

Kildare County Council

**Draft Leixlip Local Area Plan  
2020-2026**

SEA Environmental Report

Issue 2

Issue | 21 May 2019

This report takes into account the particular instructions and requirements of our client.

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Job number 262800-00

**Ove Arup & Partners Ireland Ltd**

**Arup**  
50 Ringsend Road  
Dublin 4  
D04 T6X0  
Ireland  
[www.arup.com](http://www.arup.com)

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# Document verification

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<b>Job title</b>		Draft Leixlip Local Area Plan 2020-2026		<b>Job number</b>	
				262800-00	
<b>Document title</b>		SEA Environmental Report		<b>File reference</b>	
<b>Document ref</b>		Issue 2			
<b>Revision</b>	<b>Date</b>	<b>Filename</b>	Leixlip SEA Environmental Report Draft 1 150319.docx		
Draft 1	15 Mar 2019	<b>Description</b>	First draft		
			Prepared by	Checked by	Approved by
		Name	Ailsa Doyle	Fiona Patterson	Clodagh O'Donovan
		Signature			
Draft 2	22 Mar 2019	<b>Filename</b>	Draft Revised Leixlip LAP. SEA Environmental Report- Draft 2.docx		
		<b>Description</b>			
			Prepared by	Checked by	Approved by
		Name	Ailsa Doyle	Fiona Patterson	Fiona Patterson
		Signature			
Issue	17 May 2019	<b>Filename</b>	Draft Leixlip LAP. SEA Environmental Report- ISSUE.docx		
		<b>Description</b>	Issue		
			Prepared by	Checked by	Approved by
		Name	Ailsa Doyle	Fiona Patterson	Clodagh O'Donovan
		Signature	<i>Ailsa Doyle</i>	<i>Fiona Patterson</i>	<i>Clodagh O'Donovan</i>
Issue 2	21 May 2019	<b>Filename</b>	Draft Leixlip LAP. SEA Environmental Report- Issue 2.docx		
		<b>Description</b>	Issue 2		
			Prepared by	Checked by	Approved by
		Name	Ailsa Doyle	Fiona Patterson	Clodagh O'Donovan
		Signature	<i>Ailsa Doyle</i>	<i>Fiona Patterson</i>	<i>Clodagh O'Donovan</i>
<b>Issue Document verification with document</b>					
<input checked="" type="checkbox"/>					

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## Non-Technical Summary

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### NTS1: Introduction

This is a non-technical summary of the Environmental Report that has been prepared as part of the Strategic Environmental Assessment (SEA) of the Draft Revised Leixlip Local Area Plan (Draft LAP). The document has been prepared in accordance with national and EU legislation. It draws attention to the most important issues and provides information on other significant topics.

Any topic which causes concern can be followed in greater detail in the main Environmental Report. The relevant planning legislation comprises the Planning and Development Act 2000, as amended and the Planning and Development Regulations 2001, as amended. Key planning documents reviewed as part of the assessment included:

- Project Ireland 2040: National Planning Framework;
- The Regional Planning Guidelines for the Greater Dublin Area 2010-2022;
- Draft Regional Spatial and Economic Strategy (RSES) for the Eastern and Midlands Region 2019-2031;
- Kildare County Development Plan 2019-2025.

Cognisance was also given to a wide range of legislation, plans and programmes at international, national, regional and local level for relevance to the Draft LAP.

### NTS2: Draft Revised Leixlip Local Area Plan 2020-2026

The Revised LAP will provide the main public statement of planning policies and objectives for Leixlip for the duration of the revised Plan (2020-2026) and will replace the existing Leixlip Local Area Plan 2017-2023.

The policies and objectives are critical in determining the appropriate location and form of different types of development in the study area, as the Local Area Plan is the primary statutory land use policy framework against which planning applications are assessed.

The objectives of Revised LAP will also be used by KCC to guide their activities and to indicate priority areas for action and investment by the Council such as focusing on attracting employment into the district or enhancing the district as a centre for tourism.

The Revised LAP will be a key document for setting out a vision for how Leixlip should develop over the years 2020-2026 and beyond.

### **NTS3: SEA Methodology**

The objective of the Strategic Environmental Assessment (SEA) Directive is ‘to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans ... with a view to promoting sustainable development’ (Article 1 SEA Directive). It is a systematic, on-going process for evaluating, at the earliest possible stage, the environmental quality and consequences of implementing certain plans and programmes on the environment.

The SEA methodology is based on legislative requirements and EPA guidance and will ensure compliance with the SEA Directive and associated legislation. The EPA’s SEA Pack (Version 18/04/2013) was also used as a source of information during the SEA process.

### **NTS4: Current State of the Environment**

The assessment of the plan with respect to the current Environmental Baseline is the principal task of the SEA process. Consequently, this baseline description must be cognisant of the local level nature of the Draft LAP and the pressures and interrelationships between environmental topics.

The environmental baseline provides an overview of the existing conditions in the Draft LAP area relevant to the plan and covers the following environmental topics:

- Biodiversity.
- Population and Human Health.
- Land and Soils.
- Water.
- Air, Noise and Climate.
- Archaeological, Architectural and Cultural Heritage.
- Landscape and Visual.
- Material Assets.

Leixlip is located in the north-east corner of County Kildare, approximately 14.5km from Dublin City Centre.

Three prominent water bodies are located in Leixlip; the River Rye, The Royal Canal and the River Liffey. The River Rye flows under the Royal Canal, which is carried in the Leixlip aqueduct almost 100 feet (30m) above and descends into the centre of Leixlip. The Rye then flows under the Rye Bridge to its confluence with the Liffey near the existing Boat House in Leixlip demesne.

Leixlip Town Centre is focused along Main Street which extends in a linear manner between these two bridges running parallel to the River Liffey to the south. Much of the town centre dates back to the mid-eighteenth century and retains its original character.

The towns close proximity and easy access to Dublin has resulted in large scale residential, commercial and industrial development in the area, and the rapid expansion of the same. However, the physical constraints of the M4 motorway to the south, the railway and Royal Canal to the north and west and St. Catherine's Park to the east have constrained further development in Leixlip.

According to the EPA's State of the Environment Report, 2016, Ireland's environment remains in a good condition, although there are a number of key challenges in the coming years. The report identified four priority challenges for the environment, which comprise; valuing and protecting our natural environment; building a resource-efficient low-carbon economy; putting the environment at the centre of our decision making and implementing environmental legislation.

In the EPA's 2020 Vision document it is noted that pressures on the Irish environment increased significantly as a result of a decade of rapid and unprecedented economic growth. Unfortunately, these pressures have accelerated at a rate that far exceeds that observed in other EU countries.

### **NTS5: Objectives, Targets and Indicators**

The SEA is designed to assess the potential environmental impact of the Draft LAP and its associated policies and objectives against the environmental baselines established.

The Draft LAP policies and objectives are assessed against a range of established environmental objectives and targets.

Indicators that are recommended in the SEA are utilised over the lifetime of the Draft LAP to quantify the potential level of impact that the policies and objectives are likely to have on the environment. This enables the measurement of the success of the policies in promoting the sustainable development of the area.

### **NTS6: Assessment of Likely Significant Effects**

The environmental impacts of the Draft LAP policies and objectives were assessed with respect to the existing environmental baseline and environmental objectives.

As the policies included in the Draft LAP have been designed to promote sustainability and to protect the environment, the majority of policies are expected to have positive impacts when assessed against the environmental objectives. A matrix was prepared to examine these potential impacts.

### **NTS7: Consideration of Alternatives**

Alternative development scenarios were considered in the preparation of the Draft LAP.

Five alternative plan scenarios were considered as part of the SEA process. The development of scenarios has been informed by the National Planning Framework and the requirements in regard to compact growth and the requirement for 30% of a town/settlements growth to be located within or contiguous to the existing built up area.

The scenarios considered provide for alternative methods of meeting this requirement ranging from a scenario exceeding the required 30% compact growth within or in close proximity (c.400m) to the town centre of Leixlip to more broader alternatives where the minimum 30% compact growth requirement is met with remaining growth allocated to lands either within or adjoining the 'defined built up area' i.e. the settlement boundary.

Each scenario was assessed against the environmental aspects and a preferred scenario from an environmental perspective determined.

### **NTS8 Mitigation Measures**

This Environmental Report has highlighted some potential negative environmental impacts that may arise from the implementation of the Draft LAP in relation to new policies, zonings and land use designations. A number of mitigation measures have been identified to prevent, reduce and as fully as possible offset any potential significant adverse impacts on the environment of implementing the Draft LAP.

It is envisaged that all planning applications for new developments in the Draft LAP area will be environmentally assessed and specific mitigation proposed where appropriate.

### **NTS9: SEA Monitoring**

Article 10 of the SEA Directive requires that monitoring should be carried out in order to identify at an early stage any unforeseen adverse impacts associated with the implementation of the Draft LAP or programme.

A monitoring programme was developed based on the indicators selected to track progress towards achieving strategic environmental objectives and reaching targets, enabling positive and negative impacts on the environment to be measured. As previously described, the environmental indicators have been developed to show changes that would be attributable to implementation of the Draft LAP.

The SEA carried out has ensured that any potential significant environmental impacts have been identified and given due consideration.

Kildare County Council, as the planning authority, is responsible for collating existing relevant monitored data, the preparation of preliminary and final monitoring evaluation reports, the publication of these reports and, if necessary, the carrying out of corrective action.

# 1 Introduction

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## 1.1 Introduction

Kildare County Council (KCC), as the competent authority, has prepared a Draft Local Area Plan (LAP) for Leixlip on foot of the Ministerial Direction to Kildare County Council under Section 31 of the Planning and Development Acts 2000 to 2018 ('The Acts'). The Draft Leixlip Local Area Plan hereafter referred to as 'the Draft LAP,' will replace the existing Leixlip Local Area Plan 2017-2023 and will run from 2020-2026. The key purpose of the Ministerial Direction is to ensure that additional lands are zoned for housing in Leixlip in the interests of meeting the housing allocation requirement in the core strategy of the Kildare County Development Plan 2017-2023 (the CDP).

Arup has been appointed by KCC to prepare the Strategic Environmental Assessment (SEA) documentation of the Plan, which will set out the strategic land use and planning policy guidance for the Leixlip area.

This SEA Environmental Report presents the findings of the environmental assessment of the likely significant effects on the environment as a result of the Draft LAP. A Scoping Report was previously prepared which provided information to allow consultation with defined statutory bodies on the scope and level of detail to be considered in the environmental assessment. Any issues or concerns raised during the scoping process or during the consultation period for the Draft LAP has been incorporated into this report. An SEA Statement accompanies this Environmental Report.

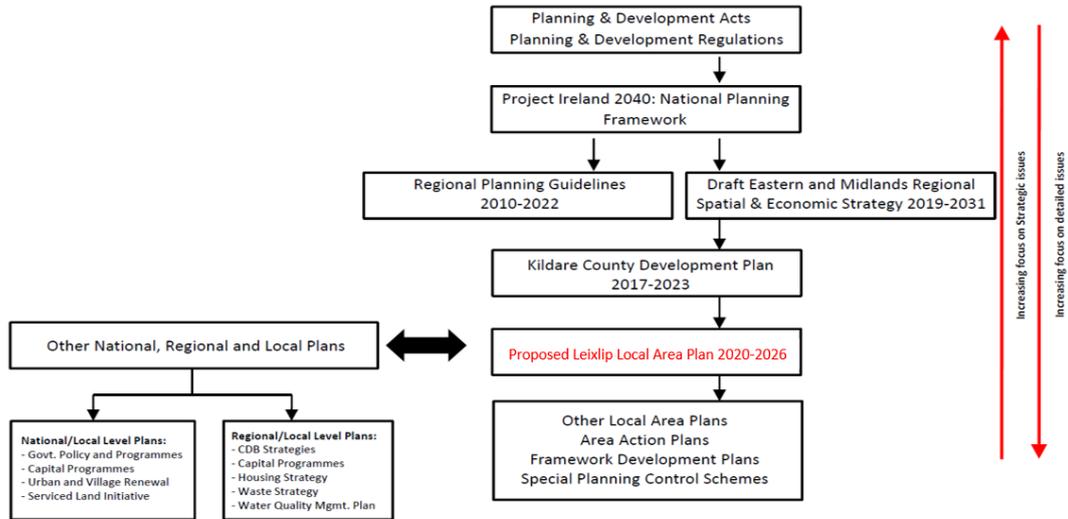
## 1.2 Planning Context

The relevant planning legislation comprises the Planning and Development Acts 2000 to 2018 and the Planning and Development Regulations 2000 to 2018.

The Draft LAP has been prepared under the provisions of Section 18, 19 & 20 of the Planning and Development Act, 2000 – 2018 and in cognisance of the National Planning Framework 2040 and National Development Plan 2018-2027. The Draft LAP is consistent with the policies of the Regional Planning Guidelines 2010-2022, the draft Eastern and Midlands Regional Spatial and Economic Strategy 2019-2031, as well as the objectives, Core Strategy and Settlement Strategy of the Kildare County Development Plan 2017-2023, and any subsequent reviews or variations thereto.

The hierarchy of the planning process within Ireland is summarised in the flow chart depicted in **Figure 1.1** and described in Section 1.2.1 – 1.2.4. The flow chart (adapted from the Department of Environment, Heritage and Local Government (DoEHLG) Development Plan Guidelines for Planning Authorities (2007)) indicates where the Draft LAP falls within that hierarchy.

This planning hierarchy was taken into account in drafting the LAP and undertaking this SEA.



**Figure 1.1: Hierarchy of the Planning Process in Ireland**

### 1.2.1 Project Ireland 2040: National Planning Framework

The Department of Housing, Planning and Local Government published Project Ireland 2040: National Planning Framework (NPF) in February 2018. The NPF is the overarching policy and planning framework for the social, economic and cultural development of the country.

The NPF was published together with a 10-year national investment plan as one vision – Project Ireland 2040, meaning that implementation of the NPF is fully supported by the Government’s investment strategy for public capital investment and investment by the State sector in general.

The NPF is the overarching document guiding regional spatial and economic strategies and local development plans.

The NPF identifies national strategic outcomes (including the sustainable management of water and other environmental resources) as well as strategic investment priorities.

The NPF provides for substantially better linkage between zoning of land and the availability of infrastructure in local authority planning. The NPF outlines the requirements for a new, standardised methodology to be put in place for core strategies which will also address issues such as the differentiation between zoned land that is available for development and zoned land that requires significant further investment in services for infrastructure for development to be realised.

The NPF outlines a number of National Policy Objectives relating to the coordination of land-use zoning and the provision of infrastructure and services.

National Policy Objective 72a states:

“Planning authorities will be required to apply a standardised, tiered approach to differentiate between i) zoned land that is serviced and ii) zoned land that is serviceable within the life of the plan.”

National Policy Objective 72b states:

“When considering zoning lands for development purposes that require investment in service infrastructure, planning authorities will make a reasonable estimate of the full cost of delivery of the specified services and prepare a report, detailing the estimated cost at draft and final plan stages.”

National Policy Objective 72c states:

“When considering zoning land for development purposes that cannot be serviced within the life of the relevant plan, such lands should not be zoned for development.”

## **1.2.2 The Regional Planning Guidelines for the Greater Dublin Area 2010-2022**

The Regional Planning Guidelines for the Greater Dublin Area 2010-2022 (RPGs) translate the national and regional population and housing targets set by the NSS to county level.

The RPGs identify two planning policy zones in the Greater Dublin Area (GDA)- The Metropolitan Area, and the Hinterland Area. Leixlip is identified as being within the Metropolitan Area.

The key objective for the future development of the Metropolitan Area is to ensure consolidation of urban centres, development of brownfield sites especially along public transport corridors, the provision and facilitation of an integrated public transport system and the achievement of a greater use of sustainable transport modes through the integration of land use and transportation planning.

Under the Regional Planning Guidelines, these planning policy zones are supported by a settlement hierarchy with the identification of key growth towns to be consolidated, developed and supported within a sustainable urban form.

Leixlip is identified as a ‘Large Growth Town II’, which is classified as ‘smaller in scale [to those in the Large Growth Town I category] but strong active growth towns, economically vibrant with high quality transport links to larger towns/city.’

Large Growth Towns are strategically positioned to make the most of their connectivity and high-quality connections to Dublin City Centre, whilst also supporting and servicing a wider local economy. They are important centres for delivery of public services, alongside IDA promoted companies, high order retail businesses and supported enterprise centres providing a strong commercial hub.

Leixlip is also identified under the Regional Planning Guidelines as a primary economic growth town in Kildare.

The RPGs will be replaced by the Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland Region, once adopted. Refer to Section 3.1.3 below for further information on the RSES.

### 1.2.3 Draft Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland Region 2019-2031

The Draft RSES for the Eastern and Midland Region, is a strategic plan which identifies regional assets, opportunities and pressures, and provides appropriate policy responses in the form of Regional Policy Objectives. At this strategic level it provides a framework for investment to better manage spatial planning and economic development throughout the Region.

The Draft RSES provides a:

- **Spatial Strategy** – to manage future growth and ensure the creation of healthy and attractive places to live, work, study, visit and invest in.
- **Economic Strategy** – that builds on our strengths to sustain a strong economy and support the creation of quality jobs that ensure a good living standard for all.
- **Metropolitan Plan** – to ensure a supply of strategic development areas for the sustainable growth and continued success and competitiveness of the Dublin metropolitan area.
- **Investment Framework** – to prioritise the delivery of key enabling infrastructure and services by government and state agencies.
- **Climate Action Strategy** – to accelerate climate action, ensure a clean and healthy environment and to promote sustainable transport and strategic green infrastructure.

In October 2018, the Eastern and Midland Regional Assembly prepared a draft Regional Spatial and Economic Strategy for the whole of the Eastern and Midland Region for the period 2019-2031, as required under section 24(4) of the Planning and Development Acts 2000-2018.

As outlined in Section 3.1.2, the RSES for the Eastern and Midland Region will replace the RPGs, on adoption.

The draft Strategy identifies the Dublin Metropolitan Area as being “*the continuous built up city area and the highly urbanised settlements of Swords, Malahide, Maynooth, Leixlip, Celbridge, Bray and Greystones, that have strong connections and synergy with the city in a polycentric metropolitan area.*” The draft Strategy includes a draft Dublin Metropolitan Area Strategic Plan (MASP), which seeks to “*focus on a number of large scale strategic sites, based on key corridors that will deliver significant development in an integrated and sustainable fashion*”.

The draft MASP identifies strategic greenfield lands near Confey station with capacity for phased development but notes that it currently maintains poor links to Leixlip and adjoining Dublin/Meath lands.

The draft MASP also identifies the large-scale former Hewlett Packard site and the Collinstown site as key employment and mixed-use development sites, which would strengthen the employment base for North Kildare.

The ‘short to medium term’ LUAS extension to Maynooth, roads upgrades, links to wastewater treatment, community and social infrastructure were also highlighted as key objectives of the draft MASP.

Public consultation on the Draft Regional Spatial and Economic Strategy ended on the 23<sup>rd</sup> of January. Elected members of the Regional Assembly at a meeting of 1<sup>st</sup> March 2019 considered the submissions received during the public consultation of the draft RSES and decided to propose material amendments to the draft RSES.

Submissions or observations on the proposed material amendments only will be received between 15th March 2019 and 12th April 2019.

### 1.2.4 Kildare Country Development Plan 2017-2023

The Core Strategy legislation requires the County Development Plan to be consistent with the population allocations and housing targets set out in the RPGs.

The Kildare County Development Plan 2017-2023 allocates growth targets to towns, villages and settlements based on the RPG targets and RPG policy requirements.

The capacity of settlements in Kildare to accommodate the level of growth envisaged by the RPGs and to deliver sustainable communities that are well served by social and physical infrastructure will need to be carefully considered as part of the Local Area Plan process for the growth towns. In order to develop in a sustainable manner, the towns must accommodate the appropriate levels of residential, economic, recreational and community development in tandem with necessary improvements in physical infrastructure and public transport.

## 1.3 Interaction with other relevant plans and programmes

As part of the SEA process, the context of the Draft LAP must be established with regard to other plans and programmes that have been adopted at International, National, Regional and Local level. In particular the interaction of the Plan with the environmental protection objectives and standards included within these other plans and programmes must be considered.

A wide range of legislation, plans and programmes are of relevance to the revised Plan and are outlined in **Table 1.1**.

**Table 1.1: Hierarchy of Relevant Legislation, Plans and Programmes**

Level	Legislation, Plans and Programmes
International/EU Level	Water Framework Directive & associated Directives SEA Directive Floods Directive Groundwater Directive Habitats Directive Birds Directive

Level	Legislation, Plans and Programmes
	<p>Freshwater Fish Directive  Shell fish Directive  Drinking Water Directive  Bathing Water Directive  Environmental Impact Assessment Directive  Seveso Directive  Sewage Sludge Directive  Urban Waste Water Treatment Directive  Waste Framework Directive  Nitrates Directive  Soils Directive  Air Quality Directives including Framework Directive  National Emissions Ceiling Directive  Environmental Noise Directive  Climate Change Programme (ECCP II)  Paris Agreement  Industrial Emissions Directive  EU Reach Initiative  European Landscape Convention  UN Convention of Biological Diversity, 1992  Kyoto Protocol  Stockholm Convention  Valetta Convention  Ramsar Convention  OSPAR Convention  Granada Convention  Gothenburg Strategy</p>
National Level	<p>National Development Plan 2018-2027  A Programme for Partnership Government 2016  Building on Recovery: Infrastructure and Capital Investment 2016-2021  Policy Position on Climate Action and Low-Carbon Development. National Policy Position Ireland (2014)  National Adaptation Framework (2018)  National Mitigation Plan (2017)  Guidelines on Urban Development and Building Heights for Local Authorities (2018)  National Landscape Strategy for Ireland 2015-2025:  Strategy for the Future Development of National and Regional Greenways (2018)  Draft Clean Air Strategy  Draft National Energy and Climate Plan  Draft Integrated Implementation Plan 2019-2024  Delivering a Sustainable Energy Future for Ireland - The Energy Policy Framework 2007-2020  National Energy Efficiency Action Plan 2013-2020  Project Ireland 2040: National Planning Framework</p>

Level	Legislation, Plans and Programmes
	<p>Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities (2015)</p> <p>Quality Housing for Sustainable Communities. Best Practice Guidelines for Delivering Homes Sustaining Communities (2007)</p> <p>The Planning System and Flood Risk Management. Guidelines for Planning Authorities (2009)</p> <p>Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns &amp; Villages) (2009)</p> <p>Guidelines for Planning Authorities – Retail Planning (2012)</p> <p>Local Area Plans - Guidelines for Planning Authorities (2013)</p> <p>Guidelines for Planning Authorities – Spatial Planning and National Roads (2012)</p> <p>Our Sustainable Future – A Framework for Sustainable Development for Ireland (2012)</p> <p>Actions for Biodiversity 2011-2016 (2<sup>nd</sup> National Biodiversity Plan)</p> <p>3<sup>rd</sup> National Biodiversity Strategy and Action Plan (2017)</p> <p>Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities (revised 2010)</p> <p>Architectural Heritage Protection - Guidelines for Planning Authorities (2004)</p> <p>Guidelines for Planning Authorities - Retail Planning (2012)</p> <p>Government Policy on Architecture 2009-2015</p> <p>National Policy on Town Defences (2008)</p> <p>Implementation of Regional Planning Guidelines Best Practice Guidance (2010)</p> <p>Irish Water’s Capital Investment Plan, Irish Water’s Water Services Strategic Plan</p> <p>Healthy Ireland, A Framework for Improved Health and Wellbeing 2013-2025 (2013)</p> <p>National Physical Activity Plan for Ireland (2016)</p>
Regional Level	<p>Regional Planning Guidelines for the Greater Dublin Area 2010-2022</p> <p>Draft Eastern and Midlands Regional Spatial &amp; Economic Strategy 2019-2031</p> <p>Retail Strategy for the Greater Dublin Area 2008-2016</p> <p>Transport Strategy for the Greater Dublin Area up to 2035</p> <p>River Basin Management Plan for Ireland 2018-2021.</p> <p>Eastern-Midlands Region Waste Management Plan 2015-2021</p> <p>Eastern Catchment Flood Risk Assessment Management (CFRAM) Study</p> <p>Flood Risk Management Plans</p> <p>Groundwater Protection Schemes</p>
Local Level	<p>Kildare County Development Plan 2017-2023</p> <p>South East Draft Flood Risk Management Plans (2016)</p> <p>County Kildare Heritage Plan 2005-2011</p> <p>County Kildare Biodiversity Action Plan 2009-2014</p> <p>Other Local Area Plans</p>

## 2 Draft Leixlip Local Area Plan 2020-2026

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### 2.1 Introduction

At present, the planning strategy for Leixlip is set out in the Leixlip Local Area Plan 2017-2023. KCC, as the competent authority, is currently preparing a Draft LAP under Section 20 of the Planning and Development Acts 2000 to 2018. The Draft LAP is being made on foot of the Planning and Development (Leixlip Local Area Plan 2017-2023) Direction 2018, hereafter referred to as ‘the Direction’.

The Direction, as administered on 6<sup>th</sup> March 2018, primarily reinforces Section 19(2) of the Planning and Development Acts 2000 to 2018, which required a revised LAP be prepared for Leixlip which would ensure that additional lands were zoned for housing in compliance with the Core Strategy of the Kildare County Development Plan 2017-2023 (the CDP).

The Ministerial Direction specifically required the preparation of the revised LAP and that this plan should be consistent with the following principles:

- I. “Adoption of a sequential approach to additional residential land use zoning objectives which shall prioritise development of lands adjacent to town cores and public transport, especially rail routes and access nodes such as rail stations over locations peripheral to the town at the edge of the settlement;
- II. The integration of transport and land use planning with significant new housing development to be focused at locations proximate to high quality public transport, especially rail access, that is easily accessible to existing local infrastructure such as schools, and local services such as neighbourhood centres, in the interest of a sustainable pattern of urban development;
- III. Protection of the integrity of strategic employment lands for long-term employment and economic development related activities in accordance with national, regional and county economic policy objectives; and
- IV. The phasing of new development in tandem with the delivery of required infrastructure that should be determined through a detailed infrastructural assessment and master planning process for significant new housing development areas”.

In order to fully comply with the Ministerial Direction and to develop a long-term planning strategy for Leixlip town and its environs, KCC have prepared a Draft Leixlip LAP 2020-2026.

The Draft LAP will provide the main public statement of planning policies and objectives for Leixlip for the duration of the Plan (2020-2026) and will replace the existing Leixlip Local Area Plan 2017-2023. The LAP, on adoption, will be a key document for setting out a vision for how Leixlip should develop over the years 2020-2026 and beyond.

The policies and objectives are critical in determining the appropriate location and form of different types of development in the study area, as the Local Area Plan is the primary statutory land use policy framework against which planning applications are assessed.

The objectives of the Draft LAP will also be used by KCC to guide their activities and to indicate priority areas for action and investment by the Council such as focusing on attracting employment into the district or enhancing the district as a centre for tourism.

**Figure 2.1** in Appendix A1 indicates the boundary of the Draft LAP.

The Draft LAP is consistent with the objectives set out in the following documents:

- Project Ireland 2040: National Planning Framework;
- The Regional Planning Guidelines for the Greater Dublin Area 2010-2022;
- The draft Eastern and Midlands Regional Spatial and Economic Strategy 2019-2031;
- Greater Dublin Area Transportation Study 2016-2035;
- Kildare County Development Plan 2017 – 2023;
- Kildare Local Economic and Community Plan 2016-2021;
- County Kildare Heritage Plan 2005 - 2011; and
- County Kildare Biodiversity Plan 2009-2014.

## 2.2 LAP Vision and Development Strategy

### 2.2.1 LAP Development Strategy

The Draft LAP is being prepared to ensure full compliance with the NPF and the draft RSES for the Eastern and Midland Region, and in order to fulfil the requirements of The Direction, as outlined in Section 2.1.

As outlined in Section 1.2.1, the Department of Housing, Planning and Local Government published the NPF in February 2018. The NPF is the overarching document guiding regional spatial and economic strategies and local development plans.

The NPF outlines the requirements for a new, standardised methodology to be put in place for Core Strategies which will address issues such as the differentiation between zoned land that is available for development and zoned land that requires significant further investment in services for infrastructure for development to be realised. The NPF also outlines a number of National Policy Objectives relating to the coordination of land-use zoning and the provision of infrastructure and services. These are summarised in Section 1.2.1.

To ensure better co-ordination in planning and development policy matters across boundaries, local authorities in Ireland are grouped into three regional assembly areas which are required to identify regional policies and coordinate initiatives that support the delivery and implementation of national planning policy. The primary vehicle for this is the preparation and implementation of RSES's.

The purpose of the RSES's is to provide regional level strategic planning and economic policy in support of the implementation of the NPF and provide a greater level of focus around the National Policy Objectives and National Strategic Outcomes of the NPF.

The Eastern and Midland Regional Assembly prepared a draft RSES in October 2018 for the Eastern and Midland Region for the period 2019-2031. The Draft RSES sets out the settlement hierarchy for the GDA and population and housing targets for each County. It also includes a draft MASP, which seeks to *“focus on a number of large scale strategic sites, based on key corridors that will deliver significant development in an integrated and sustainable fashion”*. A number of sites within the Draft LAP area are identified in the draft MASP of the draft RSES.

As outlined in the draft RSES, Local authorities, in the preparation of their Core Strategies should have due regard to the settlement typology of towns in the Region and carefully consider the phasing of development lands to ensure that towns grow at a sustainable level appropriate to their position in the hierarchy.

The Draft LAP is also being carried out in order to fulfil the requirements of the Direction, as described in Section 2.1. The Direction primarily reinforces Section 19(2) of the Planning and Development Acts 2000 to 2018, which states that a Local Area Plan must be consistent with the core strategy of the relevant County Development Plan (CDP).

Leixlip has been designated as a 'Large Growth Town II' in the Kildare County Development Plan 2017-2023. The CDP acknowledges that Large Growth Towns II play a key role in supporting the wider local economy and comprises populations of between 15,000 and 30,000 people. The core strategy of the Kildare County Development Plan 2017-2023 subsequently sets out a statutory housing requirement in the order of 3,315 new dwellings in the Leixlip area.

The Draft LAP has been prepared in accordance with the statutory housing requirements of the Kildare County Development Plan 2017-23, and as such, aims to provide sufficient residential capacity in the study area in the order of approximately 3,315 new dwellings.

In order to develop in a sustainable manner, the town must accommodate the appropriate levels of residential, economic, recreational and community development in tandem with necessary improvements in physical infrastructure and public transport.

The Draft LAP therefore aims to adopt a sequential approach to additional residential land-use zoning objectives which prioritises development of lands adjacent to town cores and public transport, especially rail routes and access nodes such as rail stations over locations peripheral to the town at the edge of the settlement.

According to the Kildare County Development Plan 2017-2023, Leixlip is identified as one of three primary economic growth towns to be promoted for regional enterprise. The Draft LAP therefore further aims to protect the integrity of strategic employment lands for long-term employment and economic development related activities, in accordance with national, regional and county economic policy objectives.

The Draft LAP includes objectives relating to land use zoning and protection of the environment. It also has regard to Ministerial Guidelines under the Planning and Development Acts, 2000 to 2018 and will be prepared in accordance with national planning legislation and relevant European legislation.

In addition to this SEA Environmental Report, the following planning and design works were undertaken to inform the Draft LAP:

### **1. Strategic Transport Assessment (STA)**

The STA of Leixlip examined the existing and proposed transport infrastructure and service provision across all modes of transport including sustainable modes such as active modes (walking and cycling) in Leixlip. The assessment leads to an understanding of the existing constraints and modal share and also models future scenarios to ensure the optimal transportation interventions can be planned and provided for to meet future demand to drive a sustainable modal shift.

### **2. Social Infrastructure Audit (SIA)**

The SIA examined the current context with respect to social infrastructure provision in Leixlip and identifies the future requirements and made recommendations on priority areas for investment within the Draft LAP area. The audit identified relevant social infrastructure that will contribute to the quality of life, forming a key part of the fabric of an area, not just in terms of wellbeing, but also in terms of sense of place and local identity.

### **3. Sustainable Planning and Infrastructural Assessment (SPIA)**

A Sustainable Planning and Infrastructural Assessment (SPIA) was carried out to inform the appropriate zoning of land, in accordance with Appendix 3 of the National Planning Framework, the Sustainable Planning and Infrastructure Assessment comprises of quantitative and qualitative research analysis of existing and proposed infrastructure and accompanies the Draft LAP.

#### **4. Urban Design Framework (UDF)**

The Urban Design Framework (UDF) provides a preliminary design guide for the future development of lands at Confey, north of Leixlip. The UDF has been informed by background research and baseline analysis, which has highlighted opportunities for future development while also identifying possible constraints and issues. The UDF includes a phasing/sequencing programme for the overall development of the lands to enable orderly development and ensure adequate infrastructure is provided alongside new development.

#### **5. Natura Impact Assessment (NIA)**

The NIA, also known as Appropriate Assessment, is a requirement under the Habitats Directive 92/43/EEC. This Directive indicates the need for plans and projects to be subject to Appropriate Assessment if the Draft LAP or project is not directly connected with or necessary to the management of a Natura 2000 site but is likely to have significant effects either individually or in combination with other plans or projects on Natura 2000 sites.

#### **6. Strategic Flood Risk Assessment (SFRA)**

A SFRA was carried out to support the preparation of the LAP. The SFRA is required to be prepared in accordance with the requirements of The Planning System and Flood Risk Assessment Guidelines for Planning Authorities (2009) and Circular PL02/2014 (August 2014).

### **2.2.2 LAP Vision**

The Draft LAP is underpinned by a strategic vision which is intended to guide the future growth of Leixlip in a sustainable manner, in a way that reflects the existing character and amenities of the area, the surrounding landscape, heritage and environment and improves the quality of life for the existing and future community.

The strategic vision is based on the role of Leixlip within the Metropolitan Area Strategic Plan (MASP) as set out in the draft Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland Region and the settlement strategy of the Kildare County Development Plan 2017-2023.

The vision for the Draft LAP will ensure that growth planned for the town over the Plan period and beyond occurs in a sustainable and sequential manner, while prioritising a low carbon, compact, consolidated and connected pattern of development.

#### **Vision**

To develop Leixlip as a dynamic town in which to live, work and carry out business, supporting a living and working population in a sustainable and compact manner and to protect and maximise opportunities presented by the unique natural and built environment of the town.

## 3 SEA Methodology

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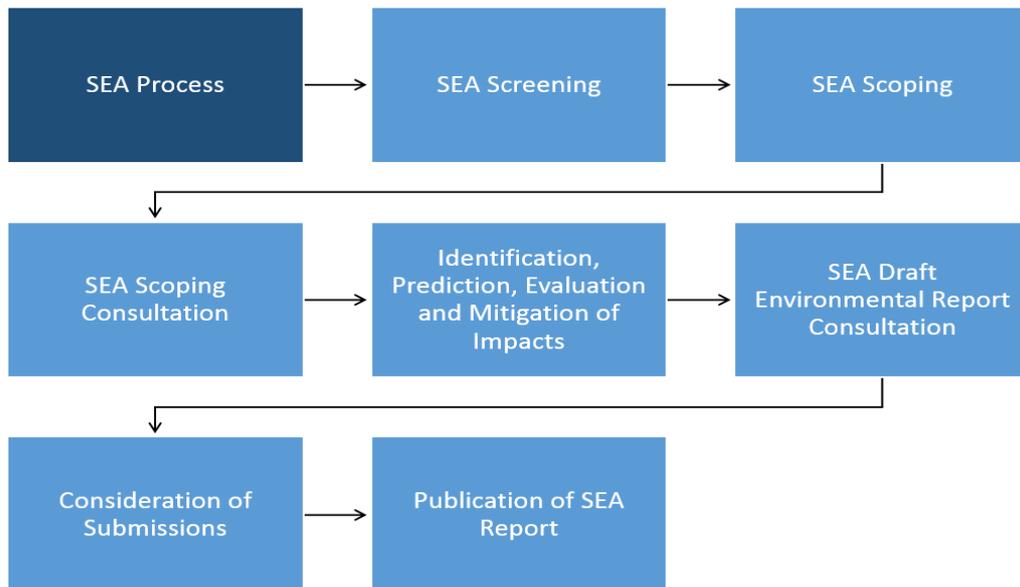
### 3.1 Introduction

The objectives of the Strategic Environmental Assessment (SEA) Directive is ‘to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans ... with a view to promoting sustainable development’ (Article 1 SEA Directive). It is a systematic, on-going process for evaluating, at the earliest possible stage, the environmental quality and consequences of implementing certain plans and programmes on the environment.

The requirements for SEA in Ireland are set out in the national legislation as follows:

- European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (S.I. No. 435 of 2004) as amended by European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations (S.I. No. 200 of 2011); and
- Planning and Development (Strategic Environmental Assessment) Regulations (S.I. No. 436 of 2004) as amended by the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations (S.I. No. 201 of 2011).

This section highlights how the SEA has been undertaken for the Draft LAP. The SEA methodology is based on legislative requirements and relevant Environmental Protection Agency (EPA) guidance and will ensure compliance with the SEA Directive and associated legislation. The EPA’s SEA Pack (Version 18/04/2013) was also used as a source of information during the scoping process. The key stages outlined in **Figure 3.1** were identified and are discussed in the following sections.



**Figure 3.1: Key Stages of the SEA Process**

## 3.2 Screening

Screening is the process for deciding whether a particular plan would warrant SEA. The screening process allowed KCC to identify at the earliest possible opportunity whether the development of the Draft LAP required an SEA, in order for the assessment to be factored in to the plan development process.

