

APPENDIX I - NON TECHNICAL SUMMARY

FOR THE

LONGFORD COUNTY DEVELOPMENT PLAN 2015-2021

for: Longford County Council

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Longford
County Longford



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Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report of the Longford County Development Plan. The purpose of the Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of growth in County Longford.

What is an 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 it needed?

The SEA is being carried out in order to comply with the provisions of the SEA Regulations and in order to improve planning and environmental management within County Longford. The output of the process is an Environmental Report which accompanies and should be read in conjunction with the Plan.

How does it work?

All of the main environmental issues in County Longford are assembled and presented to the team who prepared the Plan. This helped them to devise a Plan that protects whatever is sensitive in the environment. It also helped to identify wherever there are environmental problems in the area and ideally the Plan tries to improve these.

To decide how best to make a Plan that protects the environment as much as possible the planners examined alternative versions of the Plan. This helped to highlight the type of Plans that are least likely to harm the environment.

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

The Environmental Report contains the following information:

- A description of the environment and the key environmental issues;
- A description and assessment of alternatives for the Plan;
- An assessment of the Plan objectives; and,
- Mitigation measures which set out to aid compliance with important environmental protection legislation - e.g. the Water Framework Directive, the Habitats Directive - and which will avoid/reduce the environmental effects of implementing the Plan.

What happens at the end of the process?

On the making of the Plan, a document, referred to as the SEA Statement, will be made public.

The SEA Statement will include information on how environmental considerations were integrated into the Plan and why the preferred alternative was chosen for the Plan in light of the other alternatives.

Section 2 The Plan

2.1 Vision and Content of the Plan

The main purpose of the Plan is to set out a framework for the sustainable physical development of the County, while considering the conservation and protection of the built and natural environment. It also aims to carefully consider the needs of all groups and individuals within the county and promote equal opportunities.

The Plan has been prepared by Longford County Council and comprises of a written document with maps, and various appendices including zonings and policy for the county's settlements and county Housing and Retail Strategies.

The Core Strategy contained in the Plan articulates a medium to longer term evidence and quantitatively based strategy for the spatial development of County Longford, whilst demonstrating consistency with national and regional development objectives. The strategic aims of the Core Strategy are set out as follows:

Aim 1

To provide a framework for the proper planning and sustainable development of the County over the plan period.

Aim 2

To provide alignment and integration between strategic planning and settlement policy and the prioritisation of physical infrastructure investment.

Aim 3

To build on the unprecedented growth which has occurred over recent years and maximise the economic and social benefits that can be achieved from this in a manner which is compatible with the principles of sustainable development.

Aim 4

To secure the future vitality and viability of County Longford through optimising the County's economic, social and physical development.

Aim 5

To demonstrate that the Longford County Development Plan 2015-2021 is consistent, as far as practicable, with national and regional development objectives set out in the National Spatial Strategy and Regional Planning Guidelines for the Midland Region and other national guidelines and policies.

Aim 6

To facilitate the closer alliance of County and sub-county level plans with regional policy.

Aim 7

To identify the appropriate quantum, location and phasing of development considered necessary to provide for future population growth over the plan period in accordance with the National Spatial Strategy and Midland Regional Planning Guidelines.

Aim 8

To develop this quantum of land in a manner that supports public transport and existing services.

Aim 9

To provide a framework supported by evidence based settlement strategy, for deciding on the scale, phasing and location of new development, having regard to existing services and planned investment over the coming years.

Aim 10

To provide a framework within which the provision of sustainable infrastructure, amenities, economic investment and development can take place to maximize the use of resources in the plan area.

2.2 Interactions with Relevant Policy, Plans or Programmes

Introduction

The Plan sits within a hierarchy of land use forward planning strategic actions. The Plan must comply with higher level strategic actions and may, in turn, guide lower level strategic actions. A number of these strategic actions are summarised below:

The National Spatial Strategy 2002-2020

The focus of the National Spatial Strategy (NSS) 2002-2020 is on fostering a closer match between where people live with where they work. The NSS established a detailed sustainable planning framework for strategic spatial planning to ensure development is targeted at the most appropriate locations. The NSS places emphasis on the creation of high quality living environments through urban design and the integration of social and community amenities.

Midlands Regional Planning Guidelines

The Midlands Regional Planning Guidelines identifies Longford as a 'Principal Town' with the function of driving the northern part of the Midland Region. Granard is described as a 'Key Service Town'. The purpose of key service towns is to drive their own local economies within their area. Edgeworthstown is described as a 'Service Town' and the function of these towns is to perform important retail, residential, service and amenity functions for essentially local hinterlands and support nearby gateway and principle towns. Ballymahon and Lanesboro are described as 'Local Service Towns' and the regional guidelines envisage these towns performing important local level, residential, retailing, social and leisure functions and providing appropriate local services to a wider rural hinterland.

Catchment Flood Risk Assessment and Management Studies

Catchment Flood Risk Assessment and Management (CFRAM) Studies are being undertaken for the Shannon and North Western International River Basin Districts by the Office of Public Works. The studies are focusing on areas known to have experienced flooding in the past and areas that may be subject to flooding in the future either due to development pressures or climate change. In 2015, draft Flood Maps will be finalised. The final output from the studies will be CFRAM Plans, to be published in December 2016. The Plans will define the current and future flood risk in the River Basin Districts and set out how this risk can be managed.

GRID 25 and associated Implementation Plan

Grid25 is a high-level strategy outlining how EirGrid intends to undertake the development of the electricity transmission grid in the short, medium and longer terms, to support a long-term sustainable and reliable electricity supply. The Grid25 Implementation Programme (IP) is a practical strategic overview of how the early stages of Grid25 are intended to be implemented.

Smarter Travel – A Sustainable Transport Future 2009

"Smarter Travel" is the Government's action plan to free towns and cities from traffic congestion, substantially cut CO2 emissions, encourage car based commuters to leave their cars at home, and encourage a shift toward walking, cycling and greater public transport usage.

Environmental Protection Objectives

The Plan is subject to a number of high level environmental protection policies and objectives with which it must comply, including those which have been identified as Strategic Environmental Objectives in Section 3.13. Note that the above policies etc. influenced the various provisions of the Plan which are detailed within Section 8 of the main SEA Environmental Report and within the Plan itself.

Section 3 The Environmental Baseline

3.1 Introduction

The environmental baseline of County Longford is described in this section. This baseline together with the Strategic Environmental Objectives, which are identified in Section 3.12, 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. The environmental baseline is described in line with the legislative requirements encompassing the following components – biodiversity, flora and fauna, population, human health, soil, water, air and climatic factors, material assets, cultural heritage, landscape and the interrelationship between these components.

The lack of a centralised data source that could make all environmental baseline data for the Plan area both readily available and in a consistent format posed a challenge to the SEA process. This difficulty is one which has been encountered while undertaking SEAs at local authorities across the Country and was overcome by investing time in the collection of data from various sources and through the use of Geographical Information Systems.

3.2 Monitoring Review

As part of the scoping exercise, a monitoring review was undertaken by examining the environmental effects of planning applications upon the environment between 2009 and 2013. The following points summarise this review:

Biodiversity, Flora and Fauna

- No significant effects on protected biodiversity or flora and fauna arising from implementation of the 2009 Plan as amended were identified.
- No significant ecological networks or parts thereof which provide functional connectivity were identified as being lost without remediation resulting from development provided for by the Plan.

Population and Human Health

- No significant effects on human health arising from implementation of the 2009 Plan were identified.
- Population change appears to be in compliance with the provisions contained in the 2009 Plan.

Soil

- No significant brownfield lands were developed over the lifetime of the previous Plan.

Water

- The most recent Q values for testing locations within the County are for 2011. The most recent trophic classification from the EPA is for the period 2007-2009. For details on these indicators and the current status of surface waters please refer to Section 3.7.
- Areas of specified flood risk across the entire County have not been identified however all permissions have been granted in compliance with The Planning System and Flood Risk Management Guidelines for Planning Authorities.

Material Assets

- All new developments which have been granted permission over the lifetime of the Plan have been - or will be prior to operation - connected to and adequately and appropriately served by waste water treatment.

- With regard to drinking water quality between 2009 and 2011, Microbial Compliance Levels have slightly increased while Chemical Compliance Levels have slightly decreased. The number of entries on the RAL has decreased from 2 in 2009 to 1 in Q4 of 2012.
- The preparation of a Water Services Strategic Plan is to be investigated once this is required to be prepared by legislation.
- Between 2009 and 2011 the total *collected and brought household waste* has decreased while the total packaging recovered by self-complying packagers has increased.

