

SEA ENVIRONMENTAL REPORT

APPENDIX III – NON-TECHNICAL SUMMARY

FOR THE

GALWAY COUNTY DEVELOPMENT PLAN 2022-2028

for: Galway County Council

Áras an Chontae
Prospect Hill
Galway



Comhairle Chontae na Gaillimhe
Galway County Council

by: CAAS Ltd.

1st Floor
24-26 Ormond Quay Upper
Dublin



JUNE 2022

Table of Contents

Section 1	Introduction and Terms of Reference	1
Section 2	The Plan.....	4
2.1	Introduction and Content.....	4
2.2	Overarching Core Strategy Policy Objectives.....	4
2.3	Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development.....	5
2.4	Relationship with other relevant Plans and Programmes	5
Section 3	The Environmental Baseline.....	6
3.1	Introduction	6
3.2	Likely Evolution of the Environment in the Absence of the Plan	6
3.3	Biodiversity and Flora and Fauna.....	6
3.4	Population and Human Health.....	9
3.5	Soil.....	9
3.6	Water	10
3.7	Air and Climatic Factors	12
3.8	Material Assets	13
3.9	Cultural Heritage.....	14
3.10	Landscape.....	15
3.11	Strategic Environmental Objectives.....	15
Section 4	Alternatives	17
4.1	Introduction	17
4.2	Limitations in Available Alternatives	17
4.3	Assessment of Tier 1: Alternatives for Positioning under the Settlement Hierarchy.....	17
4.4	Assessment of Type 2: Alternatives for Population Allocations.....	19
4.5	Assessment of Type 3: Alternatives for Rural Areas.....	19
4.6	Assessment of Type 4: Alternatives for Land Use Zoning	20
4.7	Reasons for Choosing the Selected Alternatives in light of Other Reasonable Alternatives Considered	24
Section 5	Summary of Effects arising from Plan.....	25
5.1	Overall Effects	25
5.2	Instances whereby Environmental Considerations were not integrated into the Plan	25
Section 6	Mitigation and Monitoring Measures	29
6.1	Mitigation.....	29
6.2	Monitoring.....	29

Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for the Galway County Development Plan 2022-2028. The purpose of the Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan. The Environmental Report has been prepared as part of a Strategic Environmental Assessment (SEA) process for the Plan.

What is SEA?

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a proposed plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest appropriate stage of decision-making on a par with economic, social and other considerations.

Why is SEA needed? The Benefits

The SEA has been carried out in order to comply with the provisions of the European SEA Directive and in order to enable sustainable development and environmental protection and management. SEA is the planning authority's and the public's guide to what are generally the best areas for development in the County.

SEA enables the planning authority to direct development towards robust, well-serviced and connected areas in the County – thereby facilitating the general avoidance of incompatible areas in the most sensitive, least well-serviced and least well-connected areas. Compact development can be accompanied by placemaking initiatives to enable the County's towns and villages to become more desirable places to live – so that they maintain and improve services to existing and future communities.

SEA enables requirements relating to environmental protection and management to be integrated into the Plan so that compatible sustainable development in the County's sensitive areas is also facilitated.

SEA provides greater to the public and to developers. Plans are more likely to be adopted without delays or challenges and planning applications are more likely to be granted permission. Environmental mitigation is more likely to cost less.

An overlay of environmental sensitivities in County Galway is shown on Figure 1.1.

The overlay mapping shows that environmental sensitivities are not evenly distributed throughout the County. Much of the County is identified as having low to moderate levels of sensitivity.

Lough Corrib and parts of the western half of the County (including Connemara and the coast) comprise the greatest extent of sensitive areas on account of multiple and overlapping ecological, hydrological and landscape designations, including those relating to bogs, upland and coastal areas.

Areas in close proximity to the County's border with Roscommon, Offaly and Tipperary are similarly sensitive. These areas include the water bodies of the River Shannon and Lough Derg as well as adjacent areas (sensitivities including hydrological, ecological, landscape and flood risk).

Other areas with heightened levels of sensitivities include the indented coastline to the south of Oranmore, smaller lakes in the east of the County (including Lough Cutra, Lough Rea, Coole Lough, Kiltullagh Lough and Glenamaddy Turlough) and areas to the west of Gort (sensitivities including flood risk related sensitivities).

How does the SEA work?

All of the main environmental issues in the area were assembled and considered by the team who prepared the Plan. This helped them to devise a Plan that contributes towards the protection and management of environmental sensitivities. It also helped to identify wherever potential conflicts between the Plan and the environment exist and enabled these conflicts to be mitigated.

The SEA was scoped in consultation with designated environmental authorities.

What is included in the Environmental Report that accompanies the Plan?

- A description of the environment and the key environmental issues;
- A description and assessment of alternatives for the Plan;
- An assessment of the provisions of the Plan; and,
- Mitigation measures, which will avoid/reduce the environmental effects of implementing the Plan and will contribute towards compliance with important environmental protection legislation.

Difficulties Encountered during the SEA process

No significant difficulties have been encountered during the undertaking of the assessment. There was limited water services information available for some settlements within the County however objectives requiring the provision of appropriate levels of water services alongside new development have been integrated into the Plan.

There is a data gap relating to WFD surface water status data. There are a number of waterbodies within the Plan area with overall status currently not assigned to them and the term "unassigned status" applies in respect of these waterbodies. The SEA ensured that the Plan contains measures that will contribute towards the maintenance and improvement of status of all water bodies within the zone of influence.

What happens at the end of the process?

An SEA Statement is prepared which summarises, inter alia, how environmental considerations have been integrated into the Plan.

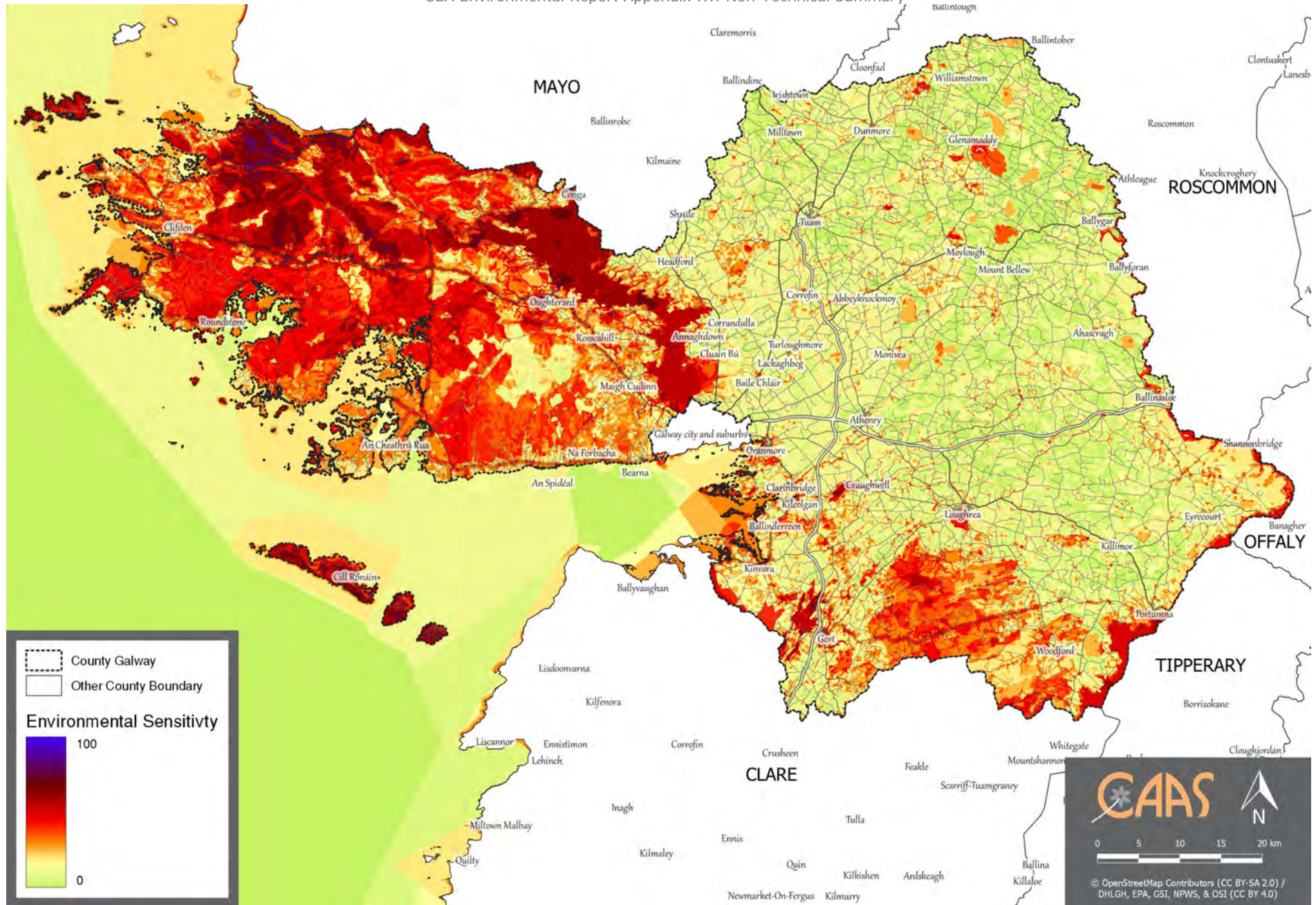


Figure 1.1 Environmental Sensitivities that the Plan directs incompatible development away from CAAS for Galway County Council

Section 2 The Plan

2.1 Introduction and Content

The Galway County Development Plan is a land use plan and overall strategy for the proper planning and sustainable development of the functional area of County Galway over the six-year period 2022-2028.

