



Comhairle Chontae na Gaillimhe
Galway County Council

**STRATEGIC ENVIRONMENTAL ASSESSMENT
ENVIRONMENTAL REPORT
Non Technical Summary**

**BALLINASLOE LOCAL AREA PLAN
2022 – 2028**

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1 Introduction

This is the Non Technical Summary of the Environmental Report that has been prepared as part of the Strategic Environmental Assessment (SEA) of the draft Ballinasloe Local Area Plan (BLAP) 2022-2028. It summarises how the assessment has been undertaken, the findings and recommendations for the BLAP 2022-2028. Strategic Environmental Assessment

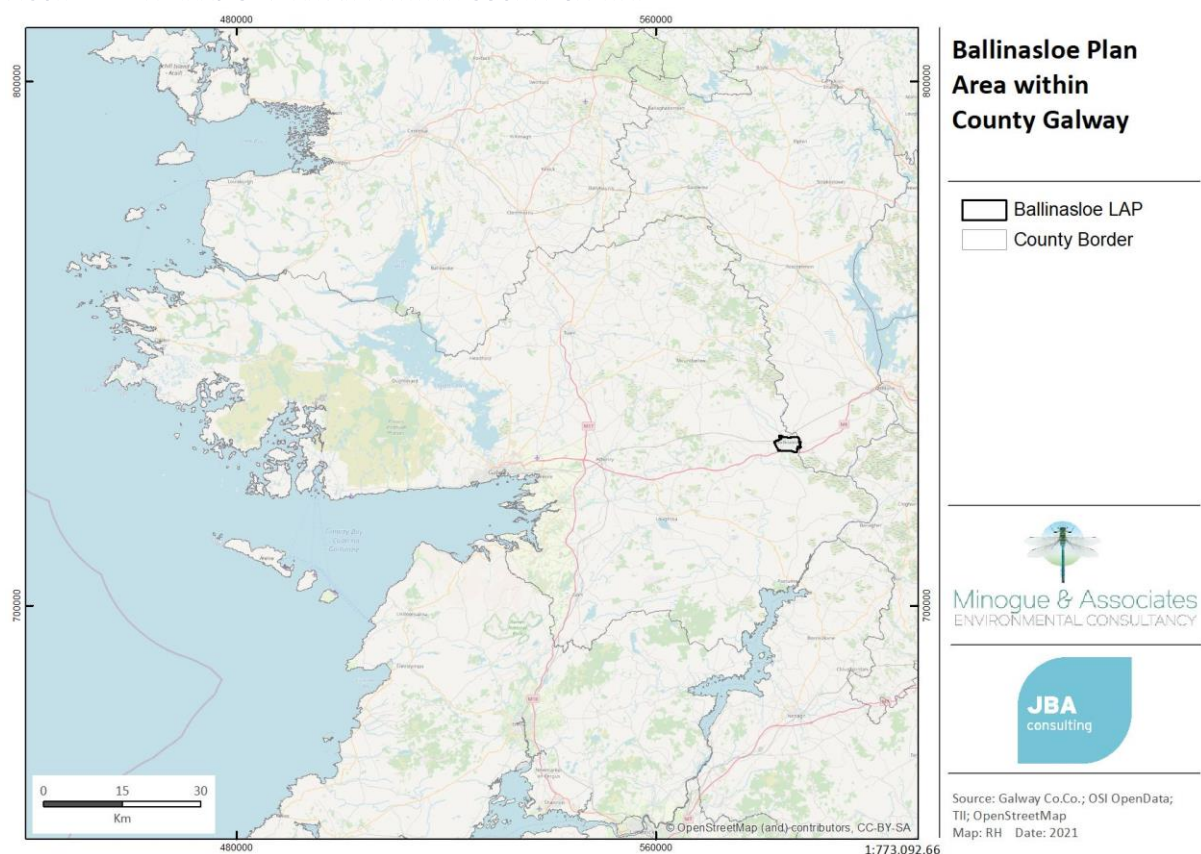
Under Directive 2001/42/EC - Assessment of Effects of Certain Plans and Programmes on the Environment, certain plans and programmes require an environmental assessment. This is known as the Strategic Environmental Assessment (SEA) Directive. Article 1 of this Directive states that its objective is:

'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development.'

Scale, nature and duration of plan

Figure 1.1 shows the outline of the plan area within the wider context of Galway County. The proposed BLAP will effectively replace the existing BLAP, namely the **Ballinasloe Local Area Plan 2015-2021** as adopted by Galway County Council in 2015.

FIGURE 1-1 BALLINASLOE PLAN AREA WITHIN COUNTY GALWAY



Stages in the SEA process

The steps involved in SEA are as follows:

- Screening (determining whether or not SEA is required).
- Scoping (determining the range of environmental issues to be covered by the SEA).
- The preparation of an Environmental Report (**current stage**)

- The carrying out of consultations.
- The integration of environmental considerations into the Plan or Programme.
- The publication of information on the decision (SEA Statement).

Scoping

The purpose of the SEA Scoping report is to identify the scope of the SEA and ensure that relevant data and environmental topics are included in the SEA. The Scoping report was issued to the statutory environmental authorities on 14th June 2021 for comment.

Baseline Data

The baseline data assists in describing the current state of the environment, facilitating the identification, evaluation, and subsequent monitoring of the effects of the Plan. Its Relationship to relevant plans and programmes the BLAP has also been subject to two other environmental assessments – Strategic Flood Risk Assessment and Habitats Directive Assessment.

Under the SEA Directive, the relationship between the BLAP 2022-2028 and other relevant plans and programmes must be taken into account. A review of the relevant plans and programmes has been prepared as part of the SEA ER.

2 Environmental Baseline

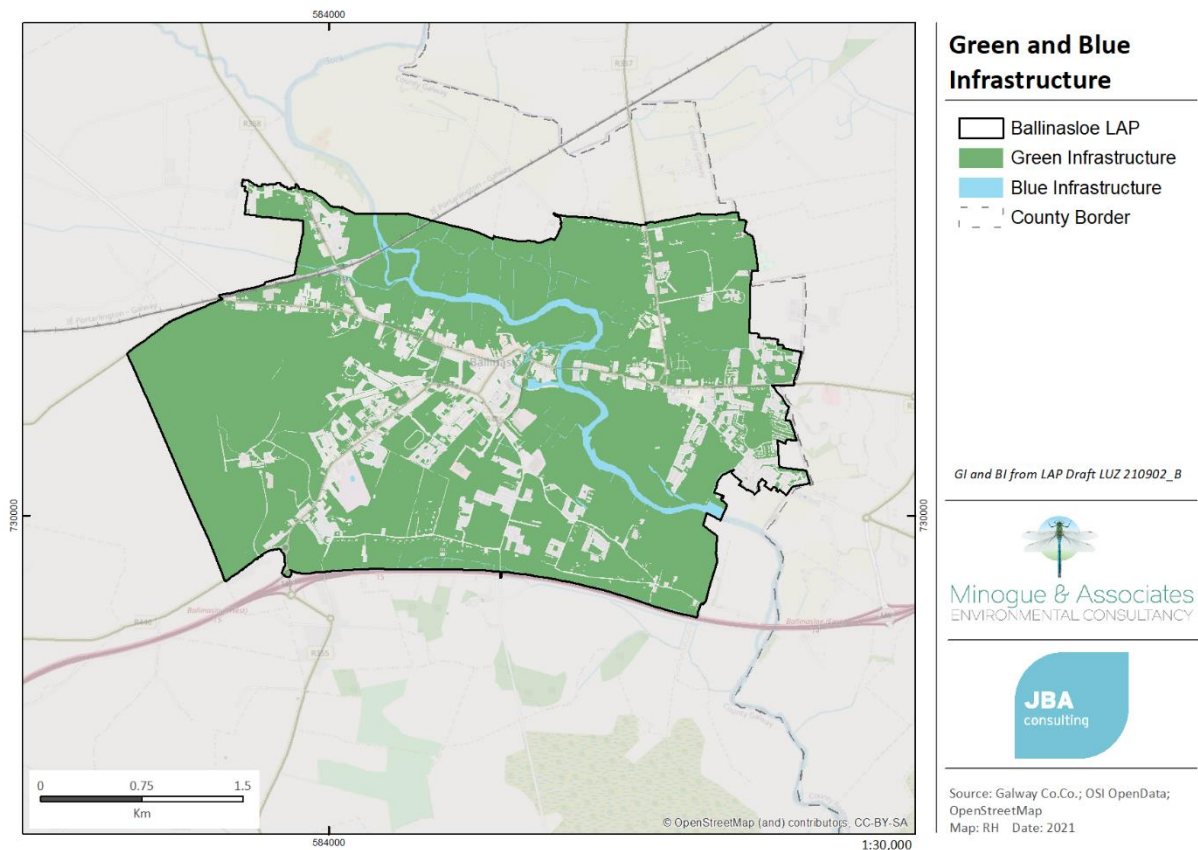
This section of the Environmental Report examines the relevant significant characteristics of the current state of the environment in relation to Biodiversity, Flora and Fauna, Population, Human Health, Water, Air Quality, Climatic Factors, Material Assets, Cultural Heritage, Landscape, Green Infrastructure and Ecosystem Services, the interrelationship between these factors and the evolution of same in the absence of the BLAP 2022-2028.