Air and Climatic Factors

- Figures from CSO show an overall decrease of 2.9% of the entire population aged 5 years and over travelling to work, school or college by public transport or non-mechanical means in the County between 2006 and 2011.

Cultural Heritage

- All entries to the Record of Monuments and Places have been protected from inappropriate development granted permission under the previous Plan.
- All entries to the Record of Protected Structures have been protected from inappropriate development granted permission under the previous Plan.

Landscape

- No complaints have been received from statutory consultees regarding avoidable impacts on the landscape.

3.3 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 evaluated. As indicated under Section 3.2, the previous County Plan has contributed towards environmental protection within County Longford. If the previous Plan was allowed to expire and not be replaced by a new Plan, this would have resulted in a deterioration of the county's planning and environmental protection framework. Although higher level environmental protection objectives – such as those of various EU Directives and transposing Irish Regulations – would have still applied, the deterioration of this framework would have meant that new development would be less coordinated and controlled. Such development could have resulted in an increase in the occurrence of adverse effects on all environmental components, especially those arising cumulatively. Cumulative effects occur as a result of the addition of many small impacts to create one larger, more significant, impact.

3.4 Biodiversity and Flora and Fauna

County Longford supports a wide diversity of natural and semi-natural habitats and a wide range of plant and animal species, some of which have come under threat due to development pressures and increased demand for new development land.

European and National Designations

There are 6 designated NHAs located in County Longford: Aghnamona Bog NHA (Site Code: 000422); Rinn River NHA (Site Code: 000691); Lough Kinale and Derragh Lough NHA (Site Code: 000985); Cloonageeher Bog NHA (Site Code: 001423); Forthill Bog NHA (Site Code: 001448); and Mount Jessop Bog NHA (Site Code: 001450). Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas and proposed Natural Heritage Areas in the County are mapped on Figure 3.1.

Existing Problems

Previous developments such as residential, commercial and transportation have resulted in loss of biodiversity and flora and fauna across the County however legislative objectives governing biodiversity and fauna were not identified as being conflicted with.

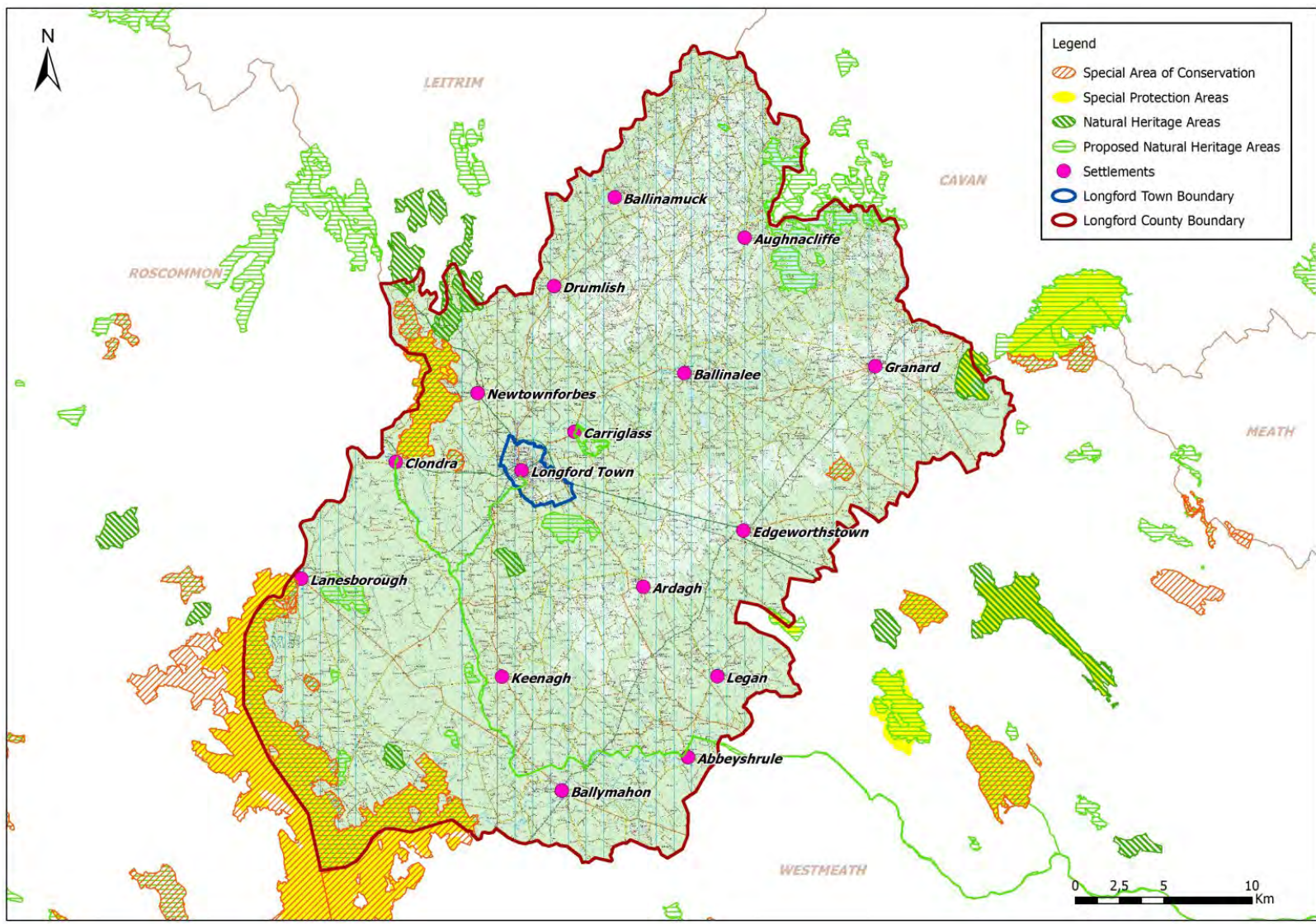


Figure 3.1 SPAs, SACs, NHAs, pNHAs and Water Management Units

Source: NPWS (datasets downloaded April, 2013)

3.5 Population and Human Health

Longford is a relatively small county of approximately 1,091 km². The population¹ currently stands at 39,000 persons. This sees an increase of 4,609 persons or 13.4% on the previous Census (2006).

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, 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.

3.6 Soil

Soil is an extremely complex, variable and living medium and performs many vital functions including: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, and nitrogen. Soil has a role as a habitat and gene pool, serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic as well as environmental importance. Soil types, as classified by Teagasc in co-operation with the Forest Service, EPA and GSI, are mapped on Figure 3.2. This map indicates that deep well drained mineral soil and cutaway peat are the most prevalent soil types in the county. Areas of blanket bog occur in the south west and north of the county. Sites of Geological Interest in County Longford are mapped on Figure 3.2.