There are two Volumes to the County Development Plan, and a number of documents that are appended to the Plan which include:

- Volume 1 Written Statement
- Volume 2 Settlement Strategy
- Appendix 1 Local Authority Renewable Energy Strategy
- Appendix 2 Housing Strategy and Housing Need Demand Assessment
- Appendix 3 Galway County Transportation Planning Strategy
- Appendix 4 Landscape Character Assessment
- Appendix 5 Rural Housing Design Guidelines
- Appendix 6 Record of Protected Structures
- Appendix 7 Architectural Conservation Areas
- Appendix 8 Environmental Reports

The Written Statement comprises 15 chapters listed below. Chapters 1 – 14 include a vision, strategic aims and policy objectives. Chapter 15 sets out the Development Management Standards.

1. Introduction
2. Core Strategy, Settlement Strategy and Housing Strategy
3. Placemaking, Regeneration and Urban Living
4. Rural Living and Development
5. Economic, Enterprise and Retail
6. Transport and Movement
7. Infrastructure, Utilities and Environmental Protection
8. Tourism and Landscape
9. Marine and Coastal Management
10. Natural Heritage, Biodiversity and Green Infrastructure
11. Community Development and Social Infrastructure
12. Architecture, Archaeology and Culture
13. Gaeltacht and Islands
14. Climate Change, Energy and Renewable Resource
15. Development Management Standards

2.2 Overarching Core Strategy Policy Objectives

The Overarching Core Strategy Policy Objectives of the Plan are as follows:

- CS 1 Implementation. To secure the implementation of the Core Strategy and the Settlement Strategy in so far as practicable, by directing sustainable growth towards the designated settlement.
- CS 2 Compact Growth. To achieve compact growth through the delivery new homes in urban areas within the existing built up footprint of settlements, by developing infill, brownfield and regeneration sites and redeveloping underutilised land in preference to greenfield sites.
- CS 3 Population Growth. To support and manage the self-sufficient sustainable development of all settlements in a planned manner, with population growth and the development of economic, physical and social infrastructure.
- CS 4 Initiatives. Promote measures to reduce vacancy and the underuse of existing building stock and support initiatives that promote the reuse, refurbishment and retrofitting of existing buildings within urban centres and targeted settlements in the County.
- CS 5 Population within Tiers. To support the attainment of the population projections of the settlements within the different tiers of the Core Strategy. After completion of the statutory requirements under section 15.2 of the Planning and Development Act 2000(as amended) of the midterm review of the Development Plan, where individual settlements are not on target to reach their population allocation maybe distributed with individual tiers as appropriate in exceptional instances and where a justifiable requirement is put forward.

2.3 Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development

Far in advance of both the submission of the pre-Draft Plan to the Elected Members for approval and the placing of the Draft Plan on public display, Galway County Council undertook various works in order to inform the preparation of the Plan. The findings of this strategic work have been integrated into the Plan and will contribute towards both environmental protection and management and sustainable development within the County. Strategic work undertaken by the Council includes background work in relation to Plan Strategies and other provisions for a variety of sectors, including: Settlement and Community; Housing and Rural Housing Design; Renewable Energy; Transportation and Infrastructure; Natural and Cultural Heritage; and Climate Action. The undertaking of this SEA process and the associated AA and SFRA processes contributed towards the integration of environmental considerations into individual Plan provisions as summarised in Section 6 of this report.

2.4 Relationship with other relevant Plans and Programmes

It is acknowledged that many of the major issues affecting the County's development are contingent on national policy and government funding.

The Plan sits within a hierarchy of statutory documents setting out public policy for, among other things, land use planning, infrastructure, sustainable development, tourism, environmental protection and environmental management. The Plan must comply with relevant higher-level strategic actions and will, in turn, guide lower-level strategic actions. These documents include plans and programmes such as those detailed in Appendix of the main SEA ER. These documents have been subject to their own environmental assessment processes, as relevant.

The National Planning Framework (NPF) sets out Ireland's planning policy direction up to 2040. The NPF is to be implemented through Regional Spatial and Economic Strategies (RSESs) and lower tier Development Plans and Local Area Plans. The RSES for the Northern and Western Region sets out objectives for land use planning, tourism, infrastructure, sustainable development, environmental protection and environmental management that have been subject to environmental assessment and must be implemented through the County Development Plan.

As required by the Planning and Development Act 2000, as amended, the County Development Plan is consistent with and conforms with national and regional policies, plans and programmes, including the NPF and the RSES for the Northern and Western Region. The County Development Plan will, in turn, guide lower-level strategic actions, such as Local Area Plans that will be subject to their own lower-tier environmental assessments.

In order to be realised, projects included in the County Development Plan (in a similar way to other projects from any other sector) will have to comply, as relevant, with various legislation, policies, plans and programmes (including requirements for lower-tier Appropriate Assessment, Environmental Impact Assessment and other licencing requirements as appropriate) that form the statutory decision-making and consent-granting framework.

Section 3 The Environmental Baseline

3.1 Introduction

The summary of the environmental baseline of the County is described in this section. This baseline together with the Strategic Environmental Objectives, which are identified in Section 3.11, is used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Plan and in order to determine appropriate monitoring measures.

3.2 Likely Evolution of the Environment in the Absence of the Plan

In the absence of a new Plan it is uncertain how permission for new development would be applied for and considered. The 2015-2021 Plan has contributed towards environmental protection within County Galway. If the 2015-2021 Plan was to expire and not be replaced by a new Plan, this would result in a deterioration of the County's planning and environmental protection framework. As a result, there would be an increased likelihood in the extent, magnitude and frequency of adverse effects on all environmental components occurring, including:

- Arising from both construction and operation of development and associated infrastructure:
 - 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;
 - Habitat loss, fragmentation and deterioration, including patch size and edge effects; and
 - Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.
- Potential interactions if effects arising from environmental vectors.
- Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands.
- Potential for riverbank and coastal erosion.
- Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology.
- Increase in flood risk and associated effects associated with flood events.
- Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Increases in waste levels.
- Potential impacts upon public assets and infrastructure.
- Interactions between agriculture and soil, water, biodiversity and human health – including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter.
- Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives.
- Potential conflicts between transport emissions, including those from cars, and air quality.
- Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors.
- Potential conflicts with climate adaptation measures including those relating to flood risk management.
- Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.
- Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.

3.3 Biodiversity and Flora and Fauna

Information on biodiversity and flora and fauna that is relevant to project planning and development and associated environmental assessment and administrative consent of projects includes available information on designated ecological sites and protected species, ecological connectivity (including stepping stones and corridors) and non-designated habitats.

The most ecologically sensitive and heavily designated and protected areas within County Galway include coastal and upland areas. These areas contain many rare and threatened habitats and species of national and international importance, including those protected under the national and European legislation.

Ecological sensitivities within and surrounding the County include:

- Coastal sand dunes and grasslands;
- Machair;
- Coastal lagoons;
- Salt marshes;
- Underwater reefs;
- Maerl beds;
- The Atlantic Ocean;
- Peatlands;
- Fens;
- Turloughs;
- Eskers;
- Cutover bog;
- Limestone pavement;
- Woodlands; and
- Freshwater lakes, rivers and streams and their riparian zones.

Dispersed areas of marginal agricultural lands that may include ecological sensitivities occur throughout the County's lowlands and foothills. A network of green spaces, including gardens, parks, graveyards, amenity walks, railway lines and patches of woodland and scrub, provide habitats and ecological connectivity within the County and beyond.

Designated sites within the County include Special Areas of Conservation¹ (SACs) and Special Protection Areas² (SPAs). These are mapped on Figure 3.1. There are 96 European sites (77 SACs and 19 SPAs) designated within or partially within County Galway. Other ecological designations occur within and adjacent to the County and these are detailed in the main SEA Environmental Report.

CORINE³ land cover mapping shows that the most dominant land cover types are peat bogs (concentrated in the west of the County), pastures and agricultural lands (mainly in the east of the County).

Existing Problems

Ireland's Article 17 report on the Status of EU Protected Habitats and Species in Ireland (DCHG, 2019) identifies various Irish, EU-protected habitats and species to be of unfavourable status and many to be still declining, although it also identifies that a range of positive actions are underway. Categories for pressures and threats on Ireland's habitats and species identified by the report include: Agriculture; Forestry; Extraction of resources (minerals, peat, non-renewable energy resources); Energy production processes and related infrastructure development; Development and operation of transport systems; Development, construction and use of residential, commercial, industrial and recreational infrastructure and areas; Extraction and cultivation of biological living resources (other than agriculture and forestry); and Climate change.

Ireland's Article 12 Birds Directive Reports and the 6th National Report under the Convention of Biological Diversity identify similar issues.

The Plan includes measures to contribute towards the protection of biodiversity and flora and fauna and associated ecosystem services. Previous changes in land uses arising from human development have resulted in a loss of biodiversity and flora and fauna however, legislative objectives governing biodiversity and fauna were not identified as being conflicted with.

¹ SACs have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) due to their conservation value for habitats and species of importance in the European Union. The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each member state to designate SACs to protect habitats and species, which, together with the SPAs designated under the 1979 Birds Directive, form Natura 2000.

² SPAs have been selected for protection under the 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) - referred to as the Birds Directive - due to their conservation value for birds of importance in the EU.

³ The CORINE (Coordinated Information on the Environment) land cover data series was devised as a means of compiling geo-spatial environmental information in a standardised and comparable manner. CORINE has become a key data source for informing environmental and planning policy on a national and European level. The main land cover type in Ireland is agricultural land including forestry, which accounts for two-thirds of the national landmass. Most of this is permanent grassland pastures. Peatlands and wetlands are the second most widespread land cover type, covering almost one-fifth of the country. While forested areas cover about one-tenth of the country. Despite rapid development in the past two decades, Ireland's landscape is predominantly rural and agricultural.