Green Network

Green spaces are key in terms of natural capital and ecosystem services. Green and Blue infrastructure can also contribute to climate change adaptation and mitigation with co benefits in terms of biodiversity, water quality, recreation, and human health¹. The Green Network (as seen in Figure 2.) supports the linkage between various multifunctional spaces, that include:

- Blue Spaces of the town's rivers, lakes and canals
- Protected Spaces of ecological and biodiversity importance
- Green Spaces of woodland parks
- Open Spaces including recreational and amenity and agricultural zoned lands
- Community Spaces, that afford direct access to nature and amenities (e.g. greenways) to the community

FIGURE 2 GREEN AND BLUE INFRASTRUCTURE OF BALLINASLOE



¹ Spatial Planning & Climate Action Delivering a Low Carbon & Climate Resilient Future Workshop Report Feb 2021 CARO

Biodiversity, Flora and Fauna

The Plan area supports a rich biodiversity, with many natural and semi-natural habitats and a range of species and flora. Other habitats, although not protected are important for providing links between the protected habitats, allow migration, dispersal and genetic exchange of wild plants and mammals. Examples include scrub, hedgerows, tree lines, and gardens etc. Natural heritage in the plan area includes a wide range of natural features that make an essential contribution to the environmental quality, ecological biodiversity, climate resilience through nature-based solutions landscape character, visual amenity and recreational activities of the city.

A full assessment of the BLAP 2022-2028 against the qualifying interests and conservation objectives of the designated sites is undertaken throughout the appropriate assessment process which has been undertaken in conjunction with the Plan preparation and SEA processes and is presented in the Natura Impact Report.

Population and Human Health

Population

The Regional Spatial and Economic Strategy 2020-2032 (RSES) for the Northern and Western Regional Assembly area recognises Ballinasloe as a Key Town which provides which provides an anchor for employment in east Galway. One of the key future priorities for Ballinasloe from the RSES 2020-2032, as recognised in the Core Strategy of the current GCDP 2022-2028 includes: “realising the town’s potential as a ‘County Town’, ensuring a balance of development in the town centre of Ballinasloe, and providing for compact growth and brownfield development, revitalising Dunlo Street, Market Square, Society Street and Main Street, and to reduce vacancies and support the vitality and vibrancy of these core shopping streets/side streets and the town centre.”

TABLE -1 CORE STRATEGY OUTLINED IN GCDP 2022-2028 FOR BALLINASLOE

Settlement Typology	CSO 2016	Core Strategy Allocation	Residential Units to be Delivered on Greenfield Sites	Density	Quantum of Greenfield Land Required for Residential Development	Residential Units to be Delivered on Infill/Brownfield Sites
Ballinasloe Key Town	6,662	1,999	816	35	23	350

Human Health

In terms of human health, where people live have a profound effect on their health. A key area for consideration of human health will be the interaction between environmental aspects such as water, landscape, biodiversity, air, energy and human beings. Soil and Geology

Soils and Geology

Urban soil underlies the built-up areas within the town. The majority of the plan area is covered by limestone till. Areas of cutover peat lie to the north, north-west and south of the plan area. Alluvial soils and limestone sands and gravels compromise the remainder of the plan area with minor areas of outcropping bedrock, including karstified limestone bedrock.

Water Resources and Flooding

3 Water Framework Directive (WFD)

Ireland is required to produce a river basin management plan under the Water Framework Directive and the current plan is from 2018-2021. The plan sets out the actions that Ireland will take to improve water quality and achieve 'good' ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2027. The main catchment in the plan area is the Upper Shannon Catchment (Code: 26D) shown in Figure 4.14. This catchment covers an area of 1,598km² and is underlain completely by karstified bedrock, apart from some isolated pockets and the most southerly part of the catchment downstream of Ballinasloe. The catchment is dominated by a flat undulating topography and the groundwater and surface water drainage systems are highly interlinked throughout the catchment.

The River Suck, which runs through the centre of Ballinasloe Town, is the most dominant river and the largest of the River Shannon's three tributaries in the context of Ballinasloe. Other surface water bodies include River Bunowen, Deerpark River, Cuilleen stream and Keelysgrove stream.

According to the WFD cycle 2 catchment assessment, River Suck is At Risk with moderate ecological status. The quality of groundwater in the plan area is classified as good following a reliable assessment in accordance with Annex V of the WFD.

Strategic Flood Risk Assessment

Ballinasloe has a long history of flooding from the River Suck, Deerpark River and other local tributaries. In recent times, significant flooding occurred in November 2009 and during winter 2015/2016. The Shannon Catchment Flood Risk Management Plan (www.floodinfo.ie/) was finalised in May 2018, and this study recommended the development of a flood relief scheme for Ballinasloe. OPW in partnership with Galway County Council have now appointed Arup in conjunction with Hydro-Environmental Ltd. to assess, develop and design a viable, cost-effective and environmentally sustainable flood relief scheme for Ballinasloe. Ryan Hanley Ltd. has also been appointed to undertake the environmental appraisals for the scheme. The flood relief scheme is a significant project for the town and provides for protection and management of the SAC and SPA. The timeframe for completion of the scheme is likely to be outside the lifespan of the Local Area Plan.

4 Key Issues- Water Resources and Flooding

The above descriptions identify a number of sensitivities with regard to the status of water bodies within the Ballinasloe plan area. Groundwater underlying the plan area and the Suck River Callows SPA are both listed on Registers of Protected Areas under the Water Framework Directive.

The majority of surface waters are at significant risk of failing to achieve the WFD's objectives of good status by 2027. The pressures which have been identified by the catchment assessment in the characterisation of the water bodies within and surrounding the plan area include:

- Diffuse source pressures such as the EPA's diffuse sources model;
- Morphological pressures including intensive land use; and
- Point sources such as combined sewer and treatment plant overflows and wastewater treatment plants.

Other key issues to be considered are as follows:

- Maintenance of water supply in relation to abstraction.

- Potential increase in the levels of flooding within the plan area; Existing and new infrastructure particularly roads, powerlines and telecommunications susceptible to flooding.
- Amenity and recreation provision where this could impact nature conservation sites and/or sensitive species.

Air Quality

The quality of air is a crucial factor in determining the health of an ecosystem. Polluted air impacts the natural environment, affecting the quality of fresh water, soil, and ecosystems, as well as damage to the built environment. The Climate Action and Low Carbon Development Act 2015 sets out the national objective of transitioning to a low carbon, climate resilient and environmentally sustainable economy in the period up to 2050. The recent Climate Action and Low Carbon (Amendment) Act 2021 provides for a statutory a “National Climate Objective” that commits to pursue and achieve the transition to a climate-resilient, biodiversity rich, environmentally-sustainable and climate-neutral economy. Climate is a key indicator with influences on all other indicators. Table 4.4 shows the impacts that climate change is expected to have nationally.

Galway County Council’s Climate Change Adaptation Strategy 2019-2024 (the Adaptation Strategy) sets out our strategic priorities, measures and responses for adaptation in County Galway over the next five years; as required by the Climate Action and Low Carbon Development Act 2015. The Strategy is based on four main themes: Critical Buildings and Infrastructure, Natural and Cultural Capital, Water Resource & Flood Risk Management and Community Services.

Material Assets

Material assets are defined as the critical infrastructure essential for the functioning of society. This section presents the baseline as it relates to transport, waste management, water services infrastructure and energy. The Environmental Report will examine effects on material assets, such as existing infrastructure and services including transportation, water supply, waste-water treatment and discharge, waste management, electricity and telecommunications etc.

The availability of a water supply of sufficient quality and quantity is essential for public health and the sustainable economic growth of Ballinasloe town. The primary source of Ballinasloe’s public water supply is the Derrymullen Water Treatment Plant which sources water from the River Suck upstream of the town. There are three reservoirs serving Ballinasloe Town and the surrounding areas. These are located at Garbally, Redmount Hill, and Sheepwalk.

