey is undertaken and submitted as part of any planning application for development of lands beside the SAC/pNHA designated site in Moneyduff.</i>		Moneyduff, beside Cregganna Marsh SPA was formerly proposed for NHA designation, though this is no longer the case. Nonetheless, the area was surveyed in	<i>Objective NH 11 – Summer Botanical Survey for Lands at Moneyduff</i> <i>Ensure that a Summer Botanical Survey is undertaken and submitted as part of any planning application for development of lands beside the cSAC/pNHA designated site in Moneyduff.</i> <i>Refer to the Map 2A/2B - Specific Objectives</i>

Original Draft Policy/Objective	Recommended change	Reason	Policy or Objective in Draft LAP
		<p>2006 and the survey suggested a mosaic of possible Annex I habitats occurs in this area. Recent aerial photos suggest little has changed although scrub may have been cleared. Although not designated, it remains an area of high ecological value, therefore the following mitigation measure is recommended prior to any future development in this area.</p>	
<p><i>Objective NH 12 – Best Practice Methodologies & Appropriately Qualified Professionals. Ensure that Natura Impact Statements and any other ecological impact assessments submitted in support of proposals for development are carried out by appropriately qualified professionals and that any necessary baseline assessments are carried out in line with best practice methodologies.</i></p>		<p>To ensure appropriately qualified and experienced professionals with sufficient ecological knowledge prepare such assessments and follow best practice</p>	<p>Please note the mitigation measure has now been incorporated into the following:</p> <p>Objective NH4 Impact Assessments</p> <p>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</i></p>

Original Draft Policy/Objective	Recommended change	Reason	Policy or Objective in Draft LAP
			<p>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 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 out according to best practice methodologies and contain all necessary baseline assessments.</p>
<p>Objective NH 13 – Consultation with Environmental Authorities Galway County Council will consult with the relevant Environmental Authorities when considering plans and projects which are likely to affect Natura 2000 sites.</p>		<p>To facilitate adequate and sufficient consultation with relevant Environmental authorities as appropriate</p>	<p>Objective NH13 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>

It is recommended that all legislation, policy and guidelines outlined in both the Draft Oranmore LAP, and this Environmental Report are adhered to. In addition, future legislation, policy and guidelines should also be fully integrated where appropriate and necessary into the Draft Plan and Environmental Report.

9 Section Nine, Monitoring

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.

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. 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) - 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	No net habitat loss for these sites	NPWS/Local Authority	Local Authority
Bio 4: Protect habitats	Spread of invasive	- Survey and	NPWS/Local	Local

(terrestrial and aquatic) from invasive species	species	monitor extent and distribution of invasive species	Authority	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/RMMP/ 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/RMMP/ 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/RMMP/ Local Authority	Local Authority
Wat 2 - Maintain or improve the quality of surface water (including estuarine) to status objectives as set out in the Water Framework Directive, WRBM and POMS	Biotic Quality Rating (Q Values) and Risk assessment	- No severe pollution incident - Appropriate WWT Infrastructure in plan area	WFD/ Local Authority/ Western RBD Project	Local Authority
Wat 3 - Prevent pollution and contamination of groundwater by adhering to aquifer protection plans	Risk Assessment	-No change or improvement in groundwater quality associated with development	EPA / WRBD Project	Local Authority
Geology and Soil				
Soil 1: Encourage the use of derelict, disused and infill sites rather than	Number of developments granted for	-Infill developments on brownfield sites over lifetime of the	Local Authority	Local Authority

Greenfield sites where appropriate	brownfield sites (or area)	plan.		
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 sites.	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
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.	- 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 Oranmore in line with Core Strategy - Reduce social exclusion. - Increase participation and	- 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	Local Authority Health Service Executive	Local Authority

	accessibility of education to all levels of society			
Pop 2: To protect human health from risks or nuisances arising from exposure to incompatible land uses/developments	- No. of complaints relating to noise, odour, water quality and visual issues.	- Promote compatible land use where possible	Local Authority/ HSA	Local Authority
Cultural heritage				
CH1: Protect and conserve the cultural heritage including the built environment and settings; archaeological (recorded and unrecorded monuments), architectural (Protected Structures, Architectural Conservation Areas, vernacular buildings, materials and urban fabric) and manmade landscape features (e.g. field walls, footpaths, gate piers etc.).	- % 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	- 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 Oranmore	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	Average energy consumption of new residential housing	Decrease Greenhouse gas emissions in line	EPA, Local Authority, SEAI	Local Authority

and promotion of renewable energy	stock Tonnes of CO2 /capita/year	with 2020 commitments		
Topic and SEA Objective Material Assets	Indicators	Targets	Data sources	
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	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 ³
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 development is 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	% recycling from regional waste strategy	Local Authority	Local Authority

	Landfill gas capture rates			
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 and provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety.	% change in modal split	Extension and improvement of the cycling and walking network	Local Authority	Local Authority

9.2 Conclusion

The Draft Oranmore 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. 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 Habitats Directive Assessment (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 Union (Natural Habitats) Regulations 94 of 1999, as amended SI 233/1998 and SI 378/2005. **Subject to the full and proper implementation of the mitigation measures outlined in this ER, including appropriate site level investigations, it is considered that significant adverse impacts on the environment will be avoided.**