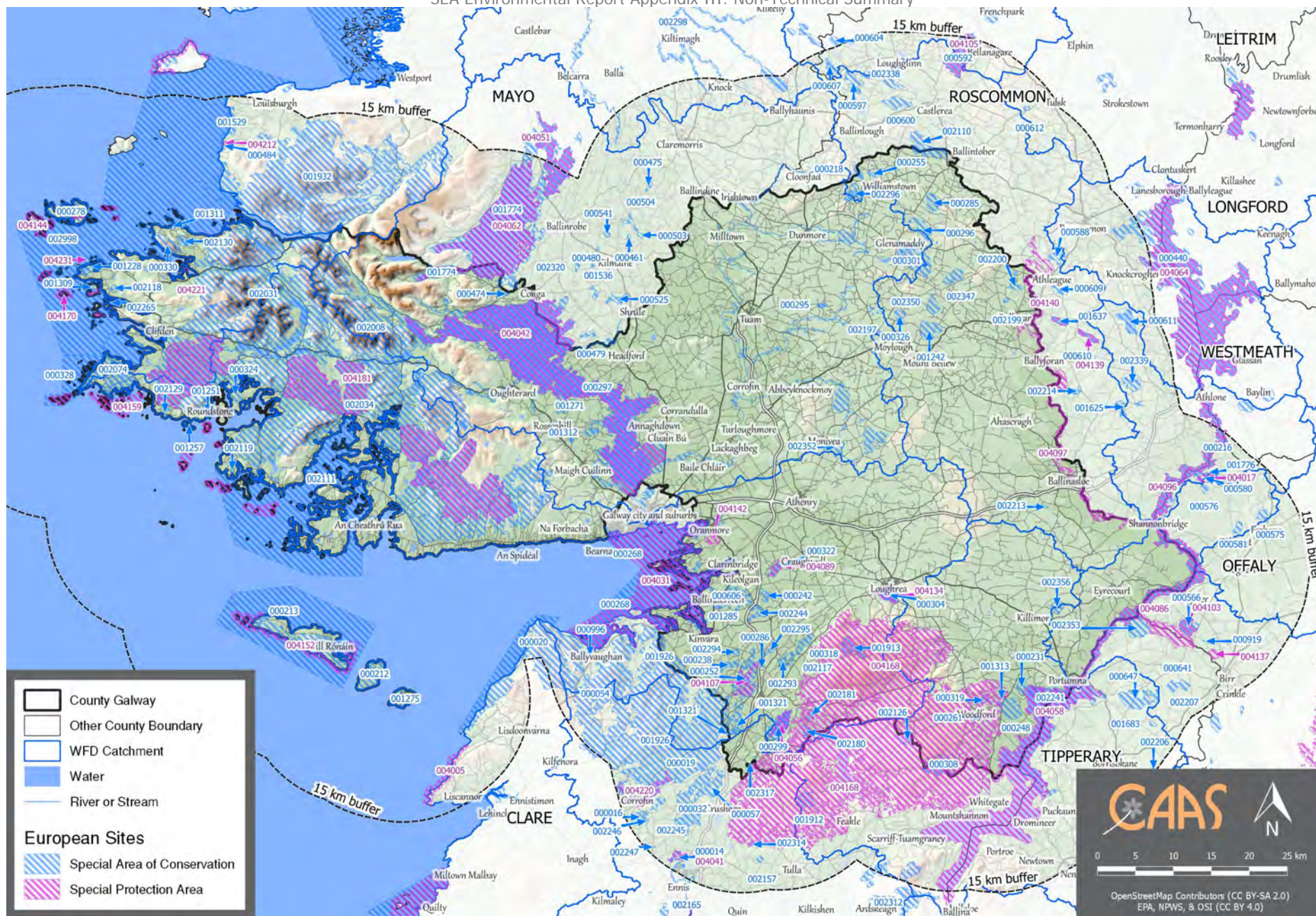


Figure 3.1 European sites within and within 15 km of the County
 CAAS for Galway County Council

3.4 Population and Human Health

In the 2016 Census the total population of County Galway was identified as being of 179,390 persons, an increase in total population in the County by c. 2.4% (c. 4,266 persons) since the previous census. The population growth projections for the County, as set out by the NPF and RSES, are 300,000-308,500 persons by 2026 and further growth by 14,000 persons by 2031.

Galway City, under the administration of Galway City Council, has a population of 79,934 persons (Census 2016) and is identified by the Northern and Western Regional Spatial and Economic Strategy (RSES) as a Regional Growth City. As per Variation no. 5 of the Galway City Development Plan 2017-2023, the target for the City is to reach a population of 102,900 persons by 2026 and 114,900 persons by 2031.

County Galway's Key Towns include: Tuam, with population of 8,767 persons (Census 2016); and Ballinasloe, with population of 6,662 persons (Census 2016). Key Towns provide important connections with adjoining regions and have the capacity and future growth potential to accommodate above average growth in tandem with the requisite investment in employment creation, services, amenities and sustainable transport.

The new population provided for in the Plan will interact with various environmental components. Potential interactions include:

- Recreational and development pressure on habitats and landscapes;
- Increase in demand for waste water treatment at the municipal level;
- Increase in demand for water supply and associated potential impact of water abstraction;
- Potential interactions in flood-sensitive areas; and
- Potential effects on water quality.

Human health has the potential to be impacted upon by environmental vectors (i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings). Hazards or nuisances to human health can arise as a result of exposure to these vectors arising from incompatible adjacent land uses for example. These factors have been considered with regard to the description of: the baseline of each environmental component; and the identification and evaluation of the likely significant environmental effects of implementing the Plan.

Existing Problems

There is historic and predictive evidence of flooding in various locations across the County.

The greatest health risk from radiation in Ireland is caused by radon. The presence of radon gas, a naturally occurring radioactive gas that originates from the decay of uranium in rocks and soils, occurs across the country. The number of homes within the County with radon levels above the reference level is within the normal range experienced in other locations across the country.

3.5 Soil

Brown earths⁴ (occupying most of the eastern and central areas of the County) and blanket peat and peaty soils (mainly in the north-western upland areas of the County) are the two most dominant soil types in County Galway. Raised bogs and cutaway raised bogs are found mainly in the eastern areas of the County with blanket bog common to the west of the Corrib.

The audit of County Geological Sites in County Galway was completed in 2020 and identified 134 County Geological Sites⁵. Concentrations of these designations can be found in the upland areas and along the coast.

There are a number of Source Protection Areas in County Galway.

The GSI have identified that most of the County has relatively low levels of landslide susceptibility, with moderate to high susceptibility found in upland and some coastal areas and high to high infrared in the north-west of the County.

⁴ Brown earths are well drained mineral soils, associated with high levels of natural fertility.

⁵ Geological Survey of Ireland (2020) *The Geological Heritage of County Galway. An audit of County Geological Sites in County Galway 2019*. CAAS for Galway County Council

3.6 Water

The County lies within two regional River Basin Districts, the Shannon International RBD and the Western RBD. Catchments draining the County include: Corrib and Galway Bay South East; Erriff-Clew Bay and Galway Bay North; Upper Shannon; Lower Shannon; and Shannon Estuary North.

The WFD status of most of the rivers and lakes within the County is classified as *moderate*, *good* and *high*, however sections of rivers and lakes are identified as *bad*⁶ and *poor*⁷ due to unsatisfactory ecological/biological and/or physio-chemical status.

The WFD surface water status (2013-2018) of coastal and transitional waterbodies within and surrounding the County is identified as *moderate*, *good* and *high*, however coastal waters of Rincarna Pools North are identified as *bad* due to unsatisfactory ecological/biological and/or physio-chemical status.

Significant pressures, those pressures which need to be addressed in order to improve water quality, have been identified⁸ for waterbodies that are 'At Risk' of not meeting their water quality objectives under the WFD.

The WFD surface water status (2013-2018) of rivers within and surrounding the County is shown on Figure 3.2.

The WFD status (2013-2018) of groundwater underlying the County is mostly identified as being of *good* status, with some areas of *poor*⁹ status to the north-east of Galway Bay and in the southern parts of the County.

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The vulnerability of aquifers is classified as being:

- *High and moderate*, throughout the County;
- *Low vulnerability*, mainly in the east of the County; and
- *Extreme vulnerability* and *extreme (rock at or near surface or karst)* mainly in the west and north-west of the County and along the coastal and upland areas.

Certain areas across the County are at risk of flooding from sources including coastal, groundwater, pluvial¹⁰ and fluvial¹¹. There are various historic and predictive indicators of flood risk in the County, such as those along the Corrib, the Shannon and its tributaries and at various locations along the coastline.

Existing Problems

Subject to exemptions provided for by Article 4 of the WFD, based on available water data, certain surface and groundwater bodies will need improvement in order to comply with the objectives of the WFD.

The Plan includes provisions that will contribute towards improvements in the status of waters.

There is historic and predictive evidence of elevated levels of flood risk at various locations across the County.

⁶ Including rivers Owenriff – Corrib and Kilcolgan; and lakes Alewnaghta and Ballyquirke.

⁷ Including rivers: Recess; Raford; Lisduff-Kilcrow; Laurencetown Stream; Kilcrow; Kilcolgan; Invermore; Eyrecourt Stream; Derryhippo; Dawros; Culfin; Coos; Clarinbridge; Castlelodge; Castlegar; Carra Stream; Cannahowna; Ballindine; Ballinaboy; and Ahascragh; and lakes: Aughrusbeg and Ross.

⁸ EPA (2019): Report on Water Quality in Ireland 2013-2018

⁹ Underlying: Caherglassaun Turlough in the south of the County; Tullynafrankagh Turlough in the south-west of the County; Historic Mine (Tynagh); Industrial Facility (P0056-01) north of Oranmore; and Waste Facility (W0013-01) to the north-west of Galway Airport.

¹⁰ Resulting from high intensity rainfall events where run-off volume exceeds capacity of surface water network.