Article 14B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004), as amended by S.I. No. 201 of 2011, lists the determinants for an SEA to be prepared as part of a LAP. An SEA is mandatory where -

- a) the population or the target population of the area of a local area plan is 5,000 persons or more; or
- b) the area covered by the local area plan is greater than 50 square kilometres; or
- c) the local area plan is being prepared for a town and its environs area; or
- d) where the planning authority determines under article 14A (3) or (5) that the implementation of a local area plan, an amended plan or an amendment to a local area plan would be likely to have significant effects on the environment.

According to the 2016 Census, the population of the Leixlip ED was 15,504 in 2016. Further, the Core Strategy of the Kildare CDP forecasts a population of 19,794 in Leixlip by 2023. As the target population is evidently greater than 5,000 persons in the area to which the Draft LAP relates, there is a statutory requirement for an SEA to be undertaken.

### 3.3 Scoping

The scoping phase of the SEA is a key part of the assessment process as it establishes the likely extent (geographic, temporal and thematic) of the assessment, the range of environmental issues to be covered and the level of detail the assessment will investigate.

The Scoping Process allows input from the environmental authorities and relevant stakeholders to be incorporated.

Essentially any issues/comments submitted as part of the scoping process will provide greater focus on the development of the Draft LAP.

The issues addressed during the scoping process are as follows:

- The key elements of the Draft LAP to be assessed;
- The key environmental issues to be assessed;
- Research of relevant international, national and local plans, objectives and environmental standards that may influence or impact on the Draft LAP;
- Development of draft environmental objectives, indicators and targets to allow the evaluation of impacts; and
- Identification of reasonable alternative means of achieving the strategic goals of the Draft LAP.

A scoping report was prepared as part of this SEA on behalf of Kildare County Council which asked key questions of statutory consultees and key stakeholders. The responses received were addressed in the preparation of the Environmental Report. A summary of the responses received to the Scoping Report, and corresponding action taken is included in **Table 3.1** below.

**Table 3.1: Summary of Scoping Responses**

Organisation	Summary of Scoping Response	Action
ESB	A new HV/MV distribution sub-station would likely be required in the medium term to provide for the electricity needs of the area and to support the sustainable economic and social development of Leixlip.	Proposed upgrades to the transmission network are discussed in Chapter 9 of the Draft LAP.
Health and Safety Authority	<p>The Authority would expect the LAP to contain:</p> <p>An indication of planning policy in relation to major accident hazard sites notified under the regulations, which reflects the intentions of Article 13 of Directive 2012/18/EU</p> <p>The consultation distances and generic advice, where applicable, supplied by the Authority in relation to such sites. These distances to be indicated on the various maps included in the plan, as well as any more specific distances and advice supplied by the authority.</p> <p>A policy on the siting of new major hazard establishments, taking account of Article 13 and the published policy of the Authority in relation to new developments, including developments in the vicinity of such establishments</p> <p>Mention the following notified establishments: Intel Ireland Limited</p>	<p>Objective EDT01.4 of the Draft LAP outlines KCCs intention to comply with the SEVESO III Directive to reduce the risk of accidents at SEVESO sites in Leixlip and the surrounding areas.</p> <p>Objective EDT01.5 of the Draft LAP outlines KCCs intention to have regard to the following in assessing applications for developments (including extensions) in the vicinity of the Intel SEVESO site:</p> <ul style="list-style-type: none"> <li>a) Major Accidents Directive (Seveso III– Directive (2012/18/EU)</li> <li>b) The potential effects on public health and safety.</li> <li>c) The need to ensure adequate distances between such developments and residential areas, areas of public use and any areas of sensitivity.</li> <li>d) The advice of the Health and Safety Authority.</li> </ul> <p>KCC may consider the inclusion of the consultation distances from Intel Ireland SEVESO Site on LAP mapping.</p> <p>The Intel Ireland Limited establishment has been considered in the SEA process.</p>
Health Service Executive	This LAP proposes a significant increase in population of approximately 25% within a 6-year period from 15,576 (2016 census) to 19,794 by 2023 (estimated).	The SEA process has assessed the potential for the provisions of the Draft LAP to result in significant negative effects on human health. The LAP will set out a strategy for compact growth and the promotion of sustainable transport modes with a significant emphasis on pedestrian movements maximising and promoting a healthy living environment.

Organisation	Summary of Scoping Response	Action
	<p>In our view a Health Impact Assessment should be carried out to maximise the positive and minimise the negative health impacts of the proposed Local Area Plan in the context of the County Development Plan.</p> <p>The National Physical Activity Plan is a further national plan which should be referred to in the context of developing a local area plan.</p> <p>In relation to Transport Infrastructure (4.9.4) we also suggest improvement on the cycle/pedestrian linkages with consideration of the need for pedestrian bridges and links to the schools and stations. Local or feeder buses to the train stations will be important to support the use of public transport by local commuters.</p> <p>The Department of Public Health welcomes the inclusion of the list (page 5) of “Human Health” issues that are “relevant to the plan”. However, it is not clear as to whether some or all of these issues will be addressed in detail in the Plan. We recommend that these issues need to be considered in depth in developing the LAP. We also suggest the explicit inclusion of the following issues: childcare needs; social care/sheltered housing needs for the elderly; recreational amenities and resources for young people.</p> <p>A suite of indicators has been agreed under the Healthy Ireland Outcomes Framework. Consideration should be given to including such indicators: Elderly dependant’s ratio Commuting times and mode of transport Rates of deprivation</p>	<p>The National Physical Activity Plan has been considered in the preparation of the SEA Environmental Report.</p> <p>Improvements to the cycle/pedestrian linkages in the LAP area are provided for in Draft LAP and discussed in Chapter 8 of the same.</p> <p>All relevant Health Issues included in the SEA Scoping Report were considered in the preparation of the Draft LAP. As outlined in the Draft LAP, it is the Policy of KCC (HC4) to facilitate and support a broad range of community, cultural and recreational facilities to serve the needs of the residents of the LAP area. Such measures have been informed by the Social Infrastructure Audit carried out for the plan.</p> <p>The proposed environmental indicators have been included in the SEA Environmental Report</p> <p>It is considered that all of the suggested aspects to be incorporated and assessed in the SEA process have been given due consideration.</p>

Organisation	Summary of Scoping Response	Action
	<p>1. The following points relate to aspects that should be identified during the process develop the Environmental Report and SEA Statement and presented in the forwarded documentation/report:</p> <p>Assessment of Principle &amp; Description of the Project: The Environmental Report must fully describe the characteristics of the project and the reasons for proposing same.</p> <p>Assessment of Later Consents Required.</p> <p>Assessment of Public Consultation &amp; Non-Technical Summary: Stakeholders and sensitive receptors affected by the development shall be identified. The Environmental Report should clearly demonstrate the link between public consultation and how it influenced decision making within the Environmental Report and SEA Statement.</p> <p>Assessment of Description of Physical Environment.</p> <p>2. In the Strategic Environmental Assessment process the following topics should be assessed and documented in the Environmental Report with regards to the proposed are plan:</p> <p>Population &amp; Human Health - The potential impacts of any future development must be assessed and factors/actions to minimise population exposure to high levels of noise, vibration and air pollution must be outlined.</p> <p>Air Quality/traffic - The potential impacts of air emissions should be clearly assessed in the Environmental Report. Data from more recent monitoring undertaken by the Environmental Protection Agency should be reviewed and assessed.</p> <p>Noise/traffic - All potential noise sensitive locations in the vicinity of the area should be identified and assessed. Baseline monitoring and an assessment of background noise in the existing environment should be carried out.</p>	

Organisation	Summary of Scoping Response	Action
	<p>Appropriate noise assessment modelling (as per the relevant BS and ISO standards) should be carried out to predict the change in the noise environment during any future development.</p> <p>3. Clear conclusions should be provided in the Environmental Report and SEA Statement.</p>	
Irish Water	<p>Impacts of the proposals on the capacity of water services (ie. do existing water services have the capacity to cater for the new development if required).</p> <p>Any up-grading of water services infrastructure that would be required to accommodate any substantial zoning changes to the LAP.</p> <p>In relation to rezoning of areas that may contain developments discharging trade effluent – any upstream treatment or attenuation of discharges required prior to discharging to an IW collection network</p> <p>In relation to the management of surface water; the potential impact of surface water discharges to combined sewer networks &amp; potential measures to minimise/stop surface waters from combined sewers</p> <p>Any physical impact on IW assets – reservoir, treatment works, pipes, pumping stations, discharges outfalls etc. including any relocation of assets</p> <p>Any potential impacts on the assimilative capacity of receiving waters in relation to IW discharge outfalls including changes in dispersion /circulation characterises</p> <p>Any potential impact on the contributing catchment of water sources either in terms of water abstraction for the development (and resultant potential impact on the capacity of the source) or the potential of the development to influence/present a risk to the quality of the water abstracted by IW for public supply.</p>	<p>As outlined in Chapter 9 of the Draft LAP, it is the policy of the Council to work in conjunction with Irish Water to protect existing water and wastewater infrastructure in Leixlip, to maximise the potential of existing capacity and to facilitate the timely delivery of water services infrastructure to facilitate future growth.</p> <p>An assessment of the potential for significant environmental effects on material assets has been undertaken as part of the SEA process and detailed in the SEA Environmental Report.</p>

Organisation	Summary of Scoping Response	Action
	<p>Where a development proposes to connect to an IW network and that network either abstracts water from or discharges waste water to a “protected”/sensitive area, consideration as to whether the integrity of the site/conservation objectives of the site would be compromised.</p> <p>Mitigation measures in relation to any of the above</p> <p>Irish Water suggest inclusion of the following relevant international, national or regional plans and programmes that should be considered: EU Sustainability Policy, EC Environmental Liability Directive, IW National Sludge Management Policy.</p>	
Meath County Council	<p>Cross-county dimension is recognised with regards to many environmental issues. It is therefore important that cognisance is taken of the policies and objectives of the Meath County Development Plan 2013-2019.</p>	<p>The provisions of the Meath County Development Plan have been taken into consideration in the Draft LAP plan making process, as well as the SEA process.</p>
Transport Infrastructure Ireland	<p>The Strategic Transportation Assessment (STA) should establish the relationship between the LAP land uses and the national road(s) in the area, vis a vis:</p> <p>existing national roads, proposals to provide new national roads or improve existing national roads, interaction with any national road structures, and</p> <p>means of access to/from the development to/from the national road(s).</p> <p>The Planning Authority should have regard to any Environmental Impact Statements or Environmental Impact Assessment Reports and all conditions and/or modifications imposed by An Bord Pleanála regarding road schemes in the area. The Planning Authority should in particular have regard to any potential cumulative impacts of the development area on traffic grounds especially interchanges in close proximity.</p>	<p>The STA has successfully examined the relationship between the LAP land uses and the national road(s) in the area.</p> <p>KCC will have had regard to existing conditions regarding road schemes in the area potential cumulative impacts on the traffic network outside the LAP area.</p> <p>KCC will ensure that all relevant standards and guidance are met in the delivery of any road projects within the lifetime of the Draft LAP.</p> <p>The SEA has had regard to the likely significant effects of any proposed road upgrade works, or new road objectives proposed under the Draft LAP.</p>

Organisation	Summary of Scoping Response	Action
	<p>Assessments and design and construction and maintenance standards and guidance are available at TII Publications that replaced the NRA Design Manual for Roads and Bridges (DMRB) and the NRA Manual of Contract Documents for Road Works (MCDRW).</p> <p>The Environmental Report should have regard to the likely significant impacts development may have on human beings due to proximity to national routes i.e. safety, noise, air, accessibility.</p> <p>The Strategic Environmental Assessment should have regard to TII Environment Guidelines that deal with assessment and mitigation measures for varied environmental factors and occurrences. In particular evidenced assessment of the protection of the strategic function of the national road in relation to the following matters is required:</p> <p>TII's Environmental Assessment and Construction Guidelines, including the Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes (National Roads Authority, 2006),</p> <p>The EIAR should consider the Environmental Noise Regulations 2006 (SI 140 of 2006) and, in particular, how the development will affect future action plans by the relevant competent authority. The developer may need to consider the incorporation of noise barriers to reduce noise impacts (see Guidelines for the Treatment of Noise and Vibration in National Road Schemes (1<sup>st</sup> Rev., National Roads Authority, 2004)).</p>	<p>In the undertaking of the SEA, due regard was had to TII's Environmental Assessment and Construction Guidelines, the Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes (National Roads Authority, 2006), and the Environmental Noise Regulations 2006.</p> <p>A STA has been undertaken as part of the plan making process, which informed the development of the KDAs, new employment lands at Collinstown and the phased development of lands at Confey.</p> <p>An assessment of the potential for significant negative effects on protected views and prospects in the LAP area was carried out as part of the SEA process.</p>

Organisation	Summary of Scoping Response	Action
	<p>It would be important that, where appropriate, subject to meeting the appropriate thresholds and criteria, a transport assessment be carried out for key development areas in accordance with relevant guidelines and best practice. TII's Traffic and Transport Assessment Guidelines (2014) should be referred to in relation to proposed development with potential impacts on the national road network.</p> <p>4. The Planning Authority should assess visual impacts from and to the existing and proposed national road network.</p>	
EPA	<p><i>Planning Policy Context-</i> You should ensure that the Plan is consistent with the National Planning Framework – Ireland 2040 (NPF), as well as the forthcoming Regional Spatial and Economic Strategy (RSES) for the Eastern and Midlands Region, upon adoption</p> <p><i>Critical Infrastructure Provision-</i> Particular consideration should be given to critical infrastructure provision in the context of the recently announced expansion to the Intel Plant in Leixlip, which when completed, will significantly increase both energy and water needs within the Plan area.</p> <p><i>Noise-</i> The scoping report refers to second Noise Action Plans. Note that the Round 3 Strategic Noise Mapping is now completed. Preparation of the Round 3 Noise Action Plans is currently underway by local authorities.</p> <p><i>Other Plans &amp; Programmes -</i> Regarding the list of other relevant plans and programmes in Table 3.1, you should note that: - the 3rd National Biodiversity Plan was adopted in 2017;</p>	<p>Due regard was had to the provisions of the NPF and Draft RSES during the plan making process.</p> <p>As described in Chapter 9 of the Draft LAP, upgrades to the transmission network to serve these major industrial connections are provided for in the Draft LAP. Objective IO1.1 of the Draft LAP sets out KCCs intent to work in conjunction with Irish Water to promote the ongoing upgrade and expansion of water supply and wastewater services to meet the future needs of Leixlip.</p> <p>Kildare County Council have recently prepared the 3rd Noise Action Plan for Kildare; to be adopted following a period of public consultation.</p> <p>The plans and programmes referenced and considered as part of the SEA process have been updated to include those suggested by the EPA in their submission. The <i>State of the Environment Report Ireland's Environment – An Assessment 2016 (EPA, 2016)</i> report was also considered.</p>

Organisation	Summary of Scoping Response	Action
	<p>- the National Spatial Strategy has been replaced by NPF.</p> <p>Other key recent plans to consider include:</p> <ul style="list-style-type: none"> <li>- National Mitigation Plan;</li> <li>- National Adaptation Framework;</li> <li>- Paris Agreement;</li> <li>- Guidelines on Urban Development and Building Heights for Local Authorities;</li> <li>- National Landscape Strategy;</li> <li>- National Greenways Strategy;</li> <li>- Draft Clean Air Strategy;</li> <li>- Draft National Energy and Climate Plan;</li> <li>- Draft Integrated Implementation Plan 2019-2024 (NTA);</li> <li>- National Water Resources Plan (Irish Water, in prep);</li> <li>- Planning, Land Use and Transport – Outlook 2040 (DTTAS, in prep).</li> </ul> <p><i>State of the Environment Report – Ireland’s Environment 2016 - In preparing the Plan and SEA, the recommendations, key issues and challenges described within our most recent State of the Environment Report Ireland’s Environment – An Assessment 2016 (EPA, 2016) should be considered, as relevant and appropriate to the Plan.</i></p> <p><i>Transition to a low carbon climate resilient economy and society- You should ensure that the Plan aligns with national commitments on climate change mitigation and adaptation, as well as relevant sectoral, regional and local adaptation plans.</i></p>	<p>As described in Chapter 9 of the Draft LAP, it is the policy of KCC to protect environmental quality in Leixlip through the implementation of European, national and regional policy and legislation relating to air quality, greenhouse gases, climate change, light pollution, noise pollution and waste management.</p>

Organisation	Summary of Scoping Response	Action
	<p><i>EPA SEA Search and Reporting Tool</i> -This tool allows public authorities to explore, interrogate and produce high level environmental summary reports. It is intended to assist in screening and scoping exercises. The tool is available through <i>EPA WFD Application</i> -Our WFD Application provides a single point of access to water quality and catchment data from the national WFD monitoring programme. The Application is accessed through EDEN and is available to public agencies. Publicly available data can be accessed via the Catchments.ie website.</p>	

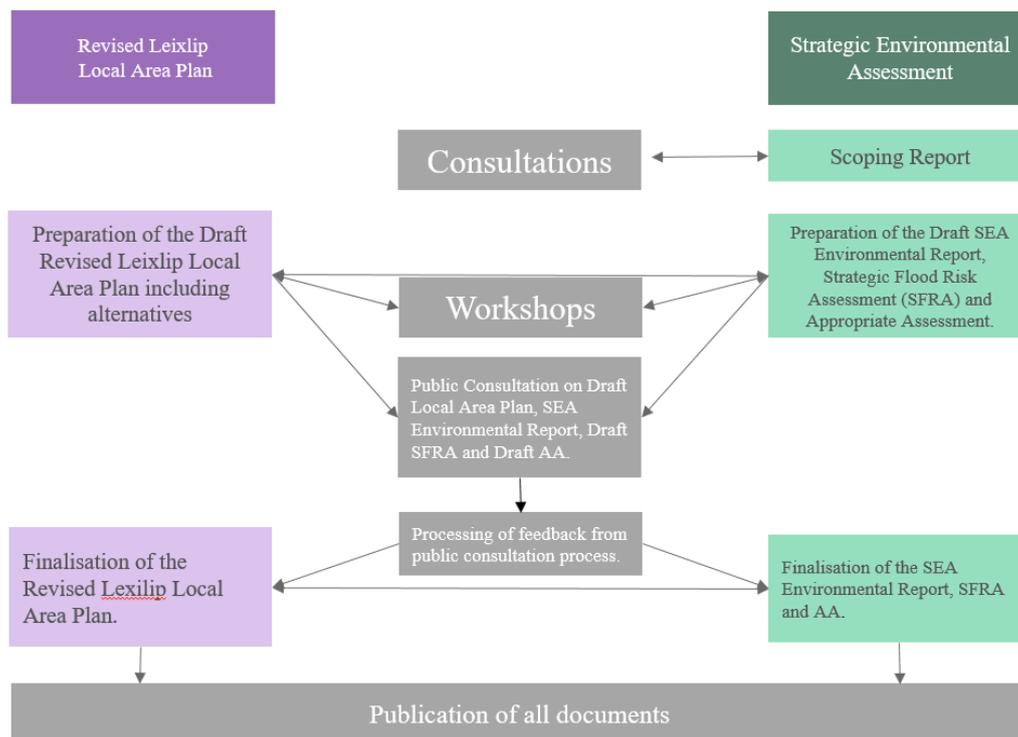
### 3.4 Baseline Data

Gathering relevant information relating to the state of the environment for a plan area is an integral part of the SEA process. The SEA Directive requires that certain information relating to the relevant environmental baseline is presented in order to help test the performance of the plans implementation, as well as helping establish how the environment would change if the plan were not to implemented.

Baseline information has been collected from readily available sources, and a Geographical Information System (GIS) was used to graphically present relevant information. The baseline information is reported in Section 4 of this report.

### 3.5 Environmental Assessment of the Draft LAP

The environmental assessment process ran in parallel to the development and preparation of the Draft LAP. Interaction between the Draft LAP and SEA is depicted in **Figure 3.2**.



**Figure 3.2: Interaction between the Draft LAP and SEA**

The environmental assessment process was undertaken in accordance with best practice SEA principles and guidance. This included desk reviews of all of the available GIS data, specialist investigation into the likely effects associated with the Draft LAP and recommendations for suitable mitigation measures along with monitoring.

### **3.6 Consultations**

This SEA Environmental Report was issued to the relevant statutory stakeholders for comment. The responses received were addressed in the finalisation of the Environmental Report. An outline of the responses received is included in the SEA Statement.

Consultation with representatives of Kildare County Council also took place throughout the SEA process.

### **3.7 Consideration of Alternatives**

The SEA Directive requires that reasonable alternatives be assessed in order to demonstrate how the preferred strategy performs against other forms of action. Alternatives must be developed, described and assessed within the SEA process, with the results presented in the Environmental Report.

Section 5 of this Environmental Report discusses the consideration of alternatives.

### **3.8 Technical Difficulties Encountered**

No major technical difficulties were encountered during the preparation of this Environmental Report.

## 4 Current State of the Environment

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Note all figures referenced from this point onwards are included in **Appendix A1**.

### 4.1 Introduction

Leixlip is located in the north-east corner of County Kildare, as illustrated in **Figure 4.1**. The town is located approximately 14.5km from Dublin City Centre.

Three prominent water bodies are located in Leixlip; the River Rye, The Royal Canal and the River Liffey. The River Rye flows under the Royal Canal, which is carried in the Leixlip aqueduct almost 100 feet (30m) above and descends into the centre of Leixlip. The Rye then flows under the Rye Bridge to its confluence with the Liffey near the existing Boat House in Leixlip demesne.

Leixlip Town Centre is focused along Main Street which extends in a linear manner between these two bridges running parallel to the River Liffey to the south. Much of the town centre dates back to the mid-eighteenth century and retains its original character.

The towns close proximity and easy access to Dublin has resulted in large scale residential, commercial and industrial development in the area, and the rapid expansion of the same. However, the physical constraints of the M4 motorway to the south, the railway and Royal Canal to the north and west and St. Catherine's Park to the east have constrained further development in Leixlip.

According to the EPA's State of the Environment Report, 2016, Ireland's environment remains in a good condition, although there are a number of key challenges in the coming years. The report identified four priority challenges for the environment, which comprise; valuing and protecting our natural environment; building a resource-efficient low-carbon economy; putting the environment at the centre of our decision making and implementing environmental legislation.

In the EPA's 2020 Vision document it is noted that pressures on the Irish environment increased significantly as a result of a decade of rapid and unprecedented economic growth. Unfortunately, these pressures have accelerated at a rate that far exceeds that observed in other EU countries.

In '2020 Vision', the EPA promotes six environmental goals which consider the principal environmental challenges facing our nation. These goals, which are highly relevant to the sustainable development of Leixlip town and environs have a bearing on the assessment of the Draft LAP:

- Limiting and adapting to climate change;
- Clean air;
- Protected waters;
- Protected soils and biodiversity;
- Sustainable use of natural resources; and

- Integration and enforcement.

These goals are identified as a means of realising the vision of protecting and improving Ireland's environment.

## 4.2 Purpose of the Environmental Baseline

The assessment of the Draft LAP with respect to the current environmental baseline is the principal task of this SEA process.

Consequently, the baseline description must be cognisant of the local level nature of the plan and the pressures and interrelationships between environmental topics.

The environmental baseline provides an overview of the existing conditions in the Leixlip area relevant to the Draft LAP and covers the following environmental topics:

- Biodiversity;
- Population and Human Health;
- Land and Soils;
- Water;
- Air, Noise and Climate;
- Archaeological, Architectural and Cultural Heritage;
- Landscape and Visual;
- Material Assets.

## 4.1 Population and Human Health

### 4.1.1 Population

According to Census 'Small Area' population statistics, the population of the Leixlip ED was 15,504 in 2016.

The Core Strategy of the Kildare CDP allocates 10.2% of Kildare's housing growth to Leixlip over the period 2017-2023 to reflect its RPGs designation. The Core Strategy figures incorporate an inbuilt headroom in order to provide for a 9-year horizon as required by the Development Plan Guidelines. Table 3.3 of the CDP identifies dwelling target 3,315 no. units for Leixlip to the year 2023. This is reproduced in **Table 4.1** below.

**Table 4.1: Excerpt from table 3.3 of the Kildare County Development Plan 2017 – 2023**

Settlement Type	2011 Pop Census	2016 Pop Estimate	* 2011 Dwellings	2016 Dwellings Estimate **	Allocated Growth (%) 2016-2023	New Dwellings Target (units) 2016-2023	2023 Dwellings Forecast	2023 Pop Forecast
Leixlip - Large Growth Town II	15,452	16,317*	5,506	5,644**	10.2%	3,315	8,958	19,794

\*Actual population, Census 2016: 15,504

\*\* Actual number of dwellings, Census 2016: 5,232

KCC are currently undertaking a social infrastructure audit of the study area. The assessment will provide the Council with an overview of existing social infrastructure (services/facilities) currently provided within the vicinity of the study area and will enable them to determine what measures could be proposed as part of a development scheme to provide for social infrastructure (services/facilities) which are considered by the planning authority to be deficient in the study area.

#### 4.1.2 Human Health

The concept of health has been defined by the World Health Organisation as “... a state of complete physical, psychological and social well-being, and not simply the absence of disease or infirmity.” Health is influenced by many factors in the social and built environment including housing, employment status, education, transport and access to fresh food and resources, as well as the impacts of air quality, water quality, flooding and access to green space.

Good planning can play an important role in reducing health inequalities. The World Health Organisation’s Commission on the Social Determinants of Health (CSDH) states governments should ‘ensure urban planning promotes healthy and safe behaviours equitably, through investment in active transport, retail planning to manage access to unhealthy foods, and through good environmental design and regulatory controls, including control of the number of alcohol outlets’.

Given the strong links between income and health, it is recognised that the sustainability of current and future economic activity is an important element in protecting and promoting population health. However, emphasising economic growth without due regard for social and environmental consequences of such growth can have negative impacts on health both for the population as a whole and for groups within the population.

Even within areas of economic development, job creation does not necessarily 'trickle down' to job opportunities for the long-term unemployed, and is neither a sufficient, nor necessary, condition for reducing long-term unemployment.

Thus, economic development needs to be targeted, geographically and within population groups to ensure that it reduces and does not exacerbate social inequalities.

Cognisance must also be paid to environmental issues and sustainability endeavours to protect human health as the local economy develops. While employment is generally good for health, there can be negative impacts, usually related to the quality of the working environment and type of work undertaken.

The level of green space and access to the natural environment is extremely important for the populace health. The health and wellbeing of individuals is greatly affected by the communities in which they live and the nature of their physical environment. A key element of sustainable communities is access to space as environments which lack public gathering places can encourage sedentary living habits. Open space provision can improve levels of exercise in a community which can impact on health and can improve social interaction and community activities which can contribute to reducing stress-related problems.

Availability of spatial data on human health is limited. A key area for consideration of human health will be the interaction between environmental aspects such as water, landscape, biodiversity, air, and energy and human beings.

The Kildare CDP sets out the Councils policies and objectives relating to the provision of health services in the county. It is the policy of the Council, for example, *‘to respond to current and future health needs to support healthy communities across the county and to facilitate and enable a multiagency approach to service delivery in community settings’*.

According to the Kildare Socio-Economic Baseline Report 2015, some 90.4% of Kildare’s population report their health status as good/very good. This is higher than both the State and regional figures. Some 26.6% reported their health as “Good”, while 63.8% reported their health as “very good”. These results are the fourth highest in the country. According to the same report, some 201 people, or 1.3% of the population of the legal town of Leixlip and 1.2% of the Leixlip/Celbridge municipal district reported their health as being ‘bad’ or ‘very bad’.

The greatest health risk from radiation in Ireland is caused by radon, which accounts for more than half of the total radiation dose received by the Irish population.

As a known carcinogen, in the same category as tobacco smoke and asbestos it is a cause of lung cancer. Up to 250 cases of lung cancer in Ireland every year can be linked to radon. These lung cancer cases are principally associated with exposure to radon in the home, but exposure in the workplace is also a contributor. In the workplace, the employer must protect the health of workers from this identifiable risk.

Certain areas of the country are more likely to have a high number of homes with excessive levels of radon and these areas are known as High Radon Areas. They can be found on the radon map of Ireland. The map was produced from a national survey of approximately 11,000 homes.

In addition to the map, statistics for the number of homes above the national Reference Level are available for each county in Ireland.

The Government's Building Regulations require that all new homes in High Radon Area are installed with a Radon Barrier. According to the EPA Radon Map, some 5-10% of homes in Leixlip are above the reference levels for Radon. As such, Leixlip is not considered to be a 'High Radon Area.'

The Control of Major-Accident Hazards Involving Dangerous Substance ("SEVESO") III Directive: 2012/18/EU came into effect in Ireland on 1st June 2015, replacing the Seveso II Directive 96/82/EC. Article 13 of the new Directive requires member states to ensure that the objectives of preventing major accidents and limiting the consequences of such accidents are taken into account in land use policies and/or other relevant policies. These objectives must be pursued through controls on the following:

- The siting of new establishments; and
- Modifications to existing establishments.

New developments including transport routes, locations of public use and residential areas in the vicinity of establishments, where the siting or developments may be the source of or increase the risk or consequences of a major accident.

Intel Ireland, which is located in Collinstown Industrial Park within the study area is a licenced SEVESO site.

The assessment of impacts on human health will reference other sections of the SEA as relevant along with considering aspects such as the Industrial Emissions Directive, the SEVESO Directive and Flood Risk Assessments. This will ensure that all relevant vectors through which human health impacts could be caused as a result of the Draft LAP are assessed.

## 4.2 Biodiversity

The Convention on Biological Diversity defines biodiversity as "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part." This includes sites, habitats, species and networks of importance at the international, national or local level, and which may occur within or outside the Plan area.

The term biodiversity refers to more than individual species. It includes the genes they contain, the habitats and ecosystems of which they form part, and also highlights the interdependence and interconnectedness of all living things.

The main elements of biodiversity are:

- European (Natura 2000) sites (SACs and SPAs, and candidate SACs and SPAs);

- NHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries, Refuges for Fauna or Flora or sites proposed for designation;
- Undesignated sites such as proposed NHAs (pNHAs), local biodiversity areas;
- Sites and habitats that can be considered to be corridors or stepping stones for the purpose of Article 10 of the Habitats Directive;
- ‘Natural habitats and protected species for the purposes of the Environmental Liability Directive, including habitats and species listed under the Habitats Directive (Annex I habitats, Annex II and Annex IV species and their habitats) and Birds Directives (Annex I species and their habitats, and regularly occurring migratory birds) wherever they occur;
- Legally protected species including protected flora under the European Communities (Birds and Natural Habitats) Regulations 2011 and Wildlife Acts 1976-2000;
- Sites identified under the Bern, Ramsar and Bonn Conventions; and
- Biodiversity in general including habitats important for birds, red listed and BoCCI listed species, natural and semi-natural habitat areas including wetlands, woodlands, waterbodies, etc.

Natural heritage in Leixlip includes a wide range of natural features that make an essential contribution to the environmental quality, ecological biodiversity, landscape character, visual amenity and recreational activities of the town. The location of the town at the confluence of the River Liffey and River Rye and being encircled by the Royal Canal means water contributes significantly to the natural heritage of the town. The occurrence of natural vegetation adjacent to these water corridors also makes important contributions in terms of landscape character and ecology/biodiversity.

The dominant environments within Leixlip are improved grassland (for agriculture) and urban, built land. For this reason, it is important to ensure that local biodiversity areas, which form an important part of the county’s Green Infrastructure and support connectivity within the network, are maintained, and given the opportunity to increase their distribution within the town.

The habitats of ecological importance present within Leixlip were noted as:

- **Woodland and Scrub Habitats:** There are significant areas of woodland particularly along linear corridors such as the Rye Water, The Liffey and St. Catherine’s Park. The woodlands provide some of the main areas of bio-diverse habitat and significant vegetation connectivity across the highly urbanised setting.
- **Hedgerow and Treeline Habitats:** Hedgerows form part of an extensive wildlife network across Leixlip and contribute to the maintenance of habitat links across the town.

- **Grassland and Associated Habitats:** Dry calcareous and neutral grasslands are located within the Rye Water Valley/Carton SAC and provide habitats that are of National Importance. Wet grassland was identified within narrow stretches alongside the Royal Canal pNHA and within a field adjacent to the Hewlett Packard (HP) site. Extensive areas of grassland within the farmlands of Collinstown and Confey, in St. Catherine's Park, Leixlip Manor, Leixlip Castle Demesne, Barnhall and the surroundings of the commercial grounds of Intel and Hewlett Packard all provide excellent habitats which are interlinked and support widespread habitat connectivity.
- **Watercourses – Rivers, Canals and Associated Habitats:** There are a number of habitats associated with the Rye Water, the River Liffey and the Royal Canal pNHA (as well as other small streams in the area such as the Oranstown and Rathleek Streams).
- **Calcareous Springs:** The Calcareous spring habitat within the Louisa Bridge area (part of the Rye Water Valley/Carton SAC) supports a mosaic of habitats and a high biodiversity of flora and fauna species (such as the Annex I Whorl Snails which are also Qualifying Interests for the SAC). The tufa springs are Annex I habitats under the EC Habitats Directive and are a qualifying feature for the SAC. For this reason, this habitat qualifies as being of European Importance. Other habitats in Leixlip included cultivated and built land. Arable crop fields can be found in the north Leixlip and Confey areas, with a small patch also noted in east Leixlip.

Buildings and artificial surfaces are present across the town and, for the most part, were noted to support little or no ecologically-valuable flora.

'Stepping Stone' habitats including scattered trees and parkland as well as amenity areas within housing estates further enhance the connectivity of habitats, and in turn, promote biodiversity across Leixlip.

The River Ryewater supports a significant population of Brown trout and provides spawning habitat for a population of Atlantic salmon.

The Liffey and several of its tributaries are exceptional in the area in supporting Atlantic salmon (*Salmo salar*, listed under Annex II and V of the EU Habitats Directive) and Sea trout (*Salmo trutta*) in addition to resident Brown trout (*Salmo trutta*) populations. This highlights the sensitivity of local watercourses and the Liffey catchment in general.

The Kildare Bat Group and Bat Conservation Ireland carried out a bat survey of Leixlip in 2014 in order to gather data on the bat usage and bat potential of the area to determine wildlife enhancement works for bats under Leixlip's application to the Tidy Towns competition.

All bat species are protected under Annex IV of the EU Habitats Directive, while the lesser horseshoe bat is listed under Annex II. Member states are required to designate Special Areas of Conservation for all species listed under Annex II in order to protect them.

Daubenton's bats were recorded in areas where there was water present. Other species recorded included the common pipistrelle, soprano pipistrelle and Leisler's bats. There is likely to be many roosting sites within the town and adjacent habitats. The Louisa Valley and St. Catherine's Park provides an essential wooded area connecting both the River Liffey and Rye Water/Royal Canal. Much of the remaining Leixlip boundaries are built up with a lot of street lighting present.

#### 4.2.1 Invasive Species

Alien species are plants or animals that have been introduced, usually by people, outside their natural range. Alien species can sometimes become 'invasive' when they spread rapidly and outcompete the native flora and fauna, pushing out native species and/or leading to environmental degradation. Invasive species present one of the greatest threats to biodiversity worldwide. Invasive species can be particularly problematic in aquatic systems. They can have a negative effect on recreational and amenity use of waterways, as well as threatening native ecosystems.

According to the National Biodiversity Data Centre, there are records of Curly leaved waterweed located within the northern section of the study area on both the Royal Canal and Rye Water.

The invasive species Japanese Knotweed and Variegated yellow archangel were both noted along the Rye Water embankment walk in the study area, and there are also records of Japanese Knotweed near Station Road.

Other records of invasive species located within the study area include the Canadian Waterweed, Himalayan Balsam, American Mink, Grey Squirrel and Jenkin's Spire Snail.

#### 4.2.2 Designated Sites

There are a range of statutory provisions in force in Ireland to protect, conserve and manage our natural heritage, and to control and regulate human activities that may impact upon it negatively. The Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs is responsible, through the National Parks and Wildlife Service (NPWS), for the designation of conservation sites in Ireland. Currently there are three main types of designation of protected areas- Special Areas of Conservation, Special Protection Areas and National Heritage Areas.

Designated conservation sites within 15km of the study area are illustrated on **Figure 4.1**. A distance of 15km is currently recommended in the case of plans, deriving from UK guidance (Scott Wilson et al., 2006), and is therefore applied in this assessment.

Special Areas of Conservation (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) by the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs due to their conservation value for habitats and species of importance in the European Union.

There is only one Special Area of Conservation (SAC) which lies within the study area; the Rye Water Valley/Cartron SAC. This site extends along the River Rye, a tributary of the river Liffey and is designated due to the presence of the Annex I priority habitat Petrifying Springs [7220] as well as the Annex II mollusc species Narrow-mouthed Whorl Snail (*Vertigo angustior*) and Desmoulin's Whorl Snail (*Vertigo moulinsiana*). These mollusc species, both of which are rare in Ireland and Europe, are known to exist in marsh vegetation near Louisa Bridge. The mineral springs found on the site is a type considered to be rare in Europe and therefore is listed on Annex I of the E.U. Habitats Directive.

A number of rare and threatened plant and animal species are known to occur at this SAC. In addition, the Rye Water is also a spawning ground for Trout and Salmon and the rare White-clawed Crayfish (*Austropotamobius pallipes*) has also been recorded at Leixlip. Both Salmon and Whiteclawed Crayfish are listed on Annex II of the E.U. Habitats Directive. Kingfisher an Annex I species on the E.U. Birds Directive has also been seen in the environs of Leixlip town.

One additional SAC (Glenasmole Valley) is identified as being within 15km of the study area is of relevance to the preparation of the Plan.

