

Kildare County Council

Kildare Town Local Area Plan 2023 - 2029

SEA Statement

Reference:

Issue | 28 November 2023

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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1. Introduction

1.1 The Purpose of the SEA Statement

This Statement forms part of the Strategic Environmental Assessment (SEA) of the Kildare Town Local Area Plan (LAP) 2023 - 2029 ('The Plan'). SEA is a systematic, on-going process for evaluating (at the earliest possible stage) the quantity and consequences of implementing certain plans and programmes on the environment. This SEA Statement is the final stage of the SEA process and it is required under the European Communities Regulations 2004¹ (EU SEA Regulations) and national legislation² (SEA Regulations).

The purpose of the SEA Statement is to provide information on the decision-making process, and to document environmental considerations, the views of stakeholders and outline how recommendations arising from the SEA have been taken into account in the Plan. The four key requirements of this SEA Statement are to highlight:

- The incorporation of environmental considerations;
- Stakeholder involvement;
- Alterations considered; and
- Monitoring.

The SEA Statement is chronological in nature and includes the following:

- An outline of the methodology for undertaking a SEA;
- Scoping - an overview of the scoping process and summary of how the submissions received from stakeholders have been taken into account;
- Environmental Assessment- description of how environmental considerations have been integrated into the SEA;
- Alternatives - an outline of the reasons for choosing the plan to be adopted, in light of the other reasonable alternatives considered;
- Monitoring - an overview of the measures to monitor the plan going forward; and
- Final Appraisal - evaluation of the effectiveness of the SEA.

This SEA Statement will accompany the adopted Kildare Town Local Area Plan 2023 - 2029 and be made available to the public.

¹ European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations, as amended by European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2004

² Planning and Development (Strategic Environmental Assessment) Regulations, as amended by the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations

1.2 Statement of the SEA Process for the adopted Kildare Town Local Area Plan 2023 – 2029

The Kildare Town Local Area Plan (LAP) 2023–2029 has been prepared in accordance with the requirements and provisions of the Planning and Development Act 2000 (as amended). It sets out an overall strategy for the proper planning and sustainable development of Kildare Town in the context of the Kildare County Development Plan 2023–2029 and the Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland Regional Assembly (EMRA). It is also informed by Ministerial Guidelines issued pursuant to Section 28 of the Planning and Development Act 2000 (as amended) together with EU requirements regarding Strategic Environmental Assessment, Appropriate Assessment and Strategic Flood Risk Assessment (SFRA).

The Kildare Town LAP provides the main public statement of planning policies and objectives for Kildare Town for the Plan duration (2023-2029). The policies and objectives are critical in determining the appropriate location and form of different types of development as the LAP is the primary statutory land use policy framework against which planning applications are assessed.

The objectives of the LAP are also used by KCC to guide their activities and to indicate priority areas for action and investment by the Council such as the sustainable development of Kildare Town and focusing on attracting employment into the town and or enhancing the town as a centre for tourism.

The Kildare Town LAP is a key document for setting out a vision for how Kildare Town should develop over the years 2023-2029.

A broad SEA was carried out using an objective led approach to assess likely significant impact. The assessment was mostly qualitative in nature, with some assessment based on expert judgement. This qualitative assessment compared the likely impacts against the SEA objectives, targets and indicators to see which policies and objectives meet these and which, if any, contradict these.

A matrix system was developed to facilitate the assessment and to highlight potential impacts under a number of environmental headings namely biodiversity, population and human health, soil, water, air and climate factors, cultural heritage, landscape and material assets.

2. SEA Methodology

2.1 Overview

This section describes how the SEA was undertaken in accordance with legislative requirements including EU's Council Directive 2001/42/EC (the SEA Directive), national legislation and associated regulations. The SEA was undertaken iteratively to facilitate discussions with Kildare County Council in order to implement mitigation where possible at the earliest possible stage.

The methodology for the SEA is based on legislative requirements and guidance from the Environmental Protection Agency (EPA) thus ensuring compliance with the SEA Directive and associated national legislation. The EPA's SEA Pack (Version 18/02/2020) was also used as a source of information during the scoping process. The key stages outlined in Figure 2.1 were identified and are discussed in the following sections.

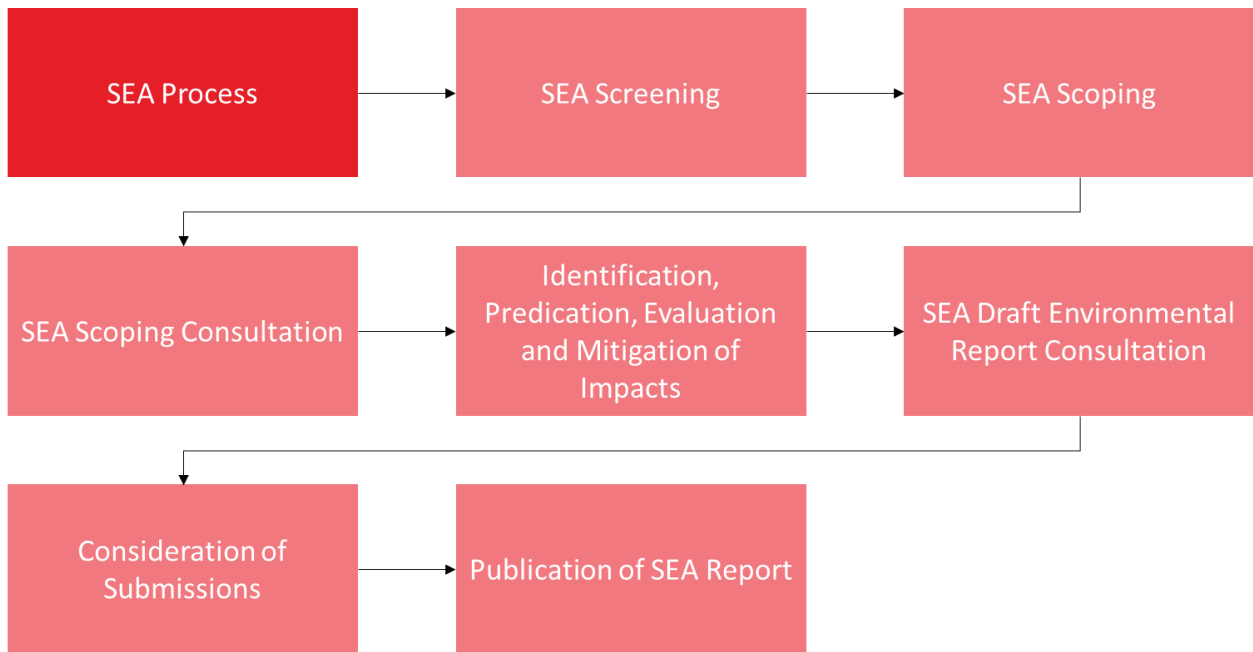


Figure 2.1 SEA Process

2.2 Screening

Screening is the process for deciding whether a particular plan would warrant SEA. A screening assessment was undertaken as part of this SEA process to determine if the adopted Kildare Town LAP required a SEA. This assessment concluded that a SEA was required due to the population within the plan area.

2.3 Scoping

Scoping is the process for establishing the range of environmental issues to be covered in the SEA and the level of detail that the assessment will investigate.

Scoping also allows input from the environmental authorities and stakeholders to be incorporated. Essentially, responses submitted as part of the scoping process provide greater focus on the evolution of the adopted Kildare Town LAP.

The considerations addressed during the scoping process for the draft LAP are as follows:

- The key elements of the draft LAP to be assessed;
- The environmental aspects to be assessed as part of the SEA;
- Identification 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 as part of the SEA; and
- Identification of any reasonable alternative means or scenarios for achieving the strategic goals of the draft LAP.

A scoping report for the SEA was prepared on behalf of Kildare County Council which asked key questions of stakeholders.

2.4 Baseline Assessment

Gathering relevant information that describes the current environment within the plan area is an integral part of the SEA process. The SEA Directive requires that certain information on the existing environment is presented to help assess the implementation of the Kildare Town LAP, as well as helping establish how the environment would change if the Kildare Town LAP is not implemented.

Baseline information has been collected from readily available sources, and a Geographical Information System (GIS) was used to graphically present and analyse relevant information. The baseline of the plan area, i.e. the area to which the adopted Kildare Town LAP applies, is reported in Section 4 of the Environmental Report ('Current State of the Environment').

2.5 Environmental Assessment

The environmental assessment ran in parallel to the development of the adopted Kildare Town LAP. The process is described in detail in Section 4 of this SEA Statement.

The environmental assessment process was undertaken in accordance with best practice SEA principles and guidance. This included review of baseline information, specialist investigation into the likely impacts associated with both the Kildare Town LAP and its material alterations, and recommendations for suitable mitigation measures.