Irish Water, working in partnership with Galway County Council, has completed upgrade works to the Ballinasloe Water Treatment Plant. The works were undertaken by Glan Agua Limited on our behalf. As a result of this €650,000 investment over 8,000 people in the Ballinasloe and surrounding area will benefit from a safer and more reliable water supply. In terms of wastewater capacity is envisaged in the GCDP 2022-2028 that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets. Pumping station upgrades in Ballinasloe (Dunloe P.S.) to resolve capacity constraints are under consideration.

The Waste Management Plan for the Connacht Ulster Region 2015-2021 provides policy guidance on waste management in County Galway. It serves as the framework for the prevention and management of wastes in a safe and sustainable manner. There are five bring banks located throughout the town at a number of locations and there is a recycling facility at Pollboy.

Developments require adequate power, energy and telecommunications services, including electricity, gas supply, telephone services and broadband, which are provided by a number of

different service providers. Ballinasloe is served by Eircom and a number of mobile telecommunications operators. The Ballinasloe Metropolitan Area Broadband Network (MANS) is fully constructed and is routed mainly around the town centre. It serves the IDA site and HSE facilities along the R357, industrial lands at Pollboy, educational facilities and along the R446 servicing Garbally College, Portiuncla Hospital and the Dunlo area.

Ballinasloe performs an important role, in particular as a commercial/industrial centre for the eastern area of the County. The town has important transport connections and provides ease of access to other major regional centres including Dublin, Galway and Athlone.

A number of regional roads (R446, R348, R357, R355 & R358) and local roads also converge in the town. These roads link Ballinasloe with a number of towns and villages, such as Tuam, Kilconnell, Laurencetown, Ahascragh, Athlone, Tullamore and Portumna. Ballinasloe is situated approximately 30.5km (19miles) west of Athlone and 67.5km (42miles) east of Galway and has daily public transport services (both rail and bus) to Galway, Athlone and Dublin and these services present the opportunity to commute to work to these destinations. Ballinasloe Railway Station is located on the Galway to Dublin line, approximately 1.3km to the northwest of the Town Centre at Deerpark. The present location for the bus stop is at the public marina.

Landscape

A Landscape Character Assessment was included in draft Galway County Development Plan 2022–2028 in accordance with the DEHLG’s Landscape and Landscape Assessment Guidelines (2000). The county’s LCA has been subdivided into three regions and the coast. The region relating to the plan area is the Eastern Plains Region which is underlain by younger, softer rocks. This gets most of its character from the covering blanket of glacial soils that give rise to extensive, level plains of grasslands, with many areas of bog in the north. Furthermore, the landscape character type for the Ballinasloe region is defined as the Urban Environs in the LCA.

Cultural Heritage

The heritage of Ballinasloe is a unique resource which is fundamental to the cultural identity of the town and the quality of life of its citizens - it is central to how we see ourselves and to our identity as individuals and communities. Historic buildings can define localities and communities within the area and can become a focus of community identity and pride. A historic church or park, for example, can help define a neighbourhood and create a sense of local cohesion.

. In Ballinasloe, there are currently 54 entries to the Record of Monuments and Places (RMP).

The existing urban form of Ballinasloe was established by the Trench Family in the late 18th and early 19th century with the development of the broad pattern of streets lined with substantial three storey buildings, St. Michael’s Square and the Fair Green.

The Record of Protected Structures (RPS) is legislated under Section 12 and Section 51 of the Planning and Development Act 2000 (as amended). There are currently 118 Protected Structures within the plan area (Figure 4.21). These structures include many houses from the Georgian and Victoria periods. Of note are two of the churches within the town, the church to the east of the Fair Green is a protected structure of national importance while the church at St. Michael's Square is a protected structure of international importance.

There are currently two Architectural Conservation Areas (ACAs) within the plan area, namely Ballinasloe Town Centre and St. Brigid's Hospital.

Inter-relationships

Environmental sensitivity mapping was prepared to inform the overall assessment of the BLAP 2022-2028 and to aggregate different environmental themes to help identify areas of greater and lesser environmental sensitivity. The key datasets used to inform this sensitivity mapping were as follows.

- Ecological Designations (SAC, SPAs, NHAs and pNHAs)
- Annex 1 habitats
- Surface Water quality and
- Architectural Conservation Areas.

The environmental sensitivities map shows the level of overlap of environmental sensitivities and the range of physical environmental factors. It is important to note that the environmental factors not reflected on this map, e.g., those that are point specific, like protected structures, were not included as it was considered by their inclusion; it would potentially give a visual misrepresentation of sensitivity when considering potential areas for future growth. Also, important to note is that the physical extent of the environmental sensitivity can extend beyond the defined area on the map, as the potential impact can be generated at a location remote from the mapped area. For example, a development outside of a designated site boundary does not mean that it cannot impact on it. The mapping also highlights the interaction of key environmental parameters, whilst all environmental parameters interact with each other to an extent, key interactions as shown below relate to water, biodiversity and climate change. All the parameters interact with Population and Human Health.

Evolution of the environment in the absence of the BLAP 2022-2028

The SEA legislation requires that consideration be given to the likely evolution of the current baseline where implementation of the BLAP 2022-2028 does not take place. Table 4. presents the likely evolution of the BLAP 2022-2028 in the absence of the plan.

TABLE 4 EVOLUTION OF THE ENVIRONMENT IN THE ABSENCE OF THE PLAN

SEA	Evolution of same
Biodiversity, Flora and Fauna	<p>In the absence of a Local Area Plan, there would be no framework to guide where development should occur and planning applications would be assessed on a case by case basis with no overall vision for the plan area. Flora and fauna, habitats and ecological connectivity would be protected under a number of largely independent strategic actions relating to biodiversity and flora and fauna protection. The evolution of biodiversity and fauna would be dependent on the rate and extent of any such developments which would take place. There would be limited considerations of the inter-connections between such things as climate change and biodiversity and therefore no provisions made to contend with future climate change.</p> <p>Developments along or adjacent to the banks or rivers could result in a reduction in ecological connectivity within and between a number of habitats. Pollution of water bodies as a result of any future development along river catchments would likely to adversely impact aquatic biodiversity and flora and fauna including salmonid species and other species protected under Annex II of the Habitats Directive.</p> <p>In the absence of a Local Area Plan, any Greenfield development would adversely impact upon biodiversity and flora and fauna by replacing natural or semi-natural habitats with artificial surfaces.</p>
Population, Human health	<p>The County Development Plan Core Strategy has identified a target population growth for Ballinasloe. In order to properly plan for the sustainable development of the plan area, it is essential that this is done at a local level in the form of a local area plan.</p> <p>In the absence of a Local Area Plan 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 would negatively affect human health.</p>

SEA	Evolution of same
Air Quality and Climate	<p>In the absence of a Local Area Plan there would be no framework for the location of new development and, as a consequence development would be likely to occur in a piecemeal fashion, spread out across wider areas than otherwise maybe the case. This would result in significant increases in travel related emissions in the air.</p> <p>While increases in the use of catalytic convertors, cleaner fuels, better engine technology and maintenance is generally reducing the pollution emitted per motor vehicle, this reduction is more than likely offset by the increases in the number of cars as well as the increase in the volume of incidences of traffic congestion. Increases in the number of cars as well as the increases in volume and increased traffic congestion may lead to increases in air and noise pollution in the future.</p> <p>In the absence of a Local Area Plan the realisation of objectives relating to energy efficiency, renewable energy and a reduction in transport related emissions contained within the Local Area Plan would be made more difficult. If new development or an intensification of existing land uses were to occur in the plan area adverse impacts upon air quality and noise levels, and resultant impacts on human health, would likely to arise if unmitigated.</p>
Water Resources including flood risk	<p>The replacing of semi-natural land cover types with artificial, more impervious surfaces is likely to lead to cumulative increases in the run-off and peak flow conditions in the local river bodies. These cumulative increases may have the potential to, especially in combination with the occurrence of severe rainfall events, result in flooding. Uncoordinated development in the absence of a local area plan could lead to the contamination of groundwater.</p> <p>Significant adverse impacts upon the biodiversity and flora and fauna of the area could potentially rise.</p>
Soil and Geology	<p>In the absence of a Local Area Plan there would be no framework for future development nor protection of the soil and geology within the environment of the town. There would be no framework for the provision of infrastructure, such as those relating to waste water treatment to serve existing and future development, therefore, soil would have the potential to be polluted and contaminated as a result of development which is not serviced appropriately by adequate waste water infrastructure. A key objective to rehabilitate brown field and derelict sites opposed to developing greenfield sites may not be achieved which will result in potential subsequent impacts not only on soil quality, but on biodiversity, groundwater quality and water supply and consequently potential impacts on public health.</p>
Material Assets	<p>Existing objectives that relate to this parameter would apply. Many of the measures in the BLAP 2022-2028 are identified with a view to minimising adverse effects of climate change on material assets and responding and facilitating behavioural and modal change in energy use and transport. An integrated sustainable land use and transportation strategy may not be advanced in such a holistic manner in the absence of the plan.</p> <p>The current legislation which provides for the protection and enhancement of the water resources and quality at European, National, Regional and County level will protect and maintain existing water bodies in the Plan area. However, there would not be a planning framework to regulate aid and control development in accordance with specific local issues in relation to potable water, wastewater treatment, flooding and development. This could result in significant impacts across a range of environmental parameters including biodiversity, water, human health, landscape and soil and geology.</p>
Landscape	<p>In the absence of the Local Area Plan there would be no framework within which to regulate aid or manage future developments. A lack of development objectives would lead to uncontrolled developments with no framework to identify specific locations for developments. Development would occur on an ad-hoc basis which would have a cumulative impact on the landscape and development pressures would invariably be on a number of specific locations. The Local Area Plan will include objectives that provide for the preservation, protection and enhancement of the landscape as part of an integrated sustainable approach to future development within the plan area. In the absence of a plan, this would remove this protection and enhancement measures for the landscape, potentially leading to its fragmentation, loss and deterioration.</p>
Cultural Heritage	<p>Ballinasloe has a significant assembly of cultural heritage and extensive and effective legislation and guidance from international and national level affording both the architectural or archaeological</p>