¹¹ Watercourse capacity is exceeded or the channel is blocked and excess water spills from the channel onto adjacent floodplains.

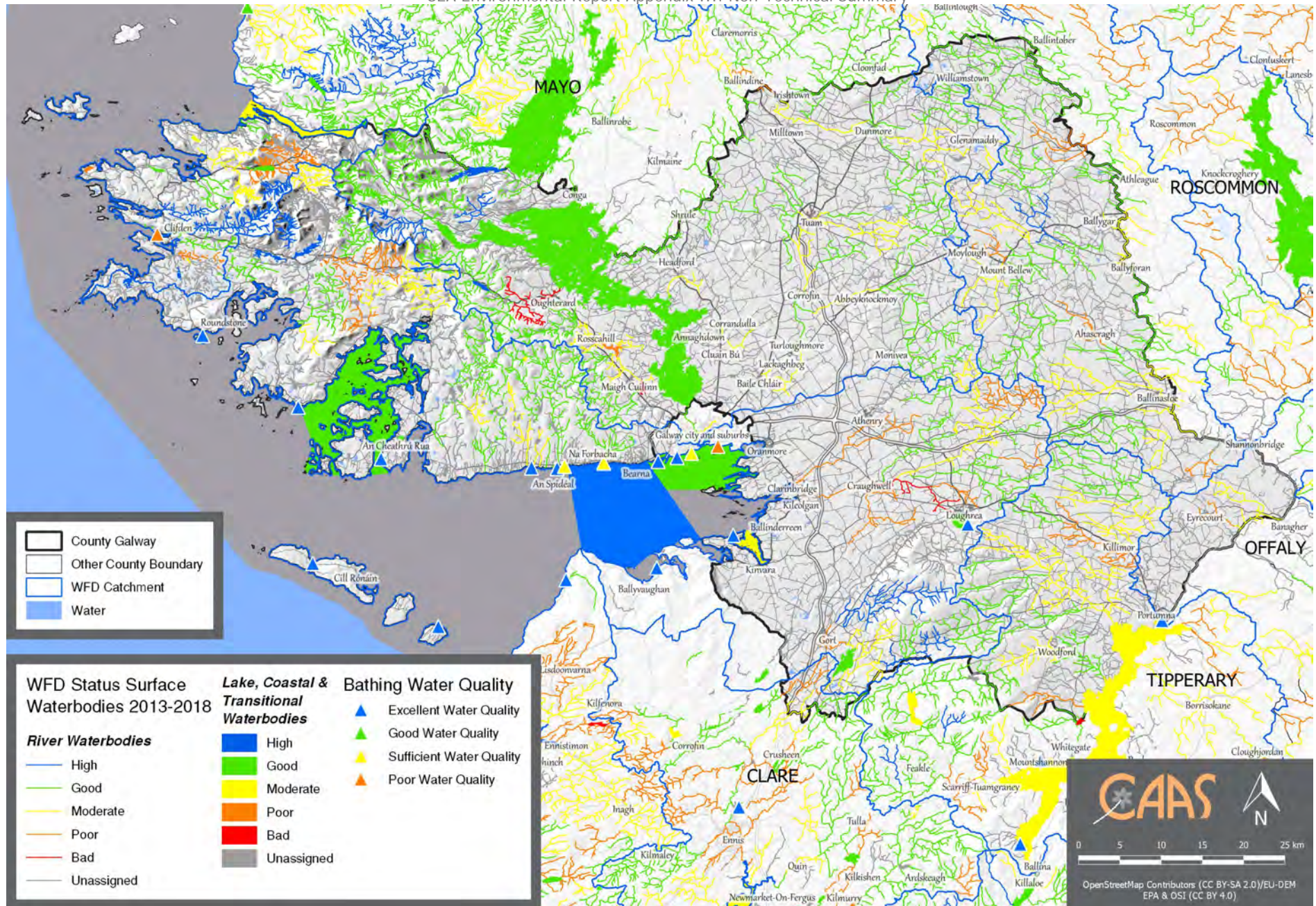


Figure 3.2 Surface Water Status (2013-2018)

CAAS for Galway County Council

3.7 Air and Climatic Factors

Total emissions of greenhouse gases by humans come from various sectors including transport, agriculture, energy industries, manufacturing combustion, industrial processes, residential developments, commercial services developments, waste management processes and fluorinated gases equipment (such as refrigeration and fire protection systems).

The National Climate Action Plan 2021 is an all of Government plan to tackle climate change and bring about a step change in Ireland's climate ambition over the coming years. The Plan sets out an ambitious course of action over the coming years to address the diverse and wide-ranging impacts climate disruption is having on Ireland's environment, society, economic and natural resources. The Climate Action Plan sets out clear 2030 targets for each sector with the ultimate objective of achieving a transition to a competitive, low-carbon, climate-resilient, and environmentally sustainable society and economy by 2050. The Action Plan deals with both mitigation and adaptation.

Climate mitigation describes action to reduce the likelihood of climate change occurring or reduce the impact if it does occur. This can include reducing the causes of climate change (e.g. emissions of greenhouse gases) as well as reducing future risks associated with climate change.

The Climate Change Advisory Council's Annual Review 2020 identifies that the most recent projections demonstrate that, under different assumptions, Ireland will not meet its emissions reduction targets, even with the additional policies and measures included in the 2018 National Development Plan (superseded in 2021). The projections also show that progress on reducing emissions is sensitive to the future path of fuel prices. A significant and sustained rate of emissions reduction of approximately - 2.5% per year is required to meet our objectives for 2050. It is noted that additional measures within the recent Climate Action Plan are not included.

Climate adaptation is a change in natural or human systems in response to the impacts of climate change. These changes moderate harm or exploit beneficial opportunities and can be in response to actual or expected impacts.

The National Adaptation Framework Department of Communications, Climate Action and Environment, 2018), sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. The National Adaptation Framework outlines a whole of government and society approach to climate adaptation. Under the Framework, a number of Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for.

The Galway County Council Climate Change Adaptation Strategy 2019-2024 seeks to:

- Improve education, awareness-raising and capacity on climate change, adaptation (and mitigation), impact reduction and early warning across the Local Authority departments, businesses, communities and individuals;
- Integrate climate change measures into policies, strategies and planning, as well as the identification of areas at risk to inform planning and decision making; and
- Strengthen resilience and adaptive capacity and develop and implement co-ordinated responses to climate risk where needed.

The EPA's (2020) Air Quality in Ireland 2019 identifies that:

- Air quality in Ireland is generally good however there are localised issues;
- Nitrogen dioxide (NO₂) from transport emissions is polluting urban areas; and
- Ireland was above World Health Organization air quality guideline value levels at 33 monitoring sites – mostly due to the burning of solid fuel within settlements across the country.

With regard to solutions, the report identifies that:

- To tackle the problem of particulate matter, clean ways of heating homes and improve energy efficiency of homes can be progressed; and
- To reduce the impact of nitrogen dioxide, transport options in the Government's Climate Action Plan can be implemented and transport choices can be considered by individuals.

In order to comply with European Directives relating to air quality, the EPA manages the National Ambient Air Quality Network and measures the levels of a number of atmospheric pollutants at locations across the country. The current ¹² air quality within the Plan area is identified by the EPA as being *good*.

¹² 25/03/2021 (<http://www.epa.ie/air/quality/>)
CAAS for Galway County Council

3.8 Material Assets

Other material assets, in addition to those referred to below, covered by the SEA include archaeological and architectural heritage (see Section 3.9) natural resources of economic value, such as water and air (see Sections 3.6 and 1.1).

Public Assets and Infrastructure

Public assets and infrastructure that have the potential to be impacted upon by the Plan, if unmitigated, include; settlements; resources such as public open spaces, parks and recreational areas; public buildings and services; transport and utility infrastructure (electricity, gas, telecommunications, water supply, wastewater infrastructure etc.); forestry; and natural resources that are covered under other topics such as water and soil.

Waste Water

The County is served by various Wastewater Treatment Plants (WWTPs). In unserved areas and outside the main settlements, the main method of sewage disposal is by individual septic tanks (64%) and other types of wastewater treatment (7%).

Irish Water has provided information on wastewater treatment capacity, constraints and projects planned within the County to improve the existing network, to assist the Council in the preparation of the new County Development Plan. This information indicates that spare treatment capacity is available in most larger settlements except for An Cheathrú Rua, Mount Bellew, Ballygar and Roundstone. The highest levels of headroom (PE) are available at Tuam, Ballinasloe and Athenry.

Galway County Council will work alongside and facilitate the delivery of Irish Water's Water Capital Investment Plan. Sewerage projects that have been completed to date in the County under Irish Water's Investment Plan up to 2020 include: Clifden Sewerage Scheme; Baile Chláir and Milltown Sewerage Scheme; Kinvara Sewerage Scheme; Oughterard Sewerage Scheme; Glenamaddy Sewerage Scheme; Athenry Sewerage Scheme; Tuam Sewerage Scheme; Ballinasloe Sewerage Scheme; Gort Sewerage Scheme; and Ballinasloe Contract 2. Wastewater projects proposed to be completed in County Galway under the Proposed Capital Investment Plan 2020 – 2024 include: new WWTPs at An Spidéal Sewerage; Ahascragh Sewerage; An Cheathrú Rua; Roundstone Sewerage Scheme and network upgrades at Athenry Sewerage Scheme; Galway City Agglomeration wastewater network; and Greater Galway Area Drainage Strategy.

Water Supply

Public drinking water in County Galway is supplied through 38 public water supply schemes and approximately 80% of the treated water supplied through this infrastructure network is abstracted from surface water sources. The remaining households are served by either Group Water Schemes or private wells, which do not fall within the remit of Irish Water.