An appraisal matrix was developed to facilitate the assessment of the policies and objectives outlined in the adopted Kildare Town LAP and its material alterations. The matrix-led assessment provided a holistic, integrated and interactive approach to the formation of the policies and objectives in the adopted Kildare Town LAP.

The assessment also considered the findings of the Strategic Flood Risk Assessment (SFRA) and Appropriate Assessment (AA) screening.

2.6 Consideration of Alternatives

The SEA Directive requires that reasonable alternatives to the plan be assessed in order to demonstrate how the preferred strategy performs against all other forms of action. Alternatives must be developed, described and assessed within the SEA process, with the results presented in the Environmental Report. This is examined in more detail in Section 4.

2.7 Flood Risk

An SFRA was prepared on behalf of Kildare County Council to provide information on the areas of flood risk and enable informed strategic land use planning decisions. This is examined in more detail in Section 4.

2.8 Appropriate Assessment

Stage 1 AA (Screening) was undertaken by Kildare County Council to identify if the potential for effects of implementing the adopted Kildare Town LAP on the conservation status of designated Natura 2000 sites within the sphere of influence of the plan (or project). It was determined as part of this screening that the Draft LAP, as well as the proposed Material Alternations, did not give rise to any potential significant effects and/or in-combination effects on European sites.

2.9 Consultation

There were multiple phases of statutory consultation undertaken during the preparation of the Kildare Town LAP in relation to SEA.

The SEA Scoping Report was published in September 2022 for review and comment by defined statutory bodies. This represents the first phase of statutory consultation and further information on this process is provided in Section 3.

A period of public, statutory consultation process took place during 21st March and 3rd May 2023 to gather feedback on the Draft Kildare Town LAP and supporting environmental assessments.

A third and final statutory consultation process took place from 4th August to 4th September 2023, to gather feedback on the proposed material alterations to the LAP (and accompanying SEA/AA screening addendum).

The content of submissions and comments received during each consultation period were considered by Arup and Kildare County Council, and amendments were made in response to those consultation inputs, where considered appropriate.

2.10 Technical Difficulties Encountered

No major technical difficulties were encountered during any stage of the SEA process.

3. SEA Scoping

3.1 Scoping Process

The SEA Scoping was a key part of the assessment process as it set out the extent of the SEA and AA and provided information to allow consultation with defined statutory bodies and environmental authorities on the scope and level of detail to be considered and incorporated at an early stage in the assessment.

The scoping report for this SEA was published in October 2022 and outlined that the SEA would assess the following aspects:

- Population and Human Health;
- Biodiversity (including Flora and Fauna);
- Soil;
- Water Resources;
- Air, Noise and Climate Factors;
- Archaeology, Architectural and Cultural Heritage;
- Landscape and Visual; and
- Material Assets

The report summarised the key environmental issues and outlined relevant plans and programmes that were likely to affect or be affected by the draft Kildare Town LAP.

This information was then used to set out a series of draft SEA objectives, indicators and associated targets. The objectives and targets established aims and thresholds which would be taken into consideration to effectively assess the impact of the draft Kildare Town LAP on the environment. Indicators were used to track the achievements of objectives and targets, describe the baseline situation, monitor the impact on the environment and predict impacts.

Essentially, any issues/comments submitted as part of the scoping provides greater focus on the development of aspects of the draft Kildare Town LAP. The issues addressed as part of the Scoping Report were:

- The key elements of the draft Kildare Town LAP to be assessed;
- The key environmental issues to be assessed;
- Research of the relevant international, national and local plans, objectives and environmental standards that may influence or impact on the draft Kildare Town LAP;
- Development of draft environmental objectives, indicators and targets to allow the evaluation of impacts; and

- Identification of reasonable alternatives means of achieving the strategic goals of the draft Kildare Town LAP.

3.2 Scoping Consultation

The SEA Scoping Report was published in October 2022 for review and comment by defined statutory bodies and environmental authorities.

During the SEA Scoping Report consultation period, two submissions were received, one from the Environmental Protection Agency EPA and one from the Department of Communications, Climate Action & Environment on behalf of Inland Fisheries Ireland (IFI).

All comments, observations and submissions contained therein were considered and incorporated into the assessment process, as considered relevant. Appendix A.1 of this report contains a summary of the submissions received on the SEA Scoping Report, and how they were responded to.

4. Environmental Assessment

As outlined in Section 2.5, the environmental assessment comprised a review of the baseline data, identification of likely impacts and development of appropriate mitigation measures for the draft Kildare Town LAP. The environmental assessment was undertaken by way of the appraisal matrix and recorded in the Draft SEA Environmental Report which was placed on public consultation on 21st March 2023 seeking feedback from stakeholders.

The draft Kildare Town LAP was updated to reflect input from the public, statutory and non-statutory bodies and local representatives provided during the period of public consultation. The SEA team and Kildare County Council worked together on this, continuing the iterative process to optimise outcomes arising from the draft Kildare Town LAP. Each time a revision of wording was considered, the appraisal matrix and associated Environmental Report were also adjusted as required.

Advice was provided to Kildare County Council regarding the options for mitigation that could be incorporated to optimise benefits and lessen adverse environmental impacts arising from the draft Kildare Town LAP.

Appendix A.1 contains a summary of the submissions received during public consultation (as they relate to the SEA), and how they were responded to.

4.1 Establishment of the Baseline

The SEA requires the assessment of the likely impacts of the Kildare Town LAP against the current environmental conditions, i.e. the baseline. The establishment of the baseline was cognisant of the local nature of the Kildare Town LAP and considered existing conditions within the plan area as well as pressures, inter-relationships and factors of relevance for the following environmental aspects:

- Population and Human Health;
- Biodiversity (including Flora and Fauna);
- Land and Soils
- Water Resources;
- Air, Noise and Climate Factors;
- Archaeological, Architectural and Cultural Heritage;

- Landscape and Visual; and
- Material Assets.

4.2 Objectives, Indicators and Targets

The objectives, indicators and targets are the aspects for which the Kildare Town LAP is assessed against. The policies and recommendations in the Kildare Town LAP are assessed against a range of environmental objectives and targets established for the purpose of the SEA. Further, indicators that are recommended in the SEA are utilised over the lifetime of the Kildare Town LAP to quantify the level of impact that the proposed plan may have on the environment. It is then possible to establish whether Kildare County Council were successful in promoting the sustainable development of the plan area.

A summary of the objectives, in indicators and targets is included in Table 4.1.

Table 4.1 Objectives, Targets and Indicators

Objectives	Targets	Indicators
Biodiversity		
<ul style="list-style-type: none"> • Protect, conserve, enhance where possible and avoid loss of diversity and integrity of the broad range of habitats, species and wildlife corridors. • To ensure no biodiversity net loss will occur as a result of development in the LAP area. • Promotion of biodiversity net gain. • To minimise and, where possible, eliminate habitat loss in the LAP area. 	<ul style="list-style-type: none"> • Siting of development of infrastructure installation on non-sensitive sites; • Maintenance of favourable conservation status for all habitats and species protected under the Habitat Directive; • No ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity to be lost without remediation (e.g., semi-natural grasslands, semi-natural woodland at Silliothill and wet grassland associated with the margins of the Tully River, Japanese Gardens and National Stud etc.); • Ensure no increase in nitrogen deposition in areas of ecological sensitivity; • Improve and or maintain protection for important wildlife sites, particularly urban wildlife corridors; • Improve access for the appreciation and promotion of wildlife; • To ensure impacts that have potential to result on biodiversity, from any development are balanced or outweighed by measures taken to avoid and minimise the impacts, to restore affected areas and offset the residual impacts, so that no loss remains; • To quantify biodiversity net loss and net gain net gain in the LAP area; • No loss of habitat during the lifetime of the Plan; and • No increase in nitrogen deposition in the LAP area. 	<ul style="list-style-type: none"> • Number and condition of Natura 2000 network, European sites, as per Article 17 Reports, and the maintenance of conservation objectives. • Achievement of favourable conservation status of designated sites. • Population and range of Designated Species. • Achievement of the Objectives of Kildare’s Biodiversity Plan and Kildare County Development Plan. • Level of baseline biodiversity conditions in the LAP area to post-development conditions, particularly but not limited to, quantifying and monitoring the area of hedgerow, native woodland, semi-natural grassland, peat based and/or heath habitat loss within the lifetime of the LAP.
<ul style="list-style-type: none"> • To achieve the conservation objectives of European Sites (SACs and SPAs) and other sites of nature conservation. • Conserve and protect other sites of nature conservation including NHAs, pNHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries as well as protected species outside these areas as covered by the Wildlife Act. 	<ul style="list-style-type: none"> • No loss of protected habitats and species during the lifetime of the Plan; • No compromise or impact on the achievement of the favourable conservation condition objectives (whether maintain or restore) of European sites; and • Submission of Screening Report or Natura Impact Statement for proposed developments with planning applications in/and/or near European Sites. 	<ul style="list-style-type: none"> • Status of Annex 1 habitats and species as per Article 17 Reports. • Level of habitat creation, habitat removal, habitat fragmentation within the LAP boundary. • Achievement of favourable conservation status of designated sites located within the LAP boundary. • Population and range of Protected and Red List Species within the LAP boundary.
<ul style="list-style-type: none"> • To minimise and, where possible, eliminate threats to biodiversity including invasive species. 	<ul style="list-style-type: none"> • Prevent the introduction of new invasive or alien species e.g., Japanese Knotwood and Giant Rhubarb; and • Control/manage/eradicate invasive species. 	<ul style="list-style-type: none"> • Achievement of the Objectives of the National Biodiversity Action Plan and Kildare’s Biodiversity Action Plan. • Status of water quality in the country’s water bodies (WFD).