All those SACs/SPA's of relevance to the Plan are outlined in **Table 4.2**. A brief summary of each of the designated sites within 15km of the study area is also provided. This text is taken from the National Parks and Wildlife Service's Site Synopses.

Special Protection Areas (SPAs) have been selected for protection under the 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) by the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs due to their conservation value for birds of importance in the European Union. There are no SPA's or proposed SPA's in Leixlip.

**Table 4.2: SACs and SPAs within 15km of the Study Area**

Site Name	Site Code	Distance from Study Area	Description
Glenasmole Valley SAC	001209	~14km	Glenasmole Valley in south Co. Dublin lies on the edge of the Wicklow uplands, approximately 5 km from Tallaght. The River Dodder flows through the valley and has been impounded here to form two reservoirs which supply water to south Dublin. The non-calcareous bedrock of the Glenasmole Valley has been overlain by deep drift deposits which now line the valley sides. They are partly covered by scrub and woodland, and on the less precipitous parts, by an herb-rich grassland. There is much seepage through the deposits, which brings to the surface water rich in bases, which induces local patches of calcareous fen and, in places, petrifying springs. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes): [6210] Orchid-rich Calcareous Grassland*

			[6410] Molinia Meadows [7220] Petrifying Springs*
Rye Water Valley/Carton SAC	001398	Within study area	Rye Water Valley/Carton SAC is located between Leixlip and Maynooth, in Counties Meath and Kildare, and extends along the Rye Water, a tributary of the River Liffey. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes): [7220] Petrifying Springs* [1014] Narrow-mouthed Whorl Snail ( <i>Vertigo angustior</i> ) [1016] Desmoulin's Whorl Snail ( <i>Vertigo moulinsiana</i> )

A potential hydrological pathway has also been identified between the study area and Natura 2000 sites beyond 15km, in that Leixlip is located at the confluence of the River Rye and the River Liffey, which drains to Dublin Bay. A total of four European Sites are located in Dublin Bay, which have been taken into consideration and assessed within the SEA Environmental Report.

Natural Heritage Areas (NHAs) are designated due to their national conservation value for ecological and/or geological/geomorphological heritage. They cover nationally important semi-natural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes. NHAs are designated under the Wildlife (Amendment) Act 2000. Proposed NHAs were published on a non-statutory basis in 1995 but have not since been statutorily proposed or designated.

Two proposed Natural Heritage Areas (pNHAs) are located within the study area; the Royal Canal which flows from west to east through Leixlip and the Liffey Valley which is located on the south-eastern boundary of the study area. A further 9 No. proposed Natural Heritage Area's (pNHAs) are identified as being within 15km of the study area, as outlined in **Table 4.3**.

**Table 4.3: NHA's and pNHA's within 15km of the Study Area**

Site Name	Site Code
Royal Canal	002103
Liffey Valley	000128
Donadea Wood	000178
North Dublin Bay	000206
Slade Of Saggart and Crooksling	000211
Dodder Valley	000991
Glenasmole Valley	001209
Lugmore Glen	001212
Kilteel Wood	001394
Rye Water Valley/Carton	001398
Grand Canal	002104

All designated sites within 15km of the plan area will be taken into consideration during the SEA and AA process, as well as those in which a hydrological link has been established.

### 4.3 Land and Soil

The soil type underlying the study area is identified by the Geological Survey of Ireland as being predominantly ‘Urban’ or ‘Made Ground’ in the urban centre. Made ground consists of materials modified by people, including those associated with mineral exploitation and waste disposal. They include materials deposited as a result of human activities or geological material modified artificially so that their physical properties (structure, cohesion and compaction) have been drastically altered.

Other soils identified in the study area include deep well drained mineral and mineral poorly drained soils. Alluvium is identified along the valleys of the River Rye and River Liffey.

Given the urban nature of certain areas within the study area and the range of land use activities which have taken place historically, soils may have been contaminated to some degree in the past in certain areas. Such contamination has the potential to affect water quality, biodiversity and flora and fauna and human health. The SEA will include provisions in relation to environmental protection and degraded/contaminated lands.

The EPA’s LEMA (Licencing, Enforcement, Monitoring and Assessment) system identifies a historic landfill site (code S22-02403) within the study area. The EPA Code of Practice: Environmental Risk Assessment for Unregulated Waste Disposal Sites (April 2007) will therefore be taken into consideration during the undertaking of the SEA. The SEA will consider whether potential future proposals for re-zoning/development of these lands (or adjacent to these lands) are ‘most appropriate to the potential sensitivities’.

According to the report ‘The Geological Heritage of Kildare’ (Geological Survey of Ireland (GSI), 2005), the predominant rock type in the Leixlip area is sedimentary rock, limestone of Carboniferous age in particular. The study area is underlain by the geological ‘Lucan Formation.’ The formation comprises dark-grey to black, fine-grained, occasionally cherty, micritic limestones that weather paler, usually to pale grey. There are rare dark coarser grained calcarenitic limestones, sometimes graded, and interbedded dark-grey calcarenitic limestones.

Refer to **Figures 4.2** and **4.3** for details of the soils and bedrock geology in the vicinity of the LAP study area.

County Kildare is positioned at the forefront of geological heritage within Ireland. One site of Geological Heritage is located in the study area- The Louisa Bridge Warm Spring. This site is defined by the GSI as a ‘warm spring formerly used as a spa.’

According to the GSI, the Louisa Bridge Warm Spring was presumably derived from shallow bedrock or Quaternary deposits and was uncovered during canal construction in 1794.

Refer to **Figure 4.4** for Geological Heritage sites in the study area. The boundary of the Rye Water Valley/Carton SAC overlaps the boundary of this Geological Heritage site.

## 4.4 Water

### 4.4.1 Hydrology

The study area is located in the Liffey and Dublin Bay Catchment, in Hydrometric Area 09. Leixlip is located on the River Liffey in the 'Liffey\_SC\_090' Sub catchment.

The River Rye or Ryewater is a tributary of the River Liffey. It rises in County Meath, flowing south-east for 19 miles.

The Rye runs north of Kilcock and Maynooth, where it meets the River Lyreen and flows on through the estate of Carton House Estate. The river then flows behind Intel Ireland where Intel have been monitoring the water quality since 1989. The Rye then flows under the Royal Canal, which is carried in the Leixlip aqueduct almost 100 feet (30m) above, and descends into the heart of Leixlip. The Rye then flows under the Rye Bridge to the confluence with the Liffey near the existing Boat House in Leixlip demesne.

The River Liffey rises in the Wicklow Mountains, about 32km southwest of Dublin, and flows in a generally north-westerly direction from its source to the Lackan Reservoir. The river then runs westward in the Kildare lowland and gradually turns north-westward to Newbridge and northeast to Celbridge and Leixlip. It then flows eastward through the city of Dublin, in which it is extensively canalized and bordered with quays. It drains to Dublin Bay, an arm of the Irish Sea, after a course of 50 miles (80 km).

### The Water Framework Directive

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD).

The WFD has been transposed into Irish legislation by the European Communities (Water Policy) Regulations 2003 (SI No. 722 of 2003) and 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.

Ireland is required to produce a river basin management plan under the WFD. In April 2018 the Government of Ireland published the River Basin Management Plan for Ireland 2018-2021. The Draft LAP sets out the actions that Ireland will take to improve water quality and achieve 'good' ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2027. Water quality in Ireland has deteriorated over the past two decades. The Draft LAP provides a more coordinated framework for improving the quality of our waters — to protect public health, the environment, water amenities and to sustain water-intensive industries, including agri-food and tourism, particularly in rural Ireland.

As part of the implementation of the EU Water Framework Directive 2000/60/EC (WFD) a baseline risk assessment was completed of the water bodies in Ireland. These assessments were made using water pollution indicators, point and diffuse pollution sources, water abstractions and detail on commercial activities. The risk assessment assigned a water quality status to each waterbody and indicated a risk status namely, whether the water body would meet the criteria for “good status” or would be considered “at risk” of not meeting the standards by 2015.

Based on water quality, ecology and morphology the EPA has determined that the River Rye which flows through the study area is of ‘poor’ status. It was also classed as “at risk” of not achieving “good status” by 2015 under the Water Framework Directive (WFD) risk score system in 2010-2015.

There are no ‘Nutrient Sensitive’ rivers identified in the plan area. Nutrient Sensitive Waters comprise nitrate vulnerable zones designated under the Nitrates Directive (91/676/EEC) and areas designated as sensitive under the Urban Waste Water Treatment Directive (91/271/EEC).

Surface water features in the vicinity of Leixlip are shown on **Figure 4.5**. The WFD Quality Status 2010-2015 for Rivers and Lakes within the plan area are shown in **Figure 4.6** and the WFD Risk Status for Rivers and Lakes within the study area is shown on **Figure 4.7**.

#### 4.4.2 Hydrogeology

The entire study area is underlain by a bedrock aquifer which is classified by the GSI as a ‘Locally Important Aquifer.’ This represents bedrock which is ‘Moderately Productive only in Local Zones.’

The Ground Waterbody WFD Status 2010-2015 identified groundwater quality in the plan area as being of ‘good status’ and groundwater vulnerability is generally classed as being of ‘high’ vulnerability.

An unusual feature of the groundwater regime in the wider environment is the formation of warm springs that occur in a syncline in the Lucan-Celbridge area, including the Leixlip Spa area at Louisa Bridge. A complex groundwater system is present here comprising of:

- A deeper, older, warmer groundwater system which discharges to the Leixlip Spa well at Louisa Bridge. The groundwater is highly mineralized and iron rich. This system is thought to be the main source of groundwater at the well; and
- A more recent, shallow groundwater system that flows through conduits in the karstified limestone bedrock and discharges near the filtering pond at the Spa well. Groundwater from the shallow system discharges near rock faces and there is understood to be lateral flow towards the River Rye; and
- Deeper older groundwater that flows through a younger groundwater system and mixes with it. Groundwater features and source protection zones in the vicinity of the plan area are shown in **Figure 4.8**. There are no source protection zones in the study area.

Groundwater vulnerability in the vicinity of the study area is shown in **Figure 4.9**. WFD Groundwater quality and risk status' in the vicinity of the plan area is shown in **Figure 4.10** and **Figure 4.11**.

#### 4.4.2.1 Flooding

There is a recognised history of flooding in Leixlip and in 2000 and 2002 flood events were recorded on Main Street. However, flood alleviation works have been undertaken in association with the Office of Public Works (OPW) including near Distillery Lane and Main Street.

A Strategic Flood Risk Assessment (SFRA) has been carried out for the Plan and will inform the SEA process.

The majority of the sites reviewed have no known fluvial flood risk. Fluvial flood risk in both the 1% and 0.1% AEP events was identified in a small number of sites. Fluvial flood risk was identified in all return periods as well as issues with drainage resulting in ponding and small-scale flooding in one site.

The proposed scheme for Leixlip contained within the OPW Flood Risk Management Plan will provide protection for the existing properties sites up to and including a 1% AEP event. However, following further examination further study will be required to confirm if the proposed scheme could be adapted in the future to provide protection on all of the sites in question. For sites in close proximity to the River Liffey there may still be a residual risk from their proximity to the Liffey.

### 4.5 Air, Noise and Climate

#### 4.5.1 Air Quality

The EPA measures the levels of a number of atmospheric pollutants throughout Ireland in order to measure compliance with Air Quality Standards Regulations, 2011 (S.I. No. 180 of 2011). For the purposes of monitoring in Ireland, four zones are defined in the Regulations:

- Zone A: Dublin Conurbation;
- Zone B: Cork Conurbation;
- Zone C: Other Cities and Large Towns; and
- Zone D: Rural Ireland which is the remainder of the State excluding Zones A, B and C.

Leixlip is located in Zone C. The Air quality in Zone C as reported in the EPA report 'Air Quality in Ireland 2017' is summarised in **Table 4.4** below.

**Table 4.4: Air Quality Assessment Zone C Concentrations compared to Air Quality Standards**

Parameter	Zone	Average measured concentration ( $\mu\text{g}/\text{m}^3$ )	Air quality standard ( $\mu\text{g}/\text{m}^3$ )
NO <sub>2</sub>	Zone C	11.8	40
SO <sub>2</sub>	Zone C	2.9	20
CO	Zone C	0.15	10
Ozone	Zone C	53.05	120
PM <sub>10</sub>	Zone C	15.8	40
PM <sub>2.5</sub>	Zone C	10.6	20
Benzene	Zone C	0.18	5

The Environmental Protection Agency manages the National Ambient Air Quality Network. This Network sets legislative limit and target values for protection of human health and vegetation. According to the ‘Air Quality in Ireland Report 2017’ no levels above the EU limit values were recorded in Ireland in 2017.

The EPA 2017 dioxin Survey shows that concentrations of dioxins and similar pollutants remain at a consistently low level in the Irish environment.

As discussed in Section 4.1.2, and according to the EPA Radon Map, some 5-10% of homes in Leixlip are above the reference levels for Radon. As such, Leixlip is not considered to be a ‘High Radon Area.’

## 4.5.2 Noise

The Environmental Noise Directive (END) (2002/49/EC) requires that action is taken by each member state, with a view to preventing and reducing environmental noise where necessary (particularly where exposure levels can induce harmful effects on human health) and to preserving environmental acoustic quality where it is good. The relevant local authorities have been designated by the Environmental Noise Regulations, S.I. Regulations No. 140 of 2006, as the bodies charged with development and making of ‘Noise Action Plans’.

Kildare County Council prepared the second Noise Action Plan for County Kildare in 2013. This Noise Action Plan primarily considers the long term environmental noise impact from road, rail and air traffic noise sources, and sets out an approach to review noise impact levels near to the major sources assessed during the strategic noise mapping in 2012 with a view to identifying locations where noise reduction is deemed necessary in the first instance. In County Kildare, there are no major agglomerations or major airports subject to noise mapping or action planning.

Strategic Noise Maps have been prepared for all roads deemed to fall within the threshold of 3 million vehicles a year. The total length of identified major roads included within the strategic noise mapping was 258 km which amounts to 10.2% of the total road network which is relatively large compared to other counties.

This broke down into 157 km of motorways and national roads, 94.4 km of regional roads and 6.4 km of local road.

The Noise Action Plan addressed a number of sections of major roadway that are located either within, or immediately adjacent to Leixlip which qualified for noise mapping and, as such were subject to consideration for action planning. Major roads in Leixlip which qualified for noise mapping are detailed in **Table 4.5**.

**Table 4.5: Major Roads in Leixlip which qualify for Noise Mapping**

Road Type	Description
National Roads	M4 between the boundary with South Dublin County Council at Leixlip and the boundary with Meath County Council at Ballynakill
Regional Roads	R149, R449
Local Roads	n/a

The Draft LAP concludes that there are an estimated 969 people in Kildare above the  $L_{den}$  threshold for noise from road traffic sources, and an estimated 5564 people above the  $L_{night}$  threshold – 3,674 from road traffic sources and 1,890 from rail traffic sources.

The Draft LAP notes that a programme for further assessment and the implementation of potential noise mitigation measures in areas above the threshold of assessment will be required. The general approach to be taken by Kildare County Council in managing the environmental noise in the area will involve:

- Noise reduction at source;
- Land use planning adapted to noise goals;
- Procedures to reduce noise impact; and
- Operating restrictions to reduce noise emissions.

Kildare County Council has developed a detailed Programme of Works for the duration of the Noise Action Plan (2013 to 2018) and proposed to implement the programme subject to the availability of the requisite technical staff, expertise and financial resources.

Kildare County Council have recently prepared the 3<sup>rd</sup> Noise Action Plan for Kildare; to be adopted following a period of public consultation.

#### 4.5.2.1 Climate

The existing climate for Leixlip corresponds with the general climatic conditions for the whole country which is dominated by the Atlantic Ocean and its air and oceanic currents. Consequently, the region does not suffer from extremes of temperature. According to Met Éireann, average annual temperature is about 9°C. Mean annual wind speed varies between about 4 m/sec in the east midlands and 7 m/sec in the northwest.

Average rainfall varies between about 800 and 2,800 mm. Rainfall accumulation tends to be highest in winter and lowest in early summer.

According to the United Nations Integrated Panel on Climate Change, in line with the global picture, Ireland's average temperature has increased by about 0.7°C over the last 100 years, and the rate of increase has been higher in the last couple of decades. The increase has not been uniform over time, with a warming period from 1910 to the 1940s, followed by a cooling period up to the 1960s. The current warming period commenced around 1980.

2006 was the warmest year recorded in Ireland since the record-breaking year of 1995 at both Malin Head and Phoenix Park, which have observations dating back over 100 years, and also at Casement Aerodrome, Kilkenny and Rosslare.

2016 has been recorded as the warmest year since 2006, and the last 10 years have been the warmest decade. Whilst we can be less categorical about wind speeds, there is some evidence of a reduction in annual average wind speeds, with a corresponding decrease in the frequency of high wind speeds and gusts. Increases in total annual rainfall in parts of the west and north have been observed, with some increase in the number of days with heavier rain but there is no clear pattern of change in other areas.

While the national scale of potential change is evident, translating the potential effects of climate change to a region is a process of inference on what will happen to Ireland at large being reduced to a regional scale. Temperatures in Ireland are predicted to increase by 1.25-1.5°C by 2040 compared to 1961 to 2000.

Rainfall is expected to increase in winter by about 15% and summer projections range from no change to a 20% decrease, potentially along the east coast of the country.

Studies have shown that extreme rainfall events associated with climate change show more marked changes with more events occurring in autumn and a 20% increase in 2-day extreme rain amounts, especially in northern areas.

Taking the projected precipitation changes into account, there will be the potential for a significant increase in the number of extreme discharge events and a slight increase in their intensity, leading to an increased probability of flooding in the future.

The potential rise in global temperature might affect the intensity and frequency of storms in the North Atlantic. As a consequence of stormy weather there exists the potential for flash flooding and erosion which would affect a wide range of ecosystems and economic sectors.

### **Climate Change Targets**

In December 2008, the EU Climate Change and Renewable Energy Package set out a number of commitments. This package commits to reduce the EU's Greenhouse Gas (GHG) emissions from non-Emission Trading Scheme (ETS) sectors (such as transport, agriculture, residential and waste) by 20% on 2005 levels by 2020 or by a more ambitious 30% in the event of a comprehensive global agreement.

As part of the effort-sharing proposal of this package, Ireland is one of the countries facing the highest target of a 20% reduction on 2005 levels for non-ETS sectors. This will result in a limit of approximately 38 Mt CO<sub>2</sub> equivalent for Ireland's non-ETS emissions in 2020, together with annual binding limits for each year from 2013 to 2020.

In October 2014, EU leaders agreed a 2030 policy framework to reduce greenhouse gas emissions by at least 40% compared to a 1990 baseline. No agreement on the contribution of individual EU Member states has yet been reached.

The Climate Action and Low Carbon Development Act was published by government in January 2015. The Act sets out the national objective of transitioning to a low carbon, climate resilient and environmentally sustainable economy in the period up to 2050.

The EPA produces greenhouse gas emission projections on an annual basis for all sectors of the economy. According to the latest set of projections (April 2017), based on two different scenarios, Ireland's emissions in 2020 could be in the range of 4-6% below 2005 levels. The projection figures indicate Ireland is likely to exceed its annual targets over the remainder of the period to 2020.

The publication Ireland's Environment 2016 – An Assessment (EPA, 2016) provides a high-level summary on the status of greenhouse gases and climate change in an Irish context. It describes the key drivers and pressures and responses to climate change that may occur, providing an outlook of greenhouse gas projections to 2020, and also identifies future challenges to be addressed.

## 4.6 Archaeology, Architectural and Cultural Heritage

Built heritage is addressed in this report under the following headings:

- Archaeological Heritage;
- Architectural Heritage; and
- Vernacular Heritage.

Kildare County Council published the County Kildare Heritage Plan 2005-2011 in 2005. The Heritage Plan outlined an action plan for the conservation, preservation and enhancement of Kildare's heritage including natural heritage. The Draft County Kildare Heritage Plan 2020-2026 has recently been prepared by KCC and subject to a period of public consultation during the preparation of this SEA Environmental Report.

The built heritage of Kildare refers to all man-made features, buildings or structures in the environment. This includes a rich and varied archaeological and architectural heritage to be found throughout the countryside and within the historic towns and villages of the county.

The architectural and archaeological heritage of a town, village or place contributes greatly to the distinctive character of each local area.

### 4.6.1 Archaeological Heritage

A record of archaeological heritage is maintained on the ‘Record of Monuments and Places’ which was established under Section 12 of the National Monuments (Amendment) Act, 1994 (No. 17 of 1994). Structures, features, objects or sites listed in this Record are known as Recorded Monuments.

The Record of Monuments and Places (RMP) comprises a list of recorded monuments and places and accompanying maps on which such monuments and places are shown for each county.

The National Monuments Service of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs will advise on the protection applying to any particular monument or place under the National Monuments Acts by reason of it being entered in the Record of Monuments and Places and should be consulted if there is any doubt as to the status of the site.

According to the database there are approximately 41 Recorded Monuments and Places within the plan area, as outlined in **Table 4.6**. **Figure 4.12** depicts Recorded Monuments in the vicinity of Leixlip. For national monuments in the ownership or guardianship of the Minister or a Local Authority or which are subject to a preservation order or temporary preservation order, the prior written consent of the Minister is required for any works at or in proximity to the monument.

**Table 4.6: Record of Monuments and Places in Leixlip**

SMR Reference	Item	Location
KD011-002002	Road - road/trackway	KILMACREDOCK UPPER
KD011-002003	Church	KILMACREDOCK UPPER
KD011-003001	Ritual site - holy well	NEWTOWN (Leixlip ED)
KD011-004001	Historic town	LEIXLIP, LEIXLIP DEMESNE, NEWTOWN (ST. CATHERINES PARK Leixlip ED),
KD011-007	Ritual site -holy well	LEIXLIP
KD011-004002	Castle - Anglo-Norman masonry castle	LEIXLIP
KD011-004004	Graveyard	LEIXLIP
KD011-004005	Castle - tower house	LEIXLIP
KD011-017	Bridge	LEIXLIP DEMESNE
KD011-018	Mound	LEIXLIP DEMESNE
KD011-031	Redundant record	BARNHALL
KD011-032	Field system	KILMACREDOCK UPPER
KD006-002	Castle - unclassified	CONFHEY
KD006-00301	Church	CONFHEY
KD006-004	Castle - tower house	CONFHEY
KD011-054	Habitation site	COLLINSTOWN (Leixlip ED)

SMR Reference	Item	Location
KD011-045	Burnt mound	KILMACREDOCK UPPER
KD011-046	Fulacht fia	KILMACREDOCK UPPER
KD011-047		KILMACREDOCK UPPER
KD011-048	Habitation site	KILMACREDOCK UPPER
KD011-049-	Burnt mound	KILMACREDOCK UPPER
KD011-054	Habitation site	COLLINSTOWN (Leixlip ED)
KD011-053	Fulacht fia	EASTON
KD011-055	Excavation - miscellaneous	COLLINSTOWN (Leixlip ED)
KD011-056	Kiln	COLLINSTOWN (Leixlip ED)
KD006-003001	Graveyard	CONFHEY
KD011-011	Bridge	CONEYBURROW (Donaghcumper ED), PARSONSTOWN (Celbridge ED), ST. WOLSTANS
KD011-00202	Graveyard	KILMACREDOCK UPPER
KD011-004009	Graveslab	LEIXLIP
KD011-004008	Wall monument	LEIXLIP
KD011-004007	Habitation site	LEIXLIP
KD011-004006	Graveslab	LEIXLIP
KD011-017001	Weir - fish	LEIXLIP DEMESNE
KD006-017	Field system	CONFHEY
KD006-018	Redundant record	CONFHEY
KD011-002	Ecclesiastical site	KILMACREDOCK UPPER
KD011-004010-	Graveslab	LEIXLIP
KD011-004011	Font	LEIXLIP
KD011-004014	Stone head	LEIXLIP
KD011-004013	Stone head	LEIXLIP
KD011-062	Fulacht fia	PARSONSTOWN (Celbridge ED)

Ireland has a long and varied maritime history with extensive records for wrecks along its coast, rivers, lakes and offshore waters. The Underwater Archaeology Unit (UAU) of the Department of Arts, Heritage, Regional, Rural and Gaeltacht affairs is in the process of compiling an inventory of wrecks for the coastal and inland waters of Ireland, the records from which are stored in a shipwreck inventory database and housed in the UAU archive. The Wreck Database is accessible through the Archive Unit of the National Monuments Service.

Over 18,000 wrecks have been recorded to date ranging from small fishing boats, dugout canoes and coastal traders to steamships and ocean-going ships. Though earlier sources have been included where obtainable, the Inventory is largely based on documentary sources available from after 1700AD.

As such, previously unrecorded shipwreck sites, including those dating to earlier periods, may await discovery in the River Liffey and its tributaries. Other forms of underwater archaeology may survive in the River Liffey in the form of abandoned vernacular craft, harbours, piers and jetties, waterside features, mills, fortifications, anchors, fish traps, crannogs, bridges, weirs, artefacts and the material traces of any activities in the past that involved the exploitation of riverine resources.

Many of these site types are protected and can be identified from the Record of Monuments and Places for the relevant County and in the relevant Urban Archaeology Survey. However, previously unrecorded archaeological sites other than wrecks may also lie undiscovered in the rivers and streams within the Leixlip Local Area Plan.

#### 4.6.2 Architectural Heritage

As defined by the Heritage Act, 1995, 'architectural heritage' includes all structures, buildings, traditional and designed, and groups of buildings including streetscapes and urban vistas, which are of historical, archaeological, artistic, engineering, scientific, social or technical interest.

The National Inventory of Architectural Heritage (NIAH) is a state initiative under the administration of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs and established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999.

The purpose of the NIAH is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. NIAH surveys provide the basis for the recommendations of the Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs to the planning authorities for the inclusion of particular structures in their Record of Protected Structures (RPS).

Leixlip has an abundance of structures of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. Such features are contained in the Record of Protected Structures (RPS).

According to the Kildare County Development Plan 2017 – 2023, there are approximately 66 protected structures in Leixlip, as outlined in **Table 4.7** and indicated in **Figure 4.13** below.

Owners and occupiers of protected buildings are required to ensure that buildings do not become endangered through harm, decay or damage.

**Table 4.7: Protected Structures in Leixlip**

NIAH Ref	RPS No.	Item and Location	Description
11900602	-	Deey Bridge and Lock 13, Royal Canal Main Line	Canal Bridge and Lock
11901102	B11-15	Wonderful Barn complex	Barn

<b>NIAH Ref</b>	<b>RPS No.</b>	<b>Item and Location</b>	<b>Description</b>
11804077	B11-28	Ralph Square (Off), Leixlip	House
11804079	B11-29	The Stables, Glebe House	House
11804070	B11-30	337Mill Lane, Leixlip	House
11804040	B11-31	Glebe House, Pound	House
11804026	B11-33	14 Main Street	House
11804073	B11-41	St Catherine's Park (Liffey Valley House Hotel)	House
11804075	B11-43	Leixlip House Hotel, Captain's Hill	House
11804074	B11-42	Newton Hill House	House
11804076	B11-44	Leixlip Bridge Toll House, Leixlip Bridge	House
11804069	B11-45	74 Mill Street	House
11804066	B11-46	Black Castle, Mill Street	House
11804029	B11-48	French Estates/John Paul's, Main Street	House with shops
11804021	B11-49	Castle View House, 5 Main Street	House
11804022	B11-50	1 Main Street	House
11804023	B11-51	Ivy House, Main Street	House
11804045	B11-52	Leixlip Castle, Leixlip Demesne Country	House
11804047	B11-55	Leixlip Castle, Leixlip Demesne	Folly
11804048	B11-56	Leixlip Castle, Leixlip Demesne	Outbuilding
11804052	B11-57	Leixlip Castle, Leixlip Demesne	Outbuilding
11804053	B11-58	Leixlip Castle, Leixlip Demesne	Walls/gates/railings
11804054	B11-59	Leixlip Castle, Leixlip Demesne	Walls/gates/railings
11804055	B11-60	Leixlip Castle, Leixlip Demesne	Garden Temple
11804056	B11-61	Leixlip Castle, Leixlip Demesne	Outbuilding
11804057	B11-62	Leixlip Castle Demesne	Outbuilding
11804058	B11-63	Leixlip Castle Demesne	Dovecote (former)
11804059	B11-64	Leixlip Castle Demesne	Outbuilding
11804060	B11-65	Leixlip Castle Demesne	Outbuilding
11804061	B11-66	Leixlip Castle Demesne	House
11804062	B11-67	Leixlip Castle Demesne	Garden Structure (misc.)
11804064	B11-68	Leixlip Castle Demesne	Boat house (former)
11804065	B11-69	Leixlip Castle Demesne	Garden Structure (misc.)
11804001	B11-70	1 The Mall, Main Street	House
11804002	B11-71	2 The Mall, Main Street	House
11804003	B11-72	3 The Mall, Main Street	House
11804004	B11-73	4 The Mall, Main Street	Office
11804005	B11-74	5 The Mall, Main Street	Office

NIAH Ref	RPS No.	Item and Location	Description
11804006	B11-75	6 The Mall, Main Street	Office
11804007	B11-76	7 The Mall, Main Street	Office
11804008	B11-77	8 The Mall, Main Street	House
11804009	B11-78	Main Street, Leixlip	House
11804017	B11-79	Saint Mary's Church, Main Street	Church
11804024	B11-80	Classic Combination Mini Mart, Main Street	Shop
11804025	B11-81	Main Street	House
11804033	B11-82	Catholic Church of Our Lady's Nativity, Pound St	Church
11804078	B11-83	Leixlip Bridge	Bridge
11901101	B11-84	Leixlip Gate, Barnhall	Walls/gates/railings
-	B11-115	Ryvale House, Leixlip	House
-	B11-117	Collinstown House, Collinstown	House
11804041	B11-122	Leixlip Castle	Walls/gates/railings
-	B11-116	Marshfield House, Mill Lane, Leixlip	House
-	B11-117	Collinstown House, Collinstown	House
11804046	B11-123	Leixlip Castle	House
11804010	-	Leixlip	Falcon Coffee Shop (The)
11804014	-	Leixlip	Leixlip Pool Club/Central Cabs
11804015	-	Leixlip	House
11804016	-	Leixlip	Oz (House)
11804020	-	Leixlip	House
11804027	-	Leixlip	House
11804031	-	Leixlip	House
11804032	-	Leixlip	Rye Bridge
11804037	-	Leixlip	House
11804038	-	Leixlip	Gaffney's Pharmacy
11804067	-	Leixlip	House

There is one Architectural Conservation Area (ACA) in Leixlip, as outlined in **Figure 4.14**. The area focuses on Main Street and extends to include Leixlip Castle to the south-west and Mill Lane to the east. An ACA is a place, area, group of structures or townscape that is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures.

A review of the existing ACA and boundary is intended to be carried out during the lifetime of plan and an Architectural Statement of Character Report for Leixlip is intended to be prepared for the Draft LAP.

### 4.6.3 Vernacular Heritage

Vernacular Architecture describes the local regional traditional building forms and types using indigenous materials, and without grand architectural pretensions, i.e. the homes and workplaces of the ordinary people built by local people using local materials. This is in contrast to formal architecture, such as the grand estate houses of the gentry, churches and public buildings, which were often designed by architects or engineers.

The majority of vernacular buildings are domestic dwellings. Examples of other structures that may fall into this category include shops, outbuildings, mills, limekilns, farmsteads, forges, gates and gate piers.

## 4.7 Landscape and Visual

### 4.7.1 Landscape

Landscape embraces all that is visible when one looks across an area of land. As well as being an important part of people's lives, giving individuals a sense of identity and belonging, landscape is the context in which all changes take place.

The study area is located in the eastern part of County Kildare, near its border with the South Dublin County Council municipal area. The River Rye and River Liffey provide important landscape features in the area.

A Landscape Character Assessment (LCA) of the county was prepared as part of the Kildare County Development Plan. The LCA focused on characterisation i.e. the discernment of the character of the landscape based on its land cover and landform, but also on its values, such as historical, cultural, religious and other understandings of the landscape. The purpose of this document is to assist in the development of the landscape objectives for the County Development Plan.

The County is divided into 15 geographically specific Landscape Character Areas (LCA's) The LCA of interest to the Draft Plan is the Northern Lowlands.

In order to inform the Landscape Character Assessment, a landscape sensitivity map was prepared. Landscape sensitivity is a measure of the ability of the landscape to accommodate change or intervention without suffering unacceptable effects to its character and values.

The sensitivity of the Northern Lowlands is deemed to be of 'Low-Sensitivity' and is defined as an area 'with the capacity to generally accommodate a wide range of uses without significant adverse effects on the appearance or character of the area.'

The CORINE Land Cover (CLC) inventory is a Pan-European land use and landcover mapping programme.

It supplies spatial data on the state of the European environmental landscape and how it is changing over time. CORINE Land Cover mapping classifies land cover under various headings. The main land-use in the Plan area is Artificial Surfaces and Agricultural Areas.

Refer to **Figure 4.15** for CORINE Landcover Data in the vicinity of Leixlip.

## 4.7.2 Visual

Scenic routes and protected views consist of important and valued views and prospects within the county. The Kildare County Development Plan 2017-2023 outlines all the views and prospects in the County which have been identified as being worthy of protection.

Views as prospects in Leixlip and its immediate environs include the following, as illustrated on **Figure 4.16**:

- Cope Bridge;
- Louisa Bridge;
- Sandfords Bridge Carton Demesne;
- New Bridge;
- Deey Bridge;
- Leixlip Bridge.

There are no scenic routes located within the boundary of the study area. However, those located in the immediate environs are also illustrated on **Figure 4.16**.

## 4.8 Material Assets

The term ‘Material Assets’ refers to all infrastructure and local services including; transportation, water supply, wastewater treatment and discharge, waste management services, electricity supply, telecommunications etc.

In order to inform the Draft LAP, the following assessments were carried out relevant to material assets, as outlined in Section 2.2.2. The outcomes of these assessments were also considered in the preparation of this SEA Environmental Report.

### 1. Strategic Transport Assessment (STA)

The STA of Leixlip examined the existing and proposed transport infrastructure and service provision across all modes of transport including sustainable modes such as active modes (walking and cycling) in Leixlip. The assessment leads to an understanding of the existing constraints and modal share and also models future scenarios to ensure the optimal transportation interventions can be planned and provided for to meet future demand to drive a sustainable modal shift.

### 2. Social Infrastructure Audit (SIA)

The SIA examined the current context with respect to social infrastructure provision in Leixlip and identifies the future requirements and made recommendations on priority areas for investment within the plan area.

The audit identified relevant social infrastructure that will contribute to the quality of life, forming a key part of the fabric of an area, not just in terms of wellbeing, but also in terms of sense of place and local identity.

### **3. Sustainable Planning and Infrastructural Assessment (SPIA)**

A Sustainable Planning and Infrastructural Assessment (SPIA) was carried out to inform the appropriate zoning of land, in accordance with Appendix 3 of the National Planning Framework, the Sustainable Planning and Infrastructure Assessment comprises of quantitative and qualitative research analysis of existing and proposed infrastructure and accompanies the LAP.

This section summarises the key findings and recommendations of the SPIA, or STA, where relevant.

#### **4.8.1 Water Supply**

The provision of an adequate supply of water and wastewater treatment facilities is critical to facilitate and sustain the growth of Leixlip over the lifetime of the Draft Plan, and beyond. As of January 2014, Kildare County Council no longer has any direct control in relation to the provision of such services. The delivery, integration and implementation of water and wastewater projects and infrastructural improvements are now the responsibility of 'Irish Water'. Kildare County Council will work closely with Irish Water to ensure that the Kildare County Development Plan and the Draft Plan continue to align with both the National Planning Framework, National Development Plan and the Draft Regional Spatial and Economic Strategy for the Eastern and Midland Region, and that the provision of water/wastewater services will not be a limiting factor in terms of targeted growth.

Leixlip Town is connected to the North Regional Water Supply scheme which is serviced by the Ballygoran Reservoir. The upgraded Irish Water Treatment Plant (WTP) in Leixlip provides the water supply for the town. The Leixlip WTP is the second largest in the country and supplies 30% of the region's water.

A Remedial Action List (RAL) of problematic drinking water supplies is released by the EPA on a quarterly basis. The Remedial Action list is a public record for the supplies known to be at risk and where the EPA is requiring Irish Water to take corrective action. The EPA has instructed Irish Water to submit an action programme for the improvement of each of these supplies and has initiated enforcement action where action programmes were not being prepared or were not prepared to the satisfaction of the EPA. This includes issuing legally binding Directions requiring specific work to be carried out.

The Ballygoran drinking water supply which serves Leixlip was not included on the Remedial Action list for Q3 of 2018.

### 4.8.1.1 SPIA Findings and Recommendations

It has been identified that all sites are located in the Leixlip water supply zone, fed from Ballygoran Reservoir with 29.5MLD capacity. The Leixlip water supply zone is also fed from Leixlip pumping station which fed directly from Leixlip Water Treatment plant in Fingal with 215MLD capacity.

Irish Water has confirmed that water mains are located immediately adjacent to or in close proximity to the majority of the sites with the exception of a small number of sites whereby the water mains traverse the lands. Wayleaves around the existing pipes will need to be considered in such instances. There is a 1940's 6" asbestos water main traversing one of the sites.

Irish Water advises that there is no adequate water main on one site. The area is currently served by a 3" UPV (1969) water main. It is noted that this small diameter does not have the capacity to serve any significant development.

Irish Water advises that this initial assessment is indicative only and based on a desktop exercise to identify the location of adjacent local network. Water mains may need to be extended to the site boundary by the developer on some of the sites. In addition, local upgrades may be required for some of the sites.