The EPA publishes their results in annual reports that are supported by Remedial Action Lists (RALs). The RAL identifies water supplies that are not in compliance with Drinking Water Regulations. There are no County Galway water supplies identified on the most recent available RAL (Q4 of 2020 published in January 2021).

Information on Water Resource Zones has been provided by Irish Water. There is surplus supply available in all zones except Rosmuc Public Supply. The highest amount of surplus is available in the Lough Corrib (Galway City, Tuam, Loughrea) Water Resource Zone.

Waste Management

Waste management across the County is guided by the Connacht-Ulster Waste Management Plan 2015-2021.

Transport

Road and rail infrastructure in the County has the potential to support reductions in energy demand from the transport sector, including through electrification of modes.

Land

The Plan seeks to assist with the reuse and regeneration of brownfield sites thereby contributing towards sustainable mobility and reducing the need to develop greenfield lands and associated potential adverse environmental effects. Brownfield lands are generally located within urban/suburban areas.

Existing Problems

There are a number of challenges with respect to the provision of water services infrastructure, some of which are summarised above.

The provisions of the new County Development Plan will contribute towards protection of the environment with regard to impacts arising from material assets.

3.9 Cultural Heritage

Archaeological Heritage

Archaeological heritage is protected under the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997 and the Planning Acts. The Record of Monuments and Places (RMP) is an inventory, put on a statutory basis by amendment to the National Monuments Act 1994, of sites and areas of archaeological significance, numbered and mapped.

There are many sites of significant archaeological interest in County Galway, including two sites within or partially within the County included on the Tentative UNESCO World Heritage Sites List: the Burren; and the Western Stone Forts. There are hundreds of Recorded Monuments within the County, including graveyards, castles, forts, crosses and churches. Clusters of archaeological heritage are identified: along the coastline; along river and lake banks; surrounding settlements (such as Galway City, Headford, Tuam, Oranmore, Athenry, Loughrea and Gort); in lowland rural areas; and on the County's Islands, including Oileán Árann and Inishbofin. There are lower concentrations in the central upland areas.

Architectural Heritage

County Galway has an important vernacular heritage with many important historic buildings and structures (including examples of cottages, houses, shops, farm complexes, outbuildings, mills, factories and forges). Notable buildings include the Kelp House, Dún Guaire Castle, Menlough, Streamstown Mill and Ballynahinch Castle. Architecture within the County also includes industrial heritage associated with ship building, agriculture, weaving, transportation, stone cutting processes and mining.

Records of Protected Structures are legislated for under Section 12 and Section 51 of the Planning and Development Act 2000 as amended. Protected structures are defined in the Planning and Development Act 2000 as amended as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view. Similar to the general spatial spread of archaeological heritage, clusters of architectural heritage are indicated within the County's settlements. There are hundreds of entries to the Record of Protected Structures within the County.

In addition to Protected Structures, the Planning and Development Act, 2000 provides the legislative basis for the protection of Architectural Conservation Areas (ACAs). The ACA designation requires that planning permission must be obtained before significant works can be carried out to the exterior of a structure in the ACA that might alter the character of the structure or the ACA. There are 20 ACAs designated within the County.

Existing Problems

The context of archaeological and architectural heritage has changed over time within County Galway, however no existing conflicts with legislative objectives governing archaeological and architectural heritage have been identified.

3.10 Landscape

The unique visual character of County Galway is due to its variety of landscapes, seascapes and rich and diverse built, natural and cultural heritage.

The landscape of the west of the County is rugged and varied with its mountains, bogs, rivers, waterways and lakes, and characteristic limestone pavement of Oileáin Árann. The east of the County is characterised by a low-lying rolling topography of a fertile limestone plain, rich pastures, bogs and the Suck-Shannon system with its callows and Lough Derg, while the lowlands of the Burren are characterised by its unique karstic landscape and hydrology. Lough Corrib lies between the east and west of the County. The seascape includes many islands, peninsulas and deep coastal indentations.

Landscape Character Units in County Galway are arranged in a hierarchy according to the level of their sensitivity:

- **'Iconic'** - unique landscape with high sensitivity to change;
- **'Special'** - high sensitivity to change;
- **'High'** - elevated sensitivity to change; and
- **'Low'** - unlikely to be adversely affected by change.

The 'iconic' and 'special' sensitivity areas are the most sensitive to development and therefore developments which are likely to create a significant environmental and particularly visual impact will best be absorbed in areas where the landscape is most robust, i.e. have the capacity to absorb development without significantly changing its character. Landscape Character Types in County Galway which are most sensitive to development include: Karst; Lake Environs; Uplands and Bog; Island; and Coastal.

Existing Environmental Problems

New developments have resulted in changes to the visual appearance of lands within the County however legislative objectives governing landscape and visual appearance were not identified as being conflicted with

3.11 Strategic Environmental Objectives

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies that generally govern environmental protection objectives established at international, Community or Member State level e.g. the environmental protection objectives of various European Directives that have been transposed into Irish law and that are required to be implemented. The SEOs are set out under a range of topics and are used as standards against which the provisions of the Plan and the alternatives are evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if - in the case of adverse effects - unmitigated.

Table 3.1 Strategic Environmental Objectives

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Biodiversity, Flora and Fauna	BFF	No net contribution to biodiversity losses or deterioration	<ul style="list-style-type: none"> • To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species • Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function • Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species • Enhance biodiversity in line with the National Biodiversity Strategy and its targets • To protect, maintain and conserve the County's natural capital
Population and Human Health	PHH	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	<ul style="list-style-type: none"> • Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management • Ensure that existing population and planned growth is matched with the required public infrastructure and the required services • Safeguard the County's citizens from environment-related pressures and risks to health and well-being

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Soil (and Land)	S	Ensure the long-term sustainable management of land	<ul style="list-style-type: none"> • Protect soils against pollution, and prevent degradation of the soil resource • Promote the sustainable use of infill and brownfield sites over the use of greenfield within the County • Safeguard areas of prime agricultural land and designated geological sites
Water	W	Protection, improvement and sustainable management of the water resource	<ul style="list-style-type: none"> • Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive • Ensure water resources are sustainably managed to deliver proposed regional and County growth targets in the context of existing and projected water supply and wastewater capacity constraints ensuring the protection of receiving environments • Avoid inappropriate zoning and development in areas at risk of flooding and areas that are vulnerable to current and future erosion, particularly coastal areas • Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals
Material Assets	MA	Sustainable and efficient use of natural resources	<ul style="list-style-type: none"> • Optimise existing infrastructure and provide new infrastructure to match population distribution proposals in the County – this includes transport infrastructure • 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 • Promote the circular economy, reduce waste, and increase energy efficiencies • Ensure there is adequate sewerage and drainage infrastructure in place to support new development • Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes • 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
Air	A	Support clean air policies that reduce the impact of air pollution on the environment and public health	<ul style="list-style-type: none"> • 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 • Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency • Promote continuing improvement in air quality • 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 • Meet Air Quality Directive standards for the protection of human health – Air Quality Directive • Significantly decrease noise pollution by 2020 and move closer to WHO recommended levels
Climatic Factors	C	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	<ul style="list-style-type: none"> • To minimise emissions of greenhouse gasses • Integrate sustainable design solutions into the County's infrastructure (e.g. energy efficient buildings; green infrastructure) • Contribute towards the reduction of greenhouse gas emissions in line with national targets • Promote development resilient to the effects of climate change • Promote the use of renewable energy, energy efficient development and increased use of public transport
Cultural Heritage	CH	Safeguard cultural heritage features and their settings through responsible design and positioning of development	Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
Landscape	L	Protect and enhance the landscape character	To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

Section 4 Alternatives

4.1 Introduction

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment. Available reasonable alternatives for the County Development Plan are provided under Types 1 to 4 detailed below.

4.2 Limitations in Available Alternatives

The Plan is required to be prepared by the Planning and Development Act 2000 (as amended), which specifies various types of objectives that must be provided for by the Plan. The alternatives available for the Plan are limited by the provisions of higher-level planning objectives, including those of the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy (RSES) for the Northern and Western Region. These documents set out various requirements for the content of the Plan including on topics such as settlement typology, land use zoning and the sustainable development of rural areas.

4.3 Assessment of Tier 1: Alternatives for Positioning under the Settlement Hierarchy

Type 1 (i) Alternatives for Gort and Loughrea

- **Alternative A:** Designate Gort and Loughrea as Self Sustaining Growth Towns
- **Alternative B:** Designate Loughrea only as a Self Sustaining Town

Both Gort and Loughrea are towns which display numerous attributes including a good level of jobs and services for both resident population but also a wider catchment area, a broad range of services and facilities and good transport links with motorways within proximity. They have the capacity for continued commensurate growth in terms of population and employment and to become more self-sustaining. Both towns have opportunities to accommodate compact growth within their development envelopes in accordance with national and regional policy.

By facilitating population and employment growth commensurate to the attributes of Gort and Loughrea, **Alternative A** would provide for a more sustainable Settlement Hierarchy and a greater level of sustainable development at a County level. Alternative A would help to facilitate a more compact form of development at these settlements that would help to maximise benefits from the infrastructural investment and to the wider network of villages surrounding these towns. Alternative A would not increase pressure in lower-level settlements, which are generally less well-serviced and less-well connected, and the open countryside—and would, as a result, avoid potential adverse significant effects on various environmental components.

By limiting population growth in the two towns, **Alternative B** would fail to provide viable alternatives to the large towns of Athenry and the Key Town of Ballinasloe as a place to live and work and would result in increased pressure in the lower-level settlements and the open countryside. It would also militate against the future compact growth of the settlements. As a result, Alternative B would be likely to result in a greater extent of significant effects on various environmental components and would not be as sustainable as Alternative A.