Objectives	Targets	Indicators
		<ul style="list-style-type: none"> • Number of incidences of invasive species, eutrophication and or water pollution. • Protected Freshwater Species • Protected Bird Species - BOCCI
<ul style="list-style-type: none"> • Promote green infrastructure networks, including riparian zones and wildlife corridors 	<ul style="list-style-type: none"> • Ensure new development is set back from rivers or tributaries. 	<ul style="list-style-type: none"> • Location and scale of new development arising as a result of the LAP. • The number of provisions of green/blue infrastructure within the LAP boundary.
Population and Human Health		
<ul style="list-style-type: none"> • Protect, enhance and improve people’s quality of life based on high quality residential, community, educational, working and recreational environments and on sustainable travel patterns. 	<ul style="list-style-type: none"> • Minimise population exposure to high levels of noise, vibration and air pollution; • No spatial concentrations of health problems arising from environmental factors; • Improve access to recreation opportunities; • Increase in the number of green spaces and amenities available to the public; • Increase modal shift to public transport; • Co-ordinate land use and transportation policies; and • No significant deterioration in human health as a result of environmental factors. 	<ul style="list-style-type: none"> • Changes in trends in perceived health status within the LAP boundary. • Changes in census population statistics within Kildare Town. • Rates of unemployment per area. • Statistics on access to sustainable modes of transport. • Percentage increase in housing (number and type). • Number of compliances of wastewater infrastructure to legislation/regulations/conditions for relevant licences, permits etc. for discharges. • Number of compliances of water supply schemes with relevant legislation/regulation/conditions for abstraction and consumption. • Number of compliances of infrastructure projects to relevant legislation/regulation/conditions re - noise, odour and/or air quality. • Number of compliances of waste management sites. • Implementation of the Noise Action Plan and relevant limit values.
<ul style="list-style-type: none"> • To protect human health from hazards or nuisances arising from incompatible land uses/developments. 	<ul style="list-style-type: none"> • No spatial concentrations of health problems arising from environmental factors; and • Minimise population exposure to high levels of noise, vibration and air pollution. 	<ul style="list-style-type: none"> • Number of new and or improved recreational facilities and or routes related to the new LAP. • Number of people utilising recreational areas within the LAP boundary. • Number of public rights of way lost through the LAP boundary. • Number and scale of new development arising as a result of the LAP.
<ul style="list-style-type: none"> • Provision of green spaces for amenity and recreational uses. 	<ul style="list-style-type: none"> • Increase in the number of green spaces and amenities available to the public. 	<ul style="list-style-type: none"> • Areas of green spaces for amenity and recreational use.

Objectives	Targets	Indicators
Land & Soil		
<ul style="list-style-type: none"> Protect quality and quantity of existing Land and Soil. 	<ul style="list-style-type: none"> No incidences of soil contamination; 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; and Ensure appropriate management of existing contaminated soil in accordance with the requirements of current waste legislation. 	<ul style="list-style-type: none"> Incidences of soil contamination. Erosion and sedimentation rates of soils within the LAP boundary. Nitrogen deposition rates. Number and condition of designated geological features
<ul style="list-style-type: none"> To maximise the sustainable re-use of the existing built environment, derelict, disused and infill sites (brownfield sites), rather than greenfield sites. 	<ul style="list-style-type: none"> Preference for development on brownfield site over green field; and Limited and controlled development of greenfield sites. 	<ul style="list-style-type: none"> Rates of brownfield site and contaminated land reuse and development. Rates of greenfield development.
<ul style="list-style-type: none"> Minimise the amount of waste to landfill from site. 	<ul style="list-style-type: none"> Minimise the consumption of non-renewable sand, gravel and rock deposits; Re-use of soil from redeveloped sites where possible; Reduction in the quantities of waste sent to landfill; Increase in the quantities of waste sent for recycling; Increase in the number of bring banks in the Plan area; and Compliance with the Eastern Midland Region Waste Management Plan 2015-2021. 	<ul style="list-style-type: none"> Rates of re-use/recycling of construction waste. Quantity of waste sent to landfill within the LAP boundary. Number of bring banks in the Plan area. Achievement of the Objectives of the Eastern Midlands Region Waste Management Plan 2015-2021.
<ul style="list-style-type: none"> Conserve, protect and avoid loss of integrity of designated geological features. 	<ul style="list-style-type: none"> No loss of integrity of geological features; and Designation of sites as County Geological Sites. 	<ul style="list-style-type: none"> Number and condition of designated geological features. Number of new developments in proximity to designated geological site.
Water Resources		
<ul style="list-style-type: none"> Improve/maintain water quality and the management of watercourses to comply with the standards of the Water Framework Directive and incorporate the objectives of the Floods Directive into sustainable planning and development. 	<ul style="list-style-type: none"> Support the achievement of “good” ecological and chemical status/potential of waterbodies by 2027 latest, in accordance with the Water Framework Directive, in particular to Kildare Town, the Tully River as it is a Tributary of the River Barrow; Promote sustainable drainage practices to improve water quality and flow in the LAP area. In doing so, also ensuring that no negative impacts are likely to result on aquatic bodies in the LAP 	<ul style="list-style-type: none"> Proportion of water bodies in the LAP boundary meeting their WFD Ecological Status objectives, as reported by the EPA Water Monitoring Programme for the WFD. The number of waterbodies within the LAP boundary that have deteriorated in ecological status or chemical status. Status of aquatic habitats and species within the LAP boundary, particularly the status of the Curragh Aquifer.

Objectives	Targets	Indicators
	<ul style="list-style-type: none"> area, particularly the Curragh Aquifer and its vulnerability status; and Minimise flood risk through appropriate management of flood vulnerable zones. 	<ul style="list-style-type: none"> Compliance of surface waters with national and international standards. Compliance with the recommendations outlined in the Kildare Town Surface Water Management Study.
<ul style="list-style-type: none"> Implement appropriate sustainable drainage systems (SuDS) in the area 	<ul style="list-style-type: none"> New drainage systems to be compliant with SuDS, prioritising nature-based solutions. 	<ul style="list-style-type: none"> Number and location of nature-based solutions incorporated into the LAP boundary.
<ul style="list-style-type: none"> Reduce the impact of polluting substances to all waters and prevent pollution and contamination of ground water by adhering to aquifer protection plans and to maintain and improve the quality of drinking water supplies. 	<ul style="list-style-type: none"> Improvement or at least no deterioration in surface and ground waters. 	<ul style="list-style-type: none"> Achievement of the Objectives of the River Basin Management Plan. Compliance of surface and ground waters with national and international standards
<ul style="list-style-type: none"> Protect flood plains and areas of flood risk from development through avoidance, mitigation and adaptation measures. 	<ul style="list-style-type: none"> Minimisation of flood risk within the LAP area, reduced flood events. 	<ul style="list-style-type: none"> Number of past flood risk events within the LAP boundary. Annual costs of damage related to flood events within the LAP area.
Air, Noise & Climate		
<ul style="list-style-type: none"> Maintain and promote continuing environmental improvement where possible of emissions to air (including noise emissions). 	<ul style="list-style-type: none"> Minimise air and noise emissions during construction and operation of new developments; Promote minimisation of greenhouse gas emissions to the atmosphere; Ensure no increase in nitrogen deposition in areas of ecological sensitivity; Minimise air and noise emissions during construction and operation of new developments; and Achieve a reduction in greenhouse gas emissions. 	<ul style="list-style-type: none"> Air Quality Monitoring Result in Ireland, both national and region-specific air emission data. Compliance with EPA emission limits for sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter at industrial sites. Number of compliances with EPA emission limits for sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter. Number of compliances with existing legislation/regulations/conditions for air quality e.g., IPPC/IE.
<ul style="list-style-type: none"> Minimise all forms of air pollution and maintain/improve ambient air quality. 	<ul style="list-style-type: none"> Maintain ambient air quality through reduction of private vehicle usage and the promotion of public transport and active travel. 	<ul style="list-style-type: none"> Compliance with national Air Quality Standards (AQS) and nitrogen deposition critical loads. Traffic, Transport and Vehicular survey data with the LAP boundary. Emission air, noise data from licensed facilities.
<ul style="list-style-type: none"> Minimise emissions of greenhouse gases and contribute to a reduction and avoidance of human - induced global climate change. Reduce car dependency within the Plan area by way of an integrated approach to sustainable urban transport. 	<ul style="list-style-type: none"> Provide for increased use of public transport; Increase number of cycle lanes and pedestrian routes in the Plan area; Reduce vehicles kilometres by private car in Plan area; 	<ul style="list-style-type: none"> Travel patterns and the number of modes of transport within Kildare Town. Number of new air monitoring stations in Kildare Town. Implementation of the LAP, which will contribute towards achieving the objectives and targets of the overall CDP and facilitate climate action and the relevant targets for emission reductions.