With regard to area that is served with a 3" UPV (1969) main, Irish Water advise that substantial upgrade works would be required.

### 4.8.2 Wastewater Treatment

Leixlip forms part of the Lower Liffey Valley Regional Sewerage Scheme (LLVRSS). The Leixlip Waste Water Treatment Plant (WwTP) is currently being upgraded to cater for an expanding population within the Lower Liffey Valley catchment and for locally-based commercial activities (including Intel).

Upon completion, the capacity of Leixlip WwTP will be 150,000 population equivalent (PE). Irish Water indicates that this will provide capacity to cater for the needs of the Lower Liffey Valley catchment in the short to medium term.

In the longer term, Irish Water will be looking at regional level solutions for the provision of wastewater infrastructure. In this regard a study is being undertaken to investigate the feasibility of a pumping station at Leixlip WwTP and a rising main pipeline to a regional trunk sewer, to transfer excess flows from the Lower Liffey Valley catchment.

Irish Water will be preparing a Drainage Area Plan (DAP) for the Lower Liffey Regional Sewerage Scheme (including Leixlip), which will identify solutions to provide capacity for future residential development and meet environmental compliance requirements. This is to be completed by 2019.

As part of the LAP process, a Sustainable Planning and Infrastructural Assessment of the study area has carried out in order to inform the zoning of lands. This process resulted in a tiered approach to zoning in line with the requirements of the Project Ireland 2040: National Planning Framework.

Kildare County Council have engaged with Irish Water regarding the serviceability of lands within the plan area which will form part of the infrastructural assessment of the Draft LAP.

As outlined in Section 4.3.1, the study area is traversed by a number of ecologically sensitive watercourses. Only clean, uncontaminated surface waters should leave the study area and drain to the river network. Treated effluent from Leixlip wastewater treatment plant (WWTP) discharging to the River Liffey should comply at all times to the requirements of the Urban Wastewater Treatment Directive and Water Framework Directive. Development in the study area must be in line with current available capacity in the relevant WWTP. This will be examined further in the undertaking of the SEA.

#### 4.8.2.1 SPIA Findings and Recommendations

It has been identified that all sites will be served by the Leixlip Wastewater Treatment Works /Lower Liffey Valley Sewerage Scheme which has a capacity of 150,000 PE.

However, Irish Water has advised that there is limited capacity at the treatment works and new connections will be on a first come/first served basis. Irish Water currently has two projects underway that will divert flows from the Leixlip Wastewater Treatment Works and therefore more capacity will become available. The first project will divert wastewater flows to the 9C sewer and on to Ringsend Waste Water Treatment Works and the second project will ultimately divert these flows to the Greater Dublin Drainage Project (GDD). The earliest these diversions will take place is late 2022. With regard to the sewer network, Irish Water has advised they are currently undertaking studies to prepare a Drainage Area Plan (DAP) and model for the Leixlip area. The report and model will identify the main issues in the area and propose remedies. The estimated date for completion of the study is the end of 2020.

Irish Water has confirmed that foul sewers are located immediately adjacent to or in close proximity to the majority of the sites with the exception of a small number of sites whereby trunk sewers traverse the lands. Way leaves around the existing pipes will need to be considered in such instances. There is no foul sewer network in the vicinity of a small number of sites.

Irish Water have advised that there is a new 750mm diameter foul sewer constructed recently to facilitate Intel and have noted that there are operational issues with the Clay Steps sewers, which may affect connections at a small number of sites and will need to be addressed.

Irish Water has advised that this initial assessment is indicative only and based on a desktop exercise to identify the location of adjacent local network. Foul sewers may need to be extended to the site boundary by the developer on some of the sites where a pumping station is in close proximity it is likely that infrastructure will connect into it. In addition, local upgrades may be required for some of the sites as well as upgrades to the pumping stations.

With regard to the DAP, this may impact on the location of connection points to the network and may necessitate the upgrading of the local pumping station.

### 4.8.3 Transport Infrastructure and Facilities

Leixlip is bounded by the Royal Canal and the Dublin-Sligo railway line to the north and west, the River Liffey to the south and east, and the River Rye Water which divides the town approximately east to west.

Leixlip is located approximately 14.5km from Dublin City Centre. The town is bypassed by the M4 motorway with grade-separated interchanges on the motorway at the eastern and western end of the town.

The R148 (old N4) runs through the Main Street linking Leixlip to Maynooth to the west. This also links with the N4 dual carriageway to the east of the town, which in turn provides access to Lucan, the M50 and Dublin City Centre.

The R149 runs north from Main Street, encompassing Captain's Hill and Cope Bridge. The route continues eastwards across the county boundary with Meath before heading northwards to Barnhill, Hansfield, Ongar, Clonee and the M3.

Vehicular circulation within the town is influenced by a number of pinch points including Pound Street (and Rye Bridge), Captain's Hill, Cope Bridge, Main Street (incl. Leixlip Bridge), with congestion and significant queue lengths evident at peak times. At the western periphery of the town the R449 links to the R148 (old N4) and is the main access from the M4 to Intel's facility in Leixlip. It also serves Collinstown.

The existing bridge crossings of the River Liffey at Leixlip Bridge, and the Rye Water at Rye Bridge, are both close to the centre of the town. These constraints serve to 'funnel' the vast majority of trips generated from residential areas to the north of the town through Main Street, as the principal link to other parts of the town and beyond.

Leixlip is located on the Dublin – Sligo rail line and is served by two rail stations, Confey and Louisa Bridge. Both stations are served by the 'Arrow' commuter rail service provided by Iarnród Éireann. Dublin Bus operates a number of routes linking Leixlip to Dublin City Centre.

While the existing intercity rail service and M4 Motorway connectivity to Dublin City, Dublin Airport and the wider region make Leixlip an attractive proposition for new employment growth, the DART expansion programme which will create a full metropolitan area network for the Dublin region provides a significant opportunity for inward investment and further economic growth within the Leixlip Area.

As outlined in the Kildare CDP, the Council is committed to focussing on the need to underpin the planning process with an integrated approach to sustainable transport. The Council will endeavour to ensure that the accessibility of all areas will improve and will co-operate with the relevant statutory agencies and organisations in the achievement of national and regional policy. The Council are committed to the provision of sustainable transportation options throughout Kildare, whilst also providing for increased vehicular trips in the county through road improvement and management of demand where possible. The Council will be guided by the sustainable transport principles set out in the NTA Transport Strategy for the Greater Dublin Area 2016-2035.

As previously outlined, KCC carried out an STA of the plan area, in order to inform both the drafting of the Draft Plan, and the strategic environmental assessment of the same.

The STA assessed the transportation elements of the 'Network' infrastructure class and was informed by policy review and stakeholder consultations. The STA will provide all necessary data required for Kildare County Council to complete an Area Based Transportation Assessment (ABTA). The ABTA shall inform all transportation requirements within the urban footprint of Leixlip over the next several plan cycles and potential new development lands north of the railway line at Confey in the coming years.

Leixlip has a well-developed pedestrian network. The quality of footpaths is generally good, with some notable deficiencies in continuity and the quality of off-road pedestrian routes in particular.

There are a number of off-road pedestrian routes in/around the town - many of which follow the Rye Valley, Royal Canal, Síleacháin Valley and within/around St Catherine's Park. Some of these routes have been marketed as health trails. This includes 3 no. Slí na Sláinte walking routes in or around the town (St. Catherine's Park Slí, Leixlip West, and Leixlip-Lucan Demesne); another links Leixlip to Celbridge (Celbridge Leixlip).

Existing cycleways in Leixlip include the grade separated cycle path linking Castletown and Leixlip along the R449. Other cycle facilities along Station Road and sections of Green Lane (L5058) are immediately adjacent or incorporated into bus lanes. There are also informal cycle routes to Lucan via St Catherine's Park; and to Castletown via Parsonstown.

Overall permeability and connectivity of pedestrian and cycle routes between destinations and communities in the town is poor primarily because of the limited number of crossing points over the Rye Valley, Royal Canal and railway line. Pinch points such as Captain's Hill also restrict permeability and connectivity.

#### **4.8.3.1 STA Findings and Recommendations**

As outlined previously and STA was carried out in order to inform the preparation of the Draft LAP; to provide suitable recommendations for transport enhancements across Leixlip, and to ensure Confey is integrated into the existing Leixlip LAP area. On completion of the STA, a number of infrastructure and service interventions were identified to progress, and integrated into the Draft LAP, where feasible.

#### **4.8.4 Waste Management**

Waste and recycling bin collection services have been privatised in County Kildare for the past 15 years. The following waste collectors currently provide these services:

- AES;
- Mahons Recycling;

- Oxigen;
- Ray Whelan; and
- Thorntons.

The Waste Facility Permit and the Certificate of Registration Database is a register for waste facility permits and certificates of registration issued by local authorities under the Waste Management (Facility Permit and Registration) Regulations, S.I. No. 821 of 2007, as amended.

According to the Local Authority Waste Facility Register, there are no licensed waste facilities within the study area.

The nearest EPA waste licenced facility is the Ormonde Organics facility which is located approximately 6.8km from the study area.

## 5 Alternatives Considered

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### 5.1 Introduction

This section provides a summary of the alternative plan scenarios considered during the development of the Draft LAP.

The scenarios considered provide for alternative methods of meeting the requirements of the Direction, as described in Section 2.1. These range from a scenario exceeding the required 30% Compact growth within or in close proximity (c.400m) to the town centre of Leixlip, to broader alternatives where the minimum 30% compact growth requirement is met with remaining growth allocated to lands either within or adjoining the ‘defined built up area’ i.e. the settlement boundary.

Some five alternative plan scenarios have been considered, as described in Section 5.2.

### 5.2 Alternative Plan Scenarios Considered

#### 5.2.1 Alternative Plan Scenario 1

Scenario 1 centres on the concept of compact growth/consolidation and the densification of the existing town centre. Lands immediately adjoining the town centre are therefore prioritised. Scenario 1 is made up of the following key principals:

- Exceeding of the requirement for 30% compact growth within or contiguous to the existing built up area. Promotion of developing lands within the Town Centre/infill and immediately adjoining the Town Centre lands i.e. 400m radius. Remaining residential growth within existing built up area and within close proximity to Confey train station.
- Employment growth directed towards Collinstown and the former Hewlett Packard (HP) site with expanded neighbourhood centre/local services offering within Confey.
- Promoting permeability/green linkages and maximising Royal Canal Green Way.
- Services and facilities to be expanded within the town as per findings of the Social Infrastructure Audit (SIA) with Confey accommodating a new GAA facility, 1 no. 16 (expandable to 24) classroom primary schools and a secondary school, a new cemetery, a minor extension to the existing cemetery, a new community hub/theatre, parklands areas to the east with linkages to St. Catherine’s Park alongside a new village centre/retail offer.
- Collinstown to accommodate a new public open space parkland capable of accommodating playing pitches as part of the overall layout and design of the employment/business park.

## 5.2.2 Alternative Plan Scenario 2

Scenario 2 also centres on the concept of compact growth/consolidation and the densification of the existing town centre. Lands immediately adjoining the town centre are therefore prioritised. Scenario 2 is made up of the following key principals:

- Aims to strictly meet the requirement for 30% compact growth within or contiguous to the existing built up area. Promotion of developing lands within the Town Centre/infill and immediately adjoining the Town Centre lands. Remaining 70% growth within existing built up area and within close proximity to Confey train station.
- Employment growth directed towards Collinstown and the former HP Site with expanded neighbourhood centre/local services offering within Confey.
- Promoting permeability/green linkages and maximising Royal Canal Green Way.
- Reduced land allocation for the subject lands along the Celbridge Road adjoining Leixlip Castle and at Black Avenue (Key Development Areas) taking into consideration the site location, topography and access arrangements. Greater emphasis on green buffers and linkages to adjoining amenities.
- Confey residential to accommodate c. 1305 units.
- Services and facilities to be expanded within the town as per findings of the Social Infrastructure Audit (SIA) with Confey accommodating a new GAA facility, 1 no. 16 (expandable to 24) classroom primary schools and a secondary school, a new cemetery, a minor extension to the existing cemetery, a new community hub/theatre, parklands areas to the east with linkages to St. Catherine's Park alongside a new village centre/retail offer.
- Collinstown to accommodate a new public open space parkland capable of accommodating playing pitches as part of the overall layout and design of the employment/business park.

## 5.2.3 Alternative Plan Scenario 3

Scenario 3 centres on the concept of 30% compact growth and the northern expansion of the LAP area. Scenario 3 is made up of the following key principals:

- Aims to strictly meet the requirement for 30% compact growth within or contiguous to the existing built up area. Promotion of developing lands within the Town Centre/infill and immediately adjoining the Town Centre lands. Remaining 70% growth to be accommodated with a focus on lands at Confey and within close proximity to Confey train station.
- Employment growth directed towards Collinstown and the former HP site with expanded neighbourhood centre/local services offering within Confey.

- Reduced land allocation for the subject lands along the Celbridge Road adjoining Leixlip Castle taking into consideration the site location, topography and access arrangements. Greater emphasis on green buffers and linkages to adjoining amenities. Minimal development potential on lands adjoining St. Catherine's Park given site constraints.
- Emphasis on northern expansion and connectivity potential through the promotion of permeability/green linkages along the Royal Canal Green Way south west and south east through existing and new residential lands adjoining St. Catherine's Park.
- Confey residential to accommodate c. 1505 units.
- Services and Facilities to be expanded within the town as per findings of the Social Infrastructure Audit (SIA) with Confey accommodating a new GAA facility, 1 no. 16 (expandable to 24) classroom primary schools and a secondary school, a new cemetery, a minor extension to the existing cemetery, a new community hub/theatre, parklands areas to the east with linkages to St. Catherine's Park alongside a new village centre/retail offer.
- Collinstown to accommodate a new public open space parkland capable of accommodating playing pitches as part of the overall layout and design of the employment/business park.

#### 5.2.4 Alternative Plan Scenario 4

Scenario 4 centres on the concept of 30% compact growth and a mix of northern and western expansion of the LAP area. Scenario 4 is made up of the following key principals:

- Aims to strictly meet the requirement for 30% compact growth within or contiguous to the existing built up area. Promotion of developing lands within the Town Centre/infill and immediately adjoining the Town Centre lands. Remaining 70% growth to be accommodated with a focus on lands at Confey and within close proximity to Confey train station and providing for a mixed-use development at Collinstown.
- Relocation of Louisa Bridge Train Station c.1.2km west to serve mixed use development at Collinstown to include Employment, Residential, Neighbourhood Centre Uses and public parklands.
- Residential allocation of c. 800 units at Collinstown.
- Residential allocation of c. 800 units at Confey.
- Redevelopment/re-use of lands at existing Park and Ride facility currently serving Louisa Bridge for playing pitches linked to the Lough na Mona lands.
- Employment growth directed towards the former HP site with expanded neighbourhood centre/local services offering within Confey.
- Promoting permeability/green linkages and maximising Royal Canal Green Way.

- Services and Facilities to be expanded within the town as per findings of the Social Infrastructure Audit (SIA) with Confey accommodating a new GAA facility, 1 no. 16 (expandable to 24) classroom primary schools and a secondary school, a new cemetery, a minor extension to the existing cemetery, a new community hub/theatre, parklands areas to the east with linkages to St. Catherine's Park alongside a new village centre/retail offer.
- Collinstown to accommodate a new public open space parkland.

### 5.2.5 Alternative Plan Scenario 5

Scenario 5 centres on the concept of compact growth, within or contiguous to the town centre, and a combination of lands considered within Scenarios 1-4 informed by findings of the Sustainable Planning and Infrastructural Assessment for the plan area. Scenario 5 is made up of the following key principals:

- Aims to strictly meet the requirement for 30% compact growth within or contiguous to the town centre lands requirement. Promotion of developing lands within the Town Centre/infill and immediately adjoining the Town Centre lands. The remaining 70% growth to be accommodated on lands identified as being Tier 1 zoning in the Sustainable Planning and Infrastructural Assessment with the remaining requirements being allocated as Tier 2 zoning.
- Employment growth directed towards Collinstown and the former HP site with expanded neighbourhood centre/local services offering within Confey.
- Promotes permeability/green linkages, maximising the Royal Canal Green Way as a key public transport network for pedestrians and cyclists connecting the north of the plan area to the south west.
- Reduced residential land allocation for the lands along the Celbridge Road adjoining Leixlip Castle and on lands at Black Avenue adjoining St. Catherine's Park providing for a medium density. Zonings take into consideration each site's location, topography and access arrangements. A significant emphasis is placed on green buffers and linkages to adjoining amenities.
- Confey: To accommodate c. 40% of the LAP required unit growth i.e. c. 1300 units. Upgrades to existing road network east and west linking the subject lands to the R149 to the east and Kellystown Lane to the west. New link road through Collinstown from Kellystown Lane providing access to the M4/Celbridge interchange.
- Phased approach to zoning with higher density allocated to lands within 400m of a redeveloped Confey Train Station. In addition to residential/mixed use zoning lands capable of accommodating a new neighbourhood facility including a new street design, local services, Community Hub/Theatre, educational facilities and a small expansion of the existing cemetery.

- Services and facilities to be expanded within the town as per findings of the Social Infrastructure Audit (SIA) with Confey accommodating a new GAA facility, 1 no. 16 (expandable to 24) classroom primary schools and a secondary school, a new cemetery, a minor extension to the existing cemetery, a new community hub/theatre, parklands areas to the east with linkages to St. Catherine's Park alongside a new village centre/retail offer.
- Collinstown to accommodate a new public open space parkland, business uses and a commensurate neighbourhood centre – lands capable of accommodating playing pitches and link from Kellystown Lane to the M4/Celbridge interchange.
- Scenario 5 aims to protect ecological corridors through appropriate design on new greenfield lands, promotes pedestrian and cycle connectivity through the identification and promotion of permeability links throughout the plan area and promotes sustainable transport modes with significant new development focused adjoining the rail corridor and along or in close proximity to existing bus services.

### 5.3 Assessment of Alternatives

This section provides an assessment of each of the five alternative scenarios considered in the preparation of the Draft LAP.

Each of the five alternative scenarios considered seek to meet the requirements of the Direction, as described in Section 2.1, by providing additional residential opportunities in the LAP area. As outlined in the requirements of the Direction, each of the alternatives scenarios aim to meet the housing requirements in Leixlip by concentrating on the concept of compact growth, and the consolidation and densification of the town centre and adjoining lands. This approach is common to each of the five alternative scenarios, with some variation in housing allocation.

The alternatives considered range from a scenario exceeding the required 30% compact growth within or in close proximity (c.400m) to the town centre of Leixlip, to broader alternatives where the minimum 30% compact growth requirement is met with remaining growth allocated to lands either within or adjoining the 'defined built up area' i.e. the settlement boundary. The variations in the alternatives considered are assessed in Section 5.3.1 – Section 5.3.5.

Each of the alternative scenarios considered are likely to result in an overall positive effect on the population of the LAP area, through the provision of required housing opportunities.

By concentrating on the consolidation of the town centre as a means of fulfilling residential requirements, rather than exploring opportunities for greenfield development on the periphery of the LAP area, the potential for urban sprawl and its associated negative environmental effects is reduced. Urban sprawl is known to contribute to an increase in the reliance on private vehicle use, traffic congestion, air pollution, ambient noise, habitat fragmentation, and a decline in community cohesiveness.

Infill development also provides an opportunity for the regeneration and revitalisation of Leixlip town centre, where vacant sites are targeted for redevelopment. This is likely to result in a positive effect on the landscape and visual setting of the LAP area. Urban regeneration of this nature does however have the potential to negatively affect features of archaeological and architectural heritage, particularly where development is proposed in the existing Architectural Conservation Area in the town.

It should also be considered that an increase in the population density of the town centre and adjoining lands could result in a potential strain on the material assets which service the area. Provision of necessary supporting infrastructure is required in order to facilitate new development in the LAP area and it should be ensured that sufficient network capacity is available with regards services and utilities. This can be achieved through the implementation of phased development in the LAP area, and by implementing the recommendations of the Sustainable Planning and Infrastructural Assessment of the Leixlip Local Area Plan 2020-2026 prepared by Kildare County Council.

The provision of an expanded neighbourhood centre and services offering in Confey to that which is currently provided for under the existing Leixlip Local Area Plan 2017-2023 (the baseline scenario) is also a common element of each of the alternatives considered. While this is likely to result in a positive effect on the population of Leixlip, greenfield land in the LAP area will be required to facilitate this development. Any development on previously undeveloped or 'greenfield' lands has the potential to result in a negative environmental effect on biodiversity, soils and geology, water resources, landscape and visual and material assets.

Each of the alternative scenarios considered, seek to promote permeability and green linkages throughout the LAP area. This is likely to result in a positive effect on population, human health, air quality and climate, through improved pedestrian connectivity, and through the promotion of walking and cycling in the LAP area. Over-utilisation of the Royal Canal Greenway does however have the potential to interfere with nature conservation objectives and natural heritage sensitivities. A potential negative effect on biodiversity and water and hydrology is therefore identified. The provision of an expanded green buffer/linear open space parkland adjoining the royal canal tow path will however enhance and off set potential negative impacts arising.

The lands at Collinstown are identified as a Strategic Employment Area where a 'Design Framework' has been prepared to guide the future development of these lands. New public open space/parklands at Collinstown are identified under each of the alternative scenarios considered. The provision of this new open space is likely to result in a positive effect on biodiversity, land, soil, population, human health and the landscape and visual setting of Collinstown when compared to the baseline scenario.

### **5.3.1 Alternative Scenario 1**

Alternative Scenario 1 centres on the concept of compact growth/consolidation and densification of the existing town centre and adjoining lands, as is the underlying concept of all of the proposed alternatives.

Alternative Scenario 1 provides for a reduction in the area of land identified for development at Confey to that which is currently provided for under the existing Leixlip Local Area Plan 2017-2023 (the baseline scenario). Approximately 1,500 residential units are provided for on greenfield land at Confey.

A reduction in the size and scale of greenfield development at Confey is likely to result in reduced potential for negative environmental effects. However, this is countered by the identification of new greenfield land targeted for residential development to the east of the town at Black Avenue and to the south of the town along Celbridge Road East.

Any development on previously undeveloped or 'greenfield' lands has the potential to result in a negative environmental effect on biodiversity, soils and geology, water resources, landscape and visual and material assets.

The lands at Collinstown, remain to be zoned for enterprise/employment, as per the existing Leixlip Local Area Plan 2017-2023 however increased open space/parkland provision has been provided for in this area. As this is representative of the baseline scenario, a neutral to positive effect on the subject lands is generally predicted.

### **5.3.2 Alternative Scenario 2**

Alternative Scenario 2 centres on the concept of compact growth/ consolidation and densification of the existing town centre and adjoining lands, as is the underlying concept of all of the proposed alternatives.

Alternative Scenario 2 is similar to Scenario 1 as described in Section 5.3.1, but with reduced allocation of new residential development on greenfield lands to the east (Black Avenue) and south of the town (Celbridge Road East).

While this is considered preferable to Alternative Scenario 1 with regards potential for environmental effects, this scenario still represents the use of new greenfield development not previously identified in the baseline scenario. Any development on previously undeveloped or 'greenfield' lands has the potential to result in a negative environmental effect on biodiversity, soils and geology, water resources, landscape and visual and material assets.

While Alternative Scenario 2 provides for a greater allocation of residential development at Confey when compared with Scenario 1, this is still representative of a reduction in the area of land identified for development at Confey to that which is currently provided for under the existing Leixlip Local Area Plan 2017-2023 (the baseline scenario). Alternative Scenario 2 provides for approximately 1300 residential units at Confey to be developed on greenfield land. Approximately 1,500 residential units of greenfield land at Confey are currently identified for development under the existing Leixlip Local Area Plan 2017-2023.

A reduction in the size and scale of greenfield development at Confey is likely to result in reduced potential for negative environmental effects. However, the proposed greenfield development at Black Avenue and Celbridge Road East is recognised as offering potentially countering effects.

### 5.3.3 Alternative Scenario 3

Alternative Scenario 3 centres on the concept of compact growth/consolidation and densification of the existing town centre and adjoining lands, with additional provisions for the northern expansion of the LAP area.

This concept of northern expansion is realised under Alternative Scenario 3 through the provision of a slightly increased area of land for development at Confey to that which is currently provided for under the existing Leixlip Local Area Plan 2017-2023 (the baseline scenario). Alternative Scenario 3 provides for approximately 1505 residential units at Confey on greenfield land. Approximately 1,500 residential units on greenfield land at Confey are currently identified for development under the existing Leixlip Local Area Plan 2017-2023.

Alternative Scenario 3 also provides for greenfield development to the east of the town at Black Avenue and to the south of the town at Celbridge Road East). While this scenario provides for reduced greenfield development in these locations to that which is proposed under Alternative Scenario 1 and Alternative Scenario 2, it is still representative of an increase in greenfield development to that which is currently provided for under the existing Leixlip Local Area Plan 2017-2023.

Development on previously undeveloped or ‘greenfield’ land has the potential to result in a negative environmental effect on biodiversity, soils and geology, water resources, landscape and visual and material assets.

### 5.3.4 Alternative Scenario 4

Alternative Scenario 4 centres on the concept of compact growth/ consolidation and densification of the existing town centre and adjoining lands, with additional provisions for the western expansion of the LAP area.

The concept of western expansion is realised under Alternative Scenario 4 through the identification of lands at Collinstown for mixed-use development, to include employment, residential, neighbourhood centre uses and public parklands. Some 800 residential units are proposed as part of this mixed-use development under Alternative Scenario 4 on lands at Collinstown.

Collinstown is currently zoned as a strategic employment area to be ‘subject to masterplan’ under the existing Leixlip Local Area Plan 2017-2023 (the baseline scenario). As such, a negative environmental effect is predicted to occur from this proposed change in zoning and increase in mix of land uses.

Alternative Scenario 4 provides for the relocation of Louisa Bridge Train Station ~1.2km west in order to serve the proposed mixed-use development at Collinstown. In considering the baseline scenario of the Draft LAP, which sees the Collinstown area already zoned for development ‘subject to masterplan’, a neutral environmental effect is identified, for the purposes of this assessment, with regards the relocation of the station. Development of any kind has the potential to negatively affect biodiversity, human health, soils and geology, water resources, heritage and the landscape and visual setting of an area, and a detailed environmental assessment would be required at project level, as required.

The relocation of Louisa Bridge Train Station to serve the proposed mixed-use development at Collinstown is, however, likely to result in a positive effect on population, human health, air quality, noise and climate in that enhanced accessibility of sustainable transport is likely to promote increased use of the same, working to reduce traffic congestion, air pollution and ambient noise levels in the LAP area. This is however countered by the removal of the existing train station at Louisa Bridge which currently serves a large residential catchment.

Alternative Scenario 4 also provides for the redevelopment of the land at Louisa Bridge Train Station, currently functioning as a park and ride facility, to playing pitches. As the subject lands are already considered to be ‘developed’, a neutral effect on the environment in general is predicted to occur as a result of this proposed change-in-use.

Alternative Scenario 4 provides for a reduction in the area of land identified for development at Confey to that which is currently provided for under the existing Leixlip Local Area Plan 2017-2023 (the baseline scenario). Alternative Plan Scenario 4 provides for approximately 800 residential units at Confey on greenfield land. Approximately 1,500 residential units at Confey are currently identified for development under the existing Leixlip Local Area Plan 2017-2023.

A reduction in the size and scale of greenfield development at Confey is likely to result in reduced potential for negative environmental effects. However, this is countered by the identification of new greenfield land targeted for residential development to the south and west of the town along Celbridge Road East and at Collinstown.

### **5.3.5 Alternative Scenario 5 (Emerging Preferred Scenario)**

Alternative Scenario 5 centres on the concept of compact growth/consolidation and densification of the existing town centre and adjoining lands, coupled with development over a combination of lands considered in Alternative Scenarios 1-4 as informed by the findings of the Sustainable Planning and Infrastructural Assessment for the Leixlip Local Area Plan 2020-2026 and the Strategic Transport Assessment for the Leixlip Local Area Plan 2020-2026 (STA).

Alternative Scenario 5 provides for a reduction in the area of land identified for development at Confey to that which is currently provided for under the existing Leixlip Local Area Plan 2017-2023 (the baseline scenario). Alternative Plan Scenario 5 provides for c. 1300 residential units at Confey. Approximately 1,500 residential units at Confey are currently identified for development under the existing Leixlip Local Area Plan 2017-2023.

A reduction in the size and scale of greenfield development at Confey is likely to result in reduced potential for negative environmental effects. However, this is countered by the identification of new greenfield land targeted for residential development the east of the town at Black Avenue and to the south of the town at Celbridge Road East. Any development on previously undeveloped or ‘greenfield’ lands has the potential to result in a negative environmental effect on biodiversity, soils and geology, water Resources, landscape and visual and material assets.

Alternative Scenario 5 also provides for upgrades to the existing road network east and west of Confey, linking the subject lands to the R149 to the East, and Kellystown Lane to the West. A new link road through Collinstown from Kellystown Lane providing access to the M4/Celbridge interchange is also proposed under Alternative Scenario 5.

In considering the baseline scenario of the Draft LAP, which sees the Confey area already zoned for development ‘subject to masterplan’, a neutral environmental effect is identified, for the purposes of this assessment, with regards the road upgrade works and new roads objective. Development of any kind has the potential to negatively affect biodiversity, human health, soils and geology, water resources, heritage and the landscape and visual setting of an area, and a detailed environmental assessment would be required at project level, as required.

Road upgrade works and the provision of a new link road in the LAP area will however work towards delivering a more efficient transport network and enhanced accessibility within Leixlip, which is likely to result in a positive effect on the population of the LAP area, and on material assets. However, it should be considered that the provision of new roads may also increase reliance on vehicular modes of transport which has the potential to result in an increase in private car use and associated emissions. A potential negative effect on air quality, noise and climate is therefore identified.

## 6 SEA Objectives, Targets and Indicators

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### 6.1 Introduction

The SEA is designed to assess the potential environmental effect of the policies of the Draft LAP against the environmental baselines established.

The policies and associated recommendations are assessed against a range of established environmental objectives and targets. Indicators that are recommended in the SEA are utilised over the lifetime of the Draft LAP to quantify the level of impact that the policies and recommendations have on the environment. This enables us to measure whether they were successful in promoting the sustainable development of the County.

### 6.2 Environmental Objectives

The formation of the environmental objectives required cognisance of the environmental protection objectives established at a range of levels through the legislation and guidelines outlined in Chapter 2. Global, EU and national level legislation, policy and associated environmental objectives were utilised to develop the environmental objectives for the Draft LAP.

The objectives outlined below are also placed in the context of and linked into the development of the draft policies and recommendations to ensure that the objectives are appropriate for Leixlip.

The environmental objectives are also linked to appropriate targets and indicators outlined in the following sections. The environmental objectives are as follows:

#### **Biodiversity**

- Conserve the diversity of habitats and species by limiting adverse impacts on habitats and species of conservation concern, including the Rye Water Valley/Cartron SAC and to contribute to the protection of the ecological, visual, recreational, environmental and amenity value of the Royal Canal pNHA and Liffey Valley pNHA.

#### **Population and Human Health**

- Meet the future housing demand of Leixlip and provide all of the services required to sustainably meet this demand (e.g. health and sanitation services including waste collection, wastewater treatment and potable water supply, electricity, gas, telecommunications, transportation, education and amenity access).

#### **Land and Soils**

- Protect quality and quantity of existing soil and geology and maintain and preserve the Louisa Bridge Warm Spring site of Geological Heritage.

## Water

- Improve/maintain water quality and the management of the River Rye and River Liffey to comply with the standards of the Water Framework Directive and incorporate the objectives of the Floods Directive into sustainable planning and development.

## Air, Noise & Climate

- Protection of ambient environmental of Leixlip through the implementation of European, national and regional policy and legislation relating to air quality, greenhouse gases, climate change, light pollution noise pollution and waste management.

## Archaeological, Architectural and Cultural Heritage

- Promote the protection and conservation of the archaeological, architectural and cultural heritage of Leixlip, specifically those buildings identified on the Record of Protected Structures, and Recorded Monuments within the plan area, and promote the historic character and visual setting of the Leixlip Architectural Conservation Area.

## Landscape and Visual

- Protect the landscape character, values, sensitivities, focal points and views in the Leixlip Plan Area, particularly the historic character and visual setting of the Leixlip Architectural Conservation Area; and

## Material Assets

- Make best use of existing infrastructure and phase the significant future growth of Leixlip in line with the capacity and delivery of the sustainable development of new physical infrastructure.

## 6.3 Environmental Targets

Each of the Environmental Objectives has a range of Environmental Targets which the LAP Policies and Recommendations are aimed towards. These targets need to be quantifiable to ensure that monitoring can be carried out effectively. The following targets have been established to direct the sustainable implementation of the Policies and Recommendations and to ensure that the environment is maintained and/or improved where possible.

### Biodiversity

- Consider siting of new development on non-sensitive sites.
- Improve/conserves and protect all designated sites and species within and adjacent to the Plan area.
- Deliver the requirement of the Habitats Directive (Article 4, Paragraph 4) for the maintenance or restoration of annexed habitats and species within SACs at a “favourable conservation status.

- Promote the maintenance and, as appropriate, achievement of favourable conservation status of habitats and species, in association with the NPWS and other stakeholders.
- Protect SPAs, Annex I bird species, and regularly occurring migratory bird species and their habitats, and avoid pollution or deterioration of important bird habitats outside SPAs.
- Improve the ecological coherence of Natura 2000 sites by encouraging the management of, maintaining, and where appropriate developing, features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems for marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species.
- Protect NHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries, Refuges for Fauna or Flora and sites proposed for designation.
- Improve/maintain protection for important wildlife sites, particularly urban wildlife corridors and linear and stepping stone features for migration, dispersal and exchange of wildlife.
- Improve access for the appreciation and promotion of wildlife.

### **Population and Human Health**

- Minimise population exposure to high levels of noise, vibration and air pollution.
- Increase modal shift to public transport.
- Co-ordinate land use and transportation policies.
- Improve access to recreation opportunities.

### **Land and Soils**

- Prevent pollution of soil through adoption of appropriate environmental protection procedures during construction and maintenance works on site.
- Ensure polluting substances are appropriately stored and banded.
- Ensure appropriate management of existing contaminated soil in accordance with the requirements of current waste legislation.
- Re-use of brownfield lands, rather than developing Greenfield lands, where possible.
- Minimise the consumption of non-renewable sand, gravel and rock deposits.

### **Water**

- Support the achievement of “good” ecological and chemical status/potential of waterbodies in accordance with the Water Framework Directive.

- Minimise flood risk through appropriate management of flood vulnerable zones.
- Promote sustainable drainage practices to improve water quality and flow.

### **Air, Noise & Climate**

- Minimise air and noise emissions during construction and operation of new developments.
- Promote reduction of greenhouse gas emissions to the atmosphere.
- Limiting climate change and adapting to climate change.

### **Archaeological, Architectural and Cultural Heritage**

- Regeneration of derelict and underutilised heritage sites.
- Improve appearance of areas with particular townscape character.
- Improve protection for protected archaeological sites and monuments and their settings, protected structures and conservation areas and areas of archaeological potential.
- Enhance access to sites of heritage interest.

### **Landscape & Visual**

- Improve protection for landscapes of recognised quality.
- Maintain clear urban/rural distinctions.
- Enhance provision of, and access to, green space in urban areas.
- Ensure development is sensitive to its surroundings.

### **Material Assets**

- Improve availability and accessibility of commercially provided facilities and public services.
- Increase local employment opportunities.
- Improve efficiencies of transport, energy and communication infrastructure.
- Promotion of sustainable transport infrastructure i.e. increased public transport.
- Reduce the generation of waste and adopt a sustainable approach to waste management.

## **6.4 Environmental Indicators**

The assessment of Policies and Recommendations with respect to the Environmental Objectives and Targets is required to be measurable. The Environmental Indicators need to be capable of the following:

- Describing trends in the baseline environment.
- Demonstrating the likely significant effect of the implementation LAP.

- Being used in a monitoring programme.
- Providing an early warning of significant unforeseen adverse effects.
- Prioritising key environmental effects.
- Ensuring the number and range of environmental indicators are manageable in terms of time and resources.

Consequently, a range of Environmental Indicators required to assess the level of impact on the environment are outlined in **Table 6.1**.

**Table 6.1 Environmental Indicators**

Item	SEA Indicator
Biodiversity	Number and extent of Protected Sites. Areas actively managed for conservation. Population and range of Protected Species. Achievement of the Objectives of Biodiversity Plans.
Population & Health	Census population data. Rates of unemployment per area. Dependency ratio Deprivation Index Commuting times and modes of transport % increase in housing (number and type).
Soils & Geology	Rates of re-use/recycling of construction waste. Rates of cement/concrete production. Rates of brownfield site and contaminated land reuse and development. Rates of greenfield development.
Water Resources	Compliance of potable water sources with water quality regulations. Compliance of surface waters with national and international standards. Potable and wastewater treatment capacities versus population. % of wastewater receiving tertiary treatment. Achievement of the Objectives of the River Basin Management Plans. Amount of new developments within flood plains. Annual costs of damage related to flood events.
Air, Noise & Climate	Traffic, Transport and Vehicular survey data. National and region-specific emission data. Compliance with national standards. Reduction in greenhouse gas emissions. Number and extent of emission licensed facilities. Number of energy/renewable energy production facilities. Rates of energy/renewable energy consumption.
Heritage	Updating of inventories to include new sites/features. Achieving the objectives of development plans regarding heritage protection. Range and extent of areas of heritage potential. Range and extent of areas of special planning controls.