SEA	Evolution of same
	<p>elements a high level of protection. However, in the absence of a Local Area Plan there may not be a framework within which to regulate aid or control development which may lead to uncontrolled development resulting in losses and or deterioration in the cultural assets of the plan area.</p> <p>The relationship between the public realm, townscape and cultural heritage features and intangible cultural heritage would not be considered in the same level of detail in the absence of the plan. The opportunity to promote, support and reuse existing buildings and improve energy efficiencies in older buildings and plan for climate change effects on structures may not be maximised.</p> <p>The cultural heritage of the plan area would suffer due to insufficient monitoring and guidance. Ultimately, the potential for fragmentation, loss, and/or deterioration of cultural heritage would occur of this irreplaceable resource.</p>
Inter-relationships	<p>The potential for in combination effects arising due to the absence of the plan would be potentially significant. Evolution of the environment in the absence of the plan could generate effects in terms of loss of ecological connectivity and non-designated habitats.</p> <p>Disturbance to biodiversity, flora and fauna through unregulated development and poor design such as increasing light levels, emissions from transport, energy.</p> <p>Flood events particularly around coastal and fluvial flooding with interactions across all SEA parameters.</p> <p>Effects of climate change on critical infrastructure, combined with loss of opportunity to adapt and embed nature-based solutions and strengthening the green and blue network. Risk of not meeting/contributing to reduction in carbon emissions.</p> <p>Potential adverse effects on water quality for estuarine, freshwater and groundwater with accompanying interactions across all SEA parameters.</p> <p>Increased greenfield development with release of carbon in soil as well as other ecosystem services that soil provides.</p> <p>Aligned to this would be the risk of not achieving compact growth and not meeting the NPF and RSES targets in this regard.</p>

5 Strategic Environmental Objectives

The purpose of the SEA Objectives is to ensure that the assessment process is transparent and robust and that the BLAP 2022-2028 considers and addresses potential significant environmental effects.

These objectives are derived from the principles identified through the plan, policy and programme review in Chapter Three and Annex A of this report. Table 5.1 SEOs in Line with the GCDP 2022-2028

SEA Topic	Strategic Environmental Objectives
Biodiversity Flora and Fauna	BFF1: To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species
	BFF2: Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function
	BFF3: Safeguard national, regional and local designated sites and supporting features which function as stepping-stones for migration, dispersal and genetic exchange of wild species
	BFF4: Enhance biodiversity in line with the National Biodiversity Strategy and its targets
	BFF5: To protect, maintain and conserve the <i>plan areas'</i> natural capital

Population, Human Health	PHH1: Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management
	PHH2: Ensure that existing population and planned growth is matched with the required public infrastructure and the required services
	PHH3 Safeguard the Ballinasloe's citizens from environment-related pressures and risks to health and well-being
Air, Climate and Noise	A1: To avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air from all sectors with particular reference to emissions from transport, residential heating, industry and agriculture
	A2: Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency
	A3: Promote continuing improvement in air quality
	A4: Reduction of emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter which are responsible for acidification, eutrophication and ground-level ozone pollution
	A5: Meet Air Quality Directive standards for the protection of human health — Air Quality Directive
	A6: Significantly decrease noise pollution by 2020 and move closer to WHO recommended levels
	C1: To minimise emissions of greenhouse gasses
	C2: Integrate sustainable design solutions into the Ballinasloe's infrastructure (e.g. energy efficient buildings; green infrastructure)
	C3: Contribute towards the reduction of greenhouse gas emissions in line with national targets
	C4: Promote development resilient to the effects of climate change
	C5: Promote the use of renewable energy, energy efficient development and increased use of public transport
Water	W1: Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive
	W2: Ensure water resources are sustainably managed to deliver proposed regional and Ballinasloe growth targets in the context of existing and projected water supply and wastewater capacity constraints ensuring the protection of receiving environments
	W3: Avoid inappropriate development in areas at risk of flooding and areas that are vulnerable to current and future erosion, particularly coastal areas
	W4: Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals
Soil and Geology	S1: Protect soils against pollution and prevent degradation of the soil resource.
	S2: Promote the sustainable use of infill and brownfield sites over the use of greenfield within the plan area
	S3: Safeguard areas of prime agricultural land and designated geological sites ² .
Material Assets	MA1: Optimise existing infrastructure and provide new infrastructure to match population distribution proposals in the plan area.
	MA2: Ensure access to affordable, reliable, sustainable and modern energy for all which encourages a broad energy generation mix to ensure security of supply – wind, solar, hydro, biomass, energy from waste and traditional fossil fuels
	MA3: Promote the circular economy, reduce waste, and increase energy efficiencies
	MA4: Ensure there is adequate sewerage and drainage infrastructure in place to support new development
	MA5: Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes

² Inserted following scoping submission by GSI

	MA6: Encourage the transition to a zero-carbon economy by facilitating the development of a grid infrastructure to support renewables and international connectivity. Reduce the average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart-buildings, cities and grids
Cultural Heritage	CH1: Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
	CH2: Promote adaptive reuse of existing buildings that contribute to local character
Landscape	L1: To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention
	L2 To protect and enhance landscape character and quality within and adjacent to the BLAP area.
Interrelationships	IR 1: Maintain and improve the health of people, ecosystems and natural processes
	IR 2: Actively seek to integrate opportunities for environmental enhancement

6 Consideration of Alternatives.

In developing, refining and assessing the alternatives for the LAP, the toolkit included in Developing and Assessing Alternatives in Strategic Environmental Assessment Good Practice Guidance (EPA 2015) was utilised. In addition to the above, the Ballinasloe LAP will function within the policy hierarchy established by national, regional and county strategic plans, as well as relevant legislation.

In the case of the Draft Ballinasloe LAP, possible alternatives include different land uses and scales of development were examined:

- 1. Continuation of Existing LAP land use zonings and policies/objectives (The Do-Nothing Scenario).** Continues with the existing LAP in its current context.
- 2. Town centre consolidation:** This approach would be to focus explicitly on the densification of the town centre with intensification of land uses and focus on employee intensive sectors.
- 3. Town centre consolidation and designation of future development lands in a tiered structure:** Promotion of development lands within the town centre for development and the designation of secondary and edge of centre areas where this type of development is considered appropriate in certain circumstances. It would also promote the development of neighbourhood centres to provide a level of retail services locally.

In considering these alternatives, regard was given to the Preferred Alternative (Type 4- Alternatives for Land Use Zoning) identified for the Galway County Development Plan 2022-2028. Within this scenario, the Land use zoning has been applied in a way that primarily seeks to achieve sustainable and compact growth, taking into account the various requirements set out in the higher-level NPF and Northern and Western RSES. Requirements relating to land use zoning provided for by the NPF and RSES have significantly limited the availability of alternatives for the various settlements.

Preferred Alternative

As the above assessment table shows, the preferred alternative from an environmental strategic perspective is Alternative 3, Town Centre consolidation and designation of future development lands in a tiered structure. This provides the greatest positive environmental effects and is consistent with national and regional planning policy.

7 Assessment of Significant Effects

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 the LAP.