Objectives	Targets	Indicators
	<ul style="list-style-type: none"> • Establish incentives and or increase the number of permissions for renewable energy projects; • To achieve a 51% reduction in GHG emissions from 2021 to 2030 to be climate neutral by 2050; • An increase in the percentage of the population travelling to work or school by public transport or non-mechanical means e.g., implementation of Kildare Town’s Transport Strategy; and • A decrease in the average distance travelled to work or school by the population of the Plan area. 	<ul style="list-style-type: none"> • Proportion of journeys made by private fossil fuel-based car compared to previous levels. • Changes to vehicle kilometres travelled. • Proportion of people reporting regular cycling / walking to school and work above previous CSO figures. • Energy consumption, the amount of uptake in renewable options and solid fuels for residential heating. • Rates of energy and or renewable energy consumption. • The quantity of GHG emission increases within the LAP boundary over the Plan period. • GHG emission reductions over the Plan period. • Noise monitoring data from any new developments arising as a result of the LAP. • Onsite dust monitoring of new development.
Archaeological, Architectural and Cultural Heritage		
<ul style="list-style-type: none"> • Protect and conserve the cultural heritage including the built environment and settings; archaeological recorded and unrecorded monuments, architectural (Protected Structures, Architectural Conservation Areas, vernacular buildings, materials and urban fabric) and manmade landscape features (e.g. field walls, footpaths, gate piers etc.). • To ensure the restoration and re - use of existing uninhabited and derelict structures where possible opposed to demolition and new build (to promote sustainability and reduce landfill). 	<ul style="list-style-type: none"> • Regeneration of derelict and underutilised heritage sites; • Improve appearance of areas with particular townscape character; • Maintenance and enhancement of archaeological heritage- including entries to the Record of Monuments and Places and unknown archaeology- and the context of the above within the surrounding landscape where relevant; • Maintenance and enhancement of entries to the Record of Protected Structures and or their context within the surrounding landscape where relevant; • No permitted development which involves loss of cultural heritage, including protected structures, archaeological sites, Architectural Conservations Areas and landscape features; and • To increase the number of uninhabited and derelict structures that are restored opposed to demolition. 	<ul style="list-style-type: none"> • Percentage of entries recommended for inclusion to the Record of Monuments and Places, and the context these entries within the surrounding landscape where relevant, protected from adverse effects resulting from development which is granted permission under the LAP in line with Kildare’s CDP. • Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the LAP in line with Kildare’s CDP. • Recorded numbers of non-designated built heritage e.g., vernacular buildings. • Range and extent of areas of heritage potential within the LAP boundary. • Number of uninhabited and derelict structures within the LAP boundary. • Range and extent of areas of special planning controls. • Archaeological Impact Assessments related to development, and or the number and types of archaeological investigations undertaken within the LAP boundary. • Educational facilities and or opportunities to promote awareness of natural and cultural heritage.

Objectives	Targets	Indicators
Landscape and Visual		
<ul style="list-style-type: none"> Conserve, protect and enhance valued natural, cultural and built landscapes, views of local value and features including those of geological and aesthetic value. 	<ul style="list-style-type: none"> Improve protection for landscapes of recognised quality and protected views; Maintain clear urban and or rural distinctions; Enhance provision of, and access to, green space in urban areas; Ensure no significant disruption of historic and or cultural landscapes and features through objectives of the LAP; and Ensure development is sensitive to its surroundings. 	<ul style="list-style-type: none"> Compliance with planning conditions relating to landscape and development. Range and extent of Amenity Landscapes. Rates of development within designated landscapes. Rates of urban expansion. Rates of agricultural land re-development. Percentage change of land use from rural to urban.
<ul style="list-style-type: none"> Maintain and enhance landscape quality within the Plan area by minimising visual impacts through appropriate design, assessment and siting. 	<ul style="list-style-type: none"> No significant visual impact from development; and Ensure no significant disruption of high landscape values. 	<ul style="list-style-type: none"> Number of planning permissions granted in areas of high value landscape. Number of permissions granted within 500m of a scenic route.
Material Assets		
<ul style="list-style-type: none"> Make best use of existing infrastructure and promote the sustainable development of new infrastructure. 	<ul style="list-style-type: none"> Improve availability and accessibility of commercially provided facilities and public services; Increase local employment opportunities; Improve efficiencies of transport, energy and communication infrastructure; Increase in renewable energy developments; To achieve a 51% reduction in GHG emissions to 2030, and to achieving net-zero emissions no later than 2050; and To identify areas for managing surface water in the LAP area, using nature-based solutions where possible. 	<ul style="list-style-type: none"> Location and or level of infrastructure arising as a result of the LAP, including renewable energy developments granted planning permission. Achievement of development plan objectives. Rates of deprivation within Kildare Town. Economic statistics for Kildare Town. Employment Statistics for Kildare Town. Achievement of Ireland’s legally binding GHG reduction targets and net zero requirements, including renewable energy targets and percentage renewable energy use within the LAP boundary. Compliance with the recommendations as outlined in Kildare Town’s Surface Water Study.

Objectives	Targets	Indicators
<ul style="list-style-type: none"> • Maximise sustainable modes of transport and encourage use of walkways/cycle paths as alternative routes to school, work, and shops. • Provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety. 	<ul style="list-style-type: none"> • Promotion of sustainable transport infrastructure i.e., increased public transport through the implementation of Kildare Town’s Transport Strategy; • An increase in provision of cycle lanes and pedestrian routes; • An increase in population travelling to work and school by public transport or non-motorised transport; • A reduction in the distance travelled to work or school by the population of the Plan area; • Reduce the number of private vehicles on the road; • Reduce vehicle kilometres travelled; • Increase cycle and walking modes of transport; and • Reduce the number of private vehicles on the road; • Increase in public transport; and • Integrated traffic management plan for the Plan area. 	<ul style="list-style-type: none"> • Proportion of people reporting regular cycling / walking to school and work above previous CSO figures. • The amount of access to sustainable modes of transport. • Location and/or level of transport related infrastructure arising as a result of the draft LAP in line with all higher-level plans. • Innovation and technological advancements within the LAP boundary and the success rates of such.
<ul style="list-style-type: none"> • Implement the waste hierarchy and encourage reuse/recycling of material wherever possible. 	<ul style="list-style-type: none"> • Reduce the generation of waste and adopt a sustainable approach to waste management; • Reduction in the quantities of waste sent to landfill; • Increase in the quantities of waste sent for recycling; • Increase in the number of bring banks in the Plan area; and • Compliance with the Eastern Midlands Region Waste Management Plan 2015-2021. 	<ul style="list-style-type: none"> • Rate of waste disposal to landfill statistics. • Range and extent of recycling facilities and services; and • Rates of recycling. • Achievement of the objectives of the Eastern Midlands Region Waste Management Plan 2015-2021.
<ul style="list-style-type: none"> • To ensure adequate and clean drinking water supplies. • Improve efficiency in distribution of potable water to the population through pipe rehabilitation and to promote water conservation and sustainable water usage for long-term protection of available water resources. • To ensure that all zoned lands (existing and proposed) are connected to the public sewer network ensuring treatment of wastewater which meets EU requirements prior to discharge. 	<ul style="list-style-type: none"> • Upgrade existing water treatment plants within the Plan area; • Reduce the amount of water usage; • Reduce the amount of water lost through pipe leakage (currently 65%) through the pipe rehabilitation; • Increase usage of water collected through water harvesting; and • Upgrade Kildare Town sewer network and wastewater treatment plant if necessary. 	<ul style="list-style-type: none"> • The number and extent of Water Treatment Plans on EPAs Remedial Action List with the LAP boundary. • Upgrades to Kildare Town Wastewater Treatment Plant.