Item	SEA Indicator
Landscape & Visual	Range and extent of Amenity Landscapes. Rates of development within designated landscapes. Rates of urban expansion. Rates of deforestation. Rates of agricultural land re-development. % change of land use from rural to urban.
Material Assets	Location/level of Infrastructure. Achievement of development plan objectives. Rates of deprivation. Rate of waste disposal to landfill statistics. Range and extent of recycling facilities and services. Rates of recycling.

## 7 Assessment of Significant Effects

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The approach used for assessing likely significant effects was objectives led. The assessment was primarily qualitative in nature, with some assessment based on expert judgement. This qualitative assessment compares the likely effects against the Strategic Environmental Objectives to see which Policies and Recommendations meet the Strategic Environmental Objectives and which, if any, contradict these.

Particular reference was made to the potential for cumulative effects in association with other relevant plans and programmes within the Kildare/Dublin Metropolitan Area.

Particular regard was also paid to the need for the sustainable development of ecological resources (including the conservation of fish and other species of fauna and flora, habitats and the biodiversity of water ecosystems and commercial and natural fisheries) as economic resources. In conjunction with the Habitats Directive Assessment due consideration was given to potential significant effects of the policies and recommendations on ecological resources for the following areas:

- Surface and ground water quality.
- Surface water hydrology.
- Fish spawning and nursery areas.
- Passage of migratory fish.
- Areas of natural heritage importance.
- Designated marine protected areas.
- Biological diversity.
- Ecosystem structure and functioning.
- Seabirds and marine mammals.
- Fish and shellfish cultivation.
- Sport and commercial fishing and angling.
- Amenity and recreational areas.
- Mineral and aggregate resources.
- Sediment transport and coastal erosion.
- Navigation.
- Other legitimate use of the sea.

## 7.1 Assessment of Environmental Effects

The environmental effects of the Draft LAP objectives were assessed with respect to the existing environmental baseline as outlined in Chapter 4 and the environmental objectives listed in Chapter 6.

The assessment process categorised environmental effects using the ratings outlined in **Table 7.1** which is based on the impact assessment criteria defined by the EPA for environmental impact assessment.

**Table 7.1: Significance Ratings**

Significance of Effects	
	Neutral
	Positive
	Negative
	Uncertain

The matrix outlined in **Table 7.3** highlights these potential effects. It assesses all policies and objectives in the plan. This assessment outlines an unmitigated scenario. Where potential effects are identified, it is expected that these can be mitigated through the implementation of the mitigation measures outlined in Section 8.1.

The environmental effects of the Draft LAP land zonings were also assessed. The matrix outlined in **Table 7.4** highlights these potential effects. It provides a site-specific assessment of the potential effects associated with any change in land use zonings throughout the Draft LAP area.

It is important to note that while the planning objectives outlined in the Kildare County Development Plan (CDP) have not been repeated, they are applicable to the Draft LAP.

Having regard to the objectives of the CDP, in particular the objectives outlined in **Table 7.2** below, it is assumed that the necessary provisions for the protection of biodiversity, land and soils, water, heritage and landscape will be undertaken prior to any development within the LAP area.

**Table 7.2 Relevant Kildare County Development Plan Policies and Objections**

<b>Environmental Receptor</b>	<b>Relevant objectives</b>
	<b>County Development Plan Objectives</b>
<b>Biodiversity</b>	NH1, NH2, NH3, NH4, NH5, NH6, NH7, NH8, NH9, NH10, NH11, NH12, NH13, NH14, NH15, NH16 NHO1, NHO2, NHO3, NHO4, NHO5, NHO6, NHO7, NHO8, NHO9, NHO10
<b>Population and Human Health</b>	LE1, LEO1, LEO2, LEO3, C1, C2, C3, EF1, EF2, EF3, EF4, EF5, EFO1, EFO2, EFO3, EFO4, EFO5, EFO6, EFO7 HS1, HS2, HS3, HS4, HS5, HSO1, HSO2, HSO3, HSO4, HSO5 MT1, MT2, MT3, MT4, MT6, MT7, MT8, MT9, MT11, MT12, MT15, MTO1, MTO3, MTO4 PT1, PT2, PT3, PT4, PT5, PT6, PT7, PT8, PT9, PT10, PT11, PT12, PT13 PTO1, PTO2, PTO3, PTO4, PTO5, PTO6, PTO8 WC1, WC2, WC4, WC5, WC6, WC7, WC8, WC9, WC10, WC14 WCO1, WCO2, WCO3, WCO4, WCO5, WCO6, WCO7, WCO8, WCO9
<b>Land and Soils</b>	EO18, EO19, EO20, EO21, EO22, EO23 VM5, VM10 VM1, VM2, VM3, VM11, VM14, PC1
<b>Water</b>	WQ1, WQ2, WQ3, WQ4, WQ5, WQ6
<b>Air, Noise and Climate</b>	ER1, ER2, ER3, ER4, ER5, ER6, ER7, ER8, ERO1 WE1, WE2, WE3, WE4, WE5, WEO1 HD1, HD2, HD3, HD4 SE1, SE2, SE3, SE4 BE1, BE2, BE3 EW1, EW2 EB1, EB2, EB3, EBO1 GT1 MT1, MT2, MT3, MT4, MT6, MT7, MT8, MT9, MT11, MT12, MT15, MTO1, MTO3, MTO4 PT1, PT2, PT3, PT4, PT5, PT6, PT7, PT8, PT9, PT10, PT11, PT12, PT13 PTO1, PTO2, PTO3, PTO4, PTO5, PTO6, PTO8 WC1, WC2, WC4, WC5, WC6, WC7, WC8, WC9, WC10, WC14 WCO1, WCO2, WCO3, WCO4, WCO5, WCO6, WCO7, WCO8, WCO9 PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC9, PC10
<b>Archaeological, Architectural and Cultural Heritage</b>	PS1, PS2, PS3, PS4, PS5, PS6, PS7, PS8, PS9, PS10, PS11, PS12, PS13, PS14, PS15, PS16, PS17, PS18, PS19, PS20, PS21 PSO1, PSO2, PSO3, PSO4, PSO5, PSO6, PSO7, PSO8 ACO1, ACO2, ACO3, ACO4 CH01, CH02 VS1, VA2, VA3, VA4, VA5, VA6, VA7, VA8 VAO1, VAO2 ACA1, ACA2, ACA3, ACA4, ACA5 ACA01, ACA02, ACA03, AH1, AH2, AH3, AH4, AH5, AH6, AH7, AH8, AH9, AH10, AH11, AH12 AO1, AO2, AO3, AO4, AO5 HF1 HFO1, HFO1

<b>Landscape &amp; Visual</b>	LA1, LA2, LA3, LA4, LA5, LA6, LA7 LO1, LO2, LO3, LO4, LO5, LO6, LO7, LO8, LO9, LO10, LO11 LU1, LU2, LU3, LU4, LU5 TA1, TA2, TA3, TA4 WC1, WC2, WC3, WC4, WC5, WC6, WC7, WC8, WC9
<b>Material Assets</b>	WW1, WW2, WW3, WW4, WW5, WW6, WW7, WW8, WW9, WW10, WW11, WW12, WW13 MT1, MT2, MT3, MT4, MT6, MT7, MT8, MT9, MT11, MT12, MT15, PT1, PT2, PT3, PT4, PT5, PT6, PT7, PT8, PT9, PT10, PT11, PT12, PT13 PTO1, PTO2, PTO3, PTO4, PTO5, PTO6, PTO8 WC1, WC2, WC4, WC5, WC6, WC7, WC8, WC9, WC10, WC14 WCO1, WCO2, WCO3, WCO4, WCO5, WCO6, WCO7, WCO8, WCO9 WM1, WM2, WM3, WM4, WM5, WM6, WM7, WM9, WM10, WM11, VM15

### 7.1.1 Principal Environmental Effects

The matrix outlined in **Table 7.3** highlights these potential effects. It assesses all policies and objectives in the Draft LAP. This assessment outlines an unmitigated scenario. Where potential effects are identified, it is expected that these can be mitigated through the implementation of the mitigation measures outlined in Section 8.1.

The environmental effects of the Draft LAP land zonings were also assessed. The matrix outlined in **Table 7.4** highlights these potential effects. It provides a site-specific assessment of the potential effects associated with any change in land use zonings throughout the Draft LAP area.

**Table 7.3: Assessment of Effects- Policies and Objectives of the Draft LAP**

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>Vision for Leixlip</b>										
S1	To accommodate housing growth in Leixlip in accordance with the Kildare County Development Plan Core Strategy.									The Kildare County Development Plan is an existing plan/policy and compliance with the same is therefore representative of the baseline environment. An overall neutral effect on the environment is therefore identified for the purpose of this assessment.
S2	To protect and enhance, including through appropriate regeneration, the quality, ambience and vitality of the traditional heart of Leixlip Town Centre in order to create a pleasant and attractive environment for local shopping, business, tourism, recreation and living needs alongside the enhancement and expansion of the neighbourhood centre offering in a manner capable of accommodating the projected future population.									<p>The regeneration and revitalisation of Leixlip town centre is likely to result in a positive effect on the population and landscape and visual setting of the LAP area, where development is implemented at an appropriate scale and where development is responsive to its architectural surroundings. Urban regeneration of this nature does however have the potential to negatively affect features of archaeological and architectural heritage, should development be proposed in the existing Architectural Conservation Area or Zone of Archaeological Potential.</p> <p>An uncertain effect on heritage is therefore identified for the purposes of this assessment, in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred, if any.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
S3	To promote, support, and enable sustainable economic development and employment generation in the town consistent with its role as a large town and optimising on its strategic location in the Dublin Metropolitan Area.								<p>The promotion of sustainable economic development and employment generation in Leixlip is likely to result in a positive effect on the population of Leixlip, through increased residential, employment and social opportunities., and potential inward investment.</p> <p>While economic growth is generally indicative of increased development, this objective does not make specific provisions for the same. An uncertain environmental effect is therefore identified for the purposes of this assessment in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred, if any.</p> <p>Refer to the assessment of objectives set out under Chapter 6 of the Draft LAP included later in this Table 7.3, and the site-specific zoning assessment in Table 7.4 for a detailed assessment of development objectives and new zoning provisions.</p>
S4	To deliver new residential development within Leixlip to support existing community infrastructure, recreation and amenity facilities and to provide new facilities in tandem alongside identified new housing lands.								<p>The provision of new residential opportunities in Leixlip is likely to result in a positive effect on population and human health through the provision of required housing. A potential negative effect on material assets is identified in that a high population density could cause a strain on local services and utilities- such as water supply and wastewater infrastructure. Refer to Table 8.1 for mitigation measures</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
S5	To promote and facilitate a sustainable transport system for Leixlip that prioritises walking, cycling and public transport and provides an appropriate level of road infrastructure, road capacity and traffic management to support the future development of the town.								<p>The provision and facilitation of enhanced transport systems in the LAP area is likely to result in a positive effect on population and human health.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>
S6	To phase significant future growth in line with the capacity and delivery of supporting physical infrastructure.								<p>In ensuring that new development is managed and phased alongside appropriate infrastructure, a potential strain on existing services and utilities can be avoided, and additional infrastructure or capacity can be provided for, as necessary. A positive effect on material assets and population and human health is therefore identified.</p> <p>The assessment of potential for significant environmental effects is largely dependent on the nature, scale and location of the development referred. Refer to the assessment of objectives set out under Chapter 7 and Chapter 9 of the Draft LAP included later in this Table 7.3.</p>
S7	To protect, conserve and manage the unique built heritage of the town and to encourage sensitive sustainable development so as to ensure its survival and maintenance for future generations.								<p>The protection, conservation and management of built heritage is likely to result in a positive effect on heritage, and on the landscape and visual setting of the LAP area.</p> <p>A potential positive effect on the population is also identified through the promotion of sensitive and sustainable development in the LAP area.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
S8	To protect, enhance, create and connect natural heritage, including areas of international biodiversity importance, high quality amenity areas and other green spaces throughout Leixlip for both biodiversity and recreational use.	Yellow	Green	Yellow	Yellow	Green	Yellow	Yellow	Blue	<p>Protection of natural heritage areas and features is likely to result in an overall positive environmental effect. However, this positive effect could be countered by the promotion of recreational use in these areas. Increased human interaction and subsequent pollution potential has the potential to negatively affect natural heritage areas. An overall uncertain environmental effect is therefore identified for the purposes of this assessment.</p> <p>A positive effect on population, human health and air, noise and climate is however identified as a result of the protection of open spaces for both biodiversity and recreational use.</p>
S9	To ensure that best practice urban design principles are applied to all new development, based on the principle that well planned and integrated development enhances the sustainability, attractiveness and quality of an area.	Blue	Green	Blue	Blue	Green	Green	Blue	Blue	<p>The application of best practise urban design principles to all new development, coupled with the commitment to deliver integrated development that enhances the sustainability and quality of Leixlip will likely result in a positive effect on the landscape and visual setting of the LAP area, as well as on local heritage. This is particularly true with regards development that is proposed in, or in proximity to, the existing Architectural Conservation Area.</p> <p>A well-planned and attractive public realm is likely to result in a positive effect on population and human health.</p>
S10	To phase new development to ensure that it occurs in an orderly and efficient manner in accordance with proper planning and sustainable development.	Yellow	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Green	<p>In ensuring that new development is managed and phased alongside appropriate infrastructure, a potential strain on existing services and utilities can be avoided, and additional infrastructure or capacity can be provided for, as necessary. A positive effect on material assets and population and human health is therefore identified.</p> <p>The assessment of potential for significant environmental effects is largely dependent on the nature, scale and location of the development referred. Refer to the assessment of objectives set out under Chapter 7 and Chapter 9 of the Draft LAP included later in this Table 7.3.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>Core Strategy</b>										
<b>CS1</b>	It is the policy of the Council to support the sustainable long-term growth of Leixlip in accordance with the core strategy of the Kildare County Development Plan 2017-2023 and provisions of the National Planning Framework, 2018 and the Regional Spatial and Economic Strategy (when adopted).									<p>The Kildare County Development Plan (CDP) and NPF represent existing plans, policies or programmes, and compliance with the same should therefore be representative of the baseline scenario. An overall neutral environmental effect is therefore identified for the purposes of this assessment.</p> <p>However, as outlined in The Direction (Refer to Section 2.1), the existing Leixlip Local Area Plan 2017-2023 is currently not in compliance with the Core Strategy of the Kildare CDP, as it does not currently meet the statutory housing requirements set out therein.</p> <p>Compliance with the Core Strategy of the Kildare CDP under the Draft LAP is likely to result in a positive effect on the population of the LAP area, through fulfilment of these statutory housing requirements.</p> <p>Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new residential zoning provisions.</p>
<b>CS1.1</b>	To support and facilitate compact growth through the sustainable intensification and consolidation of the town centre and established residential areas.									<p>By concentrating on the concept of compact growth and consolidation of the town centre, rather than limiting opportunities for residential, social and commercial expansion to greenfield lands at the periphery of the LAP area, the potential for urban sprawl and its associate negative environmental effects is reduced, and development can be focused on existing made ground in the urban centre. An overall neutral environmental effect is therefore identified for the purposes of this assessment.</p> <p>The expansion of the urban centre of Leixlip is likely to result in a positive effect on the population, as a result of increased residential, social and commercial opportunities and potential economic investment associated with the same.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
									<p>Infill development provides an opportunity for the regeneration and revitalisation of Leixlip town centre, where vacant or derelict sites are targeted for redevelopment. This is likely to result in a positive effect on the population and landscape and visual setting of the LAP area, where development is implemented at an appropriate scale and where development is responsive to its architectural surroundings. Urban regeneration of this nature does however have the potential to negatively affect features of archaeological and architectural heritage, should development be proposed in the existing Architectural Conservation Area or Zone of Archaeological Potential.</p> <p>It should also be considered that an increase in the population density of the town centre and adjoining lands could result in a potential strain on services and utilities in the area- such as water supply, wastewater and electricity demand. Refer to mitigation measures outlined in Table 8.1.</p> <p>Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>
CS1.2	To focus new residential development on appropriately zoned lands, key development areas in a phased manner alongside appropriate physical and social infrastructure.								<p>In ensuring that new residential development is managed and phased alongside appropriate infrastructure, a potential strain on existing services and utilities can be avoided, and additional infrastructure or capacity can be provided for as necessary. A positive effect on material assets and population and human health is therefore identified.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
CS1.3	To support and facilitate development in accordance with the objectives set out in Section 12.8 of this Local Area Plan.									<p>The lands at Confey are already zoned for development under the existing Leixlip LAP 2017-2023. An overall ‘neutral’ environmental effect is therefore identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions</p>
CS1.4	To promote and support the development of an enterprise and employment campus at Collinstown, Leixlip in accordance with the design Design Guidance and Principles for these lands.									<p>The existing Leixlip LAP 2017-2023 currently identifies the land at Collinstown as a strategic location for future Business and Technology uses to be developed ‘subject to masterplan’. As Objective CSO1.4 is, as such, representative of the baseline scenario, an overall neutral environmental effect is envisaged.</p> <p>However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions</p>
CSO1.5	To support and facilitate development on zoned land based on the policies and objectives of the <i>Kildare Development Plan 2017 – 2023</i> .									<p>The Kildare County Development Plan represents an existing plan, policy or programme and compliance with the same should therefore be representative of the baseline scenario. A neutral environmental effect is therefore identified for the purposes of this assessment.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>Urban Centre and Retailing</b>										
UCR1	It is the policy of the Council To protect the quality, visual character, cultural heritage, ambience and vitality of the traditional heart of Leixlip Town Centre so that it meets the retailing and service needs of the area, in addition to offering a pleasant and attractive environment for shopping, business, tourism, recreation and living.									<p>Policy UCR1 is likely to result in a positive effect on population and human health as a result of the proposed improvements to the urban centre and potential for associated inward investment and employment opportunities.</p> <p>The protection of the visual character, cultural heritage, ambience and vitality of the town centre is also likely to result in a positive effect on the landscape and visual setting and heritage of Leixlip town.</p>
UCR1.1	To promote the town centre as a priority location for commercial, civic, social and cultural development and to promote new development that consolidates the existing urban core.									<p>By concentrating on the concept of compact growth and consolidation of the town centre, rather than limiting opportunities for residential, social and commercial expansion to greenfield lands at the periphery of the LAP area, the potential for urban sprawl and its associate negative environmental effects is reduced, and development can be focused on existing made ground in the urban centre. An overall neutral environmental effect is therefore identified for the purposes of this assessment.</p> <p>The expansion of the urban centre of Leixlip is likely to result in a positive effect on the population, as a result of increased residential, social and commercial opportunities and potential economic investment associated with the same.</p> <p>Infill development provides an opportunity for the regeneration and revitalisation of Leixlip town centre, where vacant or derelict sites are targeted for redevelopment. This is likely to result in a positive effect on the population and landscape and visual setting of the LAP area, where development is implemented at an appropriate scale and where development is responsive to its architectural surroundings.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
										<p>Urban regeneration of this nature does however have the potential to negatively affect features of archaeological and architectural heritage, should development be proposed in the existing Architectural Conservation Area or Zone of Archaeological Potential.</p> <p>It should also be considered that an increase in the population density of the town centre and adjoining lands could result in a potential strain on services and utilities in the area- such as water supply, wastewater and electricity demand. Refer to Mitigation Measures in Table 8.1</p>
UCR1.2	<p>To improve the quality, ambience, vitality and vibrancy of the town centre, including:</p> <ul style="list-style-type: none"> <li>(i) To promote an appropriate mix of day and night time uses.</li> <li>(ii) To seek to Facilitating development that will act as a dynamic centre to attract and retain business in the town centre development which will ensure that the town centre remains a dynamic and attractive place.</li> </ul>									<p>Objective UCR1.2 is likely to result in a positive effect on population and human health as a result of the proposed improvements to the urban centre and potential for associated inward investment and employment opportunities.</p> <p>An ‘unknown’ effect on heritage is identified for the purposes of this assessment, as it is not possible to determine whether any redevelopment is proposed within the existing Architectural Conservation Area or Zone of Archaeological Protection</p> <p>Where any physical improvements to the quality of the town centre are envisaged, a positive effect on the landscape and visual setting is predicted.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
UCR1.3	To encourage and facilitate the full use of buildings and sites and in particular the use of upper floors and back lands, with due cognisance to quality of urban design, integration and linkage.								<p>By concentrating on the concept of compact growth and consolidation of the town centre, rather than limiting opportunities for residential, social and commercial expansion to greenfield lands at the periphery of the LAP area, the potential for urban sprawl and its associate negative environmental effects is reduced, and development can be focused on existing made ground in the urban centre. An overall neutral environmental effect is therefore identified for the purposes of this assessment.</p> <p>The expansion of the urban centre of Leixlip is likely to result in a positive effect on the population, as a result of increased residential, social and commercial opportunities and potential economic investment associated with the same.</p> <p>Infill development provides an opportunity for the regeneration and revitalisation of Leixlip town centre, where vacant or derelict sites are targeted for redevelopment. This is likely to result in a positive effect on the population and landscape and visual setting of the LAP area, where development is implemented at an appropriate scale and where development is responsive to its architectural surroundings. Urban regeneration of this nature does however have the potential to negatively affect features of archaeological and architectural heritage, should development be proposed in the existing Architectural Conservation Area or Zone of Archaeological Potential.</p> <p>It should also be considered that an increase in the population density of the town centre and adjoining lands could result in a potential strain on services and utilities in the area- such as water supply, wastewater and electricity demand.</p>
UCR1.4	To improve the accessibility of the town centre with particular emphasis on creating an environment that is accessible to pedestrians and cyclists.								<p>Enhanced accessibility of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>UCR2</b>	It is the policy of the Council to support the retail function of Leixlip through a combination of redevelopment of appropriate infill and opportunity sites in the town centre, expansion opportunities at existing neighbourhood centres in conjunction with the development of a new retail neighbourhood centre at Confey and Collinstown									<p>Provision of an enhanced retail function in the LAP area is likely to result in a positive effect on population and human health.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>
<b>UCR2.1</b>	To ensure the type, quantum and location of future retail floorspace provision in Leixlip is consistent with the requirements and recommendations of the County Development Plan, relevant regional policy frameworks and national planning guidelines.									<p>The Kildare County Development Plan represents an existing plan, policy or programme and compliance with the same should therefore be representative of the baseline scenario. A neutral environmental effect is therefore identified for the purposes of this assessment.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
UCR2.2	To support and facilitate the development of retail, retail services and niche retailing in the town centre area, including new/infill development and redevelopment of an appropriate scale.									<p>Enhanced retail offerings in the town centre is likely to result in a positive effect on population and human health through provision of improved services, and the potential for employment opportunities.</p> <p>By concentrating on the concept of compact growth and consolidation of the town centre, rather than limiting opportunities for residential, social and commercial expansion to greenfield lands at the periphery of the LAP area, the potential for urban sprawl and its associate negative environmental effects is reduced, and development can be focused on existing made ground in the urban centre. An overall neutral environmental effect is therefore identified for the purposes of this assessment.</p> <p>Infill development provides an opportunity for the regeneration and revitalisation of Leixlip town centre, where vacant or derelict sites are targeted for redevelopment. This is likely to result in a positive effect on the population and landscape and visual setting of the LAP area, where development is implemented at an appropriate scale and where development is responsive to its architectural surroundings. Urban regeneration of this nature does however have the potential to negatively affect features of archaeological and architectural heritage, should development be proposed in the existing Architectural Conservation Area or Zone of Archaeological Potential.</p> <p>It should also be considered that an increase in the population density of the town centre and adjoining lands could result in a potential strain on services and utilities in the area- such as water supply, wastewater and electricity demand.</p> <p>Further, a high population density in an urban centre has the potential to give rise to negative effects on air quality, noise and climate- due to increased emissions. Refer to Table 8.1 for mitigation measures.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
UCR2.3	To support and facilitate appropriate levels of expansion to the established retail Neighbourhood centres.	Yellow	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	<p>The expansion of existing retail neighbourhood centres is likely to result in a positive effect on population and human health through provision of required services.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>
UCR2.4	To support the development of new local retail facilities in conjunction with the development of a new residential area at Confey north of the railway line in accordance with design principles set out in the Confey Urban Design Framework.	Blue	Green	Blue	Blue	Blue	Blue	Blue	Blue	<p>The development of new retail facilities at Confey is likely to result in a positive effect on the population of Leixlip, as a result of enhanced services.</p> <p>The lands at Confey are already zoned for development under the existing Leixlip LAP 2017-2023. An overall ‘neutral’ environmental effect is therefore identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p>
UCR2.5	To support the development of a new local neighbourhood centre within the Collinstown Business Campus. The provision of this proposed neighbourhood centre will only be permitted once c.30% of the overall campus has been developed and occupied.	Blue	Green	Blue	Blue	Blue	Blue	Blue	Blue	<p>The development of a new local neighbourhood centre at Collinstown is likely to result in a positive effect on the population of Leixlip, as a result of enhanced services.</p> <p>The lands at Collinstown are already zoned for development under the existing Leixlip LAP 2017-2023. An overall ‘neutral’ environmental effect is therefore identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
	The provision of such services shall be required once 50% of the overall site has been developed.									
UCR2.6	To protect the primacy of the town centre as the core retail area in Leixlip, through the application of a sequential approach to retail development, in accordance with the Retail Planning Guidelines for Planning Authorities, DECLG (2012).									<p>By concentrating on the concept of compact growth and consolidation of the town centre, rather than limiting opportunities for residential, social and commercial expansion to greenfield lands at the periphery of the LAP area, the potential for urban sprawl and its associate negative environmental effects is reduced, and development can be focused on existing made ground in the urban centre. An overall neutral environmental effect is therefore identified for the purposes of this assessment.</p> <p>The expansion of the urban centre of Leixlip is likely to result in a positive effect on the population, as a result of increased residential, social and commercial opportunities and potential economic investment associated with the same.</p> <p>By ensuring the sequential approach to retail development, a positive effect on material assets is identified in that a strain on services and utilities can be avoided, and additional capacity provided for, as necessary.</p>
UCR2.7	To encourage and facilitate the reuse and regeneration of derelict land and buildings for retail and other Town Centre uses, with due cognisance of the character, heritage and design requirements for the Architectural Conservation Area (ACA).									<p>By concentrating on the concept of compact growth and consolidation of the town centre, rather than limiting opportunities for residential, social and commercial expansion to greenfield lands at the periphery of the LAP area, the potential for urban sprawl and its associate negative environmental effects is reduced, and development can be focused on existing made ground in the urban centre. An overall neutral environmental effect is therefore identified for the purposes of this assessment.</p> <p>The expansion of the urban centre of Leixlip is likely to result in a positive effect on the population, as a result of increased residential, social and commercial opportunities and potential economic investment associated with the same.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
									<p>Infill development provides an opportunity for the regeneration and revitalisation of Leixlip town centre, where vacant or derelict sites are targeted for redevelopment. This is likely to result in a positive effect on the population and landscape and visual setting of the LAP area, where development is implemented at an appropriate scale and where development is responsive to its architectural surroundings. Urban regeneration of this nature does however have the potential to negatively affect features of archaeological and architectural heritage, should development be proposed in the existing Architectural Conservation Area or Zone of Archaeological Potential. The provisions, however, for due cognisance of the ACA in development proposals is noted.</p> <p>It should also be considered that an increase in the population density of the town centre and adjoining lands could result in a potential strain on services and utilities in the area- such as water supply, wastewater and electricity demand.</p>
UCR2.8	To support the development of retail-led tourism associated with the natural and built heritage assets of Leixlip.								<p>The development of retail-led tourism in the LAP area is likely to result in a positive effect on the population due to the provision of employment opportunities and potential for economic investment.</p> <p>Increased human interaction with features of natural or heritage significance has the potential to result in a negative effect on the integrity of the same.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the tourism initiatives referred. Refer to the assessment of objectives set out under Chapter 6 of the Draft LAP included later in this Table 7.3, and the site-specific zoning assessment in Table 7.4 for a detailed assessment of development objectives and new zoning provisions.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>TCR 1:</b>	To facilitate and progress the regeneration of the town centre through 'Active Land Management' measures set out under the Urban Regeneration and Housing Act 2015 and the Derelict Sites Act 1990 (as amended)									The Urban Regeneration and Housing Act 2015 and the Derelict Sites Act 1990 (as amended) represents an existing plan, policy or programme and compliance with the same should therefore be representative of the baseline scenario. A neutral environmental effect is therefore identified for the purposes of this assessment.
<b>TCR 2:</b>	To progress the regeneration of suitable town centre lands in a co-ordinated manner which respects and enhances existing uses along Main Street through the identification of key regeneration sites.									<p>By concentrating on the concept of compact growth and consolidation of the town centre, rather than limiting opportunities for residential, social and commercial expansion to greenfield lands at the periphery of the LAP area, the potential for urban sprawl and its associate negative environmental effects is reduced, and development can be focused on existing made ground in the urban centre. An overall neutral environmental effect is therefore identified for the purposes of this assessment.</p> <p>The expansion of the urban centre of Leixlip is likely to result in a positive effect on the population, as a result of increased residential, social and commercial opportunities and potential economic investment associated with the same.</p> <p>Infill development provides an opportunity for the regeneration and revitalisation of Leixlip town centre, where vacant or derelict sites are targeted for redevelopment. This is likely to result in a positive effect on the population and landscape and visual setting of the LAP area, where development is implemented at an appropriate scale and where development is responsive to its architectural surroundings. Urban regeneration of this nature does however have the potential to negatively affect features of archaeological and architectural heritage, should development be proposed in the existing Architectural Conservation Area or Zone of Archaeological Potential. The provisions, however, for due cognisance of the ACA in development proposals is noted.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
									It should also be considered that an increase in the population density of the town centre and adjoining lands could result in a potential strain on services and utilities in the area- such as water supply, wastewater and electricity demand.
<b>REG1.1</b>	To facilitate the redevelopment of North Main Street Backlands in a co-ordinated manner which facilitates a mix of residential/retail and commercial uses. The development of the site shall be subject to an agreed action plan with the planning authority for the entire site and will be carried out in a phased manner.								<p>The provision of required residential, retail and commercial uses is likely to result in a positive effect on the population of the LAP area.</p> <p>By concentrating on the concept of compact growth and consolidation of the town centre, rather than limiting opportunities for residential, social and commercial expansion to greenfield lands at the periphery of the LAP area, the potential for urban sprawl and its associate negative environmental effects is reduced, and development can be focused on existing made ground in the urban centre. While this is considered positive, the subject site does consist of some greenfield land, and a potential negative environmental effect is therefore also identified. An uncertain environmental effect is therefore noted for the purposes of this assessment.</p> <p>Infill development provides an opportunity for the regeneration and revitalisation of Leixlip town centre, where vacant or derelict sites are targeted for redevelopment. This is likely to result in a positive effect on the population and landscape and visual setting of the LAP area, where development is implemented at an appropriate scale and where development is responsive to its architectural surroundings</p> <p>The proposed development area is noted however to encroach on the designated Architectural Conservation Area, and as such, a potential negative effect on features of heritage significance is identified. Refer to Table 8.1 for mitigation measures.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>REG1.2</b>	To support the provision of an entrance and egress onto Main Street via the new street which shall be subject to agreement with the Planning and Transportation Sections of Kildare County Council and shall include improvement measures along the R148 and at the R148 Junction at Mill Lane.									<p>Road improvement measures have the potential to result in a negative effect on biodiversity, land, soils, water, air, noise, climate and heritage, depending on the size, scale and location of the proposed works. Refer to Table 8.1 for mitigation measures</p> <p>A positive effect on population and human health is envisaged through improved access to and quality of key transport routes in the LAP area.</p>
<b>REG1.3</b>	The new street design shall provide pedestrian and cycle permeability through the site connecting to the main street to the south, to the west at Captains Hill and north towards St. Mary's Park.									<p>Enhanced accessibility of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.</p> <p>The proposed new street does however fall within the existing Architectural Conservation Area and Zone of Archaeological Protection. As such, a potential negative effect on heritage is identified. Refer to Table 8.1 for mitigation measures</p>
<b>REG1.4</b>	The design of new buildings and land uses within this regeneration site shall be sympathetic to the existing adjoining properties while also being orientated in a manner which provides passive surveillance of the proposed new street and pedestrian/cycle connections through the site.									<p>The provision of sympathetic design proposals within the regeneration site which offer passive surveillance to the new street and pedestrian/cycle connection will likely result in a positive effect on population and human health, through the provision of a safe, open and social public realm and sustainable transport network.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>REG1.5</b>	The overall development shall provide for adequate parking provision for the various uses proposed within the site and shall reserve additional lands within the site for a new dedicated car park to facilitate access to the existing uses located on the Main Street.									<p>The provision of additional parking facilities is likely to result in a positive effect on the population of the LAP area.</p> <p>The subject site consists of some greenfield land, and as such, the development of the same has the potential to result in an overall negative environmental effect. Refer to Table 8.1 for mitigation measures</p> <p>Provision of increased car parking facilities in the town centre has the potential to facilitate a reliance on private car use and discourage a move towards more sustainable forms of transport in the LAP area. A potential negative effect on air, noise and climate is therefore identified. Refer to Table 8.1 for mitigation measures</p> <p>The proposed development area is noted to encroach on the designated Architectural Conservation Area, and as such, a potential negative effect on features of heritage significance is identified. Refer to Table 8.1 for mitigation measures</p>
<b>UCR3</b>	It is the policy of the Council to actively encourage, support and facilitate environmental and public realm improvements in Leixlip to address environmental quality, urban design, safety, identity and traffic impact.									Objective UCR3 is likely to result in an overall positive environmental effect.
<b>UCR3.1</b>	To ensure that all new development in the town centre contributes positively to and enhances the streetscape and public realm of Leixlip.									The enhancement of the streetscape and public realm of Leixlip town is likely to result in a positive effect on population and human health by means of improved amenities, social opportunities and the potential for economic investment and associated employment opportunities.