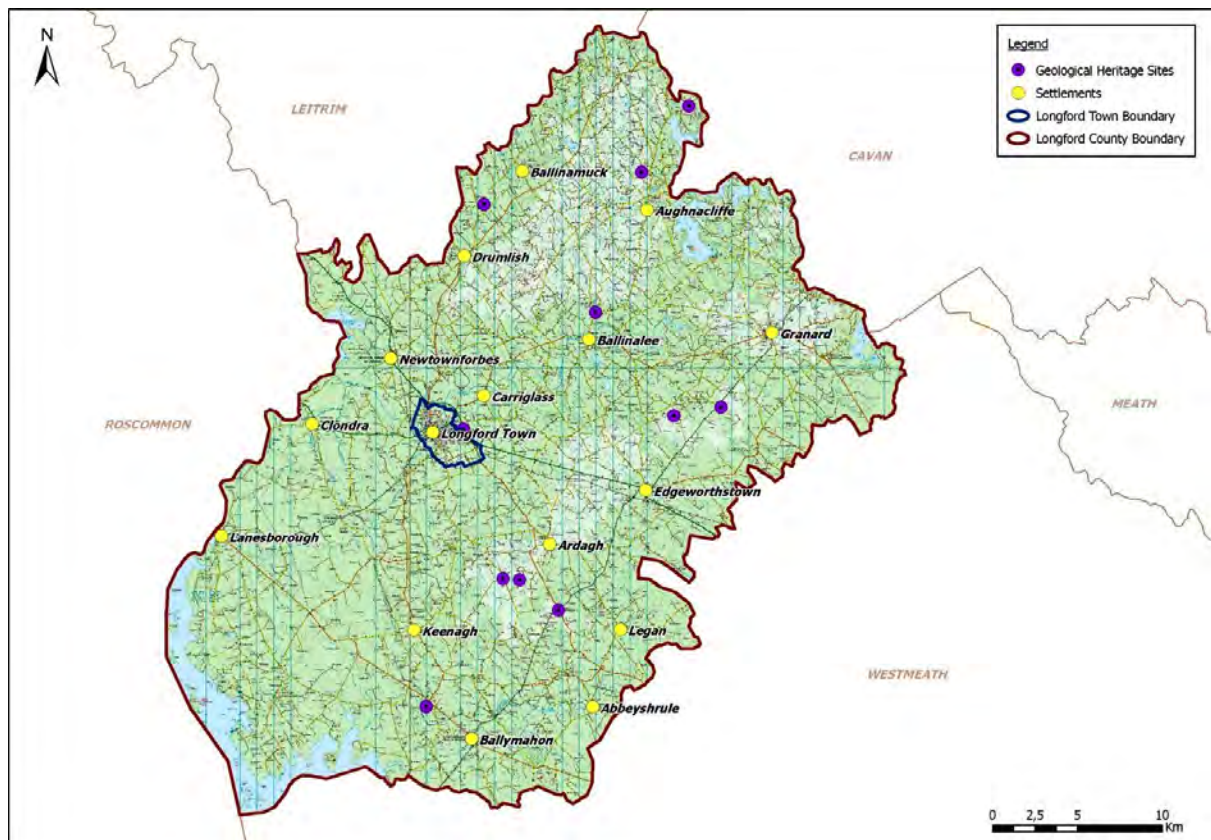


Figure 3.2 Geological Heritage Sites
Source: Longford County Council (Unknown)

¹ CSO (2011), *Census 2011*: Dublin: CSO

3.7 Water

Potential Pressures on Water Quality and the Water Framework Directive

Human activities, if not properly managed, can cause deterioration in water quality. Pressures exerted by human activities include the following: sewage and other effluents discharged to waters from point sources, e.g. pipes from treatment plants; discharges arising from diffuse or dispersed activities on land; abstractions from waters; and structural alterations to water bodies. Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving "good status" by 2015. All public bodies are required to coordinate their policies and operations so as to maintain the good status of water bodies which are currently unpolluted and improve polluted water bodies to good status by 2015. Ireland has been divided into eight river basin districts or areas of land that are drained by a large river or number of rivers and the adjacent estuarine / coastal areas. The management of water resources will be on these river basin districts. County Longford falls within the North Western and Shannon International RBDs.

The Status of Waters

River water quality within the County is monitored by the EPA² at a number of locations. Good status as defined by the WFD equates to approximately Q4 in the national biological classification scheme of rivers as set out by the EPA. Rivers in the south of the county are of moderate status while rivers in the centre of the county are generally of moderate or good status. WFD status for rivers is good in the north west, moderate in the north and poor in the north east. Figure 3.3 maps 2010 and 2011 data. Of the 28 locations which have data available for 2010/2011, 18 (64%) are identified as being of either high or good status, 8 (29%) are identified as being of moderate status, and 2 (7%) are identified as being of poor status. There are 4 main lakes in the County, positioned along the County boundary, and all are identified as being of moderate status. The EPA also monitors the quality of these lakes (see Figure 3.3).

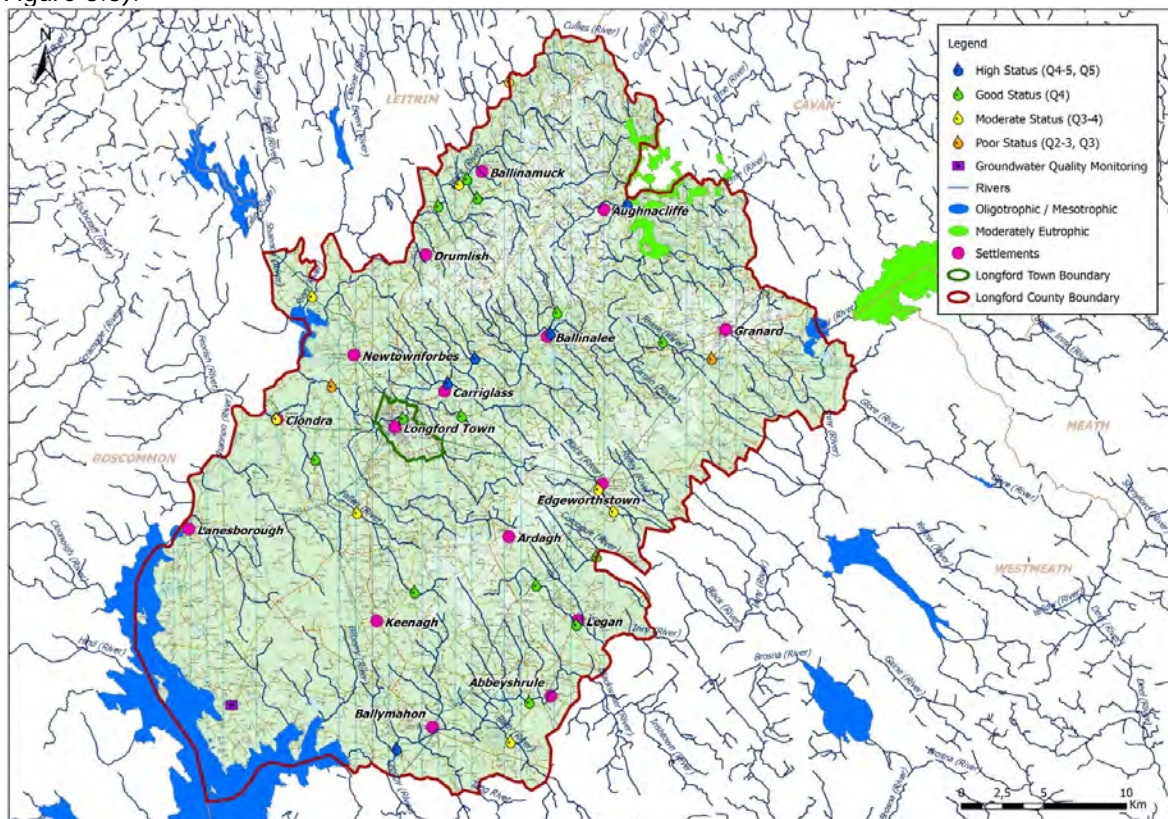


Figure 3.3 2010 and 2011 Q-Values at Points on Rivers and Lake Water Quality
 Source: EPA (Various)

² Dataset downloaded May 2013.

Flooding

Flooding is an environmental phenomenon which, as well have causing economic and social impacts, could in certain circumstances pose a risk to human health.

In November 2009 the DEHLG published The Planning System and Flood Risk Management Guidelines for Planning Authorities. These are aimed at ensuring a more consistent, rigorous and systematic approach which will fully incorporate flood risk assessment and management into the planning system. Planning authorities are required to undertake flood risk identification, assessment and management processes as appropriate when preparing or varying Land Use Plans and when consideration of applications for planning permission.

A Strategic Flood Risk Assessment (FRA) has been undertaken alongside the preparation of the new County Plan. This assessment provided Flood Risk Zones for each of the zoned areas within the county. The Flood Risk Zones were delineated taking into account various flood risk indicators and the findings of site walkovers which were informed by local knowledge (Local Council Engineers) and an examination of, inter alia: the potential source and direction of flood paths; the locations of topographic and built features, including those that coincide with the flood indicator boundaries; and vegetation indicative of standing water. A selection of historical flood risk indicators are provided on Figure 3.4.