4.3 Consideration of Alternatives

This first stage of the SEA involved an environmental assessment of the alternative scenarios considered for the Kildare Town LAP. The alternatives considered are summarised below:

Alternative Scenario 1- Development of Residential Extant. This scenario includes:

- Development of residential extant, zoning all remaining New Residential land as strategic reserve and the retention of economic land as per the 2012-2018 LAP.

Alternative Scenario 2- Town Centre Consolidation, Expansion Between the Motorway and Railway Line with Protection of Green Belt at the Curragh. This scenario includes:

- The development of the residential extant planning permissions to address the Core Strategy housing allocation.
- Focus on consolidating the town centre by development of vacant and underutilised sites for economic development.
- Development of lands proximate to strategic infrastructure, i.e., between the Motorway and Railway line.

Alternative Scenario 3 - Delivery of extant residential permissions, town centre consolidation, protection of the Green Belt at the Curragh and a combination of sites that could potentially be delivered. This scenario includes:

- Development of extant planning permission to achieve housing growth allocation.
- Reduction of lands zoned 'New Residential' without planning permission.
- Application of the Strategic Reserve land use zoning designation
- Town Centre Consolidation/Regeneration
- Protection of Green Belt

The SEA team determined that based on the assessment findings, the emerging preferred scenario was Alternative Scenario 3. This development scenario involves the delivery of extant residential permissions, town centre consolidation, protection of the Green Belt at the Curragh and a combination of sites that could potentially be delivered.

Urban regeneration and redevelopment can substantially contribute to the sustainable development of urban areas and are likely to result in an overall positive impact on the environment. Much of the town centre of Kildare Town is already zoned for development, so by focusing on the re-development and regeneration of these zonings rather than zoning new greenfield land for development on the periphery, additional environmental impacts can be avoided. However, for the purposes of this assessment it is assumed that greenfield development may also be occurring, along the periphery of the Plan boundary. Greenfield development has the potential to result in a significant negative impact on the environment.

It is likely that a positive impact on population and human health will occur through the provision of residential opportunities, and the consolidation of the urban core.

Consolidation of the town will likely result in a positive impact on air, noise, and climate. A positive impact on population and human health is envisaged, through the provision of residential and commercial opportunities. A high population density in the town centre of Kildare Town could however put a strain on utilities and services, and it should be ensured that there is sufficient water and wastewater capacity to facilitate any residential development. Three commercial sites are located within the CSO defined settlement boundary of Kildare Town and are classed as Tier 1 lands, the development of same would represent consolidation of the urban form. One further commercial site is located outside the defined settlement boundary, and it scores highly as a Tier 2 site, in relation to this site there may be potential for negative impacts on material assets as this land would need to be made serviceable. However, the development of same will provide a key route between Hospital Road and Tully Street.

All commercial sites listed in this scenario combined would provide 7.33 ha of commercial lands and can be serviced or are serviceable during the lifetime of the draft Plan, thus these sites are likely to facilitate the consolidation of the built urban form which is likely to have a positive impact on the environment as urban sprawl and associated development by such, will be avoided.

The provision of growth within the built-up urban area will be facilitated in this scenario where one site is identified for residential use as an extant permission, on a brownfield site. This site will account for a large proportion of residential units to meet the Core Strategy allocation of the Kildare County Development Plan 2023-2029. One further site has been identified as an extant permission for residential use outside of the CSO settlement boundary to the south-west. Both potential positive and negative impacts have been identified for this site as development on greenfield sites are likely to have significant environmental impacts, however the increase in residential units is likely to result in positive impacts on the surrounding population. Similarly, the two sites that are also the subject of a PPP Social Housing Scheme to the east of the Plan boundary are likely to result in positive impacts on population and human health. Excess development has the potential to negatively impact the environment, however as this scenario is likely to facilitate consolidation and some compact growth, the extent of potential negative impacts on the environment is likely to be less substantial than where urban sprawl is facilitated and particularly where urban sprawl is facilitated on peripheral greenfield sites.

Increased open space is also likely to be facilitated in this scenario where, one site has been identified as having capabilities to deliver Community or Open Space use. Increased recreational space is likely to result in positive impacts on the surrounding population and human health. In this scenario seven Tier 2 sites have been identified as Strategic Reserve sites, these sites are all located on the periphery of the CSO settlement boundary of Kildare Town, however as no development is set to occur as a result of the Strategic Reserve of these lands neutral environmental impacts are likely to occur in these areas, neutral impacts on material assets and landscape and visual are also likely where no development is anticipated to take place on sites of strategic reserve.

Five sites have the potential for positive impacts on population and human health as they have been considered as employment land, subject to an evidence-based approach to the formulation of a methodology to provide for 1,127 jobs, thus these lands have potential to increase economic activity in Kildare Town.

It is not possible to fully ascertain the potential impact on heritage, as a portion of the town is designated as an Architectural Conservation Area. Any development in this area could negatively impact on sites or buildings of historical or architectural significance. High density housing can also result in a landscape and visual impact if residential units are too intrusive, however, the scale and or density of the development proposed under this scenario is not known.

Protection of the Green Belt at the Curragh is likely to result in overall positive impacts to biodiversity, water and land and soil heritage. Neutral impacts are also likely for landscape and visuals and material assets with the protection of such. Three sites identified as potential economic lands cannot be considered for development within the lifetime of the draft Plan as per the Settlement Capacity Audit.

4.4 Assessment Stage 1 – Initial Draft Plan

The first stage of the SEA assessment process comprised the first draft of the appraisal matrix that was completed by the SEA team based on the initial draft of the Kildare Town Local Area Plan and provided to Kildare County Council for their consideration.

This objectives-led assessment compared the likely impacts of each policy and objective in the initial Draft Kildare Town LAP against the strategic environmental objectives (as described in Section 4.2) with respect to the baseline information. Particular reference was made to the potential for cumulative effects in association with other relevant plans and programmes within Kildare County Council and the Eastern and Midlands Region.

The assessment process categorised environmental impacts using the ratings outlined in Table 4.2 which is based on the impact assessment criteria defined by the EPA for environmental impact assessment.

Table 4.2 Impact Ratings

Significance of Effects	
	Neutral
	Positive
	Negative
	Uncertain

The assessment also considered the cumulative effects of policies on each other to determine if certain policies working in combination could have an environmental impact.

Upon completion of the first appraisal matrix, a number of recommendations were made which were then reviewed in detail by Kildare County Council and where appropriate, incorporated into the Draft Kildare Town LAP.

4.5 Assessment Stage 2 – Final Draft Plan

The next stage of the assessment comprised the revision of the appraisal matrix to take on board comments received from Kildare County Council on the initial draft plan and the associated first draft appraisal matrix.

This appraisal matrix was incorporated into the SEA Draft Environmental Report that accompanied the Draft Kildare Town LAP that was issued for public consultation on 21st March 2023. The principle environmental effects, as per the assessment matrix, identified are summarised below.

Population and Human Health

The potential impacts on Population and Human Health are predominantly positive with regards the provision of residential, economic, and sustainable transport opportunities in the LAP area. It is proposed to consolidate the town centre through the regeneration and redevelopment of vacant and under-utilised sites. This will likely result in a positive impact on population and human health, as it discourages urban sprawl, reduces traffic movements, enhances the public realm and encourages more sustainable transport methods.

Policies and objectives relating to improvements to the public realm and accessibility of the town centre will also positively impact the population of Kildare Town. It is proposed to provide new residential development upon sites of extant permission, sites with active planning history and sites acceptable for development within the lifetime of the draft Plan, however a number of these sites are greenfield sites. Residential development will be provided predominantly in the extant permission sites, namely the Former Magee Barracks, along with one site outside of the town centre namely Grey Abbey and other sites sequential to the CSO defined Settlement Area (Census 2016). This will seek to ensure that the longer-term development of Kildare town is provided for. The promotion of enterprise and employment development in the south-western part of the town will also result in a positive impact on the population on Kildare Town, through increased job opportunities. Positive impacts will also occur where new transport infrastructure is provided for, or existing infrastructure is upgraded through the provision of improved access through the LAP area. This is particularly true in considering new sustainable transport infrastructure/opportunities.

Biodiversity

The land use zonings and objectives of the LAP will primarily result in a neutral impact on Biodiversity. Development will be largely consolidated within existing zoned or developed lands, with a large portion of development within the existing urban centre of the LAP area. However, there is the potential for negative impacts to occur where greenfield lands have been zoned for development - such as the lands to the south-west of the Plan area, which has the potential, even with the provision of mitigation, to impact on habitats and species. Similarly, potential negative effects on biodiversity are identified where large-scale infrastructure is proposed such as new road schemes, the construction of Northern Link Street and associated one-way streets or the creation of a walking trail/ greenway from Kildare Town to the Curragh, as part of the International Thoroughbred Trail.