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
										Enhancements to the streetscape and public realm would also likely result in a positive effect on the landscape and visual setting of the town, and local features of architectural and archaeological heritage.
UCR3.2	To actively engage with the community, developers and other agencies to secure resources for the enhancement, renewal and regeneration of the public realm in Leixlip.									<p>The enhancement of the streetscape and public realm of Leixlip town is likely to result in a positive effect on population and human health by means of improved amenities, social opportunities and the potential for economic investment and associated employment opportunities.</p> <p>Enhancements to the streetscape and public realm would also likely result in a positive effect on the landscape and visual setting of the town, and local features of architectural and archaeological heritage.</p>
UCR3.3	To reduce the use of line-marking and signage on Main Street.									Objective UCR3.3 is likely to result in a positive effect on the landscape and visual setting, as well as the architectural integrity of the main street through facilitating a reduction in 'street clutter.'
UCR3.4	To develop a multiuse central hub/node at Arthur Guinness Square and strengthen the connection between Main Street and River Liffey.									<p>The development of a central hub/node at Arthur Guinness Square is currently identified under the existing Leixlip LAP 2017-2023 as representing 'Public Realm Improvement No. 1'</p> <p>Objective UCR3.5 therefore represents the baseline scenario and a neutral environmental effect is identified for the purposes of this assessment.</p> <p>However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
UCR3.5	To facilitate the extension, where appropriate, of the riverside walk along the northern bank of the River Liffey from William Roantree Park to Liffey Bridge.	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	<p>The extension of the riverside walkway is currently identified under the existing Leixlip LAP 2017-2023 as part of the Framework for Proposed Public Realm Improvements in Leixlip</p> <p>Objective UCR3.6 therefore represents the baseline scenario and a neutral environmental effect is identified for the purposes of this assessment.</p> <p>However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions</p>
UCR3.6	To facilitate the redevelopment of Ralphp Square and strengthen the connection between Main Street and the River Liffey.	Blue	Green	Blue	Blue	Blue	Blue	Green	Blue	<p>The redevelopment of Ralphp Square is likely to result in a positive effect on population and human health and on the landscape and visual setting of the LAP area, through enhancement of the public realm.</p> <p>As the development required for the successful implementation of Objective UCR03.7 would be minor in nature and centralised on existing made ground in the urban centre, a generally neutral environmental effect is identified.</p>
UCR3.7	To encourage incidental play at suitable locations along the River Liffey walkway; opportunities may be possible within the riverside woodland adjacent Rye River Mall and at the riverside amenity William Roantree Park.	Yellow	Green	Yellow	Blue	Blue	Yellow	Blue	Blue	<p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred.</p> <p>A positive effect on population and human health is identified through provision of enhanced amenity facilities.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
UCR3.8	To investigate options to connect the Rye River Walkway to Main Street, including the possibility of re-opening closed archways off Main Street.								<p>A positive effect on population and human health is envisaged through the enhancement of pedestrian permeability in the LAP area, improved access and promotion of walking and cycling as alternative transport modes.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Should Objective UCR3.9 give rise to development in proximity to the River Rye, a potentially negative environmental effect is identified. However, should the objective be limited to the re-opening of the existing archways, an overall neutral environmental effect would likely occur.</p>
<b>Public Realm Objective 1: Arthur Guinness Square</b>	It is proposed to improve the connection between the town centre and the River Liffey by developing a central hub/node at Arthur Guinness Square. By promoting a multi-use environment at this location, it can offer a zone for pop-up venues and gatherings whilst still operating as a car-park. As the river walkway and Arthur Guinness Square is somewhat disjointed from the Main Street, the design proposal for Arthur Guinness Square seeks to encourage and strengthen this important pedestrian link.								<p>The development of a central hub/node at Arthur Guinness Square is currently identified under the existing Leixlip LAP 2017-2023 as representing ‘Public Realm Improvement No. 1’</p> <p>Public Realm Objective 1 is therefore representative of the baseline scenario and a neutral environmental effect is identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
	<p>Objective 1 may be achieved through:</p> <ul style="list-style-type: none"> <li>• A carefully designed approach to external ground plans to encourage and regularise a range of multi-use zones; which shall include pedestrian linkages (to/from the town centre connecting to Arthur Guinness Square), car-parking and/or market stalls, stage etc for occasional events.</li> <li>• A strong, safe and well demarcated pedestrian link from Main Street to Arthur Guinness Square</li> <li>• Encouraging link between the Main Street and the river setting. Figure 5-4 illustrates the potential of Arthur Guinness Square.</li> </ul>								

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>Public Realm Objective 2: Riverside Boardwalk</b>	<p>The setting of Leixlip Town Centre brings a high scenic quality, made particularly attractive by the confluence of the Liffey and the Rye and the Leixlip Boat House which is a focal point behind Arthur Guinness Square.</p> <p>There is an opportunity to extend the riverside walk along the northern bank of the River Liffey from William Roantree Park to the Liffey Bridge opening up the river to both Arthur Guinness Square and William Roantree Park. The practicalities of linking Liffey Bridge to the riverside walkway can be further explored to ensure a circuitous pedestrian link which will offer a strong amenity to the town centre. Objective 2 may be achieved through:</p>									<p>The extension of the riverside boardwalk is currently identified under the existing Leixlip LAP 2017-2023 as representing ‘Public Realm Improvement No. 2’</p> <p>Public Realm Objective 2 is therefore representative of the baseline scenario and a neutral environmental effect is identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required. Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
	<ul style="list-style-type: none"> <li>▪ Investigating opportunities for the development of a sensitively designed walkway along the river edge providing a greater visual connection to the river whilst offering screening to the man-made concrete features present along the river bank.</li> <li>▪ The sensitive design of the walkway in order to minimise impacts on habitats and protected species and should allow access for all. Any walkway design shall have regard to the guidelines and principles outlined in the 'Planning for Watercourse in the Urban Environment'.<sup>1</sup></li> </ul>									

<sup>1</sup> Shannon Regional Fisheries Board (SRFB) (2011) 'Planning for watercourses in the urban environment'.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>Public Realm Objective 3: Ralphs Square</b>	<p>Ralphs Square is a small square opposite Captains Hill which has the potential to link the main street to the Riverside. While the area is too small to form a square of civic proportions it does have the potential to create a very attractive space due to its narrow entrance and the small scale of the surrounding development.</p> <p>There are a number of existing commercial uses located along the square which attract vehicular traffic reducing the potential to create a pedestrian centre. In addition, to the south of the square which opens onto the River Liffey walkway, there are a number of derelict properties. The regeneration of this area has the potential to attract enterprises which stimulate pedestrian movements though this space connecting Main Street to the River Liffey.</p>								<p>The regeneration of Ralphs Square is likely to result in a positive effect on population and human health, air, noise and climate and the landscape and visual setting of the LAP area through enhancement of the public realm and improved pedestrian permeability.</p> <p>As development would be minor in nature and centralised on existing made ground in the urban centre, a generally neutral environmental effect is identified.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
	<p>Objective 3 may be achieved through:</p> <ul style="list-style-type: none"> <li>▪ Upgrades to building facades, where appropriate, within Ralph Square;</li> <li>▪ The provision of soft landscaping to enclose the square and provide relief from hard urban materials;</li> <li>▪ A focus on pedestrian access (to/from the town centre to Ralph Square) and active uses to encourage a vibrant atmosphere;</li> <li>▪ The removal of parking and resurfacing the square with natural stone or paving;</li> <li>▪ The refurbishment and reoccupation of units south of the square for active uses and over the shop living;</li> <li>▪ The provision of a focal entrance to the proposed riverside walkway.</li> </ul>								

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>Public Realm Objective 4: Main Street</b>	A range of streetscape improvements, combined with investment in the upgrade and regeneration of existing properties and commercial premises extending to appropriate infill developments, will significantly enhance Main Street.									<p>The regeneration of the Main Street of Leixlip is currently identified under the existing Leixlip LAP 2017-2023 as representing ‘Public Realm Improvement No. 3’.</p> <p>Public Realm Objective 4 is therefore representative of the baseline scenario and a neutral environmental effect is identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>
<b>Enterprise, Economic Development And Tourism</b>										
<b>EDT1</b>	It is the policy of the Council to support the development of Leixlip as an enterprise and employment hub forming part of north-east Kildare employment cluster									<p>A likely positive effect on the population of Leixlip is identified, through the provision of employment opportunities and potential for inward investment.</p> <p>A potentially negative effect on material assets is identified, in that a large industrial concentration in the LAP area has the potential to result in a strain on services and utilities, such as water supply and wastewater infrastructure. Refer to Table 8.1 for mitigation measures</p> <p>This Objective does not make specific provisions for commercial development in the LAP area. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>EDT1.1</b>	To promote enterprise and employment development at Collinstown, focusing on the high tech, bio tech, research and development, ICT and manufacturing sectors. (Objective EO4 of the Kildare County Development Plan 2017-2023).									The lands at Collinstown are currently zoned for enterprise and employment under the existing Leixlip LAP 2017-2023. Objective EDT1.1 therefore representative of the baseline scenario. A generally neutral environmental effect is therefore predicted, for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions
<b>EDT1.2</b>	To promote the provision of incubator enterprise units suitable for SMEs and start-up companies at Collinstown to offer opportunities associated with clustering and networking.									<p>The lands at Collinstown are currently zoned for enterprise and employment under the existing Leixlip LAP 2017-2023. Objective EDT1.1 therefore representative of the baseline scenario. A generally neutral environmental effect is therefore predicted, for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions</p> <p>The promotion of incubator enterprise in the LAP area is likely to result in a positive effect on the population of Leixlip through the provision of potential employment opportunities.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>EDT1.3</b>	To facilitate the expansion of industries in Leixlip, taking full account of the obligations of the European Directives and the sensitivities of the receiving environment including ensuring that proposals for development that could potentially affect the integrity of the Natura 2000 network will only be approved if it can be ascertained, by means of an Appropriate Assessment or other ecological assessment, that the integrity of these sites will not be adversely affected.								<p>Through the facilitation of the expansion of industry in Leixlip, a positive effect on the population is envisaged, through the provision of employment opportunities and potential for inward investment.</p> <p>Objective EDT1.3 however, has the potential to result in a negative effect on material assets in that a large concentration of industrial development in the LAP area could cause a strain on local services and utilities, such as water supply and wastewater infrastructure. Refer to Table 8.1 for mitigation measures.</p> <p>While the ecological protection provisions are acknowledged, an overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>
<b>EDT1.4</b>	To comply with the SEVESO III Directive to reduce the risk of accidents at SEVESO sites in Leixlip and the surrounding areas.								The SEVESO III Directive represents an existing plan, policy or programme and compliance with the same should therefore be representative of the baseline scenario. A neutral environmental effect is therefore identified for the purposes of this assessment.
<b>EDT1.5</b>	To have regard to the following in assessing applications for developments (including extensions) in the vicinity of the Intel SEVESO site:								The SEVESO III Directive, and the provisions of the same including permissible distances between the Intel site and residential areas, areas of public use and any areas of sensitivity represents an existing plan, policy or programme. Compliance with the same should therefore be representative of the baseline scenario. A neutral environmental effect is therefore identified for the purposes of this assessment.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
	a) Major Accidents Directive (Seveso III– Directive(2012/18/EU) b) The potential effects on public health and safety. c) The need to ensure adequate distances between such developments and residential areas, areas of public use and any areas of sensitivity. d) The advice of the Health and Safety Authority.								The specific provisions of Objective EDT1.5 to have regard to the potential effects on public health and safety and advice of the Health and Safety Authority in assessing applications for development in vicinity of the Intel SEVESO site will result in a positive effect on population and human health.
<b>EDT2</b>	It is the policy of the Council, where commercial and industrial enterprises exist as non-conforming but long-established uses, to support their continued operation and reasonable expansion, save where such a use would impact negatively on the economic and social wellbeing of the area and inhibit development that is in conformance with the land use zoning objective.								Through supporting the continued operation of established commercial and industrial enterprise, a positive effect on the population is envisaged, through the maintenance of existing employment in the LAP area.  However, any proposed expansion of existing commercial or industrial enterprise as non-conforming development in the LAP area has the potential to result in a negative environmental effect, including potential for negative effects on the population and human health of the LAP area. As specific provisions for development or expansion are not defined in Objective EDT2, an overall ‘uncertain’ effect on the environment is therefore identified for the purposes of this assessment. Any development, in particular greenfield development has the potential to result in a negative effect on the environment.  Refer to assessment of Objective EDT2.1 for further appraisal of these provisions.

Ref	Policy/Objective	SEA Environmental Objectives							Material Assets	Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		
<b>EDT2.1</b>	To support the continued operation and reasonable expansion of existing non-conforming uses, provided they do not: <ul style="list-style-type: none"> <li>Result in loss of amenity to adjoining properties</li> <li>Cause adverse impact on the environment</li> <li>Cause adverse impact on the visual amenity or character of the area, or</li> <li>Inhibit the development of adjoining land in conformance with its land use zoning objective.</li> </ul>									<p>Through supporting the continued operation of established non-conforming uses, a positive effect on the population is envisaged, through the maintenance of existing employment and services in the LAP area.</p> <p>The provisions made under Objective EDT2.1 will work to ensure that an overall neutral effect on the environment occurs from any proposed expansion of existing non-conforming uses.</p> <p>Objective EDT2.1 however, has the potential to result in a negative effect on material assets where expansion of non-conforming uses relates to commercial or industrial development due to the potential strain on services and utilities. Refer to Table 8.1 for mitigation measures</p>
<b>EDT3</b>	It is the policy of the Council to support and facilitate existing amenities and the development of sustainable tourism infrastructure, attractions, activities and facilities in Leixlip.									<p>The support and facilitation of existing amenities and development of sustainable tourism infrastructure, attractions, activities and facilities is likely to result in a positive effect on population and human health through the provision or enhancement of employment and amenity opportunities in the LAP area and associated inward investment.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the tourism initiatives and development referred. Refer to the assessment of objectives set out under Chapter 6 of the Draft LAP included later in this Table 7.3, and the site-specific zoning assessment in Table 7.4 for a detailed assessment of development objectives and new zoning provisions.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>EDT3.1</b>	To identify opportunities to improve the tourist product in Leixlip, including an information/ tourist office, and to co-operate with the appropriate statutory agencies, private tourism sector and community groups.								Objective EDT3.1 is likely to result in a positive effect on the population of the LAP area through the potential provision of new employment opportunities as well the potential for increased inward investment in the area.
<b>EDT3.2</b>	To support and facilitate the development of an integrated network of Greenways and Heritage Trails, including blueways/water trails where appropriate, along suitable corridors along the River Liffey, River Rye, Royal Canal and to Castletown/Celbridge.								<p>A likely positive effect on population and human health is predicted in that greenways can provide efficient commuting options for cyclists and walkers in the LAP area. Greenways, Blueways and Heritage trails also represent an opportunity for enhanced tourism, recreation and amenity provision in the LAP area.</p> <p>The promoted use of natural areas for tourism, recreation or amenity use, or indeed as sustainable transport routes in the LAP area has the potential to result in a negative effect on the conservation of biodiversity, water and heritage, and on the integrity of the same, as a result of increased human interaction and associated pollution potential. Refer to Table 8.1 for mitigation measures</p>
<b>EDT3.3</b>	To support the future development of the Royal Canal Greenway in a manner which supports the future development of the Euro Velo Route 2 Pan-European walking and cycling route, linking Galway to Moscow.								<p>A likely positive effect on population and human health is predicted in that greenways can provide a highly efficient commuting option for cyclists and walkers in the LAP area. Greenways, Blueways and Heritage trails also represent an opportunity for enhanced tourism, recreation and amenity provision in the LAP area.</p> <p>The promoted use of natural areas for tourism, recreation or amenity use, or indeed as sustainable transport routes in the LAP area has the potential to result in a negative effect on the conservation of biodiversity, water and heritage, and on the integrity of the same, as a result of increased human interaction and associated pollution potential. Refer to Table 8.1 for mitigation measures.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>EDT3.4</b>	To encourage the development of tourism activities such as waterways activities, agri-tourism, green/ecotourism, niche retailing, food markets, local and other craft type activities so as to diversify the tourism product in Leixlip.									<p>A likely positive effect on population and human health is predicted as a result of potential for enhanced employment and tourism opportunities in the LAP area.</p> <p>The promoted use of natural areas for tourism, recreation or amenity use, or indeed as sustainable transport routes in the LAP area has the potential to result in a negative effect on the conservation of biodiversity, water and heritage, and on the integrity of the same, as a result of increased human interaction and associated pollution potential. Refer to Table 8.1 for mitigation measures</p>
<b>EDT3.5</b>	To facilitate the provision of standardised signage and interpretation for tourism facilities and tourist attractions throughout the town.									Enhanced tourism in the LAP are has the potential to result in a positive effect on the population as a result of increased inward expenditure and potential for employment opportunities. .
<b>EDT3.6</b>	To support the development of new tourist facilities or upgrading / extension of existing tourist facilities.									<p>Enhanced tourism in the LAP are has the potential to result in a positive effect on the population as a result of increased inward investment and potential for employment opportunities.</p> <p>The development of new tourism facilities in the LAP area, or redevelopment/extension to existing facilities has the potential to result in a negative effect on the environment, where greenfield development or development in proximity to features of natural or heritage significance is envisaged. An ‘uncertain’ effect is identified for the purposes of this assessment in that the location, scale and nature of development is not defined under Objective EDTO3.6.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>EDT3.7</b>	To work with Waterways Ireland and the ESB in supporting the development of angling and canoeing/kayaking infrastructure and facilities for tourism in proximity to appropriate water courses or water bodies, subject to an appropriate scale of development having regard to the pertaining environmental conditions and sensitivities, scenic amenity and availability of services.									<p>Enhanced tourism opportunities in the LAP area has the potential to result in a positive effect on the population of Leixlip as a result of the potential for increased inward investment and potential for employment opportunities.</p> <p>The supported use of water bodies in the LAP area for amenity use, and in the development of infrastructure in proximity to the same has the potential to result in a negative effect on the conservation of biodiversity, water and heritage, and on the integrity of the same, as a result of increased human interaction and associated pollution potential. Refer to Table 8.1 for mitigation measures</p>
<b>EDT3.8</b>	To support development of linkages between the historical demesne lands within and around the town to promote amenity linkage.									<p>Enhanced accessibility of amenity areas within and around the LAP area is likely to result in a positive effect on population and human health, and on air, noise and climate through the promotion of alternative transport methods and facilitation of reduced reliance on private vehicle use.</p> <p>A potential negative effect on heritage is identified as a result of increased human interaction with historical demesne lands.</p>
<b>EDT3.9</b>	To support the development of a heritage trail through the town, linking the town centre to The Wonderful Barn, Castletown House and other historical demesne lands within and around the town.									<p>Provision and promotion of a heritage trails through the LAP area is likely to result in a positive effect on population and human health through enhanced amenity access. Objective EDT3.9 also offers potential for increased tourism in the LAP area and associated inward expenditure, as well as potential for employment opportunities.</p> <p>The provision of a heritage trail through key heritage areas in Leixlip has the potential to result in a negative effect on key features or areas of architectural or archaeological heritage through increased human interaction. Refer to Table 8.1 for mitigation measures.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>EDT3.1 0</b>	To promote The Wonderful Barn as an integrated tourism and amenity destination with complementary commercial uses (see Section 10 also) to be informed by a detailed conservation and management plan.									<p>The promotion of The Wonderful Barn as an integrated tourism and amenity destination is likely to result in a positive effect on population and human health through increased amenity services, potential for inward expenditure associated with tourism, and potential for employment opportunities.</p> <p>The Wonderful Barn is listed on the Record of Protected Structures and promotion of the same as a tourism and amenity destination has the potential to result in a negative effect on the heritage conservation of the same, due to increased human interaction. Refer to Table 8.1 for mitigation measures</p>
<b>EDT3.1 1</b>	To support and encourage further appropriate development associated with the Arthur’s Way heritage trail.									<p>Objective EDT3.11 offers potential for increased tourism in the LAP area and associated inward expenditure, as well as potential for employment opportunities. A likely positive effect on population and human health is therefore identified.</p> <p>Objective EDT3.11 does not define the nature, scale or location of the proposed development and as such, an overall neutral effect on the environment is identified for the purposes of this assessment.</p> <p>Development associated with, or in close proximity to the Arthur’s Way heritage trail has the potential to result in a negative effect on the heritage conservation of the same, due to increased human interaction. Refer to Table 8.1 for mitigation measures</p>
<b>EDT3.1 2</b>	To support and encourage further appropriate development of tourism and recreational facilities at Leixlip Manor Hotel and Gardens.									<p>Objective EDT3.12 offers potential for increased tourism in the LAP area and associated inward expenditure, as well as potential for employment opportunities. A likely positive effect on population and human health is therefore identified.</p> <p>Objective EDT3.11 does not define the nature, scale or location of the proposed development and as such, an overall neutral effect on the environment is identified for the purposes of this assessment.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
										Development associated with, or in close proximity to Leixlip Manor Hotel and Gardens.has the potential to result in a negative effect on the heritage conservation of the same, due to increased human interaction. Refer to Table 8.1 for mitigation measures
<b>EDT3.13</b>	To support the preparation of an integrated tourism and amenity destination on The Wonderful Barn site, that accommodates a range of day and evening time uses.									<p>The promotion of The Wonderful Barn as an integrated tourism and amenity destination is likely to result in a positive effect on population and human health through increased amenity services, potential for inward expenditure associated with tourism, and potential for employment opportunities.</p> <p>The Wonderful Barn is listed on the Record of Protected Structures and promotion of the same as a tourism and amenity destination has the potential to result in a negative effect on the heritage conservation of the same, due to increased human interaction. Refer to Table 8.1 for mitigation measures</p>
<b>Housing and Community</b>										
<b>HC1</b>	It is the policy of the Council to ensure that sufficient land continues to be available at appropriate locations to satisfy the Core Strategy growth allocation for Leixlip and that each household has access to good quality housing that is appropriate to its circumstance.									<p>Provision of required housing in Leixlip is likely to result in a positive effect on the population.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>
<b>HC1.1</b>	To promote and facilitate the phased development of identified Key Development Areas in accordance with the guidance set out in section 12.									The phased development of the KDAs will work to ensure that required infrastructure is provided as necessary so that a strain on existing services and utilities in the LAP area can be avoided. A positive effect on population, human health and material assets is identified for the purposes of this assessment.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
HC1.2	To facilitate the future development of a new neighbourhood at Confey in accordance with the objectives set out in section 12.8	Blue	Blue	Blue	Blue	Blue	Blue	Blue	<p>The lands at Confey are currently zoned for development ‘subject o to masterplan’ under the existing Leixlip LAP 2017-2023. As Objective HC1.2 is representative of the baseline scenario, a neutral effect on the environment in general is therefore predicted for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions</p>
HC1.3	To secure the provision of social infrastructure, community, and recreational facilities in tandem with residential development, in accordance with the findings of the Social Infrastructure Audit (SIA) and the phasing and infrastructure delivery schedule set out in <b>Chapter 12</b> of this LAP.	Yellow	Green	Yellow	Yellow	Yellow	Yellow	Green	<p>The provision of enhanced services and social infrastructure in the LAP area is likely to result in a positive effect on population and human health, as well as on material assets.</p> <p>The variation in nature, location and scale of proposed infrastructural development is not reflected under Objective HC1.3, and as such, an overall uncertain environmental effect is predicted. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>
HC1.4	To encourage the appropriate redevelopment/regeneration of brownfield and infill sites for residential uses within the LAP.	Blue	Green	Blue	Blue	Yellow	Green	Red	<p>By concentrating on the concept of compact growth and consolidation of the town centre, rather than limiting opportunities for residential, social and commercial expansion to greenfield lands at the periphery of the LAP area, the potential for urban sprawl and its associate negative environmental effects is reduced, and development can be focused on existing made ground in the urban centre. An overall neutral environmental effect is therefore identified for the purposes of this assessment.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
									<p>The expansion of the urban centre of Leixlip is likely to result in a positive effect on the population, as a result of increased residential, social and commercial opportunities and potential economic investment associated with the same.</p> <p>Infill development provides an opportunity for the regeneration and revitalisation of Leixlip town centre, where vacant or derelict sites are targeted for redevelopment. This is likely to result in a positive effect on the population and landscape and visual setting of the LAP area, where development is implemented at an appropriate scale and where development is responsive to its architectural surroundings. Urban regeneration of this nature does however have the potential to negatively affect features of archaeological and architectural heritage, should development be proposed in the existing Architectural Conservation Area or Zone of Archaeological Potential.</p> <p>It should also be considered that an increase in the population density of the town centre and adjoining lands could result in a potential strain on services and utilities in the area- such as water supply, wastewater and electricity demand.</p> <p>Further, a high population density in an urban centre has the potential to give rise to negative effects on air quality, noise and climate- due to increased emissions. Refer to Table 8.1 for mitigation measures.</p>
<b>HC1.5</b>	To manage the provision of one-off housing on lands zoned as 'I: Agricultural'. Limited one-off housing will be permitted in this zone subject to compliance with the rural housing policy of the CDP and all other normal siting and design considerations.								<p>The development of one-housing on the periphery of the LAP area, on lands currently zoned for agriculture is likely to result in an overall negative environmental effect. Refer to Table 8.1 for mitigation measures</p> <p>One-off housing has been proven to result in increased reliance on private vehicle use, infrastructure supply/connection demands, lack of community cohesion, biodiversity loss, habitat fragmentation etc.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>HC2</b>	It is the policy of the Council to ensure that all new residential development provides for a sustainable mix of housing types, sizes and tenures and that new development complements the existing residential mix.									<p>Provision of a sustainable mix of housing types is likely to result in a positive effect on the population of the LAP area through provision of residential opportunities for a range of socio-economic groups and population demographics.</p> <p>By ensuring that new development complements existing, a positive effect on the landscape and visual setting of the LAP area is identified through architectural consistency, and continuity of use.</p>
<b>HC2.1</b>	To ensure that a good mix of housing types and sizes is provided in all new residential areas including each Key Development Area (KDA) and appropriate infill/brownfield locations to meet the needs of the population of Leixlip, including housing designed for older people and people with disabilities.									<p>Provision of a sustainable mix of housing types is likely to result in a positive effect on the population of the LAP area through provision of residential opportunities for a range of socio-economic groups and population demographics.</p> <p>By ensuring that new development complements existing, a positive effect on the landscape and visual setting of the LAP area is identified through architectural consistency, and continuity of use.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
HC2.2	Require that residential schemes in close proximity to heavily trafficked roads within/adjoining Leixlip are designed and constructed to minimise noise disturbance, follow a good acoustic design process and clearly demonstrate that significant adverse noise impacts will be avoided.									<p>Reduced traffic noise in the LAP area is likely to result in a positive effect on population and human health. Exposure to excessive noise is becoming recognised as a large environmental health concern, with the 2015 European Commission report ‘Noise Impacts on Health’ (European Commission, 2015) identifying the following potential effects: annoyance, sleep disturbance, heart and circulation problems, quality of life, cognitive process and hearing.</p> <p>Excessive noise also has the potential to affect biodiversity and result in a reduction of the same in the LAP area. Reduced noise levels is therefore likely to result in a positive effect on biodiversity.</p>
HC2.3	To Seek to provide Traveller Specific Accommodation at appropriate locations close to key services and public transport facilities in accordance with the Traveller Needs Assessment and Traveller Accommodation Plan due for review in 2019.									<p>The provision of Traveller Specific Accommodation in the LAP area is likely to result in a positive effect on the population, particularly that of the Traveller minority group.</p> <p>An overall uncertain environmental effect is identified for the purposes of this assessment in that the nature, scale or location of development, if any, if not defined under Objective HC2.3. A potential negative effect on material assets is identified in that a high population density in the LAP area has the potential to cause a strain on local services or utilities- such as water supply or wastewater infrastructure. Refer to Table 8.1 for mitigation measures.</p>
HC3	It is the policy of the Council to facilitate and secure the provision of social infrastructure to support existing and new communities within the LAP area, in a manner which provides flexibility to respond to varied and changing community needs.									<p>The provision of enhanced services and social infrastructure in the LAP area is likely to result in a positive effect on population and human health, as well as on material assets. The exact nature, location and scale of proposed infrastructural development is not defined under Objective HC1.3, and as such, an overall uncertain environmental effect is predicted. A detailed environmental assessment of proposed infrastructural development will be carried out at project level, as required.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
HC3.1	To support and facilitate improvements to existing educational, childcare and healthcare facilities within the Leixlip LAP area.									Objective HC3.1 is likely to result in a positive effect on population and human health through provision of enhanced educational, childcare and healthcare facilities in the LAP area. As no development is specifically provided for under Objective HC3.1, a neutral environmental effect is identified for the purpose of this assessment.
HC3.2	To require the provision of childcare spaces per dwelling on a pro-rata basis in the Key Development Areas, in accordance with the phasing requirements set out in Section 13 of the LAP and the Urban Design Framework for the new residential neighbourhood at Confey.									Objective HC3.2 is likely to result in a positive effect on population and human health through provision of enhanced educational, childcare and healthcare facilities in the LAP area. As no development is specifically provided for under Objective HC3.1, a neutral environmental effect is identified for the purpose of this assessment.
HC3.3	To support and facilitate the provision of children’s play facilities in Leixlip, including playgrounds and a skatepark, for children of all ages having regard to children with special needs.									Provision of additional play facilities in the LAP area is likely to result in a positive effect on population and human health, through provision of social services.  As the nature, scale or location of the proposed facilities are not defined in Objective HCO3.4, an uncertain environmental effect is identified for the purposes of this assessment
HC4	It is the policy of the Council to facilitate and support a broad range of community, cultural and recreational facilities to serve the needs of the residents of Leixlip.									The facilitation of additional community, cultural and recreational facilities in the LAP area is likely to result in a positive effect on population and human health, through provision of social services.  As the nature, scale or location of the proposed facilities is not defined in Objective HC4, an uncertain environmental effect is identified for the purposes of this assessment.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
HC4.1	To support and facilitate the provision of multi-functional community facilities to meet the needs of the population of Leixlip.								<p>Provision of additional community, cultural and recreational facilities in the LAP area is likely to result in a positive effect on population and human health, through provision of social services.</p> <p>As the nature, scale or location of the subject infrastructure are not defined in Objective HC4.1, an uncertain environmental effect is identified for the purposes of this assessment.</p>
HC4.2	To support and facilitate limited additional capacity at the existing cemetery at Confey in accordance with the Urban Design Framework for the new Neighbourhood at Confey and facilitate the development of a new cemetery within lands zoned for Agricultural use north of Confey.								<p>The lands at Confey are currently zoned for development ‘subject to masterplan’ under the existing Leixlip LAP 2013-2023, with provisions made for an extension to the existing cemetery. Objective HCO4.2 is therefore representative of the baseline scenario in that an extension to the existing cemetery constitutes development</p> <p>However, the proposed development of a new cemetery within existing agricultural lands north of Confey is representative of new zoning provisions. Development on existing agricultural land is likely to result in an overall negative effect on the environment. Refer to Table 8.1 for mitigation measures</p> <p>The provision of enhanced facilities has the potential to result in a positive effect on population and human health, but a potential negative effect is also identified resulting from the loss of agricultural land. An uncertain environmental effect is therefore identified for the purposes of this assessment.</p> <p>A neutral effect on air, noise, climate and material assets is identified due to the nature of the proposed development.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>HC4.3</b>	To support and promote the development of cultural, arts and performance spaces in Leixlip.								Objective HC4.3 is likely to result in a positive effect on population and human health through the provision of social and cultural facilities in the LAP area. As Objective HC4.3 does not define the nature or location of any proposed development, an uncertain environmental effect is identified for the purposes of this assessment.
<b>Movement and Transport</b>									
<b>MT1</b>	It is the policy of the Council to promote enhanced permeability for pedestrians and cyclists within the urban environment in order to improve access to the town centre, local schools, recreational facilities, shops, public transport services and other amenities, subject to local public consultation. This includes providing improved connectivity across the River Rye, Royal Canal and railway line, and enhanced links with Maynooth, Celbridge and Dublin.								Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.  Development in proximity to, or across the Royal Canal; an important ecological and heritage feature in the LAP area, has the potential to result in an overall negative effect on the environment. Refer to Table 8.1 for mitigation measures
<b>MT1.1</b>	To ensure all footpaths in the town provide adequate access for persons with a disability or who have impaired mobility.								Improved accessibility of the town centre is likely to result in a positive effect on population and human health.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>MT1.2</b>	To support cycling as a more convenient and safe method of transport through the development of new or improved cycle facilities in Leixlip.								Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.
<b>MT1.3</b>	To work with the National Transport Authority (NTA) to implement the Greater Dublin Area Cycle Network Plan proposals for Leixlip, including the North Kildare Cycleway (Dublin – Galway) subject to detailed engineering design and the mitigation measures presented in the Strategic Environmental Assessment (SEA) and Natura Impact Statement (NIS) accompanying the NTA Plan.								The GDA Cycle Network Plan represents an existing plan, policy or programme and the implementation of the same should therefore be representative of the baseline scenario. A neutral environmental effect is therefore identified for the purposes of this assessment.
<b>MT1.4</b>	To improve, maintain and enhance the following routes for use by both pedestrians and cyclists: <ol style="list-style-type: none"> <li>i. Captains Hill (R149);</li> <li>ii. Accommodation Rd;</li> <li>iii. Old Hill;</li> </ol>								Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and the facilitation of reduced reliance on private vehicle use in the LAP area.  As Objective MT01.4 does not define the proposed scale or nature of development required to facilitate proposed improvements to these existing routes, an uncertain environmental effect is identified for the purpose of this assessment.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
	iv. Dublin / Lucan Rd from Main Street to the country boundary (R148); v. Celbridge Road (R404); vi. Silleacháin Lane; vii. Distillery Lane; Rye Valley to the Glen; and Mill Lane to St Catherine’s Park  These options will be explored in further detail and subject to ecological analysis and assessment in order to safeguard the Rye Water Valley/Carlton SAC.								
<b>MO1.5</b>	To facilitate the development of new pedestrian/cycle links across the canal and railway that enhance walking and cycling options and connect the new neighbourhood at Confey and the Royal Canal Greenway to existing residential areas, public spaces, Confey Station and facilities within Leixlip.								Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.  Development in proximity to, or across the Royal Canal; an important ecological and heritage feature in the LAP area, has the potential to result in an overall negative effect on the environment. Refer to Table 8.1 for mitigation measures

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>MTI.6</b>	To provide a footbridge over the Rye Water with associated paths to connect Confey Community College to nearby housing estates.									<p>Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.</p> <p>Development in proximity to, or across the Rye River; an important feature of ecological importance in the LAP area, has the potential to result in an overall negative effect on the environment. Refer to Table 8.1 for mitigation measures</p>
<b>MTI.7</b>	To provide appropriate new pedestrian linkages to improve access to the Louisa Bridge Station and to the Intel campus, including the provision of a new footbridge to provide direct access to the Royal Canal greenway and nearby amenities.									<p>Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>
<b>MTI.8</b>	To improve access to the town centre from nearby housing estates with the provision of new paths and cycle ways, supporting measures to improve safety at crossing points on Main Street and nearby junctions.									<p>Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>MTI.9</b>	To provide adequate, secure and dry bicycle parking facilities at appropriate locations at: (i) In the town centre; and (ii) Near heritage, community and amenity destinations.								Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.  An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.
<b>MTI.10</b>	To facilitate the development of a new pedestrian link between Mill Lane, Main Street and Captains Hill in accordance with the development objectives for the identified regeneration site detailed in Chapter 5 section 5.3.1 of this plan.								Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.  An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.
<b>MTI.11</b>	To support delivery of a pedestrian and cycle overpass of the M4 to link The Wonderful Barn at Leixlip to Castletown Demesne in Celbridge in consultation with Transport Infrastructure Ireland (TII).								Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.  An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
									Development in proximity to, or across the Rye River; an important feature of ecological importance in the LAP area, has the potential to result in an overall negative effect on the environment. Refer to Table 8.1 for mitigation measures
<b>MT1.12</b>	To improve access, security and safety along the Royal Canal towpath, including: (i) Improved pedestrian access from Cope Bridge to the towpath; and (ii) Improved car-parking facilities adjacent to Royal Canal entry points at Cope Bridge and Louisa Bridge. and (iii) The integration of the towpath with the new development at Confey.								Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and facilitation of reduced reliance on private vehicle use in the LAP area.  Development in proximity to, or across the Royal Canal; an important feature of ecological importance in the LAP area, has the potential to result in an overall negative effect on the environment. Refer to Table 8.1 for mitigation measures.
<b>MT1.13</b>	To improve permeability within the plan area and increase access to key public transport nodes ensuring ease of accessibility to/from existing residential and commercial areas.								Enhanced accessibility and permeability of the town centre and improved pedestrian and cyclist facilities are likely to result in a positive effect on population, human health, air quality, noise and climate through promotion of sustainable transport and the facilitation of reduced reliance on private vehicle use in the LAP area.

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>MT2</b>	It is the policy of the Council to promote the sustainable development of Leixlip by supporting and guiding the relevant national agencies in delivering improvements to the public transport network and to public transport services.									Improvements to the sustainable transport network in the LAP area are likely to result in a positive effect on population, human health, air quality, noise and climate through the facilitation of reduced reliance on private vehicle use in the LAP area.
<b>MT2.1</b>	To focus people-intensive land uses around existing and planned public transport nodes and improve access to services.									The focus of people intensive land-use around existing and planned public transport nodes is likely to result in a positive effect on population and human health through the facilitation of reduced reliance on private vehicle use in the LAP area.
<b>MT2.2</b>	To support and facilitate the delivery of electrification and upgrading of the Dublin – Sligo rail line from Connolly Station to Maynooth, including improvements to the upgrading of Cope Bridge.									Improvements to the sustainable transport network in the LAP area are likely to result in a positive effect on population, human health, air quality, noise and climate through reduced reliance on private vehicle use in the LAP area.  Development or upgrade works in proximity to, or across the Royal Canal; an important feature of ecological importance in the LAP area, has the potential to result in a negative effect on biodiversity and water. Refer to Table 8.1 for mitigation measures
<b>MT2.3</b>	To support the provision of new or upgraded public transport infrastructure in Leixlip, including bus infrastructure, new or upgraded bus lanes, stops and lay-bys and parking areas.									Enhanced accessibility and permeability of the town centre and improved public transport initiatives are likely to result in a positive effect on population, human health, air quality, noise and climate through facilitation of reduced reliance on private vehicle use in the LAP area.  An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
										Development in proximity to, or across the Rye River; an important feature of ecological importance in the LAP area, has the potential to result in an overall negative effect on the environment. Refer to Table 8.1 for mitigation measures.
<b>MT2.4</b>	To engage with the NTA, Dublin Bus, Irish Rail, Local Link and other stakeholders to improve the provision of public transport in Leixlip including the provision of a bus link between Leixlip and Celbridge, park and ride facilities, and the provision of bus priority measures to ensure the improved movement of bus services through the town centre and the provision of bus turn facilities proximate to Confey Station.									<p>Enhanced accessibility and permeability of the town centre and improved public transport initiatives are likely to result in a positive effect on population, human health, air quality, noise and climate through facilitation of reduced reliance on private vehicle use in the LAP area.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p> <p>Development in proximity to, or across the Rye River; an important feature of ecological importance in the LAP area, has the potential to result in an overall negative effect on the environment. Refer to Table 8.1 for mitigation measures.</p>
<b>MT2.5</b>	To provide for improved access to Confey railway station in consultation with the National Transport Authority (NTA) and Irish Rail supporting the sustainable development of the Confey area.									<p>Provision of improved access to Confey railway station is likely to result in a positive effect on population and human health through enhanced accessibility and promotion of sustainable forms of transport.</p> <p>An overall uncertain environmental effect is identified in that the assessment of potential for significant effects is largely dependent on the nature, scale and location of the development referred. Refer to the site-specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
										However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required
MT2.6	To liaise with the National Transport Authority (NTA) and Irish Rail to consider the provision of a new railway station at Collinstown.									Provision of a new railway station at Collinstown is likely to result in a positive effect on population and human health through enhanced accessibility and promotion of sustainable forms of transport. Collinstown is already zoned for development to be ‘subject to masterplan’ under the existing Leixlip LAP 2017-2023 and the identified as a ‘key development area’. A neutral environmental effect is therefore identified for the purposes of this assessment as a result of the proposed provision of a new railways station within this KDA. Further, Objective MT2.6 does not provide for any development within the lifetime of the LAP.
MT2.7	To liaise with the National Transport Authority (NTA) to investigate the feasibility the rerouting of the No.66 Bus service via Green Lane, or other similar measure, and provide a high frequency bus service the residents of the Green lane and Easton Road Area.									This Objective does not provide for any development within the lifetime of the LAP. An overall neutral environmental effect is therefore identified for the purposes of this assessment.  A potential negative effect on the population is identified as a result of potential reductions to existing serviceable areas, and potential shift in journey times. However., a potential positive effect on the population is also identified as a result of the provision of a high frequency bus service for the residents of the Green Land and Easton Road Area. An overall ‘uncertain; effect is therefore identified for the purposes of this assessment.
MT2.8	To review the configuration and movement of Pedestrian, cycle public transport and private vehicle modes at the junction of Main Street and Captains Hill in order to prioritise the sustainable movement of people.									This objective does not provide for any development within the lifetime of the LAP. An overall neutral environmental effect is therefore identified for the purposes of this assessment.  The prioritisation of the sustainable movement of people in the LAP area is likely to result in a positive effect on the population of the LAP area.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>MT3</b>	It is the policy of the Council to maintain, improve and extend the local road network in and around Leixlip to ensure a high standard of connectivity and safety for all road users.									<p>Road development works, or road upgrade works have the potential to result in an overall negative environmental effect, depending on their scale and location. As the details of the proposed works are not defined under Objective MT3, an overall uncertain environmental effect is identified for the purposes of this assessment.</p> <p>Improved transport infrastructure in Leixlip does however have the potential to result in a positive effect on the population through enhanced accessibility and permeability of the LAP area.</p>
<b>MT3.1</b>	To maintain and improve, as required, the local road network to ensure a high standard of road quality and safety in accordance with the requirements of this Plan and relevant legislation.									<p>Road development works, or road upgrade works have the potential to result in an overall negative environmental effect, depending on their scale and location. As the details of the proposed works are not defined under Objective MT3, an overall uncertain environmental effect is identified for the purposes of this assessment.</p> <p>Improved transport infrastructure in Leixlip does however have the potential to result in a positive effect on the population through enhanced accessibility and permeability of the LAP area.</p>
<b>MT3.2</b>	To support the implementation of the following road improvement schemes, subject to the availability of funding and environmental and conservation requirements:									<p>The road realignment works, junction improvement works, and bridge replacement have the potential to result in an overall negative environmental effect. Refer to Table 8.1 for mitigation measures</p> <p>Improved transport infrastructure in Leixlip does however have the potential to result in a positive effect on the population through enhanced accessibility and permeability of the LAP area.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
	i. The improvement of the bridge at Confey Railway Station to provide two traffic lanes, segregated cycle tracks and footways. ii. The realignment of the R148 (Maynooth Road) at Collinstown in line with the approved Part 8. iii. Improvement of the L1015 and L1014 west of Confey. The improvement of the junction of Main Street and Mill Lane. V. Capacity enhancements of the M4 mainline and M4 / R449 junction as provided for in the NTAs Transport Strategy for the Greater Dublin Area 2016-								

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
	2035 and the Draft Regional Spatial and Economic Strategy.								
<b>MT3.3</b>	To implement the recommendations of the Leixlip Strategic Transport Assessment including road improvement measures required to provide access to and facilitate the development of a new neighbourhood at Confey and improved accessibility over the canal and railway line to facilitate permeability and connectivity.								<p>The road improvement works proposed under Objective MT3.3, in particular the provisions for improved accessibility over the canal, have the potential to result in an overall negative environmental effect. Refer to Table 8.1 for mitigation measures</p> <p>Improved transport infrastructure in Leixlip does however have the potential to result in a positive effect on the population through enhanced accessibility and permeability of the LAP area.</p>
<b>MT3.4</b>	To support the development of a North East Kildare Strategic Land Use and Transportation Study in accordance with objective MTO2 of the Kildare County Development Plan 2017-2023 including investigations for potential connections to the north and south east of the Leixlip Plan area with adjoining Counties.								Objective MT3.3 does not provide for development within the plan period. An overall neutral environmental effect is therefore identified.