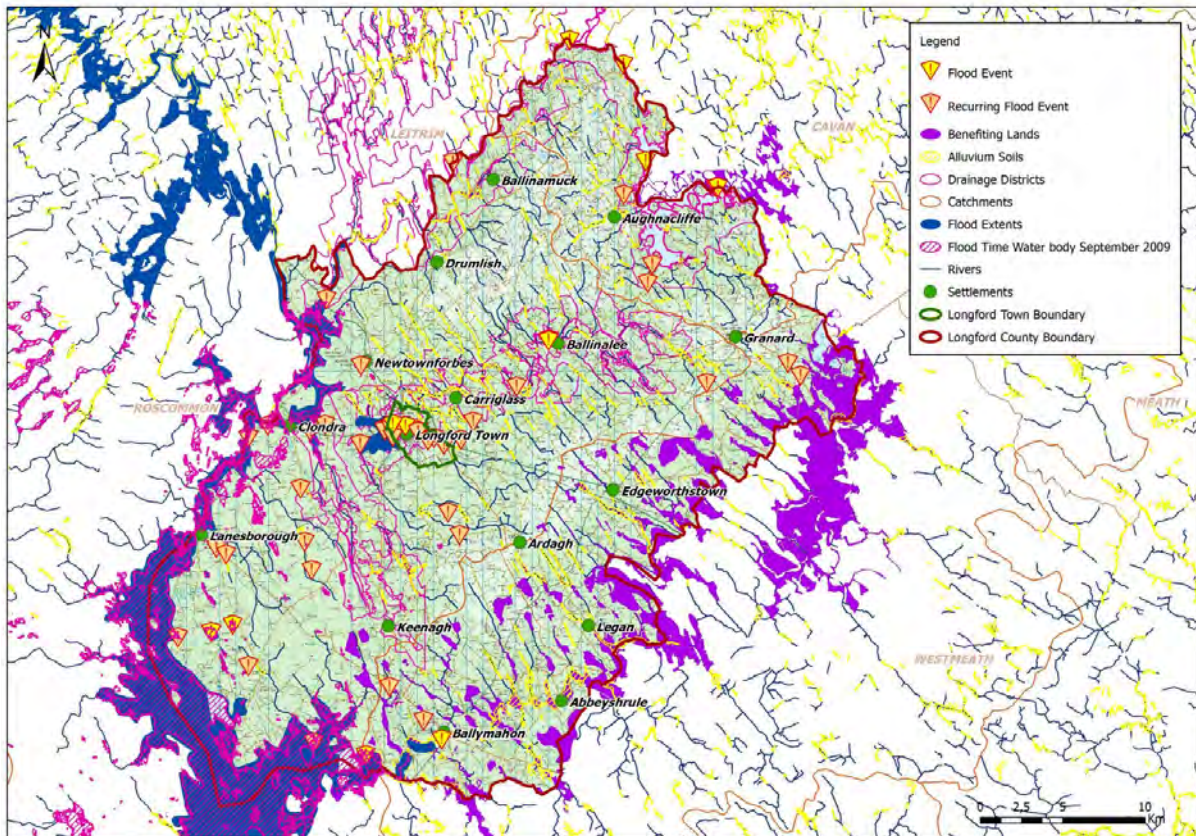


Figure 3.4 Occurrence of Available Historical Flood Risk Indicators
Source: Various

Existing Problems

Some areas of poor water quality exist in the east of the County. Lough Gowna is moderately eutrophic. Groundwater in the west of the County is of poor status. Based on available water data, some of the Counties water bodies will need improvement in order to comply with the objectives of the WFD.

The Shannon and North Western International RBD Management Plans and associated Programmes of Measures include provisions to help ensure that these water bodies meet the objectives of the WFD. The Plan will contribute towards the achievement of the objectives of these Management Plans.

Flood risk indicators provide historic evidence of flooding in various locations across the County however the recommendations made by the SFRA in respect of these areas have been integrated into the Plan.

3.8 Air and Climatic Factors

Ambient Air Quality

In order to protect human health, vegetation and ecosystems, EU Directives set down air quality standards in Ireland and the other Member States for a wide variety of pollutants. These pollutants are generated through fuel combustion, in space heating, traffic, electricity generation and industry and, in sufficient amounts, could affect the well-being of the areas inhabitants. The EU Directives include details regarding how ambient air quality should be monitored, assessed and managed.

In order to comply with air quality standards directives, the EPA measures the levels of a number of atmospheric pollutants. For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Standards Regulations 2002 (SI No. 271 of 2002). The Plan area falls within Zone D. Air quality in Zone D is currently good. Legislative objectives governing air and climatic factors in Longford were not identified by the assessment as being conflicted with.

Noise - The Environmental Noise Directive

Noise is unwanted sound. The Environmental Noise Regulations (SI No. 140 of 2006) transpose into Irish law the EU Directive 2002/49/EC relating to the assessment and management of environmental noise, which is commonly referred to as the Environmental Noise Directive or END. The END defines a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise.

The END does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities. Limit values are left to each member state. At this point in time, Ireland does not have any statutory limit values.

Climatic Factors

The key issue involving the assessment of the effects of implementing the plan on climatic factors relates to greenhouse gas emissions arising from transport. It is noted that the Plan contains a number of actions which respond to potential threats to environmental components arising from a changing climate.

Flooding – see also Section 3.7 - is influenced by climatic factors and that the implications of climate change with regard to flood risk in relevant locations have been considered by the SFRA which has been undertaken for the Plan. There are emerging objectives relating to climate adaptation and that there is likely to be future Guidance for climate change proofing of land use plan provisions as is flagged in the National Climate Change Adaptation Framework (DECLG, 2012). Some of these objectives might relate to green infrastructure which can achieve synergies with regard to the following: provision of open space amenities; sustainable management of water; protection and management of biodiversity; protection of cultural heritage; and protection of protected landscape sensitivities.

In 2009, Ireland's greenhouse gas emissions decreased across all sectors due to the effects of the economic downturn with a decline in total emissions of 7.9 per cent. In 2010, Ireland's emissions fell by a further 0.7 per cent. Ireland's emissions profile has changed considerably since 1990, with the contribution from transport more than doubling and the share from agriculture reducing since 1998.

Travel is a source of: noise; air emissions; and energy use (38.8% of Total Final Consumption in Ireland in 2010 was taken up by transport, the largest take up of any sector)³.

Land-use planning contributes to what number and what extent of journeys occur. By addressing journey time through land use planning and providing more sustainable modes and levels of mobility, noise and other emissions to air and energy use can be minimised. Furthermore, by concentrating populations, greenfield development - and its associated impacts - can be minimised and the cost of service provision can be reduced.

Maximising sustainable mobility will also help Ireland meet its emission target for greenhouse gases under the 2020 EU Effort Sharing target which commits Ireland to reducing emissions from those sectors that are not covered by the Emissions Trading Scheme (e.g. transport, agriculture, residential) to 20% below 2005 levels.

3.9 Material Assets

Waste Water

Waste Water Treatment plants within Longford towns included in the settlement strategy have sufficient capacity to treat wastewater produced by the existing population. The Plan provides for the permitting of new development only where adequate and appropriate waste water infrastructure is provided.

Three of the wastewater treatment plants are identified by the EPA (Focus on Urban Waste Water Discharges in Ireland, 2012) as having failed to comply with the overall requirements of the Urban Waste Water Regulations (2001). Clondra failed due to the sample number while Drumlish and Newtown Forbes both failed as they both do not have secondary treatment in operation.

Drinking Water

- Drinking Water Supply

Public drinking water within the County is abstracted from the Shannon in the north and west of the County and from groundwater aquifers in the west and south of the County. Longford County Council produces over 14.5 million litres of water each day which is collected at source, treated and distributed to over 25,000 people.

County Longford has six main Regional Water Supply Schemes (RWSSs). Five of the six RWSSs are operating under capacity. The Longford RWSS is operating beyond the identified capacity volume however the water services Department have identified that an abstraction order for an additional 4,800m³ was obtained in 2010 however the water treatment plant upgrade for this increased capacity is still waiting approval from the Department of the Environment, Community and Local Government.

- Drinking Water Quality

Under Section 58 of the Environmental Protection Agency Act 1992 the EPA is required to collect and verify monitoring results for all water supplies in Ireland covered by the European Communities (Drinking Water) Regulations, 2007. The EPA publishes their results in annual reports which include Remedial Action Lists (RALs). The RAL identifies water supplies which are not in compliance with the Regulations mentioned above.

The EPA Remedial Action List (Q2 of 2013) identifies that the Newtowncashel RWSS has inadequate treatment for *Cryptosporidium*. The Proposed Action Measure identified by the Remedial Action List is the upgrade of the treatment plant to include effective barrier against *Cryptosporidium*.