SEA is an iterative process and the LAP has taken consideration of environmental issues raised during the SEA process to date. These issues have been incorporated into the LAP and the principal purpose of this chapter is to discuss the evaluation of these. The discussion of likely impacts is grouped around each of the following environmental parameters as described in Chapter Four:

The individual evaluation of relevant requirements contained in the LAP is presented in Annex A. The identification of impacts through the evaluation matrix and discussion of significant impacts detailed below, in turn informs the development of mitigation measures presented in Chapter Eight, Mitigation Measures. The Table 7.1 below identifies the significant environmental issues that were identified for all alternatives considered through the SEA process.

TABLE 7-1 OVERALL EVALUATION OF SIGNIFICANT EFFECTS OF THE BLAP

SEA theme	Significant positive effects	Significant adverse effects, if unmitigated
<p>Biodiversity, Flora and Fauna</p>	<p>Recognition of River Suck combined with green and blue infrastructure measures, principles of Nature Based Solutions all contribute towards protection of designated sites, ecological connectivity, habitats. (BKT 41 European Sites)</p> <p>Due to increased utilisation of lands within the existing development boundary and use of existing utilities and brownfield sites reduces pressure and need for greenfield land development.</p> <p>Embedding nature based solutions to climate change – allows for co-benefits with other environmental parameters including biodiversity, water and human health. (BKT 59 Trees, Parkland/Woodland and Hedgerows, BKT 53 Inland Fisheries)</p> <p>Promotion of pedestrianisation and cycle friendly town with modal shift contributes to air quality improvements at local level and noise level reductions with positive effects on urban wildlife.</p> <p>In turn longer positive interactions with population and human health in facilitating. access to additional well designed green and blue space</p> <p>Positive effects on water quality arising from nature-based solutions from micro to macro scale. This can reduce pressure on stormwater overflows and conserve water, thus reducing abstraction pressures on water dependent habitats and species.</p>	<p>Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna in the absence of detailed surveys and assessment.</p>
<p>Population and Human health</p>	<p>Land use planning impacts on the everyday lives of people and can either hinder or help promote healthy sustainable environments and communities.</p> <p>For example, the provision of safe walking routes and cycle-ways, parks, playgrounds, safe routes to school, public transport facilities, etc. result in direct and indirect health benefits and allow for healthier transportation choices to be made by communities above private motor car. (BKT 31 Local Transport Plan, BKT 32 Transportation Infrastructure, BKT 33</p>	<p>Activities associated with construction and operation, particularly in environmentally sensitive areas may result in emissions to air and water; with accompanying adverse effects on local health.</p>

SEA theme	Significant positive effects	Significant adverse effects, if unmitigated
	<p>Pedestrian and Cycle Network, BKT 34 Public Transport and Integrated Transportation Location, BKKT 35 Traffic and Transport Assessment (TTA) and Road Safety Audits (RSA), BKT 36 Preservation of Routes, Road Upgrade and Infrastructure Provision, BKT 37 Reservation of Access Points)</p> <p>Many of the policies identified in the draft BLAP 2022-2028 may give rise to long term positive effects on population and human health both by responding and adapting to the impacts of climate change, promoting town centre, compact living, enhancing access to green space and improving the public realm. (BKT 21 Public Utilities, BKT 24 Universal Access, BKT 27 Social and Specialist Housing, BKT 28 Housing for Older Persons and People with Special Needs, BKT 29 Traveller Accommodation, BKT 10 Town Centre Management, BKT 9 Town Centre)</p> <p>Adaptation to climate change by reducing reliance on fossil fuel for heating as well as transport.</p> <p>Reuse of existing buildings represents embedding existing carbon in existing buildings. (BKT 8 Sequential Development, BKT 11 St. Brigid’s Campus, BKT 12 Community Facilities)</p>	
Water Resources including flood risk	<p>The Galway CDP 2022-2028 already includes a range of provisions and measures to address and minimise the adverse, including measures around green infrastructure, flood risk management and development control. The draft strategy however further enhances and strengthen these through the flood resilience actions and nature based solutions in particular. (BKT 43 Flood Risk Management Guidelines, BKT 46 Principles of Flood Management Guidelines, BKT 47 Flood Relief Scheme)</p> <p>Additional tree planting and a focus on riparian habitat provide for positive effects as they reduce soil run off and allow for water attenuation and filtration. Again this provides for longer, positive effects associated with linear habitat creation and ecological connectivity.</p>	<p>A reduction in water quality in groundwater, springs and watercourses associated with the construction phase of new developments (short to medium term impacts)</p> <p>Surface water runoff from impermeable surfaces leading to reduced water quality in groundwater springs or surface waters affecting qualifying habitats and species downstream (impacts can range from short to long term);</p> <p>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.</p>

SEA theme	Significant positive effects	Significant adverse effects, if unmitigated
	<p>Measures around SUDs, and other natural water retention measures are particularly positive, creating long term direct positive effects on water resources, as well as soil and biodiversity, landscape and population. (BKT 48 Surface Water Drainage and Sustainable Drainage Systems)</p> <p>Nature-based or combined grey-green solutions for water management can also provide additional co-benefits with regards to:</p> <ol style="list-style-type: none"> 1) Urban biodiversity (BKT 49 Protection of Waterbodies and Watercourses, BKT 59 Trees, Parkland/Woodland and Hedgerows) 2) Improving the urban environment and living conditions, with benefits for human well-being and quality of life (BKT 63 Bathing Area, BKT 16 Open Space, Recreation and Amenity, BKT 19 Water-Based Tourism) 3) Improvement of air quality, with benefits for human health 4) Improving the urban microclimate and reducing the urban heat island effect through the cooling effect of evapotranspiration; 5) Climate mitigation. As for all NBS, urban trees and green areas enhance direct carbon sequestration in plants and soils, but the quantities involved may not be significant enough for NBS to be considered an effective means for achieving local GHG reduction targets, especially when irrigation is required for maintaining plants (Baró et al., 2015; Pataki et al., 2011). However, green solutions may produce lower emissions compared to grey solutions (e.g. engineered solutions made from cement and other construction materials) that aim at the same goals. 6) Indirect economic benefits (increasing real estate values and tax income for local governments)³ 	<p>Generally, land use practices can result in water quality impacts and whilst surface water impacts may be identified quickly, impacts to groundwater can take much longer to ascertain due to the slow recharge rate of this water resource.</p> <p>Water quality impacts can also have human health impacts in the case where bacterial or chemical contamination arises.</p>
Soil and geology	<p>Soil quality and function may be enhanced through particular measures associated with flood resilience and nature based solutions.</p> <p>The promotion of brownfield and town centre sites embeds existing geological resources and reduces requirements for additional geological</p>	<p>Given the historical and recent landuse associated with a number of town centre sites, the potential for contamination soil presents a risk in the absence of mitigation.</p>

³ EKLIPSE report, page 12.

SEA theme	Significant positive effects	Significant adverse effects, if unmitigated
	<p>resources and greenfield development. (BKT 42 Constrained Land Use, BKT 20 Agriculture)</p> <p>The recognition of ecosystem services and green infrastructure further recognises the essential role and function that soil plays in terms of biodiversity, landscape, human health and climate change adaptation and mitigation. (BKT 48 Surface Water Drainage and Sustainable Drainage Systems, BKT 49 Protection of Waterbodies and Watercourses, BKT 53 Inland Fisheries)</p> <p>The LAP also recognises and supports the ecosystem services approach which identifies the areas within the plan area that show the greatest carbon retention in the soil.</p> <p>Micro and macro nature-based solutions ranging from green roofs to larger nature water retention measures all serve to reduce the volume and rate of flow of water, thus impacting positively in terms of potential loss of soil associated with increased surface water runoff and extreme weather events.</p>	
Landscape and Townscape	<p>Long term positive effects are identified for the draft LAP and landscape and townscape primarily through the public realm enhancement, green and blue infrastructure, increased tree planting etc.</p> <p>Many of the measures in the LAP strategy require a landscape level response such as recognition of green and blue infrastructure and corridors and this an important approach to take when responding to climate change. (BKT 62 Park)</p> <p>Public realm enhancement and reuse of existing buildings are also consistent with landscape SEOs. (BKT 61 Opportunity Sites)</p> <p>Overall, positive effects identified for Landscape SEOs, as landscape change can be considerable with climate change effects in terms of changing water levels, habitat change, transport measures and adaptation measures such as flood risk management.</p>	<p>In the absence of mitigation, the over reliance on engineered and higher specification flood relief and climate adaption measures may result in long term cumulative adverse effects on both townscape character, by losing access to the River (visual amenity and views), engagement with the River (particularly through hard embankments/flood defences).</p> <p>The consideration of modal shift, increased pedestrianisation and cycling are all positive but require again consideration to avoid visual clutter associated with excessive infrastructural and signage.</p> <p>The public realm enhancements offer a good opportunity to embed urban greening measures to avoid an over hardscaped public realm design.</p>