Neutral impacts are predicted to arise due to the various green infrastructure objectives where the works are considered minor, such as cycle paths. Most natural green infrastructure features are likely to result in a positive impact on biodiversity, through species and habitat provision, while often man-made features such as greenways can result in a negative impact on the existing biodiversity through increased human interaction.

Land and Soils

The majority of potential impacts for Land and Soils are neutral as development will primarily be consolidated within existing zoned or developed lands. However, there is also the potential for negative impact to occur where greenfield lands have been zoned for development - such as the land at the south-west of the Plan area, as well as where new roads are proposed. Uncertainties will occur where the precise nature and extent of proposed new development is unknown.

Water Resources

The land use zonings and objectives of the Draft LAP will primarily result in a neutral impact on Water as development will largely take place with existing zoned or developed lands.

However, there is the potential for negative impacts to occur where greenfield lands have been zoned for development - such as the land to the south-west of the Plan area. Similarly, potential negative effects on water are identified where large-scale infrastructure is proposed such as new road schemes, the construction of Northern Link Street and associated one-way streets or the creation of a walking trail/ greenway from Kildare Town to the Curragh, as part of the International Thoroughbred Trail.

A Strategic Flood Risk Assessment (SFRA) has been carried out in support of the LAP. The SFRA has recommended a number of flood risk management objectives for specific areas, ensuring planning applications, where applicable, will require an FRA of appropriate detail. The level of detail within the FRA will depend on the risks identified and the proposed land use. A Surface Water Study (SWS) was also prepared as a precursor to the SFRA. The aim of the SWS is to find a municipal-level, multi-site nature based solution(s) to surface water management for Kildare Town.

Air, Noise and Climate

The potential impacts on Air, Noise and Climate are predominantly positive or neutral as the proposals to consolidate the town centre will likely result in a reduction in traffic movements.

The draft Plan also promotes sustainable travel modes while making provisions for improved pedestrian and cycle routes in, and around the town centre. Such measures will have a positive effect on air, noise and climate. This draft Plan comprises a range of climate change adaptation objectives relating to the promotion of sustainable transport, uptake in renewable energy etc. These objectives will likely result in a positive impact on air quality and climate change mitigation.

Uncertainties will occur where the precise nature and extent of proposed new development is unknown. There is the potential for negative impacts to occur where new roads objectives are proposed. Proposed new road schemes are likely to result in a negative air quality, noise, and climate impacts due to both the materials used in construction, but also by means of the encouragement of private vehicle use.

Archaeology, Architectural and Cultural Heritage

The land use zonings and objectives of the Draft LAP will primarily result in neutral impacts on Heritage as development will largely take place with existing zoned or developed lands.

Where urban regeneration or redevelopment is proposed in the town centre, it is not possible to fully ascertain if this is likely to result in a negative impact on heritage, as much of the town comprises an ACA. There are certain implications for development within an ACA - protection generally relates to the external appearance of structures and features of the streetscape.

Generally, any works that may have a potential impact on the exterior would require planning permission, such as changes to the original roofing material, windows, boundary walls etc. The aim of ACA designation is not to prevent development, rather to guide sensitive, good quality development, which will enhance both the historical character of the area and the amenity of those who enjoy it.

Other uncertainties will occur where the precise nature and extent of proposed new development is unknown and where the discovery of heritage features cannot be ruled out.

The draft Plan does however place a significant emphasis on the retention, protection and enhancement of existing heritage features within the LAP area.

There is the potential for negative impacts to occur where greenfield lands have been zoned for development - such as the land at south-west of the Plan area, as this has the potential to impact on archaeology.

Landscape and Visual

The majority of potential impacts for Landscape and Visual are predominantly neutral. A number of positive impacts on the townscape of Kildare Town will likely result from the range of regeneration and urban realm proposals included in the draft Plan.

However, there is the potential for negative impacts to occur where greenfield lands have been zoned for development - such as the land at the south-west of the Plan area, or where new roads objectives are proposed. This is particularly relevant with regards to the proposed new road schemes.

Material Assets

In general, the potential impacts on Material Assets are largely considered as positive or neutral. This is because development will occur in a manner that is balanced and self-sustaining occurring in tandem with physical and social infrastructure. The proposed consolidation of development in the town centre of Kildare Town has the potential to result in a negative impact on material assets. A high population density could put a strain on material assets, and it should be ensured that there is sufficient water and wastewater capacity to facilitate any residential development. However, the recent upgrades to Kildare Town's WWTP and sewer network should accommodate all development proposed under the Plan.

Interactions and Interrelationships

In accordance with the SEA Directive, the inter-relationship between environmental aspects must be taken into account. The interaction and inter-relationships of relevance for the environmental baseline aspects was an important consideration for the environmental assessment.

Table 4.3 outlines the identifiable inter-relationships that were taken into account during the environmental assessment. It is noted that all environmental aspects interact with each other to some extent, however only significant relationships were considered.

Table 4.3 Key inter-relationships between environmental aspects

Environmental Aspect	Bio	P&HHH	L & S	Wat	A, N & C	AA&CH	L&V	MA
Biodiversity								
P & HH	No							
L & S	Yes	Yes						
Wat	Yes	Yes	Yes					
A, Q & C	Yes	Yes	Yes	No				
AA & CH	No	No	Yes	No	No			
L & V	Yes	Yes	No	No	No	Yes		
MA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

4.5.1 SEA Environmental Report – Consultation

As outlined in Section 2.9, the SEA Environmental Report was subject to a period of statutory consultation to gather feedback in accordance with legislative requirements. The documents were sent to statutory stakeholders and made available for public viewing at Kildare County Council’s dedicated online public consultation portal and a public notice in the Kildare Nationalist.

The documents were placed on public display from 21st March 2023 – 3rd May 2023, during which time 142 submissions and observations were received, including 13 from public bodies. On foot of this public consultation period, on 12th June 2023, the Chief Executive’s Report was published, summarising the matters raised in the submissions and observations received.

Submissions were also reviewed to consider any comments received in relation to the SEA. As previously stated, Appendix A.1 contains a summary of the submissions received (as they relate to the SEA), and how they were responded to.

4.6 Assessment Stage 3 – Material Alterations

4.6.1 Proposed Material Alterations

In accordance with Section 20(3) of the Planning and Development Act 2000 (as amended), it was resolved by the Elected Members at a Special Meeting of the Kildare Newbridge Municipal District on Tuesday 18th July 2023 to alter the Draft Kildare Local Area Plan 2023-2029, and that these alterations constitute a material alteration to the Draft Plan.

The 114 No. amendments related to a change in the plan, modifications to some objectives and the provision of additional objectives. The Proposed Material Alterations (PMAs) to the draft Kildare Town Local Area Plan 2023-2029 were screened for environmental assessment and some eight PMAs were identified as having the potential to result in significant environmental effects. These Alterations were subjected to SEA and AA in Addenda prepared to the SEA Environmental Report and AA screening. An appraisal matrix was developed to facilitate the assessment of these proposed material alterations. The SEA screening exercise recommended the removal of ‘local bee-hive initiative’, PMA No.76, as it has the potential to give rise to negative environmental effects.

4.6.2 Proposed Material Alterations – Consultation

The SEA and AA addenda and the draft Kildare Town LAP were subject to a four-week period of consultation from 4th August to 4th September 2023 inclusive.

Some 45 No. submissions were received in relation to the material amendments and/or the SEA addendum, including 1 from the EPA. Upon completion of the consultation period, a Chief Executive’s Report on submissions was prepared to take into account comments received.

Appendix A.2 contains a summary of the 45 No. submissions received on the proposed Material Alterations, and how they were responded to.

4.6.3 Final Material Alterations

The final MA included a number of variations to the proposed MA, most involved minor text changes. These changes require no updates to the SEA Environmental Report, the Addendum to the Environmental Report, the AA screening report or the Addendum to the AA screening Report. Two proposed amendments were not adopted; 91 and 112. These resulted in a reversion back to the zoning outlined in the draft Plan which were considered and assessed in the SEA Environmental Report and AA Screening Report.

5. Mitigation

Mitigation measures are measures envisaged and designed to prevent, reduce and as fully as possible offset any significant adverse impacts on the environment of implementing the draft Plan. 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 the draft Plan area 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 5.1 summarises the proposed mitigation measures.