³ Sustainable Energy Ireland (2011) *Energy in Ireland 1990 – 2010*

Waste

At present, there are a number of private companies providing a waste collection service to both householders and businesses within the County. There are no active landfill sites in the County.

Transport

The central position of County Longford is important in terms of the road network within it. Two national primary routes traverse the County from east to west, the N4 from Dublin to Sligo and N5 from Longford to Castlebar. Longford Town is strategically positioned where the two national roads divide. The national secondary route, N63 leaves Longford Town for Roscommon/Galway and the N55 from Cavan to Athlone takes a north-south route through the east of the County, passing through Granard, Edgeworthstown and Ballymahon.

Nine regional routes connect these, serviced by a network of county roads. The Dublin-Sligo rail line traverses the County from east to west, generally following the line of the N4 and serves Longford and Edgeworthstown stations.

Existing Problems

Three wastewater treatment plants in the county are identified by the EPA (Focus on Urban Waste Water Discharges in Ireland, 2012) as having failed to comply with the overall requirements of the Urban Waste Water Regulations (2001). Clondra failed due to the sample number while Drumlish and Newtown Forbes both failed as they both do not have secondary treatment in operation.

The Longford RWSS is operating beyond the identified capacity volume however the water services Department have identified that an abstraction order for an additional 4,800m³ was obtained in 2010 however the water treatment plant upgrade for this increased capacity is still waiting approval from the Department of the Environment, Community and Local Government.

The EPA Remedial Action List (Q2 of 2013) identifies that the Newtowncashel RWSS has inadequate treatment for Cryptosporidium. The provisions of the new Plan 2015-2021 will contribute towards protection of the environment with regard to impacts arising from material assets.

3.10 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. The term 'monument' includes all man-made structures of whatever form or date except buildings habitually used for ecclesiastical purposes. All monuments in existence before 1700 A.D. are automatically considered to be historic monuments within the meaning of the Acts. Over 1700 archaeological sites and monuments are recorded in County Longford under the Record of Monuments and Places.

Architectural Heritage

The term architectural heritage is defined in the Architectural Heritage (National Inventory) and Historic Monuments Act 1999 as meaning all: structures and buildings together with their settings and attendant grounds, fixtures and fittings; groups of structures and buildings; and, sites which are of technical, historical, archaeological, artistic, cultural, scientific, social, or technical interest.

The Record of Protected Structures (RPS) is legislated for under the Planning and Development Acts 2000-2010. Protected Structures are defined 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.

The Planning and Development Acts 2000-2010 provide the legislative basis for the protection of areas known as Architectural Conservation Areas (ACAs). An ACA is a place, area or group of

structures or townscape which is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures, whose character it is an objective to preserve in a development plan.

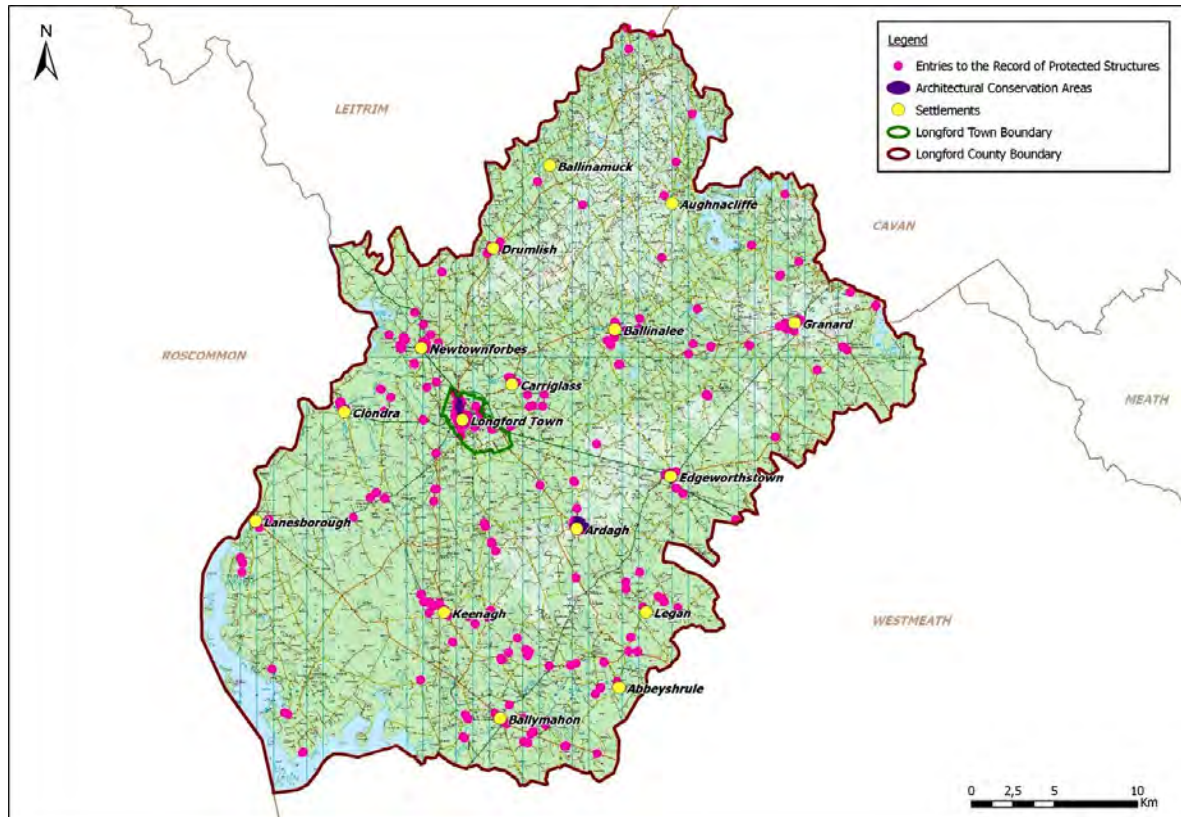


Figure 3.5 Architectural Heritage - Entries to the RPS and ACAs
 Source: Longford County Council (Unknown)

3.11 Landscape

Introduction

County Longford is richly endowed with a variety of landscape types. The general topography of the County may be described as undulating lowland, however, within this classification comes several sub-types such as the extensive commercial peatlands of the southwest, lakeland of the west, south and north-east and agricultural lowland with deciduous forest of the south-east and intermittent pockets of coniferous forest. Ardagh Mountain and the Cornhill area through to Lough Gowna represent the two upland areas.

Landscape Character Assessment

Character can be defined as a distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another. Landscape character assessments differ from landscape evaluations in that they attempt to classify landscapes on their individuality rather than defining one as better as or worse than another.

Landscape character types (LCT) are defined as landscapes that may occur in many areas throughout the Country and are composed of similar combinations of elements such as topography, geology, drainage and settlement patterns, landcover and use. Landscape character areas (LCA) are sections of the County that are treated as a unit in visual and physical terms, and that may consist of several landscape character types. Landscape Character types in County Longford would include the

peatlands/wetlands, Shannon basin and northern uplands. Landscape character areas are the individual representation of a landscape character type, e.g. Begnagh Bog.

In broad terms, there are seven basic landscape character units in Longford:

- Unit 1 - Northern Drumlin Lakeland.
- Unit 2 - Northern Upland.
- Unit 3 - Shannon Basin/Lough Ree.
- Unit 4 - Central Corridor.
- Unit 5 - Inny Basin.
- Unit 6 - Peatlands.
- Unit 7 - Open Agricultural.

The Plan provides a level of protection for *Broad Zones*, which include the county's lakes, rivers, canals and deciduous woodlands, and *Intermittent Views and Full Views*.

3.12 Overlay of Environmental Sensitivities

In order to identify where most sensitivities within the county occur, a number of the environmental sensitivities described above were weighted and mapped overlapping each other. Figure 3.6 provides an overlay of environmental sensitivities for the county. The settlements are also included on this map.

The overlay mapping shows that environmental sensitivities are not evenly distributed throughout the County. The County's western and south western boundaries are extremely and acutely vulnerable. These levels of sensitivity reflect the sensitive nature of the River Shannon and its Loughs which are protected under the Habitats Directive.

Peatland areas, due to their ecological, hydrological and amenity characteristics, present higher levels of sensitivity than most of the surrounding agricultural areas throughout the County. This is particularly the case at Clooneen Bog, Ballykenny-Fisherstown Bog and Brown Bog.