Type 1 (ii) Alternatives for Portumna and Headford

- **Alternative A:** Designate Headford and Portumna as a Small Growth Town
- **Alternative B:** Designate Portumna and Headford as Self-Sustaining Towns

Alternative A would focus on localised sustainable growth and employment related development that would strengthen and support the local base of Headford and Portumna. It would also provide a realistic and suitable alternative to one off housing in the countryside. By facilitating population and employment growth commensurate to its attributes, Alternative A would provide for a more sustainable Settlement Hierarchy and a greater level of sustainable development at a County level and at a town level in Headford and Portumna.

Alternative A would result in a lower number of car journeys, supporting efforts to improve sustainable mobility and meet greenhouse gas emission reduction targets. This alternative would help to facilitate a more compact form of development at these settlements that would help to maximise benefits from infrastructural investment. Alternative A would provide for higher levels of brownfield and infill development (and associated adverse environmental effects) in better serviced, better connected and more sensitive locations. This type of development would result in less potential environmental impacts, including on water, drinking water, human health, ecology and landscape designations.

Alternative B would not be line with the two settlements of Gort and Loughrea identified as self-sustaining towns. The settlements of Headford and Portumna would not have the same level of services and employment base which would result in increased populations for these towns, but the employment opportunities would not be present.

A greater level of sprawl and higher dependence on outbound commuting for employment means that Alternative B would be likely to result in a greater extent of significant effects on various environmental components and would not be as sustainable as Alternative A. Alternative B would result in a higher number of car journeys, conflicting with efforts to improve sustainable mobility and meet greenhouse gas emission reduction targets. The greater degree of sprawl would reduce efficiencies with regard to infrastructural investment. This alternative would provide for higher levels of greenfield development (and associated adverse environmental effects) in less well-serviced, less-well connected and more sensitive locations surrounding these settlements. This type of development would result in a higher adverse environmental impact, including effects on water, drinking water, human health, ecology and landscape designations.

Type 1 (iii) Alternatives for Rural Settlements and Rural Area

- **Alternative A:** Designate the Rural Settlements within this level (7) dispersed throughout the county to meet rural generated housing needs.
- **Alternative B:** Do not designate the Rural Settlements, settlements to remain in Open Countryside

The settlements are primarily residential in nature. Some of the villages in the rural settlements are served by public mains water and/or wastewater supply, whilst there are others that are unserved. The purpose of these settlements is to provide an alternative to rural housing within a low-density environment.

Alternative A, by providing focus to and targeted policy objectives for the Rural Villages, would facilitate a viable alternative to one-off housing in the open countryside. Development within these settlements would be more likely to be served by infrastructure (including water services infrastructure) and more likely to protect the environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape. Development would be required to be subject to siting, design, protection of residential amenities and normal development management criteria, subject to the satisfactory provision of infrastructure and services and in keeping with the character of the settlement.

Alternative B, by not providing a focus to and targeted policy objectives for Rural Villages would be less likely to provide a viable alternative to one-off housing in the open countryside.

Development within the open countryside would be less likely to be served by infrastructure (including water services infrastructure) and less likely to protect the environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape. Alternative B would be the least sustainable of these two alternatives and would be most harmful to the environment.

4.4 Assessment of Type 2: Alternatives for Population Allocations

- **Type 2 – Alternative A:** Allocate significant population allocation to the settlements in Level 1, 2 and 3 of the settlement hierarchy, with limited growth in Level 4, 5 and 6 and minimal growth identified in Level 7
- **Type 2 – Alternative B:** Continued Growth of the MASP and Key Towns and dispersed pattern of growth across the other settlements and open countryside

The concentration of growth in the larger settlements in the County (i.e. MASP, Ballinasloe, Tuam and Athenry) under **Alternative A** will ensure there are settlements suitably located in the County with the capacity to grow at a sustainable level where there are opportunities to consolidate development in the existing urban footprint through infill and brownfield development. These settlements have a number of positive attributes including a broad range of services, transport links, a strong employment base, and capacity to facilitate population and economic growth. By providing for a concentration in the larger settlements in the County, Alternative A would result in lower levels of commuting, benefiting efforts to improve sustainable mobility and meet greenhouse gas emission reduction targets the most. Development in these centres would be better serviced and there would be a reduced need for greenfield development (and associated adverse environmental effects, including effects on water, drinking water, human health, ecology and landscape designations) in less well-serviced, less-well connected and more sensitive locations in the County, including the open countryside and smaller settlements as identified in Levels 4-6.

A more dispersed pattern of development as identified in **Alternative B** that would result in the expansion of the smaller towns and villages in the County. Development is more likely to be on greenfield lands as there are few infill and brownfield sites available. Services and public transport are more limited and there would be a greater dependence on commuting for employment. Development would be more likely to occur on greenfield lands as there are less infill and brownfield sites available in Rural Settlements and the Open Countryside. Greenfield development (and associated adverse environmental effects, including effects on water, drinking water, human health, ecology and landscape designations) would be in less well-serviced, less-well connected and more sensitive locations in the County, including the open countryside and smaller settlements. The more dispersed population approach has the potential to undermine the role of the larger settlements and make it more difficult to deliver key infrastructure and placemaking projects.

4.5 Assessment of Type 3: Alternatives for Rural Areas

- **Type 3 (i) Alternative A:** Designate Rural Areas under Strong Urban Pressure that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation.
- **Type 3 (i) Alternative B:** Do not designate Rural Areas under Strong Urban Pressure and assess each planning application on its merits.

Alternative A provides for a robust and transparent policy approach to manage rural housing.

Restricting the development of single dwellings in rural areas that are under strong urban influence/pressure would positively impact upon the protection and management of the environment and sustainable development. The restrictions would help to both reduce levels

of greenfield development in areas immediately surrounding existing centres and encourage brownfield development within existing centres.

Single dwellings in rural areas would be facilitated as appropriate and urban development would be directed towards established settlements. This alternative would help to prevent low density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components.

Alternative B Provides a vague and unclear policy approach to rural housing and risks facilitating a significant increase in urban-generated one-off housing in the open countryside which will undermine the role of small towns and villages and have consequences for the environment.

Not restricting the development of single dwellings in rural areas that are under strong urban influence/pressure would adversely impact upon the protection and management of the environment and sustainable development. The absence of restrictions would result in increased levels of greenfield development in areas immediately surrounding existing centres and less demand for brownfield development within existing centres.

Urban generated housing development would occur within rural areas outside of established settlements. This alternative would result in low density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components.

4.6 Assessment of Type 4: Alternatives for Land Use Zoning

Alternatives for Land Use Zoning are assessed on Table 4.1.

Table 4.1 Assessment of Type 4 Alternatives against Strategic Environmental Objectives

Town	Alternative (selected alternatives in bold)	Commentary
Bearna	A New Residential Zoning: South of R336 lands (outside Flood Zone A) zoned as TC/Infill Residential	Open Space would be an appropriate use for these lands and would be to be in compliance with the Flood Risk Management Guidelines. New Residential lands could be zoned elsewhere in the settlement on lands with low levels of flood risk. Such residential development would reduce the need for development elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
	B New Residential Zoning: South of R336 zoned, all lands (within Flood Zone A) zoned as TC/Infill Residential	New Residential would be an inappropriate use for these lands and would be unlikely to be in compliance with the Flood Risk Management Guidelines. Due to the elevated flood risk, the development of this site would be hindered and development pressures may present elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
Oranmore Set 1	A Lands (within Flood Zone A) zoned Open Space/Recreation and Amenity	Open Space would be an appropriate use for these lands and would be to be in compliance with the Flood Risk Management Guidelines. New Residential lands could be zoned elsewhere in the settlement on lands with low levels of flood risk. Such residential development would reduce the need for development elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
	B Lands (within Flood Zone A) zoned Residential Phase 1	New Residential would be an inappropriate use for these lands and would be unlikely to be in compliance with the Flood Risk Management Guidelines. Due to the elevated flood risk, the development of this site would be hindered and development pressures may present elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
Oranmore Set 2	A Lands to the south of the Plan area zoned Residential Phase 2	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	B Lands to the south of the Plan area removed from Plan boundary	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.