Table 5.1 Proposed Mitigation Measures

Aspect	Mitigation Measures
Biodiversity	To afford the highest level of protection to all designated European sites and species in accordance with the relevant legislation
	To require all planning applications for development to balance or outweigh any potential impacts on biodiversity, by measures taken to avoid and minimise the impacts and to restore affected areas and offset the residual impacts, so that no loss remains.
	To ensure no increase in nitrogen deposition at ecologically sensitive sites.
	To require all planning applications for development that may have (or cannot rule out) likely significant effects on European Sites in view of the site's Conservation Objectives, either in isolation or in combination with other plans or projects, to submit a Natura Impact Statement in accordance with the requirements of the EU Habitats Directive and the Planning and Development Act, 2000 (as amended).
	To recognise and afford appropriate protection to any existing, new, or modified SPAs or SACs that are identified during the lifetime of the LAP.
	To implement Article 6(3) and where necessary 6(4) of the Habitats Directive and to ensure that Appropriate Assessment is carried out in relation to works, plans and projects likely to impact on European sites (SACs and SPAs), whether directly or indirectly or in combination with any other plan(s) or project(s).
	To have regard to Appropriate Assessment of Plans and Projects in Ireland – Guidelines for Planning Authorities 2009 or any updated version.
	To actively promote the conservation and protection of areas designated as an NHA (including proposed sites) and to only consider proposals for development within or affecting an NHA where it can be clearly demonstrated that the proposed development will not have a significant adverse effect on the NHA or pNHA.
	To identify and afford appropriate protection to any new, proposed or modified NHAs identified during the lifetime of this Plan.
	To ensure the protection and conservation of areas, sites, species and ecological networks/corridors of biodiversity value outside of designated sites throughout the country and to require an ecological assessment to accompany development proposals likely to impact on such areas or species.
To implement the EIA Directive, ensuring that all elements/stages or components of the project are included in one overall assessment and all reasonable alternatives are taken into consideration in choosing the option with the least environmental impact.	
To have regard to "Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessments (2013)" when considering proposals for which an EIA is required.	
To protect and promote the sustainable management of the natural heritage, flora and fauna of the county through the promotion of biodiversity, the conservation of natural habitats and the enhancement of new and existing habitats.	

Aspect	Mitigation Measures
	<p>To promote the conservation of biodiversity through the protection of sites of biodiversity importance and wildlife corridors, both within and between the designated sites and the wider Plan area;</p> <p>To ensure that development proposals support and enhance the connectivity and integrity of habitats in the Plan area by incorporating natural features into the design of development proposals.</p> <p>To raise awareness of the threat of alien invasive species and take all necessary steps to prevent the spread of non-native invasive species and noxious weeds in the Plan area, including requiring landowners, developers and boat operators to adhere to best practice guidance in relation to their control;</p> <p>To implement the requirements of EU Regulations 1143/2014 on the Prevention and Management of the Introduction and Spread of Invasive Alien Species.</p> <p>The development of new infrastructure will be subject to site options assessment and environmental assessment, where required.</p>
Population and Human Health	<p>Ensure that access to adequate health and education facilities to meet the demand of the current and projected populace are included in plans.</p> <p>To consult with and have regard to the technical advice of the Health and Safety Authority and assessing planning applications where the Major Accidents Directive and any associated regulations are relevant.</p> <p>Encourage the further development of regional sustainable and public transport infrastructure including rail and bus corridors.</p>
Land and Soil	<p>To ensure that contaminated soil is disposed of in accordance with the Waste Management Regulations (S.I.821 of 2007).</p> <p>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.</p> <p>To recognise the importance of Geological Heritage Sites and to protect the character and integrity of these sites.</p> <p>To work with the GSI and relevant stakeholders to undertake a review of Geological Heritage Sites in the county during the lifetime of this Plan.</p>
Water Resources	<p>To work with all relevant stakeholders to protect and manage inland waters, river corridors and their floodplains, turloughs, lakes, fens and other water bodies from degradation and damage, and to recognise and promote them as natural assets and key elements in the green infrastructure network in the county.</p> <p>To facilitate the implementation of the relevant River Basin Management Plan for ground, surface, estuarine, coastal and transitional waters in the Plan area as part of the implementation of the EU Water Framework Directive.</p> <p>To protect groundwater resources in accordance with the statutory requirements and specific measures as set out in the relevant River Basin Management Plan.</p> <p>To consider proposals for development where it can be clearly demonstrated that the development will meet the requirements of the relevant River Basin Management Plan.</p> <p>To ensure that developments that would have an unacceptable impact on water resources, including surface water and groundwater quality and quantity, designated sources protection areas, estuarine, coastal transitional waters, river corridors and associated wetlands will not be permitted;</p> <p>In areas of potable groundwater resources or over vulnerable aquifer areas, development proposals will only be considered if the applicant can clearly demonstrate that the proposed development will not pose a risk to the quality of the underlying groundwater.</p> <p>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 impacts on water quality.</p>

Aspect	Mitigation Measures
	<p>Comply with the objectives and policies of the Eastern Catchment Flood Risk Assessment Management Study.</p> <p>Promote SuDS principles for all drainage including the integration of storm water attenuation facilities for new developments and existing catchment areas.</p> <p>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.</p> <p>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.</p>
Air, Noise and Climate	<p>Ensure that the objectives and policies of EU Air Quality legislation are incorporated into plans and programmes upon implementation into Irish law. Ensure nitrogen deposition at ecological sensitive areas is in compliance with critical loads.</p> <p>Promote the reduction of emissions of Greenhouse Gases and facilitate measures which seek to reduce emissions of greenhouse gases to ensure Ireland’s compliance with our Emission Targets.</p> <p>Facilitate sustainable transport modes and the use of walking, cycling and public transport.</p> <p>Consideration of existing noise policy in County Kildare for example noise mapping and noise action plans produced by the Local Authority.</p> <p>Consideration of likely noise impacts/effects associated with new developments. 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.</p> <p>To support the implementation of the Climate Change policy documents and legislation outlined in the Environmental Report (ER).</p> <p>To ensure that developments do not give rise to negative effects on air quality, during both construction and operation.</p>
Heritage	<p>To ensure the protection of the architectural heritage through the identification of Protected Structures, the designation of Architectural Conservation Areas, the safeguarding historic gardens, and the recognition of structures and elements that contribute positively to vernacular and industrial heritage.</p> <p>To protect, as set out in the Record of Protected Structures, all structures, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social, or technical interest.</p> <p>To ensure that new developments within or adjacent to an ACA respect the established character context of the area and contribute positively to the ACA in terms of design, scale, setting and material finishes.</p> <p>To protect existing buildings, structures, groups of structures, sites, landscapes and features such as street furniture and paving, which are considered to be intrinsic elements of the special character of the ACA, from demolition or removal and non-sympathetic alterations;</p> <p>To ensure that all new signage, lighting, advertising and utilities to buildings within an ACA are designed, constructed and located in a manner that does not detract from is complementary to the character of the ACA;</p> <p>To safeguard sites, features and objects of archaeological interest generally;</p> <p>To secure the preservation (i.e. preservation in situ or in exceptional cases preservation by record) of all archaeological monuments included in the Record of Monuments and Places as established under Section 12 of the National Monuments (Amendment) Act, 1994, and of sites, features and objects of archaeological and historical interest generally;</p> <p>To have regard to the government publication Framework and Principles for the Protection of the Archaeological Heritage 1999 in relation to protecting sites, features and objects of archaeological interest.</p>

Aspect	Mitigation Measures
	<p>To protect and preserve archaeological sites discovered since the publication of the Record of Monuments and Places.</p> <p>To protect the Zones of Archaeological Potential located within both urban and rural areas as identified in the Record of Monuments and Places.</p> <p>To have regard to archaeological concerns when considering proposed service schemes located in close proximity to Recorded Monuments and Places and the Zones of Archaeological Potential.</p>
Landscape and Visual	<p>Ensure that all new plans and programmes incorporate the findings of the County Landscape Character Assessments</p> <p>To require that all proposed developments in Heritage Landscapes demonstrate that every effort has been made to reduce visual impact. This must be demonstrated for all aspects of the proposal- from site selection through to details of siting and design. All other relevant provisions of the development plan must be complied with.</p> <p>Protect and enhance the streetscape of Kildare Town 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.</p> <p>To protect sensitive areas from inappropriate development while providing for development and change that will benefit the rural community.</p> <p>To ensure that proposed developments take into consideration their effects on views from the public road towards scenic features or areas and are designed and located to minimise their impact.</p> <p>To ensure that appropriate standards of location, siting, design, finishing, and landscaping are achieved.</p>
Material Assets	<p>Promote the implementation of the Waste Management Plan together with any future National or Regional Waste Management Plans. Additionally, ensure national policies and regulations regarding waste are adhered to.</p> <p>Encourage waste prevention, minimisation, reuse, recycling and recovery as methods of managing waste.</p> <p>Promote the development of sufficient energy resources to meet the needs of the Plan area and promote the use of renewable energies to meet those needs.</p> <p>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.</p> <p>Promote the development of sustainable transportation infrastructure where considered feasible.</p>

6. 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 Plan.

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 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 LAP.