Likewise, lakes in the area show higher levels of sensitivity in comparison to surrounding areas and in addition to Lough Forbes and Lough Ree on the River Shannon in the west of the County include Lough Kinale and Derragh Lough.

The remainder of the County is generally of low and moderate vulnerability.

As previously referenced, the occurrence of multiple sensitivities in any location does not preclude development; rather it flags at a strategic level that the mitigation measures - which have already been integrated into the County Development Plan as policies and objectives - will need to be complied with in order to ensure that the implementation of the Plan contributes towards environmental protection.

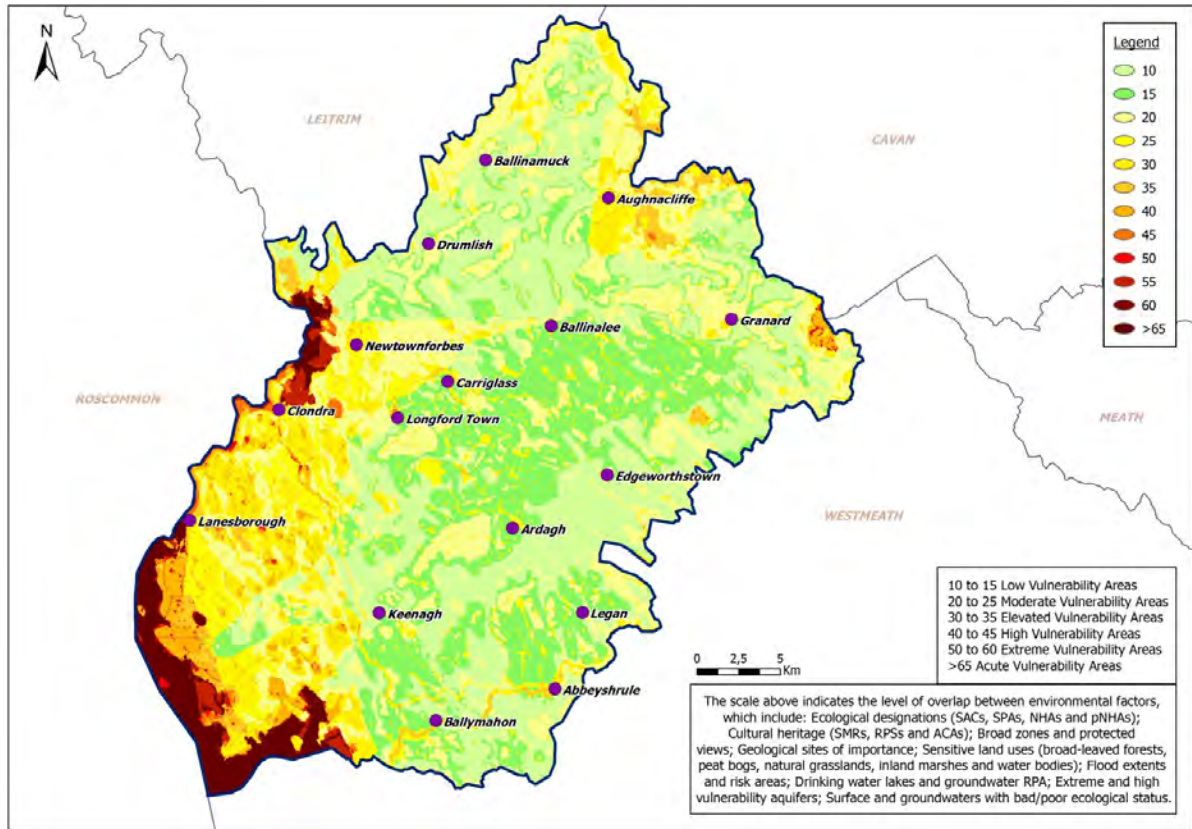


Figure 3.6 Overlay Mapping of Environmental Sensitivities
 Source: CAAS (2013)

3.13 Strategic Environmental Objectives

Strategic Environmental Objectives (SEOs) are methodological measures against which the environmental effects of the Plan can be tested. If complied with in full, SEOs would result in an environmentally neutral impact from implementation of the Plan. The SEOs are set out under a range of topics and are used as standards against which the provisions of the Plan can be evaluated in order to help identify areas in which potential adverse impacts may occur. SEOs are distinct from the objectives of the Plan and are developed from international and national policies which generally govern environmental protection objectives. Such policies include those of various European Directives which have been transposed into Irish law and which are intended to be implemented within the Plan area.

Table 3.1 Strategic Environmental Objectives

SEO Code	SEO
B1	To ensure compliance with the Habitats and Birds Directives with regard to the protection of Natura 2000 Sites and Annexed habitats and species ⁴
B2	To ensure compliance with Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function act as stepping stones - are of major importance for wild fauna and flora and essential for the migration, dispersal and genetic exchange of wild species
B3	To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in Wildlife Sites and to ensure compliance with the Wildlife Acts 1976-2010 with regard to the protection of species listed on Schedule 5 of the principal act
B4	To sustain 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
PHH1	To protect populations and human health from exposure to incompatible landuses
S1	To avoid damage to the hydrogeological and ecological function of the soil resource in County Longford
W1	To maintain and improve, where possible, the quality and status of surface waters
W2	To prevent pollution and contamination of ground water
W3	To comply as appropriate with the provisions of the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG, 2009)
M1	To serve new development with adequate and appropriate waste water treatment
M2	To serve new development with adequate drinking water that is both wholesome and clean
M3	To reduce waste volumes, minimise waste to landfill and increase recycling and reuse.
C1	To reduce travel related emissions to air and to encourage modal change from car to more sustainable forms of transport
CH1	To protect archaeological heritage including entries to the Record of Monuments and Places and/or their context
CH2	To protect as appropriate architectural heritage including entries to the Record of Protected Structures and their context and Architectural Conservation Areas
L1	To avoid significant adverse impacts on the landscape, especially with regard to protected views and prospects and broad zones including lakes, rivers, canals and deciduous woodlands

⁴ 'Annexed habitats and species' refer to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

Section 4 Alternative Scenarios

4.1 Description of Alternative Scenarios

As per the requirements of the SEA Directive, this SEA considers reasonable alternatives for the County Development Plan taking into account the objectives and the geographical scope of the Plan.

This section identifies and describes three different alternative scenarios. These scenarios are realistic and capable of implementation.

The evaluation of these scenarios - which has resulted in the identification of potential effects and informing the selection of a preferred alternative for the Plan – is summarised in Section 4.2. The evaluation of policies and objectives which are required to realise the preferred alternative is summarised in Section 5.

It is a statutory obligation to have a County Development Plan but, in accordance with the SEA Directive, the likely evolution of the environment in the absence of the Plan must be described (see Section 3). Since this is not a feasible alternative it is not included in this stage.

The alternatives considered are constrained by the provisions of the RPGs;

- A target population growth of 5,603 persons has been allocated to County Longford by the RPGs.
- The RPGs require that 4,924 persons of the allocation is assigned Longford Town; there is no alternative to this requirement. The SEA ER evaluates the various environmental effects of, inter alia, this allocation (see summary in Section 5).
- The RPGs require that the residual balance of 679 persons is distributed across the remainder of the County, having regard to a county settlement strategy. The location of this residual balance is the basis for the following alternatives.

The settlement hierarchy outlined in the RPG's for County Longford is as follows:

- Principal Town: Longford Town
- Key Service Town: Granard
- Service Town: Edgeworthstown
- Local Service Towns: Ballymahon and Lanesboro
- Village Network: Serviced Settlements and Rural Service Settlements

Alternative Scenario 1

This alternative involves the general allocation of the residual 679 persons balance to Longford Town/its immediate surrounding areas. A minimal balance is allocated to other settlements within the county and to rural areas.

Alternative Scenario 2

This alternative involves the general allocation of the residual 679 persons balance to the Open Countryside, to areas outside of existing settlements. A minimal balance is allocated to county settlements other than Longford Town.

Alternative Scenario 3

This alternative involves the allocation of the residual 679 persons balance to both existing settlements (60%) and the Open Countryside (40%⁵).

⁵ This figure is an assumption referred to in the RPGs

4.2 Evaluation of Alternative Scenarios

As previously noted, the alternatives available to be considered constrained by the provisions of the RPGs.

Of the target population growth of 5,603 persons that has been allocated to County Longford by the RPGs, 4,924 persons must be allocated to Longford Town.

This means that alternatives can only be considered with respect to the allocation of the balance of 679 persons (or circa 13% of the total allocation).