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
MT3.5	<p>To require the following road improvements for the new neighbourhood at Confey in accordance with the phasing programme for the delivery of this new neighbourhood (as set out in Appendix A – Confey Urban Design Framework):</p> <p>(i) The realignment and improvement of the R149 (Confey Road) between the L1015 (Kellystown Lane) and the county boundary with Fingal.</p> <p>(ii) (The upgrading of the L1015 and L1014 (Kellystown Lane) or an alternative north-south connection west of the R149.</p>									<p>Road development works, or road upgrade works have the potential to result in an overall negative environmental effect. Refer to Table 8.1 for mitigation measures</p> <p>Improved transport infrastructure in Leixlip does however have the potential to result in a positive effect on the population through enhanced accessibility and permeability of the LAP area.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
MT3.6	To facilitate the improvement of the intersection between R149 (Captains Hill) and R148 (Main St.) and the intersection between R404 (Celbridge Road) and R148 (Main Street).									<p>Road development works, or road upgrade works have the potential to result in an overall negative environmental effect. Refer to Table 8.1 for mitigation measures</p> <p>Improved transport infrastructure in Leixlip does however have the potential to result in a positive effect on the population through enhanced accessibility and permeability of the LAP area.</p>
MT3.7	To secure improved access to The Wonderful Barn and the Celbridge Road (east) lands from the R404 (Celbridge Road) as part of the future development of these lands.									<p>Road development works, or road upgrade works have the potential to result in an overall negative environmental effect. Refer to Table 8.1 for mitigation measures</p> <p>Improved transport infrastructure in Leixlip does however have the potential to result in a positive effect on the population through enhanced accessibility and permeability of the LAP area.</p>
MT3.8	To ensure that any significant new development takes place in proximity to public transport routes and can be adequately served by the road network.									<p>The assurance that new development in the LAP area will be serviceable by public transport is likely to result in a positive effect on population, human health and air quality, noise and climate through a reduction in the increased private vehicle use associated with new development.</p>
MT3.9	To provide traffic calming and speed reduction measures throughout the town, where necessary as funding allows and ensure that all new developments are designed to incorporate appropriate traffic calming measures as set out in the Design Manual for Urban Roads and Streets.									<p>It is not envisaged that the traffic calming measures set out under Objective MT3.8 would result in significant development. Any development that would occur is expected to be minor in nature and would take place on already developed land within the urban centre of Leixlip. An overall neutral environmental effect is therefore identified.</p> <p>The provision of traffic calming measures in the town centre is likely to result in a positive effect on population and human health as a result of reduced traffic congestion, as well as improved air quality.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>MT3.10</b>	To implement the recommendations of the Kildare Noise Action Plan to reduce, where necessary, the harmful effects of traffic noise, through appropriate mitigation measures in accordance with CDP Objective RS03.									<p>Reduced traffic noise in the LAP area is likely to result in a positive effect on population and human health. Exposure to excessive noise is becoming recognised as a large environmental health concern, with the 2015 European Commission report ‘Noise Impacts on Health’ (European Commission, 2015) identifying the following potential effects: annoyance, sleep disturbance, heart and circulation problems, quality of life, cognitive process and hearing.</p> <p>Excessive noise also has the potential to affect biodiversity and result in a reduction of the same in the LAP area. Reduced noise levels is therefore likely to result in a positive effect on biodiversity.</p>
<b>MT3.11</b>	To ensure that all significant development proposals for KDAs and lands at Collinstown and Confey are subject to Traffic Impact Assessments (TIA), to be carried out in accordance with the Traffic and Transport Assessment Guidelines, NRA 2014 to assess the individual and cumulative impact of the planned development in the area on the strategic road network.									<p>Implementation of a TIA is likely to result in a positive effect on population and human health in that any road network deficiencies can be identified and potentially resolved prior to the implementation of large-scale development in Confey and Collinstown. Implementation of a TIA can also work to ensure that potential negative cumulative effects on the wider road network can be mitigated.</p> <p>The outcome of the TIA also has the potential to result in a positive effect on air, noise and climate in that potential for traffic congestion can be mitigated at an early stage.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>MT3.12</b>	To investigate the feasibility of a new link road from the Celbridge Road (R404) to the south of the M4 connecting to the M4 Leixlip/Celbridge Interchange in consultation with TII, NTA and other stakeholders.									<p>Road development works, or road upgrade works have the potential to result in an overall negative environmental effect. Refer to Table 8.1 for mitigation measures</p> <p>Improved transport infrastructure in Leixlip does however have the potential to result in a positive effect on the population through enhanced accessibility and permeability of the LAP area.</p>
<b>MT3.13</b>	To complete the through public road to connect the Celbridge Road (At Former HP Site) to M4 Interchange Junction 6 prior to the commencement of Celbridge Road East KDA.									<p>Road development works, or road upgrade works have the potential to result in an overall negative environmental effect. Refer to Table 8.1 for mitigation measures</p> <p>Improved transport infrastructure in Leixlip does however have the potential to result in a positive effect on the population through enhanced accessibility and permeability of the LAP area.</p>
<b>MT4</b>	It is the policy of the Council to manage the provision of parking to provide for the needs of residents, business and visitors to Leixlip Town Centre.									<p>Increased car-parking facilities in the LAP area is likely to result in a positive effect on the population of Leixlip, in particular those members of the public with reduced or impaired mobility.</p> <p>However, increased provision of car-parking in the town centre has the potential to encourage or facilitate increased reliance on private vehicle use. A potential negative effect on air, noise and climate is therefore identified. Refer to Table 8.1 for mitigation measures</p>
<b>MT 4.1</b>	To have regard to the parking standards in the Kildare County Development Plan and relevant Section 28 Guidelines in considering applications for planning permission in Leixlip.									<p>The Kildare County Development Plan represents an existing plan, policy or programme and compliance with the same should therefore be representative of the baseline scenario. A neutral environmental effect is therefore identified for the purposes of this assessment.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>MT4.2</b>	To facilitate the delivery of off-street car parking at suitable locations, including the provision of a public car park within the regeneration site identified north of Main Street as detailed in Section 5 of this LAP.									<p>The provision of additional parking facilities is likely to result in a positive effect on the population of the LAP area.</p> <p>The subject site consists of some greenfield land, and the development of the same has the potential to result in an overall negative environmental effect is therefore identified. Refer to Table 8.1 for mitigation measures</p> <p>Provision of increased car parking facilities in the town centre has the potential to facilitate a reliance on private car use and discourage a move towards more sustainable forms of transport in the LAP area. A potential negative effect on air, noise and climate is therefore identified.</p> <p>The proposed development area is noted to encroach on the designated Architectural Conservation Area, and as such, a potential negative effect on features of heritage significance is identified.</p>
<b>MT4.3</b>	To Continue to manage public parking areas within the town centre and encompass new public parking areas to ensure that the limited parking provision supports the business and services provided in the town centre and that inappropriate parking in residential areas is minimised.									<p>The management of public parking areas in the LAP area, and provision of additional parking, is likely to result in a positive effect on the population of Leixlip, in particular those members of the public with reduced or impaired mobility.</p> <p>However, increased provision of car-parking in the town centre has the potential to encourage or facilitate increased reliance on private vehicle use. A potential negative effect on air, noise and climate is therefore identified. Refer to Table 8.1 for mitigation measures</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>Infrastructure and Environmental Services</b>										
<b>II</b>	It is the policy of the Council to work in conjunction with Irish Water to protect existing water and wastewater infrastructure in Leixlip, to maximise the potential of existing capacity and to facilitate the timely delivery of water services infrastructure to facilitate future growth.									<p>Maximising the potential of existing water and wastewater capacity in the LAP area and the timely delivery of infrastructure to facilitate future growth will likely result in a positive effect on population and human health, through provision of enhanced services.</p> <p>A potential positive effect on material assets is also identified in that any potential strain on existing services will likely be avoided.</p>
<b>II.1</b>	To work in conjunction with Irish Water to promote the ongoing upgrade and expansion of water supply and wastewater services to meet the future needs of Leixlip									<p>The ongoing upgrade and expansion of existing water and wastewater services in the LAP area will likely result in a positive effect on population and human health, through provision of enhanced services.</p> <p>A potential positive effect on material assets is also identified in that any potential strain on existing services will likely be avoided.</p>
<b>II.2</b>	To maximise the sustainable and efficient use of existing capacity in water services in the planning of new development.									<p>The ongoing upgrade and expansion of existing water and wastewater services in the LAP area will likely result in a positive effect on population and human health, through provision of enhanced services.</p> <p>A potential positive effect on material assets is also identified in that any potential strain on existing services will likely be avoided.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>11.3</b>	To seek to ensure that adequate water services will be available to service development prior to the granting of planning permission for development.									<p>Provision of adequate water supply in the LAP area is likely to result in a positive effect on population and human health.</p> <p>In ensuring that an adequate water supply is available to service proposed development in the LAP area, a positive effect on material assets is identified in that a potential strain on the supply can be avoided.</p>
<b>11.4</b>	To seek to ensure that development proposals comply with the standards and requirements of Irish Water in relation to water and wastewater infrastructure									<p>Compliance with Irish Water standards and requirements is representative of the baseline environment. A neutral environmental effect is therefore identified for the purposes of this assessment.</p>
<b>12</b>	It is the policy of the Council to maintain and enhance the existing surface water drainage systems in Leixlip and to protect surface and ground water quality in accordance with the Water Framework Directive.									<p>The Water Framework Directive represents existing policy, and compliance with the same is therefore representative of the baseline scenario. A neutral environmental effect is therefore predicted.</p> <p>Policy 12 of the Draft LAP does however make provisions for the enhancement of existing surface water drainage infrastructure in Leixlip. A potential positive effect on population and human health, water and biodiversity is likely to occur, as a result of potentially improved surface water quality</p>
<b>12.1</b>	To carry out surface water infrastructure improvement works as required.									<p>A potential positive effect on population and human health, water and biodiversity is likely to occur as a result of Objective IO2.1, as a result of potentially improved surface water quality</p> <p>However, a potential negative effect is also identified during the construction phase of these works.</p>
<b>12.2</b>	To incorporate Sustainable Urban Drainage Systems (SUDS) as part of all plans and development proposals in Leixlip.									<p>Objective 12.2 is likely to result in a positive effect on population and human health as a result of improved surface water quality in the LAP area.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
	Proposals for Key Development Areas, lands at Confey and Collinstown should address the potential for SuDS to control surface water outfall and protect water quality.								
<b>12.3</b>	To maintain, improve and enhance the environmental and ecological quality of surface waters and groundwater in Leixlip in accordance with the Eastern River Basin District River Basin Management Plan and in conjunction with the EPA.								The Eastern River Basin District River Basin Management Plan represents an existing plan, policy or programme and compliance with the same should therefore be representative of the baseline scenario. A neutral environmental effect is therefore identified for the purposes of this assessment.
<b>12.4</b>	To require applicants to demonstrate that proposals will not negatively impact on the status of a waterbody, in accordance with the requirements of the Water Framework Directive and associated River Basin Management Plans.								The Water Framework Directive and the Eastern River Basin District River Basin Management Plan represents existing plans, policies or programmes and compliance with the same should therefore be representative of the baseline scenario. A neutral environmental effect is therefore identified for the purposes of this assessment.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
12.5	To protect both ground and surface water resources and to work with Irish Water to develop and implement Water Safety Plans to protect sources of public water supply and their contributing catchments.								Protection of ground and surface water services in the LAP area is likely to result in a positive effect on population, human health and water, through improved quality of bathing and drinking waters in the LAP area. Improved surface water quality is also likely to result in a positive effect on biodiversity.
13	It is the policy of the Council to manage flood risk in Leixlip in conjunction with the OPW and in accordance with the requirements of the Planning System and Flood Risk Management Guidelines for Planning Authorities (2009) and circular PL02/2014 (August 2014).								While the Planning System and Flood Risk Management Guidelines for Planning Authorities is not a policy document, compliance with the same, and with the planning system and Circular PL02/2014 is representative of the baseline scenario. A neutral effect on the environment is therefore identified for the purposes of this assessment
13.1	To manage flood risk in Leixlip in accordance with the requirements of The Planning System and Flood Risk Management Guidelines for Planning Authorities, DECLG and OPW (2009) and Circular PL02/2014 (August 2014).								While the Planning System and Flood Risk Management Guidelines for Planning Authorities is not a policy document, compliance with the same, and with the planning system and Circular PL02/2014 is representative of the baseline scenario. A neutral effect on the environment is therefore identified for the purposes of this assessment

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
I3.2	To ensure development proposals within the areas outlined on Flood Risk Map are the subject of Site-Specific Flood Risk Assessment, appropriate to the nature and scale of the development being proposed.								In ensuring development proposals within the areas outlined on the Flood Risk Map are subject to a FRA, a positive effect on population, human health, land, soil and material assets is envisaged due to the facilitation of reduced flooding potential in areas of residential/commercial/social land-use, and in the location of strategic infrastructure.
I3.3	To support and co-operate with the OPW in delivering the Eastern CFRAM Programme applicable to Leixlip.								<p>The Flood Risk Management Plan for the Liffey and Dublin Bay was published on 19/02/2018 as an output of the CFRAM Programme. This plan was not in place at the time of publication of the existing Leixlip LAP 2017-2023.</p> <p>The implementation of the measures outlined in the Flood Risk Management Plan for the Liffey and Dublin Bay will likely result in a positive effect on population, human health, land, soil and material assets by facilitating flooding potential in areas of residential/commercial/social land-use, and in the location of strategic infrastructure.</p>
I4	It is the policy of the Council to promote and facilitate the development and renewal of energy and communications networks in Leixlip, while protecting the amenities of the town.								<p>Policy I4 of the Draft LAP is likely to result in a positive effect on the population and material assets of the LAP area through provision of required services, and through the potential for employment opportunities.</p> <p>Policy I4 does not define the nature, scale or location of development that would occur as a result of its implementation. An uncertain environmental effect is therefore identified for the purposes of this assessment.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>I4.1</b>	To support the statutory providers of national grid infrastructure by safeguarding existing infrastructure and strategic corridors from encroachment by development that might compromise the operation, maintenance and provision of energy networks.								<p>Objective I4.1 has the potential to result in a positive effect on the environment. The safeguarding of strategic corridors from the encroachment of development in particular has the potential to result in an in-direct positive effect on biodiversity, land, soils, air, noise, climate, heritage and the landscape and visual setting of the LAP area, through the protection and conservation of existing lands.</p> <p>The operation, maintenance and provision of energy networks is likely to result in a positive effect on population and on material assets, through provision of required services in the LAP area.</p>
<b>I4.2</b>	To support and facilitate the provision of telecommunications infrastructure in Leixlip, subject to safety and amenity requirements.								<p>Objective I4.2 does not define the nature, scale or location of development that would occur as a result of the provision of communications infrastructure in Leixlip. An uncertain environmental effect is therefore identified for the purposes of this assessment.</p> <p>A likely positive effect on population and material assets is predicted due to the provision of required services.</p>
<b>I4.3</b>	To seek the undergrounding of all electricity, telephone and television cables in the town.								<p>A likely positive effect on the population and on the landscape and visual setting of the LAP area is identified as a result of a reduction of the visual impact of infrastructure such as pylons and electricity poles.</p> <p>It is acknowledged that Objective I4.3 relates to the undergrounding of cables within the already developed ‘made-ground’ area of Leixlip town. However, the construction works involved still offer the potential to result in a negative effect on biodiversity, land, soil, water, air quality, noise and heritage. Of particular concern is proposed undergrounding within the Architectural Conservation Area and Zone of Archaeological Protection. Refer to Table 8.1 for mitigation measures.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
14.4	To discourage a proliferation of above ground utility boxes in the town and to seek screening measures in conjunction with the provision of such structures.								The management of the quantity and location of above ground utility boxes in the town is likely to result in a positive effect on the population and on the landscape and visual setting of the LAP area, due to reduced street clutter, improved accessibility and enhancements to the public realm and townscape.
14.5	To support the ESB in identifying a suitable alternative site for the relocation of the existing telecommunications mast at Mill Lane.								An overall uncertain effect is identified prior to the allocation of a suitable alternative site.
14.6	To promote and encourage the use of renewable energy technologies in existing and proposed building stock within the LAP area subject to consideration of environmental, conservation and visual requirements.								Promotion of renewable energy alternatives in the LAP area is likely to result in a positive effect on population and human health and on air and climate as a result of reduced reliance on fossil fuels, and provision of alternative energy sources.  Objective IO4.6 does not specifically provide for development in the LAP area and, as such, an overall neutral environmental effect is identified for the purposes of this assessment.
15	It is the policy of the Council to protect environmental quality in Leixlip through the implementation of European, national and regional policy and legislation relating to air quality, greenhouse gases, climate change, light pollution, noise pollution and waste management.								Compliance with existing European, National and Regional policy is representative of the baseline scenario. A neutral environmental effect is therefore identified for the purposes of this assessment.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>I5.1</b>	To adequately maintain recycling facilities and to secure the provision of additional facilities, as required, including in conjunction with development.	Yellow	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Green	<p>Provision of an increased number of recycling facilities is likely to result in a positive effect on population, human health and material assets as a result of enhanced accessibility and promotion of recycling as a waste management solution, and reduced reliance on landfill and incineration.</p> <p>Objective I5.1 does not define the nature, scale or location of development that would occur as a result of its implementation. An uncertain environmental effect is therefore identified for the purposes of this assessment.</p>
<b>I5.2</b>	To avoid, prevent or reduce harmful effects on human health and the environment as a whole through promoting the preservation of best ambient air quality with sustainable development.	Green	Green	Blue	Blue	Green	Blue	Blue	Blue	<p>The maintenance and promotion of good ambient air quality within the LAP area is likely to result in a positive effect on biodiversity, population, human health and on the climate, through a reduced pollution potential.</p>
<b>IO5.3</b>	To support the take-up and use of ultra-low emissions vehicles and encourage, through the development management process the provision of electric vehicle charging infrastructure, where appropriate.	Blue	Green	Blue	Blue	Green	Blue	Blue	Blue	<p>The support and uptake of ultra-low emission vehicles and electric vehicles is likely to result in a positive effect on air quality, noise and climate in the LAP area, and a consequently positive effect on population and human health.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>Built Heritage and Archaeology</b>										
<b>BH1</b>	It is the policy of the Council to preserve and enhance the buildings identified on the Record of Protected Structures and to carefully consider any proposals for development that would affect the special value of such structures, including its historic curtilage, both directly and indirectly.									The preservation and enhancement of buildings identified on the RPS is likely to result in a positive effect on heritage, and on the landscape and visual setting of the LAP area. A potential positive effect on the population is also identified, as a result of reduced visual impact of proposed new development.
<b>BH1.1</b>	To ensure the protection of all structures, (or parts of structures) and the immediate surroundings including the curtilage and attendant grounds of structures contained in the Record of Protected Structures (refer to Table 10.1 and Map No. 2 Built Heritage and Archaeology).									The preservation and enhancement of buildings identified on the RPS is likely to result in a positive effect on heritage, and on the landscape and visual setting of the LAP area. A potential positive effect on the population is also identified, as a result of reduced visual impact of proposed new development.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
BH1.2	To acknowledge and promote awareness of the origins, historical development and cultural heritage of the town, to support high quality developments that relate to local heritage and to ensure that new development respects and is responsive to the cultural heritage of Leixlip.								Increased awareness of the towns heritage and promotion of appropriate and responsive development is likely to result in a positive effect on the heritage and landscape and visual setting of the town. A potential positive effect on the population is also identified, as a result of reduced visual impact of proposed new development.
BH1.3	To protect the landscape character, values, sensitivities, focal points and views in the Leixlip Plan Area, including those identified in the Kildare County Development Plan. This will include, inter alia, the following: a) the requirement of a Visual Impact Assessment for developments with potential to impact on areas of significant landscape character, value or sensitivity, including both urban and natural features, significant townscapes and historic buildings, as appropriate.								Objective BH1.3 sets out provisions for the protection of the landscape character, values, sensitivities, focal points and views of the LAP area, which will likely result in a positive effect on the population, heritage and landscape and visual setting of Leixlip as a result of the limitations placed on potentially visually intrusive development.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
	b) Prohibit development that will block or interfere with a significant focal point of view. Where it is considered that a development may impact on focal points or views, have regard to the significance of any such impact and any appropriate mitigation measures that should be incorporated.								
<b>BH1.4</b>	To support the implementation of the conservation plan for the restoration and management of Leixlip Spa in association with key stakeholders.								The restoration and management of Leixlip Spa is likely to result in a positive effect on heritage, and on the landscape and visual setting of the Leixlip Spa lands. A potential positive effect on the population is also identified as a result of the potential employment opportunities and economic investment that could result from the promotion of Leixlip Spa as a tourist destination.
<b>BH1.5</b>	To complete a Conservation Study for The Wonderful Barn and its curtilage to inform potential feasibility studies and public consultation for appropriate use, and to support the implementation of the conservation study for the restoration and management of The Wonderful Barn and associated lands in association with key stakeholders.								The restoration and management of the Wonderful Barn is likely to result in a positive effect on heritage, and on the landscape and visual setting of the subject lands. A potential positive effect on the population is also identified as a result of the potential employment opportunities and economic investment that could result from the promotion of The Wonderful Barn as a tourist destination.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>BH1.6</b>	<p>To promote The Wonderful Barn as an integrated tourism attraction including the restoration of the main features of the complex and its historical landscape:</p> <ul style="list-style-type: none"> <li>(i) The re-arrangement of the existing access way.</li> <li>(ii) The integration of car parking facilities,</li> <li>(iii) The consolidation and eventual restoration of the historic buildings.</li> <li>(iv) The reinstatement of the walled garden and rear courtyard;</li> <li>(v) The insertion of complementary commercial uses to ensure a sustainable future for the project. The feasibility of a Discovery Park including play facilities and a picnic area shall be investigated.</li> </ul>								<p>The restoration and management of the Wonderful Barn is likely to result in a positive effect on heritage, and on the landscape and visual setting of the subject lands. A potential positive effect on the population is also identified as a result of the potential employment opportunities and economic investment that could result from the promotion of The Wonderful Barn as a tourist destination.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>BH1.7</b>	To seek the protection of burial grounds within Leixlip in co-operation with agencies such as the Office of Public Works and the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht (DoCHG) as appropriate.	Blue	Blue	Blue	Blue	Blue	Green	Blue	Blue	Protection of existing burial grounds within the LAP area is likely to result in a positive effect on heritage.
<b>BH1.8</b>	To promote the restoration of the Boat House on the River Liffey where it meets the River Rye and to promote the area along the Liffey as a recreational amenity.	Red	Green	Blue	Red	Blue	Green	Green	Blue	<p>The Boat House is listed on the Record of Protected Structures and the restoration of the same is therefore likely to give rise to a positive effect on heritage, and on the landscape and visual setting of the area.</p> <p>Promotion of the area along the River Liffey as a recreational amenity is likely to result in a positive effect on population and human health through the encouragement and facilitation of physical activity.</p> <p>Increased use of the river or riverbank for recreation has the potential to give rise to a negative effect on biodiversity and water, as a result of increased human interaction. Refer to Table 8.1 for mitigation measures.</p>
<b>BH2</b>	It is the policy of the Council to preserve and enhance the historic character and visual setting of the Leixlip Architectural Conservation Area and to carefully consider any proposals for development that would affect the special value of the area.	Blue	Green	Blue	Blue	Blue	Green	Green	Blue	Policy BH2 is likely to result in a positive effect on heritage, population and landscape and visual setting of the town centre, specifically the ACA, as a result of the enhancement of its conservation value, local character, townscape and the public realm.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>BHO2.2</b>	To ensure that new development, including infill development, extensions and renovation works within or adjacent to the ACA preserve or enhance the special character and visual setting of the ACA including vistas, streetscapes, building line, fenestration patterns and architectural features.								Objective B2.2 is likely to result in a positive effect on heritage, population and landscape and visual setting of the town centre, specifically the ACA, as a result of the enhancement of its conservation value, local character, townscape and the public realm.
<b>BH2.2</b>	To have regard to the Kildare Shopfront Guidelines (2013) in the consideration of any proposals within the ACA providing that they contribute to the established pattern, scale, materials and proportions of the buildings within the ACA. Modern design that makes a positive contribution to this ACA will also be considered.								Objective BH2.3 is likely to result in a positive effect on heritage, population and landscape and visual setting of the town centre, specifically the ACA, as a result of the enhancement of its conservation value, local character, townscape and the public realm.
<b>BH2.3</b>	To encourage the retention, repair and re-use of materials which characterise the vernacular architecture of the ACA including stone, slate, timber windows and doors, and decorative render.								Objective BH2.4 is likely to result in a positive effect on heritage, population and landscape and visual setting of the town centre, specifically the ACA, as a result of the enhancement of its conservation value, local character, townscape and the public realm.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>BH2.4</b>	To reduce and prevent visual and urban clutter within the ACA including, where appropriate, traffic management structures, utility structures and all signage.								Reduced urban clutter within the existing ACA is likely to result in a positive impact on the population, landscape and visual setting and heritage of the town centre, as a result of reduced obstruction of features of heritage significance.
<b>BH2.5</b>	To prepare a statement of character and area specific policy objectives for the Leixlip ACA.								This objective is likely to result in a positive effect on the heritage of the LAP area.
<b>BH3</b>	It is the policy of the Council to safeguard the archaeological heritage of the LAP area and avoid impacts on sites, monuments feature or objects of significant historical or archaeological interest.								Policy BH3 is likely to result in a positive effect on the heritage of the LAP area.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>BH3.1</b>	To prioritise the protection/preservation in situ (or upon agreement preservation by record) of items of archaeological interest as listed in Table 10-2 and shown on Map No. 2 Built Heritage and Archaeology from inappropriate development that would adversely affect and/or detract from the interpretation and setting of these sites.								Objective BH3.1 is likely to result in a positive effect on the heritage of the LAP area.
<b>BH3.2</b>	To protect the historic core of Leixlip town and retain where possible the existing street layout, historic building lines and traditional plot widths where these derive from medieval or earlier origins								Objective BH3.2 is likely to result in a positive effect on the heritage and landscape and visual setting of the LAP area through the protection of features of historic importance.
<b>BH3.3</b>	To ensure that development proposals contribute towards the protection and preservation of the archaeological value of underwater or archaeological sites associated with the River Liffey and associated features.								Objective BH3.1 is likely to result in a positive effect on the heritage of the LAP area.

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>Natural Heritage</b>										
NH1	It is the policy of the Council to support the protection of species and habitats that are designated under the Wildlife Acts 1976 and 2000, the Birds Directive 1979 and the Habitats Directive 1992 as well as areas of high local biodiversity value and to ensure developments with potential to impact the integrity of the Natura 2000 network will be subject to Appropriate Assessment.									Policy NH1 is likely to result in a positive effect on the biodiversity of the LAP area.
NH1.1	To protect, conserve and manage the Rye Water Valley/Cartron SAC and contribute to the protection of the ecological, visual, recreational, environmental and amenity value of the Royal Canal pNHA and Liffey Valley pNHA.									<p>Objective NH1.1 is likely to result in a positive effect on biodiversity and water quality, through protection and conservation of the surface water features in the LAP area.</p> <p>Protection of the visual value of the pNHAs is likely to result in a positive effect on the landscape and visual setting of the LAP area.</p> <p>A positive effect on population and human health is also identified as a result of the protection of the recreational and amenity value of the surface water features.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
NH1.2	To ensure screening for Appropriate Assessment, in accordance with Article 6(3) of the Habitats Directive is carried out in respect of any plan or project, including Masterplans									The provisions made under Objective NH1.2 for the required undertaking of AA in respect of any plan or project are likely to result in a positive effect on biodiversity due to the protection and conservation of European designated sites, or their conservation interests.
NH1.3	To ensure that any proposal for development within or adjacent to the Royal Canal (pNHA) and Liffey Valley (pNHA) is located and designed to minimise its impact on the biodiversity, geological, water and landscape value of the pNHA.									An overall positive effect on the environment is identified as a result of Objective NH1.3
NH1.4	To ensure all applications for planning consent within or adjacent to the Royal Canal (pNHA) and Liffey Valley (pNHA) are accompanied by an Ecological Impact Assessment (EcIA) prepared by a suitably qualified professional.									While the successful implementation of Objective NH1.3 will likely work to minimise potential effects on the biodiversity of the LAP area, provision of an Ecological Impact Assessment alongside planning applications in the defined locations will not necessarily give way to the occurrence of no negative effects on habitats or species as a result of the development. An overall uncertain environmental effect is identified for the purposes of this assessment.  See site specific zoning assessment for a detailed assessment of proposed development within or adjacent to the Royal Canal pNHA and Liffey Valley pNHA.

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
NH1.5	To identify, protect, conserve and enhance wherever possible, wildlife habitats and species of local importance, not otherwise protected by legislation. Such habitats would include woodland, river, grassland areas and field boundaries (hedgerows, stone walls and ditches). Such features form part of a network of habitats and corridors, which allow wildlife to exist and flourish and contribute to compliance with Article 10 of the Habitats Directive.									Objective NH1.5 is likely to result in a positive effect on local biodiversity.
NH1.6	To protect and conserve the integrity of soils that supports the rich biodiversity and ecological networks in Leixlip.									The protection and conservation of soils in the LAP area is likely to result in a positive effect on the biodiverse plant species which it supports, as well as surface water quality as a result of reduced potential for leeching of harmful substances.
GI 1	It is the policy of the Council to protect, enhance and further develop the Green Infrastructure network in Leixlip to provide a shared space for amenity, recreation and biodiversity.									<p>An enhanced green infrastructure network in the LAP area is likely to result in a positive effect on population and human health and on air, noise and climate through promotion of walking and cycling as alternative modes of transport, and through the provision of amenity and recreational services.</p> <p>Promoted use of green infrastructure does however have the potential to result in a negative effect on biodiversity, land, soil and water as a result of increased human interaction and associated pollution potential. Refer to Table 8.1 for mitigation measures.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
<b>GII.1</b>	To protect identified key Green Infrastructure and ‘Stepping Stone’ habitats (according to their value) and enhance where possible. Site specific ecology surveys should be carried out where appropriate to inform proposed development and assess and mitigate potential impacts. The need for site specific ecological surveys will be determined on a case by case basis as part of the planning consent process.								The protection and enhancement of habitats of green infrastructure in the LAP area, and provisions for site-specific ecological surveys is likely to result in a positive effect on biodiversity, land, soil and water.
<b>GII.2</b>	To seek to ensure key trees, woodlands and high value hedgerows identified in the Leixlip Habitat Survey, and the linkages they provide to larger areas of green infrastructure and the wider countryside, are retained and integrated into the design of new developments where appropriate.								The retention of key trees, woodlands and high value hedgerows is likely to result in a positive effect on biodiversity, land, soil and the landscape and visual setting of the LAP area, through maintenance of existing habitats and landscape features, and through the maintenance of nutrient rich soil.

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>GI1.3</b>	To provide for Eco-ducts as part of any new pedestrian and cycle links across the River Rye, Royal Canal and railway, thereby facilitating the free movement of people and species through the LAP area.									Provision of Eco-Ducts is likely to result in a positive effect on biodiversity in the LAP area.
<b>GI1.4</b>	To maintain a green infrastructure protection zone of not less than 10 metres from the top bank of water courses in Leixlip with the full extent of the protection zone to be determined on a case by case basis by the Planning Authority, based on site specific characteristics and sensitivities. Strategic green routes and trails will be open for consideration within the protection zone, subject to appropriate safeguards and assessments.									Provision of new green infrastructure in the LAP area is likely to result in an overall positive environmental effect.
<b>GI1.5</b>	To incorporate items of historical or heritage importance within the Green Infrastructure, as amenity features.									The incorporation of items of historical or heritage importance within the proposed green infrastructure is likely to result in a positive effect on the population of the LAP area, through potential employment opportunities and economic investment resulting from increased tourism.

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
										A potential negative effect on heritage is identified, as the promotion of items of heritage or historical importance as amenity features is likely to result in increased human interaction, and a potential loss of conservation value. Refer to Table 8.1 for mitigation measures
<b>GI1.6</b>	<p>To seek to preserve, protect and enhance trees (including woodlands) of special amenity, nature conservation or landscape value within the plan area including at the following locations:</p> <ul style="list-style-type: none"> <li>• St Catherine’s Park.</li> <li>• The Black Avenue.</li> <li>• Leixlip Castle Demense.</li> <li>• Newtown House, Captain’s Hill.</li> <li>• In grounds of Leixlip House, adjoining public open space at Rye River Estate.</li> <li>• Both sides of the aqueduct embankment.</li> <li>• Sileachain Valley, between fire station and Glendale Meadows.</li> <li>• East side of laneway to Leixlip Gate.</li> <li>• Marshfield House, Mill Lane.</li> </ul>									The preservation and protection of trees in the LAP area is likely to result in a positive effect on biodiversity, land, soil and the landscape and visual setting of the LAP area, through maintenance of existing habitats and landscape features, and through the maintenance of nutrient rich soil.