SEA theme	Significant positive effects	Significant adverse effects, if unmitigated
	An increase in open space, green infrastructure, public realm and permeability would all create long term positive effects for the Landscape SEOs.	
Cultural Heritage	Long term positive effects associated with the town centre use and intensification of use. (BKT 10 Town Centre Management, BKT 9 Town Centre) The relationship between the urban realm, townscape and cultural heritage features and intangible cultural heritage. (BKT 23 High Quality, Contextually Sensitive Design, BKT 25 Architectural Heritage, BKT 26 Architectural Conservation Areas)	In the absence of mitigation, potential adverse effects particularly in relation to the townscape setting and context of architectural conservation areas.
Air Quality and Climatic Factors/ Climate Change	Will contribute positively to climate change adaptation through the following: <ul style="list-style-type: none"> • Blue and green infrastructure giving rise to increased surface water storage and potential carbon sequestration • Focus on energy efficiency and innovation (BKT 15 Industrial) • Other energy related measures are all identified as positive in relation to this SEO. Key measures relating to behavioural change around transport and the increase in walking/cycling and public transport measures are essential in addressing transport emissions over the lifetime of the strategy and beyond. (BKT 40 Climate Change, BKT 33 Pedestrian and Cycle Network) Recognising the ecosystems functions of soil, water and biodiversity is a key element in the Nature Based solutions theme and is an important acknowledgement that also provides for positive effects across a number of SEOs.	In the absence of mitigation, the opportunity to embed meaningful actions in the plan that are needed to deliver the overall vision and aims is lost. Particularly in the areas of urban greening, and nature based solutions which offer co and multiple benefits in responding to climate change whilst enhancing the overall environmental quality of Ballinasloe and environs.
Material Assets	Many of the measures in the draft strategy are identified with a view to minimising adverse effects of climate change on material assets, and also responding and facilitating behavioural and modal change in energy use and transport. (BKT 21 Public utilities, BKT 22 Water Supply, BKT 24 Universal Access, BKT 38 Road Junction Improvements, BKT 45 Connections to the Public Sewer and Public Water Mains)	As above. In particular the opportunity to embed circular economy and reuse of existing buildings and brownfield development. reduction of waste and modal shift in transport which contribute to reduction of greenhouse gases.
Cumulative effects between the plan and with other plans and projects were also undertaken and please see chapter 7 of the SEA ER. Overall, given the provision and application of mitigation measures identified in the listed plans/projects no significant adverse environmental effects are identified.		

Summary Evaluation of Landuse zonings

Zoning	Policy Objective	Description	Hectares
Existing Residential and Infill Residential	<i>To protect and improve residential amenities of existing residential areas.</i>	<i>To provide for house improvements alterations, extensions and appropriate infill residential development in accordance with principles of good design and protection of existing residential amenity.</i>	29.91
SEA Comment: Most of the impacts identified for residential development zones are identified as being mitigated at project level through development management. Positive impacts were identified for population and human health, plus a number of material assets such as flood risk and sustainable transport. Consistent with SEOs PHH2, PHH3, C2, S2, MA1, MA2, and MA4.			
Residential Phase 1	<i>To protect, provide and improve residential amenity areas within the lifetime of this plan.</i>	<i>To facilitate for the provision of high quality new residential developments at appropriate densities with layout and design well linked to the town centre and community facilities. To provide an appropriate mix of house sizes, types and tenures in order to meet household needs and to promote balanced communities.</i>	23.02
SEA Comment: Consistent and positive for SEOs PHH2, PHH3, C2, W2, MA1, MA2, and MA4.			
Residential Phase 2	<i>To protect, provide and improve residential amenity areas.</i>	<i>To facilitate the provision of high quality new residential developments at appropriate densities with layout and design well linked to the town centre and community facilities. Phase 2 residential is generally not developable during the lifetime of this plan subject to the provisions below. (*Single House developments for family members on family-owned lands: *Non-residential developments that are appropriate to the site context, any existing residential amenity and the existing pattern of development in the area; *Where it is apparent that R-Residential (Phase 1) lands cannot or will not be developed within the plan period, residential development maybe considered in a phased manner on some residential (Phase 2 lands).</i>	24.39
SEA Comment: Positive and consistent with SEOs PHH2, PHH3, C2, W2, MA, MA2, and M4. Due to the gap between planning and execution (i.e. construction), Residential Phase 2 can potentially incorporate measures that can benefit SEOs C4, W3, W4, S1, S2, S3, MA3, and MA6.			
Town Centre	<i>To provide for the development and improvement of appropriate town centre uses including retail, commercial, office and civic/community uses and to provide</i>	<i>To develop and consolidate the existing town centre to improve its vibrancy and vitality with the densification of appropriate commercial and residential developments ensuring a mix of commercial, recreation and civic uses.</i>	17.75

	<i>for “Living over the Shop” scheme Residential accommodation, or other ancillary residential accommodation.</i>		
SEA Comment: Positive and consistent with SEOs PHH1, PHH2, PHH3, C5, S2, S3, MA1, MA2, MA4, MA5, and CH2. Town-centred living encourages compact growth which serves to benefit the community, the economy and the environment.			
Mixed Use /Commercial	<i>To provide for the development of commercial and complementary mixed uses, on suitable lands that can provide focal points for the provision of services to surrounding neighbourhoods/areas and opportunities for commercial enterprises, retail developments and employment creation and which do not undermine the vitality and viability of the town centre.</i>	<i>To facilitate the further development and improvement of existing employment areas and to facilitate opportunities for the development of new high quality commercial/mixed use developments in a good quality physical environment.</i>	30.13
SEA Comment: Impacts positively on SEOs PHH1 (Promotes avenues for employment of the working-age population), C5 (Promotes the use of renewable energy, energy efficient development and increased use of public transport by developing in focal points across the plan area), S2 (Re-uses existing built infrastructure in semi-developed neighbourhoods/areas), MA1 (Optimising existing and providing new infrastructure to match population needs), and MA6 (by capitalizing on the opportunity to switch to more sustainable modes of energy).			
Industrial	<i>Promote the sustainable development of industrial and industrial related uses, including manufacturing, processing of materials, warehousing and distribution on suitable lands, with adequate services and facilities and a high level of access to the major road networks and public transport facilities.</i>	<i>To facilitate the further development and improvement of existing employment areas and to facilitate opportunities for the development of new high quality industrial developments in a good quality physical environment.</i>	30.63
SEA Comment: The range of impacts will vary according to the potential use; however for most of the SEOs, the impacts are considered to be addressed through mitigation at development management level. Green and blue infrastructure measures may also be integrated within this landuse zonings and offer longer term positive effects on Biodiversity, and Water SEOs.			
Agriculture	<i>To promote the development of agriculture and agriculture related uses in accordance with proper planning and sustainable development.</i>	<i>To facilitate the further development of agriculture and facilitate opportunities for farm diversification with agriculture related uses.</i>	286.00
SEA Comment: Positive and consistent for SEOs relating to Biodiversity, Flora and Fauna and Landscape, Air, Climate and Noise, Water, Soil and Geology.			

Business and Enterprise	<i>To provide for the development of business and enterprise.</i>	<i>To facilitate the further development and improvement of existing employment areas and to facilitate opportunities for the development of new high-quality business and enterprise developments in a good quality physical environment.</i>	27.96
SEA Comment: Positive and consistent for PHH1, MA1, and MA3. On undeveloped lands, negative impacts are identified for biodiversity and soil due to development on greenfield sites, but for many SEOs these can be mitigated through development management and relevant policies and objectives in the draft Plan.			
Community Facilities	<i>To provide for civic, community and educational facilities.</i>	<i>To facilitate the development of necessary community, health, religious educational social and civic infrastructure.</i>	92.59
SEA Comment: Positive and consistent for PHH1, PHH2, PHH3, C4, and MA1. This zoning benefits the Ballinasloe community by providing spaces where citizens can come together, contributing positively to the wellbeing of the community. On undeveloped lands, negative impacts are identified for biodiversity and soil due to development on greenfield sites, but for many SEOs these can be mitigated through development management and relevant policies and objectives in the draft Plan.			
Open Space	<i>To protect and enhance existing open space and provide for recreational and amenity space.</i>	<i>To facilitate the further development and improvement of existing active open spaces, formal exercise areas, sports grounds, playing fields.</i>	280.08
SEA Comment: Positive for population and human health, material assets and interrelationships. Further positive impacts are identified for soil and geology in the case sites are re-using existing the built environment. On undeveloped lands, negative impacts are identified for biodiversity and soil due to development on greenfield sites, but for many SEOs these can be mitigated through development management and relevant policies and objectives in the draft Plan.			
Tourism	<i>To promote and encourage cultural, historic and tourism potential for Ballinasloe as a Key Town.</i>	<i>To facilitate the development and improvement of tourism facilities that exists in Ballinasloe. Encourage new tourism development and investment where appropriate.</i>	2.95
SEA Comment: Tourism development contained and developed within existing built environments can be positive and consistent with PHH1, PHH3, CH1, L2 and MA1. However, impingement on undeveloped lands (greenfield site) might have negative effects for biodiversity and soil, which can be mitigated through development management and relevant policies and objectives in the draft Plan.			
Public Utility	To maintain lands providing service infrastructure.	To allow for lands to be designated for public utilities such as waste water treatment plants	2.41
Relating to provision for lands associated with the WWTP, this is consistent with PH, MA and W SEOs in particular			