This limited scope of consideration therefore limits the difference in environmental effects across available alternatives and the severity of these effects.

This section provides a comparative evaluation of the environmental effects of implementing the three alternative scenarios.

4.2.1 Alternative Scenario 1

By generally allocating the residual 679 persons balance to Longford Town/its immediate surrounding areas, many conflicts between the county's most sensitive areas (see Overlay Mapping of Environmental Sensitivities at Figure 3.6) and this balance of development would be avoided.

For biodiversity and flora and fauna this would mean avoiding development in areas with the greatest concentration of Natura 2000 sites thereby contributing towards the protection of these sites. However this alternative would result in higher losses of the extent of non-protected habitats and higher levels of 'soil sealing' in the Longford Town area as a result of the replacement of semi-natural land covers with artificial surfaces.

By limiting the population allocation in smaller settlements and rural areas, there would be a potential threat to the maintenance of the population of the county involved in land management.

The higher population in the Longford Town area would add demand to the waste water and drinking water services however, subject to appropriate upgrades and maintenance, this demand could be served by the Town's waste water treatment plant and drinking water supply. There is always uncertainty associated with the provision of upgrades however mitigation could require adequate and appropriate infrastructure to be in place in advance of new development. The provision of adequate and appropriate waste water services, or lack thereof, would interact with the protection of water quality, biodiversity and flora and fauna and human health.

There are extensive flood risk zones within and surrounding Longford Town which would need to be considered by new development.

By avoiding development in areas with the greatest concentration of Council landscape designations, this alternative would contribute towards the protection of these designations (although it is noted that *Intermittent Views* are identified to the south of the town).

Impacts upon architectural and archaeological heritage – which has been identified throughout the county - would have to be considered on an application by application basis. The greatest potential conflicts would occur in settled areas.

This alternative would be likely to further contribute towards levels sustainable mobility.

4.2.2 Alternative Scenario 2

By generally allocating the residual 679 persons balance to the Open Countryside this alternative provides a heightened degree of uncertainty as to where exactly outside of existing settlements development would occur. New development and associated conflicts could occur in areas ranging from the most sensitive to the least sensitive areas (see Overlay Mapping of Environmental Sensitivities at Figure 3.6).

Provisions would be needed to ensure that inappropriate development is avoided in Natura 2000 sites in the open countryside.

More treated effluent would be dispersed over wider areas within the county. Adequate and appropriate construction and maintenance of on-site treatment systems would be required to ensure that adverse effects upon water quality, biodiversity and flora and fauna, human health do not occur.

'Soil sealing' and loss of non-designated habitats - as a result of the replacement of semi-natural land covers with artificial surfaces - would coincide with new development in the open countryside.

This alternative would help to facilitate the maintenance of the population of the county involved in land management.

There are extensive areas outside of the county's settlements which have been subject to historical flooding or which are at heightened risk of flooding in the future; flood risk would need to be considered by new development.

Higher levels of dispersed, one-off developments across the countryside would have the potential to conflict with Council landscape designations, both individually and cumulatively, if unmitigated.

Impacts upon architectural and archaeological heritage – which has been identified throughout the county - would have to be considered on an application by application basis. The greatest potential conflicts would occur in settled areas.

This alternative would have the potential to conflict with efforts to maximise sustainable mobility levels.

4.2.3 Alternative Scenario 3

This alternative would help to facilitate the maintenance of the population of the county involved in land management.

By generally allocating 60% of the residual 679 persons balance to existing settlements, many conflicts between the county's most sensitive areas (see Overlay Mapping of Environmental Sensitivities at Figure 3.6) and this balance of development would be avoided.

- For biodiversity and flora and fauna this would mean avoiding development in areas with the greatest concentration of Natura 2000 sites thereby contributing towards the protection of these sites. However this alternative would result in higher losses of the extent of non-protected habitats and higher levels of 'soil sealing' within zoned settlements as a result of the replacement of semi-natural land covers with artificial surfaces. It is noted that the settlements of Clondra and Lanesborough are located close to Natura 2000 sites.
- The higher population in the county's various settlements would add demand to the waste water and drinking water services however, subject to appropriate upgrades and maintenance, this demand could be served by the existing infrastructure and services. There is always uncertainty associated with the provision of upgrades however mitigation could require adequate and appropriate infrastructure to be in place in advance of new development. The provision of adequate and appropriate waste water services, or lack

thereof, would interact with the protection of water quality, biodiversity and flora and fauna and human health.

- There are extensive flood risk zones within the county's settlements which would need to be considered by new development.
- Impacts upon architectural and archaeological heritage – which has been identified throughout the county - would have to be considered on an application by application basis. The greatest potential conflicts would occur within existing settlements.
- This allocation of population would be likely to further contribute towards levels sustainable mobility.

By generally allocating 40% of the residual 679 persons balance to the Open Countryside this alternative provides a degree of uncertainty as to where exactly outside of existing settlements this development would occur. New development and associated conflicts could occur in areas ranging from the most sensitive to the least sensitive areas (see Overlay Mapping of Environmental Sensitivities at Figure 3.6).

- Provisions would be needed to ensure that inappropriate development is avoided in Natura 2000 sites in the open countryside.
- Development in the open countryside would disperse treated effluent over wider areas. Adequate and appropriate construction and maintenance of on-site treatment systems would be required to ensure that adverse effects upon water quality, biodiversity and flora and fauna, human health do not occur.
- 'Soil sealing' and loss of non-designated habitats - as a result of the replacement of semi-natural land covers with artificial surfaces - would coincide with new development in the open countryside.
- There are extensive areas outside of the county's settlements which have been subject to historical flooding or which are at heightened risk of flooding in the future; flood risk would need to be considered by new development.
- Higher levels of dispersed, one-off developments across the countryside would have the potential to conflict with Council landscape designations, , both individually and cumulatively, if unmitigated.
- Impacts upon architectural and archaeological heritage – which has been identified throughout the county - would have to be considered on an application by application basis. The greatest potential conflicts would occur in settled areas.
- This allocation of population would have the potential to conflict with efforts to maximise sustainable mobility levels.

4.2.4 The Selected Alternative Scenario

The Alternative Scenario for the County Development Plan which has emerged from the planning/SEA process is Scenario 3. This Scenario contributes towards protection of the environment while conforming in spirit and word with high level planning objectives.

By complying with appropriate mitigation measures - including those which have been integrated into the Plan - potential adverse environmental effects which could arise as a result of implementing this scenario would be likely to be avoided, reduced or offset.

Alternative Scenario 3 has been developed by the Planning Team as the Draft Plan and placed on public display, amended and adopted by the Elected Members having regard to both:

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

Section 6 of this report identifies how the Plan was informed by environmental sensitivities.

The Core Strategy Map from the Plan is provided on Figure 4.1 overleaf.



Figure 4.1 Core Strategy Map from the Plan
 Source: Longford County Council (2013)

Section 5 Environmental Effects

5.1 Introduction

Effects considered by the assessment include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

5.2 Appropriate Assessment and Strategic Flood Risk Assessment

A Stage 2 Appropriate Assessment (AA) and a Strategic Flood Risk Assessment (SFRA) have both been undertaken alongside the preparation and adoption of the Plan.

The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009).

The AA concluded that the Plan will not affect the integrity of the Natura 2000 network. All recommendations made by the SFRA were integrated into the Plan.

The preparation of the Plan, SEA, AA and SFRA has taken place concurrently and the findings of the AA and SFRA have informed both the Plan and the SEA.

5.3 Overall Findings

The overall findings (in addition to those detailed in preceding sections) are that:

- The Council have integrated all recommendations arising from the SEA, AA and SFRA into the Plan;
- Some Plan provisions would be likely to result in significant positive effects upon all of the environmental components; and
- Some provisions would have the potential to result in significant negative environmental effects (these are described below) however these effects will be mitigated by the mitigation measures which have been integrated into the Plan.