Ref	Policy/Objective	SEA Environmental Objectives							Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	
	<ul style="list-style-type: none"> <li>Open space adjacent to Rye water at Rye River Estate.</li> <li>Along north bank of Canal, Collinstown.</li> <li>Between River Forest and Ryevale Lawns.</li> <li>Trees along Main Street.</li> <li>Ryevale House and adjoining public open space at Ryevale Lawns.</li> </ul>								
<b>GI1.8</b>	To seek to protect trees with a particular local amenity or conservation value.								The preservation and protection of trees in the LAP area is likely to result in a positive effect on biodiversity, land, soil and the landscape and visual setting of the LAP area, through maintenance of existing habitats and landscape features, and through the maintenance of nutrient rich soil.
<b>GI1.9</b>	To promote appropriate tree planting within public open spaces along transport networks and in the public realm								<p>The promotion of tree planting in the LAP area is likely to result in a positive effect on biodiversity, land, soil and the landscape and visual setting of the LAP area, through the provision of habitats and ecological corridors and maintenance of nutrient rich soil in the LAP area.</p> <p>An uncertain effect on the landscape and visual setting of the LAP area is identified for the purposes of this assessment in that the provision of trees and plants are often considered positive attributes of the public realm. However, and particularly in the existing Architectural Conservation Area in Leixlip town, trees also have the potential to result in a visual obstruction of key features of architectural significance.</p>

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
<b>GI1.10</b>	(A) To seek to protect, preserve and develop St. Catherine’s Park as a public amenity. (B) To protect the amenity of St. Catherine’s Park as a dedicated public open space area and to provide for increased connectivity from Leixlip Main street to the existing car park through the provision of a new linear parkland access with dedicated off-road pedestrian and cycle access points. (Refer to Black Avenue KDA).									<p>Protection and preservation of St. Catherine’s Park as a public amenity and provision of a new linear parkland is likely to result in a positive effect on population and human health through provision of amenities services and alternative transport networks and promotion of walking and cycling.</p> <p>The introduction of a new linear parkland in the LAP area is likely to result in a positive effect on biodiversity, through habitat creation and provision of ecological linkages. However, the promotion of the parklands as public amenity areas also has the potential to result in a negative effect on biodiversity, as a result of increased human interaction. An uncertain effect on biodiversity is therefore identified for the purposes of this assessment.</p>
<b>OS1</b>	It is the policy of the Council to provide for a hierarchy of high quality multi-functional public open spaces within Leixlip, and to preserve and protect such spaces through the appropriate zoning of lands.									<p>Provision of high-quality open spaces within the LAP area is likely to result in a positive effect on population and human health, air quality, biodiversity, land, soil, and the landscape and visual setting of the LAP area.</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>OS1.1</b>	To explore the feasibility of, develop and/or improve linkages and connections between the network of open spaces in Leixlip, without compromising the biodiversity of the location:  (i) Along the northern bank of the Rye from Distillery Lane to Woodside Estate and Confey Community College;  (ii) Along the River Liffey, from Leixlip Town Centre through Leixlip Castle, to the Salmon Leap Canoe Club; and  (iii) Between Síleacháin Valley and St. Catherine’s Park.									<p>Increased connectivity between open spaces in the LAP area is likely to result in a positive effect on population and human health and on air, noise and climate through the provision of amenity and recreational services.</p> <p>Increased use of open spaces does however have the potential to result in a negative effect on biodiversity, land, soil and water as a result of increased human interaction and associated pollution potential.</p> <p>Objective OS1.1 does however require that the proposed development/improvement works be implemented in a way that the biodiversity of the subject lands is not compromised. An uncertain effect on biodiversity, land, soil and water is therefore identified for the purposes of this assessment.</p>
<b>OS1.2</b>	To continue to facilitate and promote community-managed garden/allotments.									Objective OS1.2 is likely to result in a positive effect on population and human health through provision of enhanced community services.

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
OS1.3	To encourage the development of amenity lands at Lough na Mona to cater for active recreation for residents of Leixlip.									<p>The Lough Na Mona Lands are currently zoned for open space and amenity use under the existing Leixlip LAP 2017-2023. The provisions set out under Objective OS1.5 are therefore representative of the baseline scenario and a neutral environmental effect is identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions</p>
OS1.4	<p>To cooperate with key stakeholders in the development (where appropriate) of the Rye River, Royal Canal, Liffey corridor and other areas within Leixlip for recreational purposes:</p> <ul style="list-style-type: none"> <li>(i) ESB regarding the recreational potential of the reservoir at Backweston.</li> <li>(ii) Waterways Ireland regarding the Royal Canal.</li> <li>(iii) To pursue the creation of a Liffey Valley Regional Park together with Fingal and South Dublin County Councils.</li> </ul>								<p>Objective OS1.6 does not provide for development, but rather the welcomed consultation with key stakeholders in advance of the same.</p> <p>The stakeholders identified would not necessarily take into consideration potential effects on biodiversity, water etc. but would be largely concerned with recreational/amenity functions and potential effects on material assets, namely water supply.</p> <p>A potential positive effect on material assets and the population is therefore identified. Provision of a regional park is likely to result in a positive effect on population and human health through improved recreational and amenity services.</p> <p>A potential negative effect on biodiversity, land, soil and water is identified as a result of increased human interaction with the subject lands. Refer to Table 8.1 for mitigation measures</p>	

Ref	Policy/Objective	SEA Environmental Objectives							Commentary	
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual		Material Assets
OS1.5	To facilitate and promote the provision of a public park at The Wonderful Barn.									<p>Provision of a public park at the Wonderful Barn is likely to result in a positive effect on population and human health through improved recreational and amenity services.</p> <p>A potential negative effect on biodiversity, land, soil and heritage is identified as a result of increased human interaction with the subject lands. Refer to Table 8.1 for mitigation measures</p>
OS1.6	To maintain and protect the greenbelt between Leixlip, Celbridge and Maynooth.									Objective OS1.9 is likely to result in an overall positive environmental effect.
CON1	It is the policy of the Council to ensure that lands located at Confey are developed in a sustainable manner and in accordance with the details set out in the Confey Urban Design Framework recognising the areas strategic location within the Dublin Metropolitan Area.									<p>The lands at Confey are already zoned for development under the existing Leixlip LAP 2017-2023. An overall ‘neutral’ environmental effect is therefore identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions</p>
CON 1.1	To ensure the future development of the lands identified within the Confey Urban Design Framework are subject to a detailed Masterplan the contents of which shall be agreed in writing with the Planning Department of Kildare County Council.									<p>The lands at Confey are already zoned for development under the existing Leixlip LAP 2017-2023. An overall ‘neutral’ environmental effect is therefore identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
<b>CON1.2</b>	To ensure no development is permitted until a detailed Masterplan has been prepared for the Urban Design Framework lands. Individual applications for smaller sections of the Framework lands will not be considered until such time as an agreement in writing has been received from the Planning Department of Kildare County Council.									<p>The lands at Confey are already zoned for development under the existing Leixlip LAP 2017-2023. An overall 'neutral' environmental effect is therefore identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions</p>
<b>CON 1.3</b>	To require that the Masterplan prepared for the Confey Lands is accompanied by a statement of compliance which demonstrates how proposals for future development are consistent with the overall design principles, concept and character area details set out in section 2 of the Urban Design Framework.									<p>The lands at Confey are already zoned for development under the existing Leixlip LAP 2017-2023. An overall 'neutral' environmental effect is therefore identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions</p>

Ref	Policy/Objective	SEA Environmental Objectives								Commentary
		Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
CON1.4	To ensure the development of the Framework lands and Masterplan are consistent with the phasing/sequencing schedule set out in section 3 of the Confey Urban Design Framework.									<p>The lands at Confey are already zoned for development under the existing Leixlip LAP 2017-2023. An overall 'neutral' environmental effect is therefore identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required</p> <p>Refer to site specific zoning assessment in Table 7.4 for a detailed assessment of new zoning provisions</p>

**Table 7.4: Site-Specific Zoning Assessment**

Summary of Change in Land-Use Zoning	SEA Environmental Objectives								Commentary
	Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
Area previously zoned for Open Space and Amenity located to the east of the town north of Black Avenue adjoining Leixlip Manor Hotel and St. Catherines Park. rezoned as The Black Avenue KDA. This KDA measures approximately 15.1ha, provides for 10ha of Residential Zoned lands alongside a new Parklands space adjoining Black Avenue and a linear parklands space leading to St. Catherines Park.									<p>An uncertain positive effect on population and human health is identified for the purposes of this assessment, in that increased residential opportunities will likely result in a positive effect on the population through provision of required housing. However, the loss of open space and amenity use could also be considered to have the potential to give rise to negative effect on population and human health.</p> <p>While the subject lands do provide for 'open space', they do not currently offer an amenity function, as suggested by their existing land-use zoning designation, in that the lands are currently within private ownership. No loss in amenity value is therefore identified.</p>

Summary of Change in Land-Use Zoning	SEA Environmental Objectives								Commentary
	Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
									<p>Intensive development on generally undeveloped land has the potential to result in a negative effect on biodiversity, land, soil, air, noise, climate and the landscape and visual setting of the area.</p> <p>This change in land-use zoning has the potential to result in a negative effect on material assets in that increased residential density in the LAP area could cause a strain on local services and utilities- such as water supply and wastewater infrastructure.</p> <p>A potential neutral effect on heritage is identified in that no known features of architectural or archaeological significance are located on the subject lands.</p>
<p>A reduction in the area of land zoned for development ‘subject to masterplan’ at Confey. Remaining lands now zoned for development subject to proposed ‘Confey Urban Design Framework’.</p> <p>The land that has been excluded from development at Confey has been rezoned for Agricultural use under the Draft LAPDraft LAP.</p>								<p>A reduction in the area of land identified for large-scale development, and its change of use to one which is considered to be substantially less intensive, is likely to give rise to an overall positive environmental effect.</p> <p>A potentially negative effect on the population is identified however, in that this zoning change is representative of a reduction in the residential opportunities provided for at Confey, then that which is currently provided for under the existing Leixlip LAP 2017-2023. This is however compensated for elsewhere in the Draft LAP. An uncertain effect on population and human health is therefore identified for the purposes of this assessment.</p>	
Change in boundary of the Leixlip Gate KDA in order to take into account an area of Existing Residential development.									It is assumed that this change in land-use zoning was made in order to more accurately reflect the existing land-use of the LAP area. As this change does not represent any new development, an overall neutral environmental effect is identified for the purposes of this assessment.
Exclusion of Easton (off Green Lane) KDA and rezoning of land to represent Existing Residential use.									It is assumed that this change in land-use zoning was made in order to more accurately reflect the existing land-use of the LAP area. As this change does not represent any new development, an overall neutral environmental effect is identified for the purposes of this assessment.

Summary of Change in Land-Use Zoning	SEA Environmental Objectives								Commentary
	Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
Expansion of currently zoned Neighbourhood Centre near Collinstown. This will involve the rezoning of small area of ‘Open Space and Amenity’ to ‘Neighbourhood Centre’ land use.									<p>It is assumed that this change in land-use zoning was made in order to more accurately reflect the existing land-use of the LAP area. As this change does not represent any new development, an overall neutral environmental effect is identified for the purposes of this assessment. An uncertain effect on population and human health is identified for the purposes of this assessment. While the expanded neighbourhood centre and associated commercial and employment opportunities could be considered to give rise to a potential positive effect on population and human health, the loss of amenity space could also be considered to give rise to a potentially negative effect.</p> <p>Development on generally un-developed lands such as those zoned for Open Space and Amenity use is likely to result in an overall negative environmental effect. Further, there are two features of heritage significance located within the lands identified for development.</p> <p>An expanded neighbourhood centre has the potential to give rise to a negative effect on material assets in that new retail or commercial development in this area could cause a strain in local services or utilities- such as water supply or wastewater.</p>
Area of land currently zoned to represent Existing Residential development rezoned to facilitate ‘Transport and Utilities’ use near Louisa Bridge.									<p>It is assumed that this change in land-use zoning was made in order to more accurately reflect the existing land-use of the LAP area- specifically, the existing Louisa Bridge train station. As this change does not represent any new development, an overall neutral environmental effect is identified for the purposes of this assessment.</p> <p>This change in land-use zoning is likely to result in an overall neutral environmental effect in that the subject lands are currently identified as being ‘developed’ under the existing Leixlip LAP 2017-2023. The incorporation or facilitation of ‘transport and utilities’ development on the subject lands is therefore not expected to result in any significant environmental effect.</p>

Summary of Change in Land-Use Zoning	SEA Environmental Objectives								Commentary
	Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
									A positive effect on population and human health is identified through the provision of enhanced services and facilities.
Minor expansion of the land currently zoned for Community and Educational use between the River Rye and Captains Hill. This will involve the rezoning of a small area of 'Open Space and Amenity' to 'Community and Educational' land use.									<p>It is assumed that this change in land-use zoning was made in order to more accurately reflect the existing land-use of the LAP area- specifically, the existing Louisa Bridge train station. As this change does not represent any new development, an overall neutral environmental effect is identified for the purposes of this assessment.</p> <p>An uncertain effect on population and human health is identified for the purposes of this assessment in that while the provision of community and educational facilities in the LAP area could be considered to give rise to a potential positive effect on population and human health, the loss of amenity space could also be considered to give rise to a potential negative effect.</p> <p>Development on generally un-developed lands such as those zoned for Open Space and Amenity use has the potential to give rise to an overall negative environmental effect.</p>
Minor expansion of the land currently zoned as Existing Residential development between the River Rye and Captains Hill. This will involve the rezoning of a small area of 'Open Space and Amenity' to 'Existing Residential' land use.									It is assumed that this change in land-use zoning was made in order to more accurately reflect the existing land-use of the LAP area. As this change does not represent any new development, an overall neutral environmental effect is identified for the purposes of this assessment.
Area of land currently zoned for Open Space and Amenity Agricultural use east of the Confey development lands rezoned for Agricultural Open Space and Amenity use.									<p>An overall neutral environmental effect is envisaged in that both land-zonings generally constitute limited or no development.</p> <p>A negative effect on population and human health is identified for the purpose of this assessment through the loss of amenity value.</p> <p>An overall uncertain effect is identified for the purposes of this assessment in that Open Space and Amenity land-use has the potential to constitute development in the form of sports buildings, playing pitches, parks etc.</p>

Summary of Change in Land-Use Zoning	SEA Environmental Objectives								Commentary
	Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
									<p>Where development of this nature is proposed on existing ‘undeveloped’ lands currently zoned for Agricultural use, there is potential for negative environmental effects to arise.</p> <p>A likely positive effect on population and human health is identified through the provision of new amenity services in the LAP area.</p>
<p>Large area of land currently zoned for Agricultural use to the south of Leixlip town, north of the M4 motorway forming part of Leixlip Castle demesne rezoned as the Celbridge Road East Key Development Area. This KDA is measures approximately 12.8ha and provides for 10ha of Residential Zoned lands alongside a new Community Park and Amenity Walk covering an area of c. 12.8ha.</p>									<p>This change in land zoning is likely to result in an overall negative environmental effect in that it makes provisions for intensive residential development on generally undeveloped lands.</p> <p>A positive effect on population and human health is identified through the provision of required residential opportunities.</p> <p>The Infrastructural Assessment carried out as part of the Draft LAP has indicated that there is sufficient capacity to cater for the level of development proposed at the Celbridge Road East Key Development Area. A neutral effect on material assets is therefore identified.</p> <p>This change in land-use zoning has the potential to result in a negative effect on material assets in that increased residential density in the LAP area could cause a strain on local services and utilities- such as water supply and wastewater infrastructure.</p> <p>A potential neutral effect on heritage is identified in that no known features of architectural or archaeological significance are located on the subject lands.</p>
<p>Overall reduction in the Leixlip LAP plan boundary to the north. This represents the de-zoning of land currently zoned for Agricultural use, to un-zoned or ‘greenfield’ land.</p>									<p>An overall positive environmental effect is identified as a result of the de-zoning of land to greenfield land.</p>

Summary of Change in Land-Use Zoning	SEA Environmental Objectives								Commentary
	Biodiversity	Population & Human Health	Land & Soils	Water	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets	
Lands previously zoned for development 'subject to masterplan' at Confey to be subject to the zoning provisions set out under the Urban Design Framework. This will include mixed-use development, residential, community hub and educational as well as open space and amenity land zonings.									The lands at Confey are already zoned for development under the existing Leixlip LAP 2017-2023. An overall 'neutral' environmental effect is therefore identified for the purposes of this assessment. However, it is acknowledged that any development has the potential to give rise to significant environmental effects, and the mitigation measures outlined in Table 8.1 should be given due regard in the implementation of this Objective. All development will be subject to Environmental Impact Assessment or Appropriate Assessment at project level, where required

## 8 Mitigation Measures and Monitoring

### 8.1 Mitigation Measures

Mitigation measures are measures envisaged and designed to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the Draft LAP. All mitigation measures have been developed and agreed with KCC as part of the SEA iterative process.

The primary mitigation measure is to ensure the sustainable and appropriate development of Leixlip and its environs without compromising the integrity of the natural and built environment. All new development that requires an Environmental Impact Assessment (EIA) in accordance with EIA legislation will address the range of environmental objectives, indicators and targets and associated environmental mitigation measures and incorporate them into the project specific mitigation measures.

**Table 8.1: Mitigation Measures**

Environmental Receptor	Mitigation Measures	Relevant objectives	
		County Development Plan Objectives	Draft LAP Objectives
Biodiversity	Ensure that appropriate measures for conservation and enhancement of the natural and built environment are incorporated into all relevant plans and programmes.	NH1, NH2, NH3, NH4, NH5, NH6, NH7, NH8, NH9, NH10, NH11, NH12, NH13, NH14, NH15, NH16 NHO1, NHO2, NHO3, NHO4, NHO5, NHO6, NHO7, NHO8, NHO9, NHO10	NHO1.1, NHO1.2, NHO1.3, NHO1.4, NHO1.5, NHO1.6
	Ensure that all new development plans are cognisant of the Biodiversity Action Plan for the County.	NHO2	-
	Ensure the protection of ecological resources that have economic benefits e.g. ecological zones that draw tourism.	NHA, NH2, NH3, NH4, NH5, NH6, NH7, NH8, NH9, NH10, NH11, NH12, NH13, NH14, NH15, NH16 NHO1, NHO2, NHO3, NHO4,	NHO1.1, NHO1.2, NHO1.3, NHO1.4, NHO1.5, NHO1.6

		NHO5, NHO6, NHO7, NHO8, NHO9, NHO10	
	Compliance with the zoning of the SACs, NHAs, SPAs which prohibits non-compatible developments.	NH3, NH4, NH5, NH6, NH7, NH8, NH9, NH10,	NHO1.1, NHO1.2, NHO1.3, NHO1.4,
	Ensure that an AA is carried out for all development proposals with potential to impact on Natura 2000 sites.	NH3, NH4, NH5, NH6, NH11. NH12	NHO1.2
	Ensure that greenfield development, such as that targeted at Black Avenue and Celbridge Road East is subject to environmental assessment, where required.	NHA, NH2, NH3, NH4, NH5, NH6, NH7, NH8, NH9, NH10, NH11. NH12, NH13, NH14, NH15, NH16  NHO1, NHO2, NHO3, NHO4, NHO5, NHO6, NHO7, NHO8, NHO9, NHO10	NHO1.2, NHO1.3
	The development of new road linkages should be subject to route option assessment and environmental assessment, where required.	NHA, NH2, NH3, NH4, NH5, NH6, NH7, NH8, NH9, NH10, NH11. NH12, NH13, NH14, NH15, NH16  NHO1, NHO2, NHO3, NHO4, NHO5, NHO6, NHO7, NHO8, NHO9, NHO10	NHO1.2, NHO1.3
	Ensure that appropriate invasive species management and control measures are implemented	NH14, NHO 7, NHO8	-
Population and Human Health	Ensure that access to adequate health and education facilities to meet the demand of the current and projected populace are included in development plans.	LE1, LEO1, LEO2, LEO3,  C1, C2, C3, EF1, EF2, EF3, EF4, EF5, EFO1, EFO2, EFO3, EFO4, EFO5, EFO6, EFO7  HS1, HS2, HS3, HS4, HS5, HSO1, HSO2, HSO3, HSO4, HSO5	HCO3.1

	Encourage the further development of regional sustainable and public transport infrastructure including rail and bus corridors.	MT1, MT2, MT3, MT4, MT6, MT7, MT8, MT9, MT11, MT12, MT15, MTO1, MTO3, MT04 PT1, PT2, PT3, PT4, PT5, PT6, PT7, PT8, PT9, PT10, PT11, PT12, PT13 PTO1, PTO2, PTO3, PTO4, PTO5, PTO6, PTO8 WC1, WC2, WC4, WC5, WC6, WC7, WC8, WC9, WC10, WC14 WCO1, WCO2, WCO3, WCO4, WCO5, WCO6, WCO7, WCO8, WCO9	MT1, MTO1.2, MTO1.3, MTO1.4, MTO1.5, MTO1.6, MTO1.7, MTO1.8, MTO1.9, MTO1.10, MTO1.11, MTO1.12, MT2, MTO2.1, MTO2.2, MTO2.3, MTO2.4, MTO2.5, MTO2.6
Land and Soils	Perform a survey of obsolete urban renewal areas and facilitate and promote the reuse and regeneration of brownfield sites, derelict land and buildings in and around urban centres.	EO18, EO19, EO20, EO21, EO22, EO23	CSO1.1, UCRO1.3, UCR2, TCR 1, TCR 2, UCRO3.2, UCRO3.7
Waste	Promote the recycling of construction and demolition waste and the reuse of aggregate and other materials in order to reduce the quantities of virgin material being extracted. This is particularly relevant with regards the proposed greenfield development at Black Avenue and at Celbridge Road East	VM5, VM10	I5 IO5.1
	Ensure that the 'polluter pays principle' is adhered to in full cooperation with the EPA.	VM1, VM2, VM3, VM11, VM14, PC1	I5
Water	Ensure that the objectives and the programme of measures outlined the River Basin Management Plans are fully implemented.	WQ1, WQ2, WQ3, WQ4, WQ5, WQ6	I2, IO2.1, IO2.2, IO2.3, IO2.4, IO2.5

	Provide adequate capacity of water and wastewater treatment and storage facilities for current and projected populace.	WQ1, WQ2, WQ3, WQ4, WQ5, WQ6	I1, IO1.1, IO1.2, IO1.3, IO1.4
	Prevent the alteration of natural drainage systems and in the case of development works require the provision of acceptable mitigation measures in order to minimise the risk of flooding and negative effects on water quality.	WQ1, WQ2, WQ3, WQ4, WQ5, WQ6	I3, IO3.1, IO3.2, IO3.3
	Comply with the objectives and policies of the Eastern Catchment Flood Risk Assessment Management Study.	WQ1, WQ2, WQ3, WQ4, WQ5, WQ6	I3, IO3.1, IO3.2, IO3.3
	Promote SUDS principles for all drainage including the integration of storm water attenuation facilities for new developments and existing catchment areas.	WQ1, WQ2, WQ3, WQ4, WQ5, WQ6	IO2.2
	Ensure that any new development does not present an inappropriate risk of flooding or does not cause or exacerbate such a risk at other locations.	WQ1, WQ2, WQ3, WQ4, WQ5, WQ6	I3, IO3.1, IO3.2, IO3.3
	Preserve and protect the water quality of Kildare's river systems where this helps to regulate stream flow, recharge ground water and screen pollutant.	WQ1, WQ2, WQ3, WQ4, WQ5, WQ6	I2, IO2.1, IO2.2, IO2.3, IO2.4, IO2.5
	Comply with the DoECLG/OPW guidance on development and flood risk through the control of development in any flood plain so that new and existing developments are not exposed to increased risk of flooding and that any loss of flood storage is compensated for elsewhere in the river catchment.	WQ1, WQ2, WQ3, WQ4, WQ5, WQ6	I3, IO3.1, IO3.2, IO3.3
	Ensure that mitigation measures proposed under the SFRA are implemented as appropriate.	WQ1, WQ2, WQ3, WQ4, WQ5, WQ6	I3, IO3.1, IO3.2, IO3.3
	Ensure that the objectives and policies of EU Air.	VM2	I5, IO5.2

Air, Noise and Climate	Quality legislation are incorporated into plans and programmes upon implementation into Irish law.	PC1	
	Promote the reduction of emissions of Greenhouse Gases to ensure Ireland's compliance with our Emission Targets.	VM2 PC1 ER1, ER2, ER3, ER4, ER5, ER6, ER7, ER8, ERO1 WE1, WE2, WE3, WE4, WE5, WEO1 HD1, HD2, HD3, HD4 SE1, SE2, SE3, SE4 BE1, BE2, BE3 EW1, EW2 EB1, EB2, EB3, EBO1 GT1	I5, IO5.2
	Facilitate sustainable transport modes and the use of walking, cycling and public transport.	MT1, MT2, MT3, MT4, MT6, MT7, MT8, MT9, MT11, MT12, MT15, MTO1, MTO3, MTO4 PT1, PT2, PT3, PT4, PT5, PT6, PT7, PT8, PT9, PT10, PT11, PT12, PT13 PTO1, PTO2, PTO3, PTO4, PTO5, PTO6, PTO8 WC1, WC2, WC4, WC5, WC6, WC7, WC8, WC9, WC10, WC14 WCO1, WCO2, WCO3, WCO4, WCO5, WCO6, WCO7, WCO8, WCO9	MT1, MTO1.2, MTO1.3, MTO1.4 MTO1.5, MTO1.6 , MTO1.7 , MTO1.8, MTO1.9, MTO1.10 MTO1.11,MTO1.12, MT2, MTO2.1, MTO2.2, MTO2.3, MTO2.4, MTO2.5, MTO2.6
	Consideration of existing noise policy in County Kildare for example noise mapping and noise action plans produced by the Local Authority.	PC1, PC2, PC3, PC6, PC7, PC8, PC10	MTO3.10
	Consideration of likely noise impacts/effects associated with new developments.	PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC9, PC10	HCO2.2, I5

	This includes being cognisant of proximity to sensitive receptors when siting new developments and consideration of existing noise sources when zoning lands for residential development.		
Archaeological, Architectural and Cultural Heritage	Ensure the protection of all features of architectural and archaeological merit. This is particularly relevant where development is proposed on greenfield lands at Black Avenue and Celbridge Road East	<p>PS1, PS2, PS3, PS4, PS5, PS6, PS7, PS8, PS9, PS10, PS11, PS12, PS13, PS14, PS15, PS16, PS17, PS18, PS19, PS20, PS21</p> <p>PSO1, PSO2, PSO3, PSO4, PSO5, PSO6, PSO7, PSO8</p> <p>ACO1, ACO2, ACO3, ACO4</p> <p>CH01, CH02</p> <p>VS1, VA2, VA3, VA4, VA5, VA6, VA7, VA8</p> <p>VAO1, VAO2</p> <p>ACA1, ACA2, ACA3, ACA4, ACA5</p> <p>ACAO1, ACAO2, ACAO3,</p> <p>AH1, AH2, AH3, AH4, AH5, AH6, AH7, AH8, AH9, AH10, AH11, AH12</p> <p>AO1, AO2, AO3, AO4, AO5</p> <p>HF1</p> <p>HFO1, HFO1</p>	BH1, BHO1.1, BHO1.2, BHO1.3, BHO1.4, BHO1.5, BHO1.6, BHO1.7, BHO1.8, BHO1.9, BHO1.10, BH2, BHO2.1, BHO2.2, BHO2.3, BHO2.4, BHO2.5, BHO2.6, BH3, BHO3.1, BHO3.2, BHO3.3
	Promote the integration of suitably designed developments into existing urban and rural landscapes.	<p>PS1, PS2, PS3, PS4, PS5, PS6, PS7, PS8, PS9, PS10, PS11, PS12, PS13, PS14, PS15, PS16, PS17, PS18, PS19, PS20, PS21</p> <p>PSO1, PSO2, PSO3, PSO4, PSO5, PSO6, PSO7, PSO8</p> <p>ACO1, ACO2, ACO3, ACO4</p> <p>CH01, CH02</p>	UCR1, UCRO1.2, UCRO1.3, TCR: TCR 2:

		<p>VS1, VA2, VA3, VA4, VA5, VA6, VA7, VA8 VAO1, VAO2 ACA1, ACA2, ACA3, ACA4, ACA5 ACAO1, ACAO2, ACAO3, AH1, AH2, AH3, AH4, AH5, AH6, AH7, AH8, AH9, AH10, AH11, AH12 AO1, AO2, AO3, AO4, AO5 HF1 HFO1, HFO1</p>	
	<p>Prevent inappropriately designed developments in designated areas of architectural merit.</p>	<p>PS1, PS2, PS3, PS4, PS5, PS6, PS7, PS8, PS9, PS10, PS11, PS12, PS13, PS14, PS15, PS16, PS17, PS18, PS19, PS20, PS21 PSO1, PSO2, PSO3, PSO4, PSO5, PSO6, PSO7, PSO8 ACO1, ACO2, ACO3, ACO4 CH01, CH02 VS1, VA2, VA3, VA4, VA5, VA6, VA7, VA8 VAO1, VAO2 ACA1, ACA2, ACA3, ACA4, ACA5 ACAO1, ACAO2, ACAO3, AH1, AH2, AH3, AH4, AH5, AH6, AH7, AH8, AH9, AH10, AH11, AH12 AO1, AO2, AO3, AO4, AO5 HF1 HFO1, HFO1</p>	<p>UCR1, UCRO1.2, UCRO1.3, TCR: TCR 2:</p>

Landscape & Visual	Ensure that all new plans and programmes incorporate the findings of the landscape Character Assessment for County Kildare	LA1, LA2, LA3, LA4, LA5, LA6, LA7 LO1, LO2, LO3, LO4, LO5, LO6, LO7, LO8, LO9, LO10, LO11 LU1, LU2, LU3, LU4, LU5 TA1, TA2, TA3, TA4 WC1, WC2, WC3, WC4, WC5, WC6, WC7, WC8, WC9	BHO1.3, GIO1.7
	Protect and Enhance the streetscape of Naas' Main Street through the appropriate control of alterations to existing buildings and the development of new structures; in particular building and roof lines and heights which diverge from the established form will require to be justified.	LA1, LA2, LA3, LA4, LA5, LA6, LA7 LO1, LO2, LO3, LO4, LO5, LO6, LO7, LO8, LO9, LO10, LO11 LU1, LU2, LU3, LU4, LU5 TA1, TA2, TA3, TA4 WC1, WC2, WC3, WC4, WC5, WC6, WC7, WC8, WC9	UCR1, UCRO1.2, UCRO1.3, TCR: TCR 2:
Material Assets	Protect the hydrological environment from adverse effects of the wastewater discharges by ensuring that there is suitable wastewater treatment to meet demands before discharge to the environment.	WW1, WW2, WW3, WW4, WW5, WW6, WW7, WW8, WW9, WW10, WW11, WW12, WW13	I1, IO1.1, IO1.4
	Promote the development of sustainable transportation infrastructure where considered feasible.	MT1, MT2, MT3, MT4, MT6, MT7, MT8, MT9, MT11, MT12, MT15, PT1, PT2, PT3, PT4, PT5, PT6, PT7, PT8, PT9, PT10, PT11, PT12, PT13 PTO1, PTO2, PTO3, PTO4, PTO5, PTO6, PTO8 WC1, WC2, WC4, WC5, WC6, WC7, WC8, WC9, WC10, WC14 WCO1, WCO2, WCO3, WCO4,	MTO2.4, MTO2.5, MTO2.6

		WCO5, WCO6, WCO7, WCO8, WCO9	
	Promote the implementation of the Waste Management Plan together with any future National or Regional Waste Management Plans.	WM1, WM3	I5
	Encourage waste prevention, minimisation, reuse, recycling and recovery as methods of managing waste.	WM1, WM2, WM3, WM4, WM5, WM6, WM7, WM9, WM10, WM11, VM15	I5, IO5.1, IO5.2
	Ensuring specific national policies and regulations regarding waste Management are adhered to.	WM1, WM3	I5
	Promote and facilitate community awareness and involvement in community-based recycling initiatives or environmental management initiatives that will lead to local Sustainable waste management practices.	W11	-
	Promote the development of sufficient energy resources to meet the needs of the GDA and promote the use of renewable energies to meet those needs.	ER1, ER2, ER5, ER6, ERO1	IO4.6

## 8.2 SEA Monitoring

Article 10 of the SEA Directive requires that monitoring should be carried out in order to identify at an early stage any unforeseen adverse effects associated with the implementation of the plan or programme.

A monitoring programme is developed based on the indicators selected to track progress towards achieving strategic environmental objectives and reaching targets, enabling positive and negative effects on the environment to be measured. As previously described, the environmental indicators have been developed to show changes that would be attributable to implementation of the Draft LAP.

The SEA carried out has ensured that any potential significant environmental effects have been identified and given due consideration.

KCC is responsible for collating existing relevant monitored data, the preparation of preliminary and final monitoring evaluation reports, the publication of these reports and, if necessary, the carrying out of corrective action.

**Table 8.2: Monitoring Programme**

Environmental Category	Target	Indicators	Data Sources, Responsibility, and Frequency
Biodiversity including Flora and Fauna	<p>Consider siting of new development on non-sensitive sites.</p> <p>Improve/conservate and protect all designated sites and species within and adjacent to the Plan area.</p> <p>Deliver the requirement of the Habitats Directive (Article 4, Paragraph 4) for the maintenance or restoration of annexed habitats and species within SACs at a “favourable conservation status.</p> <p>Promote the maintenance and, as appropriate, achievement of favourable conservation status of habitats and species, in association with the NPWS and other stakeholders.</p> <p>Protect SPAs, Annex I bird species, and regularly occurring migratory bird species and their habitats, and avoid pollution or deterioration of important bird habitats outside SPAs.</p> <p>Improve the ecological coherence of Natura 2000 by encouraging the management of, maintaining, and where appropriate developing, features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems for marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species.</p> <p>Protect NHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries, Refuges for Fauna or Flora and sites proposed for designation.</p>	<p>Census population data</p> <p>Number and extent of Protected Sites.</p> <p>Areas actively managed for conservation.</p> <p>Population and range of Protected Species.</p> <p>Achievement of the Objectives of Biodiversity Plans</p>	<p>Sources: Kildare County Council, National Parks and Wildlife Services, Fisheries Board and EPA.</p> <p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.</p>

Environmental Category	Target	Indicators	Data Sources, Responsibility, and Frequency
	<p>Improve/maintain protection for important wildlife sites, particularly urban wildlife corridors and linear and stepping stone features for migration, dispersal and exchange of wildlife.</p> <p>Improve access for the appreciation and promotion of wildlife.</p>		
Population and Human Health	<p>Minimise population exposure to high levels of noise, vibration and air pollution.</p> <p>Increase modal shift to public transport.</p> <p>Co-ordinate land use and transportation policies.</p> <p>Improve access to recreation opportunities.</p>	<p>Census population data.</p> <p>Rates of Unemployment per area.</p> <p>Dependency ratio</p> <p>Deprivation Index</p> <p>Commuting times and modes of transport.</p> <p>% increase in housing (number and type).</p>	<p>Sources: Kildare County Council and Central Statistics Office.</p> <p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.</p>
Land and Soils	<p>Prevent pollution of soil through adoption of appropriate environmental protection procedures during construction and maintenance works on site.</p> <p>Ensure polluting substances are appropriately stored and banded.</p> <p>Ensure appropriate management of existing contaminated soil in accordance with the requirements of current waste legislation.</p> <p>Re-use of brownfield lands, rather than developing Greenfield lands, where possible.</p>	<p>Rates of re-use/recycling of construction waste.</p> <p>Rates of quarrying.</p> <p>Rates of brownfield site and contaminated land reuse and development.</p> <p>Rates of greenfield development.</p>	<p>Sources: Kildare County Council and Environmental Protection Agency.</p> <p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.</p>

Environmental Category	Target	Indicators	Data Sources, Responsibility, and Frequency
	Minimise the consumption of non-renewable sand, gravel and rock deposits.		
Water Resources	<p>Support the achievement of “good” ecological and chemical status/potential of waterbodies in accordance with the Water Framework Directive.</p> <p>Minimise flood risk through appropriate management of flood vulnerable zones.</p> <p>Promote sustainable drainage practices to improve water quality and flow</p>	<p>Compliance of potable water sources to water quality regulations.</p> <p>Compliance of surface waters with national and international standards.</p> <p>Potable and wastewater treatment capacities versus population.</p> <p>% of wastewater requiring treatment.</p> <p>Achievement of the Objectives of the River Basin Management Plans.</p> <p>Amount of new developments within flood plains.</p> <p>Annual costs of damage related to flood events.</p>	<p>Sources: Kildare County Council, Environmental Protection Agency and Fisheries Board.</p> <p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.</p>
Air, Noise and Climate	<p>Minimise air and noise emissions during construction and operation of new developments.</p> <p>Promote reduction of greenhouse gas emissions to the atmosphere.</p> <p>Limiting climate change and adapting to climate change.</p>	<p>Traffic, Transport and Vehicular survey data.</p> <p>National and region-specific emission data.</p> <p>Compliance with national standards.</p> <p>Reduction in greenhouse gas emissions.</p>	<p>Sources: Kildare County Council, Environmental protection Agency and Central Statistics Office.</p> <p>Responsibility: Kildare County Council</p>

Environmental Category	Target	Indicators	Data Sources, Responsibility, and Frequency
		Number and extent of emission licensed facilities. Number of energy/renewable energy production facilities. Rates of energy/renewable energy consumption.	Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development.
Archaeological, Architectural and Cultural Heritage	Regeneration of derelict and underutilised heritage sites. Improve appearance of areas with particular townscape character. Improve protection for protected archaeological sites and monuments and their settings, protected structures and conservation areas and areas of archaeological potential. Enhance access to sites of heritage interest.	Updating of inventories to include new sites/features. Achieving the objectives of development plans regarding heritage protection. Range and extent of areas of heritage potential. Range and extent of areas of special planning controls.	Sources: Kildare County Council and Department of Environment Community and Local Government.  Responsibility: Kildare County Council  Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development.
Landscape and Visual	Improve protection for landscapes of recognised quality. Maintain clear urban/rural distinctions. Enhance provision of, and access to, green space in urban areas. Ensure development is sensitive to its surroundings.	Range and extent of Amenity Landscapes. Rates of development within designated landscapes. Rates of urban expansion. Rates of deforestation. Rates of agricultural land re-development. % change of land use from rural to urban.	Sources: Kildare County Council and Department of Environment, Community and Local Government.  Responsibility: Kildare County Council  Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.

Environmental Category	Target	Indicators	Data Sources, Responsibility, and Frequency
Material Assets	<p>Improve availability and accessibility of commercially provided facilities and public services.</p> <p>Increase local employment opportunities.</p> <p>Improve efficiencies of transport, energy and communication infrastructure.</p> <p>Promotion of sustainable transport infrastructure i.e. increased public transport.</p> <p>Reduce the generation of waste and adopt a sustainable approach to waste management.</p>	<p>Location/level of Infrastructure.</p> <p>Achievement of development plan objectives.</p> <p>Rates of deprivation.</p> <p>Rate of waste disposal to landfill statistics.</p> <p>Range and extent of recycling facilities and services.</p> <p>Rates of recycling.</p>	<p>Sources: Kildare County Council, Central Statistics Office, National Roads Authority and Environmental Protection Agency.</p> <p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.</p>