8 Mitigation Measures

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

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

Consideration has been given to existing environmental protective policies in the County Galway Development Plan with some examples below:

NHB 1 "Natural Heritage and Biodiversity of Designated Sites, Habitats and Species

NHB 2 "European Sites and Appropriate Assessment

IS 1 Control of Invasive and Alien Invasive Species

Mitigation Measures Amendment of Text

Additional text identified through the SEA process is included in **blue, bold** font.

SEA of Ballinasloe Local Area Plan Recommended Mitigation Measures	In draft LAP? Yes/no
<p>BKT 3 New objective To require the preparation and assessment of all planning applications in the plan area to have regard to the information, data and requirements of the Appropriate Assessment Natura Impact Report, SEA Environmental Report and Strategic Flood Risk Assessment Report that accompany this LAP. There shall be a requirement of Ecological Impact Assessment as appropriate in plan area.</p>	Yes
<p>BKT 19 Water-Based Tourism The Council will support, subject to meeting the requirements of relevant Irish Planning and European environmental legislation including the Habitats Directive, the development of the necessary infrastructure and amenities to support water-based tourism within the plan area.</p> <p>The Council shall:</p> <p>a) Collaborate with Waterways Ireland, Fáilte Ireland, other Local Authorities and other relevant agencies in the implementation of the ‘Shannon Tourism Masterplan’ which involves waterways and waterside tourism potential and to enhance water based tourism product along the Shannon Navigation System including Ballinasloe in order to make the town a more attractive inland water tourism destination. Galway County Council will have cognisance of the SEA and AA mitigation measures including in the Shannon Tourism Masterplan as appropriate.</p>	Yes

<p>b) Continue to promote and enhance the public marina at Slí na hAbhainn as a sustainable marina resource including ancillary facilities and services as appropriate.</p> <p>c) There shall be a requirement for Ecological Impact Assessment as appropriate.</p>	
<p>BKT 62 Park</p> <p>To carry out a feasibility study exploring the options for the development of a public park in Ballinasloe that reflects good practice in line with . Any proposal would be subject to a detailed planning and environmental assessment that accords with proper planning and sustainable development.</p> <p>Where appropriate recreational considerations and access to blue and greens space should be underpinned by the Green Space Principles⁴ including</p> <ul style="list-style-type: none"> ● Enhance urban greening through planting strategies that mitigate noise and air pollution and maximise local biodiversity gain and facilitate sustainable drainage (e.g. deciduous wooded and wildflower meadow areas). ● A networked approach: emphasising green infrastructure networks (rather than isolated parks) can provide new opportunities for connecting existing and new green spaces and creating linkages between urban and rural areas. Examples include greenways and linear parks, local greenways or cycleways that link to regional and national greenways and de-culverting watercourses to provide new blue corridors. ● Well managed and maintained, creating a high-quality environment: poorly managed spaces or vandalism lead to negative perceptions among potential users. ● Multifunctional uses: examples include spaces that encourage active mobility, physical activity and sports, relaxation and tranquillity, and opportunities for social exchange (e.g. that incorporate community gardens or encourage parkruns). ● Create multisensory restorative environments that help mitigate the psychological stresses of modern living through the provision of “restive places for rejuvenation”. 	Yes

An example of some of the AA mitigation measures is presented below, these are in full in the Natura Impact Report and Chapter 8 of the SEA ER/

Implementation routes for physical routes

Measures or projects arising from the objectives, aims, strategies or policies of the LAP requiring physical works may either require planning consent or confirmation, or will be an exempted development.

Works that will require planning consent or confirmation, will be carried out by either a private developer or the Local Authority. Works may progress to construction stage as one of the following:

- Project led by private developer in line with the aims, policies, objectives or strategies of the Plan.

⁴ Eco-Health: Ecosystem Benefits of Green Space for Health. EPA Research Report No 328

- Project led by the Local Authority under the Planning and Development Regulations.
- Project led by the Local Authority under the Strategic Infrastructure Act.

Project level assessments that may be required for all types of project include:

- Environmental Impact Assessment: For a project above the thresholds specified under Article 24 of the European Communities (Environmental Impact Assessment) Regulations, 1989 as amended or a project likely to have significant effects on the environment, having regard to the criteria specified for under Article 27 of the same EIA Regulations 1989 as amended.
- Appropriate Assessment: All projects will be screened for Appropriate Assessment and, where there is a potential for a significant effect on a European (Natura 2000) site, an Appropriate Assessment will be undertaken in accordance the European Communities (Birds and Natural Habitats) Regulations 2011.

Exempted developments include those of limited scale and scope, that may fall under the category of flood mitigation works or housing protection schemes. Exempted developments may be carried out by Local Authorities under funding by the OPW, will be exempted in accordance with the Planning and Development Act 2000 (as amended) and will comply with all relevant environmental legislation. This could require the undertaking of an EIA or AA screening for physical works. Local Authorities must

9 Monitoring

It is proposed, in accordance with Article 10 of 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 pollution levels. Monitoring will focus on the aspects of the environment that are likely to be significantly impacted upon by the implementation of the LAP.

The targets and indicators are derived from the Strategic Environmental Objectives (SEOs) 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.

TABLE 9-1 INDICATORS, TARGETS, SOURCES AND REMEDIAL ACTIONS

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
Biodiversity, Flora and Fauna (BFF)	<ul style="list-style-type: none"> • Conditions of European Sites 	<ul style="list-style-type: none"> • Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species • Implement and review, as relevant, County Galway Heritage and Biodiversity Plan 2017-2022 	<ul style="list-style-type: none"> • DHLGH report of the implementation of the measures contained in the Habitats Directive- as required by Article 17 of the Directive (every 6 years). • DHLGH National Birds Directive Monitoring Report for the under Article 12 (every 3 years) • Consultations with the NPWS 	<p>Where condition of European sites is found to be deteriorating this will be investigated with the Regional Assembly and the DHLGH to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance.</p>

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
	<ul style="list-style-type: none"> Number of spatial plans that have included ecosystem services content, mapping and policy to protect the ecosystem services when their relevant plans are either revised or drafted 	<ul style="list-style-type: none"> Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species Implement and review, as relevant, County Galway Heritage and Biodiversity Plan 2017-2022 	Internal review of local land use plans	Review internal systems
	<ul style="list-style-type: none"> SEAs and AAs as relevant for new Council policies, plans, programmes etc. 	<ul style="list-style-type: none"> Screen for and undertake SEA and AA as relevant for new Council policies, plans, programmes etc. 	<ul style="list-style-type: none"> Internal monitoring of preparation of local land use plans 	<ul style="list-style-type: none"> Review internal systems
	<ul style="list-style-type: none"> Status of water quality in Ballinasloe's water bodies 	<ul style="list-style-type: none"> Included under Water below 	<ul style="list-style-type: none"> Included under Water below 	<ul style="list-style-type: none"> Included under Water below

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
	<ul style="list-style-type: none"> Compliance of planning permissions with Plan measures providing the protection of Biodiversity, flora and fauna 	<ul style="list-style-type: none"> For planning permission to be only granted when applications demonstrate that they comply with all Plan measures providing the protection of Biodiversity, flora and fauna 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> Review internal systems
Population and Human Health (PHH)	<ul style="list-style-type: none"> Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 2.3 “Economic and Enterprise Development” 	<ul style="list-style-type: none"> For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to the promotion of economic growth as provided for by Chapter 2.3 “Economic and Enterprise Development” By 2020 all citizens will have access to speeds of 30Mbps, and that 50% of citizens will be subscribing to speeds of 100Mbps (Also relevant to Material Assets) 	<ul style="list-style-type: none"> Internal review of progress on implementing Plan objectives Consultations with DECC 	<ul style="list-style-type: none"> Review internal systems Consultations with DECC
	<ul style="list-style-type: none"> Number of spatial concentrations of health problems arising from environmental factors resulting from development 	<ul style="list-style-type: none"> No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan 	<ul style="list-style-type: none"> Consultations with the Health Service Executive and EPA 	<ul style="list-style-type: none"> Consultations with the Health Service Executive and EPA