Town	Alternative (selected alternatives in bold)	Commentary
Baile Chláir	A Lands to the West of the Plan boundary zoned Residential Phase 2	There are various other alternative lands for residential development that would contribute more to the proper planning of the town. Residential zoning on these lands would be unnecessary and there would be a need to provide for tourism zoning elsewhere. This alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary Residential zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	B Lands to the West of the Plan boundary zoned Community Facilities	There is an identified planning need for community facilities development in Baile Chláir. Providing for this use within the settlement boundary would help to minimise the occurrence of this type of development outside of the town, potentially on less well-connected, less well-served lands – with associated potential adverse environmental effects on environmental components such as water, drinking water, human health, ecology and landscape designations. This alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment and it would contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health).
Briarhill	A. To prepare a Framework Plan for Briarhill for integration into the County Development Plan that is centred around the principles of good placemaking and provides for phased development at this key strategic growth area.	The preparation of a Framework Plan for Briarhill for integration into the County Development Plan that is centred around the principles of good placemaking and provides for phased development at this key strategic growth area would benefit proper planning, sustainable development and environmental protection and management. Such a Framework Plan would make development at this location, which has proximity to services, jobs and infrastructure and is well-served and well-connected, more likely. Development at Briarhill would reduce the need to develop lands that are less well-served and connected and potentially more sensitive. A focus on placemaking would make Briarhill a more desirable location to live and work. Phasing would help to both maximise benefits from infrastructural investment and ensure that new development is accompanied by appropriate infrastructure and services.
	B. Not preparing any focused Plan or land use zoning for Briarhill.	Not preparing any focused Plan or land use zoning for Briarhill would stymie proper planning, sustainable development and environmental protection and management. The absence of a co-ordinated Plan for Briarhill would make development at this location, which has proximity to services, jobs and infrastructure and is well-served and well-connected, less likely. In the absence of a Framework Plan, there would be a greater need to develop lands elsewhere that are less well-served and connected and potentially more sensitive. The absence of phasing would make both maximising benefits from infrastructural investment and ensuring that new development is accompanied by appropriate infrastructure and services more difficult.
Garraun	A. To prepare a Framework Plan for Garraun for integration into the County Development Plan that is centred around the principles of good placemaking and provides for phased development at this key strategic growth area.	The preparation of a Framework Plan for Garraun for integration into the County Development Plan that is centred around the principles of good placemaking and provides for phased development at this key strategic growth area would benefit proper planning, sustainable development and environmental protection and management. Such a Framework Plan would make development at this location, which has proximity to services, jobs and infrastructure and is well-served and well-connected, more likely. Development at Garraun would reduce the need to develop lands that are less well-served and connected and potentially more sensitive. A focus on placemaking would make Garraun a more desirable location to live and work. Phasing would help to both maximise benefits from infrastructural investment and ensure that new development is accompanied by appropriate infrastructure and services.
	B. Zoning Garraun generally as a reserve area, potentially to be developed under future Plan periods, post 2028.	Not preparing any focused Plan or land use zoning for Garraun would stymie proper planning, sustainable development and environmental protection and management. The zoning of Garraun generally as a reserve area, potentially to be developed under future Plan periods, post 2028, would make development at this location, which has proximity to services, jobs and infrastructure and is well-served and well-connected, less likely. In the absence of a Framework Plan, there would be a greater need to develop lands elsewhere that are less well-served and connected and potentially more sensitive. The absence of phasing would make both maximising benefits from infrastructural investment and ensuring that new development is accompanied by appropriate infrastructure and services more difficult.
Clifden Set 1	A New Residential Zoning: Residential Phase 2 lands removed to the north of the Galway Clifden Road, boundary reduced	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.
	B New Residential Zoning: Residential Lands Phase 2 lands zoned north of the Clifden Galway Road	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.

SEA Environmental Report Appendix III: Non-Technical Summary

Town	Alternative (selected alternatives in bold)	Commentary
Clifden Set 2	A To the north of Clifden Glen Lands zoned to Tourism from Residential Phase 2.	There is an identified planning need for tourism development in Clifden. Providing for this use within the settlement boundary would help to minimise the occurrence of this type of development outside of the town, potentially on less well-connected, less well-served lands – with associated potential adverse environmental effects on environmental components such as water, drinking water, human health, ecology and landscape designations. This alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment and it would contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health).
	B To the north of Clifden Glen Lands zoned to Residential Phase 2.	There are various other alternative lands for residential development that would contribute more to the proper planning of the town. Residential zoning on these lands would be unnecessary and there would be a need to provide for tourism zoning elsewhere. This alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary Residential zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
Maigh Cuilinn	A Lands to the east of the N59 approach into Maigh Cuilinn zoned Agriculture	Agricultural zoning would be compatible with the topography of these lands. Residential zoning allocated to the town could be provided for elsewhere within the town, contributing towards a more compact form of development that would help to maximise benefits from infrastructural investment. This alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing the need to develop lands elsewhere, outside of the settlement, for residential uses would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.
	B Lands to the east of the N59 approach into Maigh Cuilinn zoned Residential Phase 2	Land topography is a physical constraint to the development of these lands. Allocating some of Maigh Cuilinn's allotted residential zoning to these lands would be likely to place greater pressure on lands outside of the settlement for residential development, potentially on less well-connected, less well-served lands – with associated potential adverse environmental effects on environmental components such as water, drinking water, human health, ecology and landscape designations. Lands developed outside of the settlement would be likely to result in inefficiencies infrastructural investment and higher emissions from transport (with associated effects on energy, air, noise and human health).
Headford	A Lands to the north of Headford Village removed from Plan boundary	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.
	B Lands to the north of Headford village zoned Residential Phase 2	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
Oughterard	A Lands zoned with excess Residential Lands(2005 2011) Plan to the West of Plan boundary	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	B More compact residential zoning	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.
Portumna Set 1	A Lands to the west of the N65 zoned Residential Phase 2	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.
	B Lands to the west of the N65 town zoned Phase 1	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.

SEA Environmental Report Appendix III: Non-Technical Summary

Town	Alternative (selected alternatives in bold)	Commentary
Portumna Set 2	A Lands to the west of Portumna town on the R352 zoned Tourism	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	B Lands to the west of Portumna town on the R352 removed from Plan boundary	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.
An Cheathrú Rua	A Consolidation of Plan boundary- Residential Phase 2 lands removed west of the village	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.
	B Residential Phase 2 lands zoned to the west of the village	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
An Spidéal	A Consolidation of Plan boundary- Residential Phase 2 lands removed north of the village	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.
	B Residential Phase 2 lands zoned to the north of the village	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
Ballygar	A Lands to the East of Ballygar Village zoned Residential Phase 1	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.
	B Lands to the East of Ballygar village zoned Residential Phase 1 and 2	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
Dunmore	A Lands to the east of R328 (with flood zone A) zoned Open Space	Open Space would be an appropriate use for these lands and would be to be in compliance with the Flood Risk Management Guidelines. New Residential lands could be zoned elsewhere in the settlement on lands with low levels of flood risk. Such residential development would reduce the need for development elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
	B Lands to the east of R328 (within flood zone A) zoned Residential	New Residential would be an inappropriate use for these lands and would be unlikely to be in compliance with the Flood Risk Management Guidelines. Due to the elevated flood risk, the development of this site would be hindered and development pressures may present elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
Glenamaddy	A Lands to the east of the R362 on the village zoned TC with limited development potential beyond these lands	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.

Town	Alternative (selected alternatives in bold)	Commentary
	B Lands to the east of the R362 on the approach into the village and beyond the TC lands zoned Residential Phase 2	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
Kinvara	A More compact residential zoning to the south of the N67 in the village zoned Residential Phase 2	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.
	B Lands zoned to the south of the N67 in the village zoned Residential Phase 2 (2005 2011)	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
Moylough	A Lands to the west of the N63, on the approach to the village Zoned Residential Phase 1, more compact development	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components.
	B Lands to the west of the N63 on the approach to the village Zoned Residential Phase 1 and 2 more sprawl	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.

4.7 Reasons for Choosing the Selected Alternatives in light of Other Reasonable Alternatives Considered

Selected alternatives for the Plan from each of the tiers of alternatives that emerged from the planning/SEA process are indicated above.

These alternatives have been incorporated into the Plan having regard to both:

1. The environmental effects which are identified by the SEA and are detailed above; and
2. Planning - including social and economic - effects that also were considered by the Council.

Section 5 Summary of Effects arising from Plan

5.1 Overall Effects

Table 5.1 summarises the overall environmental effects arising from Plan provisions. The effects encompass all in-combination/cumulative effects arising from implementation of the Plan. The potentially significant adverse environmental effects (if unmitigated) arising from implementation of the Plan are detailed as are residual effects, taking into account mitigation through both provisions integrated into the Plan – see summary at Section 6.

5.2 Instances whereby Environmental Considerations were not integrated into the Plan

The Plan, considered as a whole, contributes towards environmental protection and management and sustainable development and complies with various legislative requirements. This is identified throughout the SEA documentation.

Various Plan provisions that would contribute towards the sustainable development of the County would, at the same time, have the potential to conflict with the environment, were mitigation measures not taken into account. This is normal and mitigation measures have been integrated into the Plan to deal with these potential effects.

However, a number of alterations were adopted by the Elected Members as part of the Plan that are particularly internally inconsistent with the overall approach provided for by the Plan and were advised against by the Plan-preparation SEA process. Advice provided on the environmental consequences of these alterations included:

- Certain alterations adopted as part of the Plan would not provide the most evidence-based framework for development and have the potential to undermine sustainable development and proper planning, including compact growth, by placing non-evidence-based restrictions on future growth. They do not align with higher level policy or guidance. These amendments have the potential to push development that would be appropriate in certain locations to more sensitive, less well-served, less well-connected locations.
- Certain alterations would potentially conflict proper flood risk management and not comply with the Flood Risk Management Guidelines. There would be potential risk to environmental components including human health and material assets.
- Certain alterations would dilute the management of rural housing (including in the Rural Metropolitan Area, Rural Area Under Strong Urban Pressure-GCTPS-Outside Rural Metropolitan Area Zone 1 and Rural Housing Zone 4 - Landscape Classification 2, 3 and 4) and have the potential to result in more housing in these areas with associated additional, unnecessary and potentially significant adverse effects on various environmental components, including landscape, biodiversity, surface and ground water, human health and sustainable mobility and climate emission reduction targets. This would present potential conflicts with legislative requirements including the European Habitats and Water Framework Directives that would be challenging to mitigate.
- Certain alterations would not be consistent with established population targets and/or the proper planning and sustainable development of the County. As a result they would present additional, unnecessary and potentially significant adverse effects on various environmental components, including soil, water, biodiversity, air and climatic factors and material assets.
- For certain alterations relating to zoning, much of the zoning proposed is considered to be premature in the context of current population targets. Potentially significant adverse unnecessary effects, would be likely to include:
 - Effects on non-designated habitats and species
 - Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces
 - Increased loadings on water bodies
 - Conflict with efforts to maximise sustainable compact growth and sustainable mobility
 - Occurrence of adverse visual impacts

Where such alterations are further from the centre of settlements, potentially significant unnecessary adverse effects would be likely to include:

- Difficulty in providing adequate and appropriate waste water treatment as a result of zoning outside of established built development envelopes of settlements
- Adverse impacts upon the economic viability of providing for public assets and infrastructure
- Adverse impacts upon carbon emission reduction targets in line with local, national and European environmental objectives
- Conflicts between transport emissions, including those from cars, and air quality
- Conflicts between increased frequency of noise emissions and protection of sensitive receptors
- Potential effects on human health as a result of potential interactions with environmental vectors

Table 5.1 Overall Evaluation – Effects arising from the Plan

Environmental Component	Environmental Effects, in combination with the wider planning framework		
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Northern and Western RSES, adjacent Development Plans and lower-tier land use plans.		
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> • Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the County and beyond. • Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats. • Contribution towards protection and/or maintenance of biodiversity and flora and fauna by contributing towards the protection of natural capital including the environmental vectors of air, water and soil. Biodiversity and flora and fauna includes biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species (including birds and bats), listed/protected species, ecological connectivity and non-designated habitats (including terrestrial and aquatic habitats), and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna. • Sustains existing sustainable rural management practices – and the communities who support them – to ensure the continuation of long-established managed landscapes and the flora and fauna that they contain. 	<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> • 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; • Habitat loss, fragmentation and deterioration, including patch size and edge effects; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats. 	<ul style="list-style-type: none"> • Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces. • Losses or damage to ecology (these would be in compliance with relevant legislation).
Population and Human Health	<ul style="list-style-type: none"> • Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County and beyond. • Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the County and beyond. • Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water. 	<ul style="list-style-type: none"> • Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors. 	<ul style="list-style-type: none"> • Potential interactions with residual effects on environmental vectors – please refer to residual adverse effects under “Soil”, “Water” and “Air and Climatic Factors” below.