5.4 Potentially Significant Adverse Effects

Potentially significant adverse environmental effects (which will be mitigated by measures which have been integrated into the Plan) are described on the Table below:

Table 5.1 Potentially Significant Adverse Environmental Effects

Effect, if unmitigated	Mitigation Measure Reference(s) from the Plan
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> o Loss of biodiversity with regard to Natura 2000 Sites o Loss of biodiversity with regard to ecological connectivity o Loss of biodiversity with regard to Wildlife Sites and species listed on Schedule 5 of the Wildlife Act 1976 o Loss of population of the county involved in land management
Population and Human Health	<ul style="list-style-type: none"> o Spatially concentrated deterioration in human health
Soil	<ul style="list-style-type: none"> o Damage to the hydrogeological and ecological function of the soil resource
Water	<ul style="list-style-type: none"> o Adverse impacts upon the status of water bodies o Increase in the risk of flooding
Material Assets	<ul style="list-style-type: none"> o Failure to provide adequate and appropriate waste water treatment o Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean o Increases in waste levels
Air and Climatic Factors	<ul style="list-style-type: none"> o Failure to contribute towards sustainable transport and associated impacts
Cultural Heritage	<ul style="list-style-type: none"> o Effects on entries to the Record of Monuments and Places and other archaeological heritage o Effects on entries to the Records of Protected Structures and other architectural heritage
Landscape	<ul style="list-style-type: none"> o Occurrence of adverse visual impacts

5.5 Residual Adverse Effects

Mitigation measures to prevent or reduce significant adverse effects posed by the Plan are referred to in Section 6 of this Non-Technical Summary - these have been integrated into the Plan, through both the Land Use Zoning Maps and the text of the written statement.

Residual adverse effects likely to occur - considering the extent of detail provided by the Plan and assuming that all mitigation measures are complied with by development - are identified for each of the environmental components below:

Table 5.2 Residual Adverse Effects

Environmental Component	Residual Adverse Effects
Biodiversity and Flora and Fauna	Loss of an extent of non-protected habitats arising from the replacement of semi-natural land covers with artificial surfaces
Population and Human Health	None
Soil	Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces
Water	Fluvial and pluvial flood related risks remain due to uncertainty with regard to extreme weather events
Air and Climatic Factors	None
Material Assets	Residual wastes to be disposed of in line with higher level waste management policies
Architectural Heritage	Potential alteration to the context and setting of architectural heritage (Protected Structures) however these will occur in compliance with legislation
Archaeological Heritage	Potential alteration to the context and setting of archaeological heritage (Recorded Monuments) however this will occur in compliance with legislation Potential loss of unknown archaeology however this loss will be mitigated by measures integrated into the Plan
Landscape Designations ⁶	None

⁶ The Plan contributes towards the protection of landscape designations. The county's landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments.

Section 6 Mitigation and Monitoring Measures

6.1 Mitigation

6.1.1 Overview

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, AA and 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.

6.1.2 Integration of Environmental Considerations into the Land Use Zoning Maps

The Council have integrated all recommendations in relation to land use zoning that have arisen from the AA and SFRA processes which were undertaken alongside the SEA.

Land use zoning was guided by AA which provided, inter alia, information on the location of Natura 2000 sites. There are no Natura 2000 sites or parts of designated sites subject to zoning that would lead to direct habitat loss. This means that the zoning contained within the Plan will contribute towards the protection of ecological sites. The AA concluded that the Plan will not affect the integrity of the Natura 2000 network.

Land use zoning was also guided by the location of Flood Risk Zones A and B which have comparatively higher levels of flood risk than other areas and were identified by the SFRA. There are no undeveloped lands within Flood Risk Zones A or B which are zoned for inappropriate land uses by the Plan. This means that the Plan will contribute towards the minimisation of flood risk and associated beneficial environmental effects upon the protection of human health and material assets.

All recommendations made by the SFRA were integrated into the Plan.

6.1.3 Integration of Environmental Considerations into the Plan text

Table 6.1 links key mitigation measure(s) - which have been integrated into the Plan - to the likely significant effects of implementing the Plan, if unmitigated, as well as to monitoring measures. The integration of these measures into the Plan occurred over a number of iterations and was informed by, inter alia, various communications through the SEA, AA and SFRA processes.

The measures generally benefit multiple environmental components i.e. a measure providing for the protection of biodiversity, flora and fauna could beneficially impact upon the minimisation of flood risk and the protection of human health, for example. The reference codes are those which accompany the relevant measures in the SEA ER and in the Plan.

6.2 Monitoring

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. The Environmental Report contains proposals for monitoring the Plan which are adopted alongside the Plan. Monitoring enables, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

The Environmental Report identifies indicators - which allow quantitative measures of trends and progress in the environment over time. Measurements for indicators generally come from existing monitoring sources or from an internal monitoring of the environmental effects of grants of permission in the Council.

A stand-alone Monitoring Report on the significant environmental effects of implementing the Plan will be prepared before in advance of the beginning of the review of the Plan. This report will address the indicators that are set out on Table 6.1.

Table 6.1 SEA Summary Table: Likely Significant Effects, Mitigation Measures and Indicators for Monitoring

Likely Significant Effect, if unmitigated	Mitigation Measure Reference(s) from the Plan	Primary Indicator(s) for Monitoring
Loss of biodiversity with regard to Natura 2000 Sites	Policies NHB 6, NHB 21 (A), NHB 21 (B), NHB 23, AGR 10, RE 1 and RE 6.	B1: Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive
Loss of biodiversity with regard to ecological connectivity	Policies NHB 1, NHB 2, NHB 8, NHB 10 and NHB 19.	B2: Percentage loss of functional connectivity without remediation resulting from development provided for by the Plan
Loss of biodiversity with regard to Wildlife Sites and species listed on Schedule 5 of the Wildlife Act 1976	Policies NHB 4, NHB 6 and NHB 7.	B3i: Number of significant impacts on relevant habitats, species, environmental features or other sustaining resources in Wildlife Sites resulting from development provided for by the Plan B3ii: Number of significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976.
Loss of population of the county involved in land management	Various measures providing for populations in rural and supporting areas and Policy NHB 23.	B4: Population of the county involved in land management
Spatially concentrated deterioration in human health	Policies ENV 2, ENV 4, ENV 12 and ACA 2. Also see measures related to water quality, flooding, waste water treatment and drinking water supply and quality.	HH1: Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors resulting from development provided for by the Plan, as identified by the Health Service Executive and Environmental Protection Agency
Damage to the hydrogeological and ecological function of the soil resource	Policies HOU DS 4, CHAR 1, RPS 6 and GEO 1.	S1: Soil extent and hydraulic connectivity
Adverse impacts upon the status of water bodies	Policies ENV 6, ENV 7, ENV 8, ENV 9, ENV 10, WS 10, WS 11, WS 12 and SW 2.	W1: Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009) W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC
Increase in the risk of flooding	Policies SFRA 1 to 11 and FLO 1 to 9.	W3: Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk
Failure to provide adequate and appropriate waste water treatment	Policies WS 1, WS(a), WS 2, WS 3, WS 4, WS 5, WS 6, WS 14 and WS 18	M1: Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan

Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean	Policies WS 1, WS 2, WS 2 (a), WS 3, WS 4, WS 5, WS 6, WS 14, WS 18, WS 9, WS 10, WS 11, WS 12 and WS 19	M2: Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan
Increases in waste levels	Policies WAS 1, WAS 2, WAS 3 and WAS 5	M3i: Total collected and brought household waste M3ii: Packaging recovered (t) by self-complying packagers
Failure to contribute towards sustainable transport and associated impacts	Policies ROADS 2, PED 1, PED 2, PED 3, PED 4, PED 5, PT 1, PT 2, RL 1, RL 2, RL 3, RL 4, RL 5, RL 6, RL 7, RL 8, BUS 1, BUS 2 and BUS 3	C1: Percentage of population working within the county travelling to work, school or college by public transport or non-mechanical means
Effects on entries to the Record of Monuments and Places and other archaeological heritage	Policies HER 1, HER 5, ARC 1, ARC 5, ARC 6, ARC 9, ARC 10, ARC 11 and ARC 12	CH1: Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and the context of the above within the surrounding landscape where relevant) – protected from adverse effects resulting from development which is granted permission under the Plan
Effects on entries to the Records of Protected Structures, Architectural Conservation Areas and other architectural heritage	Policies HER 5, RPS 1, RPS 2, RPS 3, RPS 4, RPS 5, RPS 6, ARCH 6, ACA 1 and ACA 2	CH2: Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from adverse effects resulting from development which is granted permission under the Plan
Occurrence of adverse visual impacts	Policies HER 2, LCA 1, LCA 2 and LCA 3	L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to protected views and prospects and broad zones including lakes, rivers, canals and deciduous woodlands - which is granted permission under the Plan