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
	permitted under the Plan			
	<ul style="list-style-type: none"> Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> CSO data Monitoring of Galway County Council's Climate Change Adaptation Strategy 2019-2024 	<ul style="list-style-type: none"> Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
	<ul style="list-style-type: none"> Number of spatial plans that include specific green infrastructure mapping 	<ul style="list-style-type: none"> Require all local level land use plans to include specific green infrastructure mapping 	<ul style="list-style-type: none"> Internal review of local land use plans 	<ul style="list-style-type: none"> Review internal systems
Soil and Geology (S)	<ul style="list-style-type: none"> Proportion of population growth occurring on infill and brownfield lands compares to greenfield (also relevant to Material Assets) 	<ul style="list-style-type: none"> Maintain built surface cover nationally to below the EU average of 4% In accordance with National Policy Objectives 3c of the National Planning Framework, a minimum of 30% of the housing growth targeted in any settlement is to be delivered within the 	<ul style="list-style-type: none"> EPA Geoportal Compilation of greenfield and brownfield development for the DHLGH AA/Screening for AA for each application 	<ul style="list-style-type: none"> Where the proportion of growth on infill and brownfield sites is not keeping pace with the targets set in the NPF and the RSES, the Council will liaise with the Regional Assembly to establish reasons and coordinate actions

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
		<ul style="list-style-type: none"> existing built-up footprint of the settlement To map brownfield and infill land parcels across the Ballinasloe 		to address constraints to doing so.
	<ul style="list-style-type: none"> Instances where contaminated material generated from brownfield and infill must be disposed of 	<ul style="list-style-type: none"> Dispose of contaminated material in compliance with EPA guidance and waste management requirements 	<ul style="list-style-type: none"> Internal review of grants of permission where contaminated material must be disposed of 	<ul style="list-style-type: none"> Consultations with the EPA and Development Management
	<ul style="list-style-type: none"> Environmental assessments and AAs as relevant for applications for brownfield and infill development prior to planning permission 	<ul style="list-style-type: none"> Screen for and undertake environmental assessments and AA as relevant for applications for brownfield and infill development prior to planning permission 	<ul style="list-style-type: none"> Internal monitoring of grants of permission 	<ul style="list-style-type: none"> Review internal systems
Water (W)	<ul style="list-style-type: none"> Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD. 	<ul style="list-style-type: none"> Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' Implementation of the objectives of the River Basin Management Plan 	<ul style="list-style-type: none"> EPA Monitoring Programme for WFD compliance 	<ul style="list-style-type: none"> Where water bodies are failing to meet at least good status this will be investigated with the DHLGH Water Section, the EPA Catchment Unit, the Regional Assembly and, as relevant, Irish Water to establish if the pressures are

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
				<p>related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance.</p> <ul style="list-style-type: none"> Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA
	<ul style="list-style-type: none"> Number of incompatible developments permitted within flood risk areas 	<ul style="list-style-type: none"> Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> Where planning applications are being permitted on flood zones, the Council will ensure that such grants are in compliance with the Flood Risk Management

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
				Guidelines and include appropriate flood risk mitigation and management measures.
Material Assets (MA)	<ul style="list-style-type: none"> • Programmed delivery of Irish Water infrastructure for all key growth towns in line with Irish Water Investment Plan and prioritisation programme to ensure sustainable growth can be accommodated • Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan 	<ul style="list-style-type: none"> • All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan • Where septic tanks are proposed, for planning permission to be only granted when applications demonstrate that the outfall from the septic tank will not – in combination with other septic tanks– contribute towards any surface or ground water body not meeting the objective of good status under the Water Framework Directive • Facilitate, as appropriate, Irish Water in developing water and wastewater infrastructure 	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission Consultations with the Irish Water • DHLGH in conjunction with Local Authorities 	<ul style="list-style-type: none"> • Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Irish Water to achieve the necessary capacity.

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
		<ul style="list-style-type: none"> See also targets relating to greenfield and brownfield development of land under Soil and broadband under Population and Human Health 		
	<ul style="list-style-type: none"> Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> CSO data Monitoring of Galway County Council's Climate Change Adaptation Strategy 2019-2024 	<ul style="list-style-type: none"> Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
Air (A)	<ul style="list-style-type: none"> Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74% NOx, SOx, PM10 and PM2.5 as part of Ambient Air Quality Monitoring 	<ul style="list-style-type: none"> Decrease in proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels Improvement in Air Quality trends, particularly in relation to transport related emissions of NOx and particulate matter 	<ul style="list-style-type: none"> CSO data Data from the National Travel Survey EPA Air Quality Monitoring Consultations with Department of Transport and Department of Environment, Climate and Communications 	<ul style="list-style-type: none"> Where proportion of population shows increase in private car use above CSO 2016 figures, Council will coordinate with the Regional Assembly, DHLGH, DECC and NTA to develop a tailored response. See also entry under

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
				Population and human health above
Climatic Factors (C)	<ul style="list-style-type: none"> Implementation of Plan measures relating to climate reduction targets 	<ul style="list-style-type: none"> For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to climate reduction targets 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> Review internal systems
	<ul style="list-style-type: none"> A competitive, low-carbon, climate-resilient and environmentally sustainable economy 	<ul style="list-style-type: none"> Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050 	<ul style="list-style-type: none"> Monitoring of Galway County Council's Climate Change Adaptation Strategy 2019-2024 	<ul style="list-style-type: none"> Where targets are not achieved, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
	<ul style="list-style-type: none"> Share of renewable energy in transport 	<ul style="list-style-type: none"> Contribute towards the target of the Renewable Energy Directive (2009/28/EC), for all Member States to reach a 10% share of renewable energy in transport by facilitating the development of electricity charging and transmission infrastructure, in compliance with the provisioning of the Plan 	<ul style="list-style-type: none"> EPA Annual National Greenhouse Gas Emissions Inventory reporting Climate Action Regional Office Consultations with DECC (at monitoring evaluation) 	
	<ul style="list-style-type: none"> Carbon dioxide (CO₂) emissions across the electricity 	<ul style="list-style-type: none"> Contribute towards the target of aggregate reduction in carbon dioxide (CO₂) 		

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
	generation, built environment and transport sectors	emissions of at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors		
	<ul style="list-style-type: none"> Energy consumption, the uptake of renewable options and solid fuels for residential heating 	<ul style="list-style-type: none"> To promote reduced energy consumption and support the uptake of renewable options and a move away from solid fuels for residential heating 		
	<ul style="list-style-type: none"> Proportion of journeys made by private fossil fuel-based car compared to 2016 levels 	<ul style="list-style-type: none"> Decrease in the proportion of journeys made by residents of the Ballinasloe using private fossil fuel-based car compared to 2016 levels 	<ul style="list-style-type: none"> CSO data Monitoring of Galway County Council's Climate Change Adaptation Strategy 2019-2024 	<ul style="list-style-type: none"> Where trends toward carbon reduction are not recorded, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
	<ul style="list-style-type: none"> Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> CSO data Monitoring of Galway County Council's Climate Change Adaptation Strategy 2019-2024 	<ul style="list-style-type: none"> Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
				<ul style="list-style-type: none"> Assembly, the DHLGH, DECC and NTA to develop a tailored response.
Cultural Heritage (CH)	<ul style="list-style-type: none"> Percentage of entries to the Record of Monuments and Places, and the context these entries within the surrounding landscape where relevant, protected from adverse effects resulting from development which is granted permission under the Plan 	<ul style="list-style-type: none"> Protect entries to the Record of Monuments and Places, and the context of these entries within the surrounding landscape where relevant, from adverse effects resulting from development which is granted permission under the Plan 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> Where monitoring reveals visitor pressure is causing negative effects on key tourist features along these routes, the Council will work with Regional Assembly, Fáilte Ireland and other stakeholders to address the pressures through additional mitigation tailored to the plans.
	<ul style="list-style-type: none"> Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the Plan 	<ul style="list-style-type: none"> Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from significant adverse effects arising from new development granted permission under the Plan 	<ul style="list-style-type: none"> Consultation with DHLGH 	

Environmental Component (Code)	Indicators	Targets	Sources	Remedial Actions
Landscape (L)	<ul style="list-style-type: none"> Number of developments permitted that result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan 	<ul style="list-style-type: none"> No developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> Where monitoring reveals developments permitted which result in avoidable adverse visual impacts on the landscape, the Council will reexamine Plan provisions and the effectiveness of their implementation