SEA Environmental Report Appendix III: Non-Technical Summary

Environmental Component	Environmental Effects, in combination with the wider planning framework		
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Northern and Western RSES, adjacent Development Plans and lower-tier land use plans.		
	Significant Positive Effect, likely to occur		Significant Positive Effect, likely to occur
Soil	<ul style="list-style-type: none"> Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the County and beyond. Contribution towards the protection of the environment from contamination the highest standards of remediation, and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land. 	<ul style="list-style-type: none"> Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. Potential for riverbank and coastal erosion. 	<ul style="list-style-type: none"> Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces. Riverbank and coastal erosion will continue to occur naturally over time and is likely to be enhanced by climate change.
Water	<ul style="list-style-type: none"> Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the County and beyond. Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations. Contribution towards flood risk management and appropriate drainage. 	<ul style="list-style-type: none"> Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. Increase in flood risk and associated effects associated with flood events. 	<ul style="list-style-type: none"> Any increased loadings as a result of development to comply with the River Basin Management Plan. Flood related risks remain due to uncertainty with regard to extreme weather events – however such risks will be mitigated by measures that have been integrated into the Plan.
Material Assets	<ul style="list-style-type: none"> Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County and beyond. Contribution towards compliance with national and regional water services and waste management policies. Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments. Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth. Contribution towards reductions in average energy consumption per capita including promoting sustainable compact growth, sustainable mobility, sustainable design and energy efficiency. 	<ul style="list-style-type: none"> Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). Increases in waste levels. Potential impacts upon public assets and infrastructure. Interactions between agriculture and soil, water, biodiversity and human health - including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter. 	<ul style="list-style-type: none"> Exceedance of capacity in critical infrastructure risks remain, including due to uncertainty with regard to climate – however, such risks will be mitigated by: measures, including those requiring the timely provision of critical infrastructure, and compliance with the Water Framework Directive and associated River Basin Management Plan. Residual wastes to be disposed of in line with higher-level waste management policies. Any impacts upon public assets and infrastructure to comply with statutory planning/consent-granting framework.

SEA Environmental Report Appendix III: Non-Technical Summary

Environmental Component	Environmental Effects, in combination with the wider planning framework		
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Northern and Western RSES, adjacent Development Plans and lower-tier land use plans.		
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects
Air and Climatic Factors	<ul style="list-style-type: none"> Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County and beyond. In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, and associated contribution towards maintaining and improving air quality and managing noise levels, including through measures relating to: <ul style="list-style-type: none"> Sustainable compact growth; Sustainable mobility, including walking, cycling and public transport; Drainage, flood risk management and resilience; Sectors including agriculture, forestry, energy and buildings; and Sustainable design, energy efficiency and green infrastructure. 	<ul style="list-style-type: none"> Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives. Potential conflicts between transport emissions, including those from cars, and air quality. Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. Potential conflicts with climate adaptation measures including those relating to flood risk management. 	<ul style="list-style-type: none"> An extent of travel related greenhouse gas and other emissions to air. This has been mitigated by provisions which have been integrated into the Plan, including those relating to sustainable compact growth and sustainable mobility. Interactions between noise emissions and sensitive receptors. Various provisions have been integrated into the Plan to ensure that noise levels at sensitive receptors will be minimised.
Cultural Heritage	<ul style="list-style-type: none"> Contributes towards protection of cultural heritage elsewhere in the County by facilitating development within existing settlements. Contributes towards protection of cultural heritage within existing settlements by facilitating brownfield development and regeneration. 	<ul style="list-style-type: none"> Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities. 	<ul style="list-style-type: none"> Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation.
Landscape	<ul style="list-style-type: none"> Contributes towards protection of wider landscape and landscape designations by facilitating development within existing settlements. 	<ul style="list-style-type: none"> Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape. 	<ul style="list-style-type: none"> Landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments that will occur in compliance with the Plan's landscape protection measures.

Section 6 Mitigation and Monitoring Measures

6.1 Mitigation

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Plan. Various environmental sensitivities and issues have been communicated to the Council through the SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes. By integrating all related recommendations into the Plan, the Council have ensured that both the beneficial environmental effects of implementing the Plan have been and will be maximised and that potential adverse effects have been and will be avoided, reduced or offset.

Mitigation was achieved through the:

- Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development¹³;
- Considering alternatives for the Plan¹⁴;
- Integration of environmental considerations into zoning provisions of the Plan¹⁵; and
- Integration of individual SEA, AA and SFRA provisions into the text of the Plan.

6.2 Monitoring

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. Monitoring is based around indicators that allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified at Table 3.1 and used in the evaluation. Monitoring indicators, targets, sources and remedial action is provided at Table 6.1 overleaf.

¹³ Far in advance of both the submission of the pre-Draft Plan to the Elected Members for approval and the placing of the Draft Plan on public display, Galway County Council undertook various works in order to inform the preparation of the Plan.

The findings of this strategic work have been integrated into the Plan and will contribute towards both environmental protection and management and sustainable development within the County.

Strategic work undertaken by the Council includes background work in relation to Plan Strategies and other provisions for a variety of sectors, including:

- Settlement and Community;
- Housing and Rural Housing Design;
- Renewable Energy;
- Transportation and Infrastructure;
- Natural and Cultural Heritage; and
- Climate Action.

¹⁴ Although strategic alternatives in relation to the content of the Plan were significantly limited for the Plan (see Section 4), as part of the Plan preparation/SEA process, the Council considered a number of alternatives for the Plan. These alternatives were assessed by the SEA process and the findings of this assessment informed the selection of preferred alternatives, facilitating an informed choice with respect to the type of Plan that was prepared and placed on public display.

¹⁵ Environmental considerations were integrated into the Plan's zoning through an interdisciplinary approach. 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. The detailed Plan preparation process undertaken by the Planning Department combined with specialist seeks to facilitate zoning that will help to avoid inappropriate development being permitted in areas of elevated sensitivity, such as in areas at risk of flooding or ecological sensitivity. Various provisions have been integrated into the Plan that provide for flood risk management and ecological protection and management at project level. Also taken into account were environmental sensitivities relating to ecology, cultural heritage, landscape and water, as well as the overlay mapping of environmental sensitivities.

Table 6.1 Indicators, Targets, Sources and Remedial Action

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Biodiversity, Flora and Fauna	BFF	<ul style="list-style-type: none"> Condition 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 	<ul style="list-style-type: none"> 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.
		<ul style="list-style-type: none"> Number of spatial plans that have included ecosystem services content, mapping and policy to protect 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 	<ul style="list-style-type: none"> Internal review of local land use plans 	<ul style="list-style-type: none"> 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 the County'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
		<ul style="list-style-type: none"> Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Chapter 10 “Natural Heritage, Biodiversity and Green Infrastructure” 	<ul style="list-style-type: none"> For planning permission to be only granted when applications demonstrate that they comply with all Plan measures providing for the protection of biodiversity and flora and fauna – see Chapter 10 “Natural Heritage, Biodiversity and Green Infrastructure” 	<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 5 “Economic, Enterprise and Retail” 	<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 5 “Economic, Enterprise and Retail” 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 permitted under the Plan 	<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

SEA Environmental Report Appendix III: Non-Technical Summary

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
		<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 Land)	S	<ul style="list-style-type: none"> Proportion of population growth occurring on infill and brownfield lands compared 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% as per the NPF 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 existing built-up footprint of the settlement To map brownfield and infill land parcels across the County 	<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 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 related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance. 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.
		<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 Guidelines and include appropriate flood risk mitigation and management measures.

SEA Environmental Report Appendix III: Non-Technical Summary

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
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 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 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"> 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.
		<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% NO_x, SO_x, 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 NO_x 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 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 EPA Annual National Greenhouse Gas Emissions Inventory reporting Climate Action Regional Office Consultations with DECC 	<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 provisions of the Plan 		

SEA Environmental Report Appendix III: Non-Technical Summary

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action		
		<ul style="list-style-type: none"> Carbon dioxide (CO₂) emissions across the electricity generation, built environment and transport sectors 	<ul style="list-style-type: none"> Contribute towards the target of aggregate reduction in carbon dioxide (CO₂) 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 County 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 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 or development pressure is causing negative effects on designated archaeological or architectural heritage, the Council will work with Regional Assembly, Fáilte Ireland and the National Monuments Service and other stakeholders, as relevant, to address pressures through additional mitigation. 		
		<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 			
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 re-examine Plan provisions and the effectiveness of their implementation 		