As outlined in the EPA guidance document ‘Guidance on SEA Statements and Monitoring’ (EPA, 2020), SEA monitoring should reflect the nature and level of detail of the plan/programme (EPA, 2020)³. Many national-level plans/programmes lack geographic specificity, contain only high-level strategic objectives and do not lend themselves to cause–effect models in terms of direct measuring of environmental effects. As such, SEA monitoring for these plans should focus on national indicators to examine environmental trends.

Refer to Table 6.1 for the proposed monitoring measures. The monitoring measures included are based on national indicators and informed by the content of the LAP.

Kildare County Council 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.

³ EPA (2020) Guidance on SEA Statements and Monitoring. Available at: Strategic Environmental Assessment | Environmental Protection Agency (epa.ie)

Table 6.1 Proposed Monitoring Measures

Environmental Component	SEA Indicators	Monitoring Sources	Frequency/Responsibility
Biodiversity	<p>Number and condition of Natura 2000 network, European sites, as per Article 17 Reports, and the maintenance of conservation objectives.</p> <p>Achievement of favourable conservation status of designated sites.</p> <p>Population and range of Designated Species.</p> <p>Achievement of the Objectives of Kildare’s Biodiversity Plan and Kildare County Development Plan.</p> <p>Level of baseline biodiversity conditions in the LAP area to post-development conditions, particularly but not limited to, quantifying and monitoring the area of hedgerow, native woodland, semi-natural grassland, peat based and/or heath habitat loss within the lifetime of the LAP.</p> <p>Nitrogen deposition loads.</p>	<p>The Status of EU Protected Habitats and Species in Ireland Article 17 Report (Department of Housing, Local Government and Heritage)</p> <p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA).</p> <p>Department of Housing, Local Government and Heritage report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive.</p> <p>Monitoring related to other relevant Local Area Plans and County/City Development Plans.</p> <p>Monitoring related to Kildare’s Biodiversity Action 2021-2025.</p> <p>EPA State of the Environment Report 2020.</p> <p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA).</p> <p>EPA Air quality monitoring reports</p>	<p>DHLGH, every 6 years.</p> <p>In accordance with the monitoring provisions of EIA/ AA.</p> <p>Department of Housing, Local Government and Heritage (DHLGH). Every 6 years.</p> <p>In accordance with the monitoring provisions of the lower-level plans.</p> <p>KCC, annual review of the of Biodiversity Action Plan.</p> <p>EPA. every 4 years.</p> <p>In accordance with the monitoring provisions of EIA/ AA.</p> <p>EPA annual air quality monitoring.</p>
	<p>Status of Annex 1 habitats and species as per Article 17 Reports.</p> <p>Level of habitat creation, habitat removal, habitat fragmentation within the LAP boundary.</p> <p>Achievement of favourable conservation status of designated sites located within the LAP boundary.</p> <p>Population and range of Protected and Red List Species within the LAP boundary.</p>	<p>Department of Housing, Local Government and Heritage report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive.</p> <p>Updates to National Red List Check List</p> <p>Monitoring related to other relevant Local Area Plans and County/City Development Plans</p> <p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA)</p> <p>Fish habitat and ecology surveys</p> <p>Targeted Local Catchment Assessments</p>	<p>Department of Housing, Local Government and Heritage (DHLGH). Every 6 years.</p> <p>NPWS, varies</p> <p>In accordance with the monitoring provisions of the lower-level plans.</p> <p>In accordance with the monitoring provisions of EIA/ AA.</p> <p>IFI, varies.</p> <p>LAWPRO Catchment Scientists, varies.</p>

Environmental Component	SEA Indicators	Monitoring Sources	Frequency/Responsibility
	<p>Achievement of the Objectives of the National Biodiversity Action Plan and Kildare's Biodiversity Action Plan.</p> <p>Status of water quality in the country's water bodies (WFD).</p> <p>Number of incidences of invasive species, eutrophication and or water pollution.</p> <p>Protected Freshwater Species</p> <p>Protected Bird Species - BOCCI</p>	<p>Monitoring related to other relevant Local Area Plans and County/City Development Plans.</p> <p>EPA State of the Environment Report 2020.</p> <p>Ireland's National Water Framework Directive Monitoring Programme, 2019-2021.</p> <p>EPA Water Quality of Ireland 2020 Report.</p> <p>Inland Fisheries Ireland – Protected Freshwater Species – Atlantic Salmon etc – trends in protected freshwater species, population, distribution, health etc.</p> <p>Birds of Conservation Concern Ireland – Monitoring by Birdwatch Ireland on status, distribution, population etc.</p>	<p>In accordance with the monitoring provisions of the lower-level plans.</p> <p>EPA, every 4 years.</p> <p>EPA, continuously.</p> <p>EPA, continuously.</p> <p>Inland Fisheries Ireland, varies.</p> <p>Birdwatch Ireland, every 6 years.</p>
	<p>Location and scale of new development arising as a result of the LAP.</p> <p>The number of provisions of green/blue infrastructure within the LAP boundary.</p>	<p>Monitoring related to other relevant Local Area Plans and County/City Development Plans</p> <p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA)</p>	<p>In accordance with the monitoring provisions of the lower-level plans.</p> <p>In accordance with the monitoring provisions of EIA/ AA.</p>
Population and Human Health	<p>Changes in trends in perceived health status within the LAP boundary.</p> <p>Changes in census population statistics within Kildare Town.</p> <p>Rates of unemployment per area.</p> <p>Statistics on access to sustainable modes of transport.</p> <p>Percentage increase in housing (number and type).</p> <p>Number of compliances of wastewater infrastructure to legislation/regulations/conditions for relevant licences, permits etc. for discharges.</p> <p>Number of compliances of water supply schemes with relevant legislation/regulation/conditions for abstraction and consumption.</p>	<p>CSO Census Reports – Health, Population, Employment and Transport Statistics.</p> <p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA)</p> <p>Monitoring related to other relevant Local Area Plans and County/City Development Plans or RSEs.</p> <p>EPA State of the Environment Report 2020.</p> <p>EPA Remedial Action Lists.</p> <p>Irish Water and National Federation of Group Water Schemes water quality monitoring and Source Protection Plans, EPA drinking water quality monitoring</p> <p>EPA Urban Wastewater Treatment Reports.</p> <p>Monitoring for KCC's Third Noise Action Plan 2019 – 2023.</p>	<p>Central Statistics Office, every 6 years.</p> <p>In accordance with the monitoring provisions of EIA/ AA</p> <p>In accordance with the monitoring provisions of the lower-level plans.</p> <p>EPA, every 4 years.</p> <p>The EPA releases a Remedial Action List every Quarter which identifies problems with drinking water supply. KCC should have regard to issues pertaining to KCC water treatment plants.</p> <p>EPA, annual reports.</p> <p>The EPA publish an Urban Wastewater Treatment Report each year which identifies areas in Ireland where there are issues with treatment and effluent quality as well as capacity issues. KCC should have regard to issues pertaining to KCC treatment plants.</p> <p>KCC, varies.</p>

Environmental Component	SEA Indicators	Monitoring Sources	Frequency/Responsibility
	<p>Number of compliances of infrastructure projects to relevant legislation/regulation/conditions re - noise, odour and/or air quality.</p> <p>Number of compliances of waste management sites.</p> <p>Implementation of the Noise Action Plan and relevant limit values.</p>		
	<p>Number of new and or improved recreational facilities and or routes related to the new LAP.</p> <p>Number of people utilising recreational areas within the LAP boundary.</p> <p>Number of public rights of way lost through the LAP boundary.</p> <p>Number and scale of new development arising as a result of the LAP.</p>	<p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA)</p> <p>Monitoring related to relevant Local Area Plans and County/City Development Plans or RSES's, particularly LAP Quarterly Reviews with monitoring taking place in accordance with the monitoring of lower-level plans.</p>	<p>In accordance with the monitoring provisions of EIA/ AA.</p> <p>In accordance with the monitoring provisions of the lower-level plans. Quarterly review basis.</p>
	<p>Economic growth statistics within the LAP boundary.</p> <p>Rates of unemployment in Kildare Town.</p> <p>Rates of employment in Kildare Town.</p>	<p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA)</p> <p>Monitoring related to relevant Local Area Plans and County/City Development Plans or RSES's, particularly LAP Quarterly Reviews.</p> <p>CSO Census Reports – Employment and Economic data.</p>	<p>In accordance with the monitoring provisions of EIA/ AA.</p> <p>In accordance with the monitoring provisions of the lower-level plans. Quarterly review basis.</p> <p>Central Statistics Office, every 6 years.</p>
Land and Soil	<p>Incidences of soil contamination.</p> <p>Erosion and sedimentation rates of soils within the LAP boundary.</p> <p>Nitrogen deposition rates.</p> <p>Number and condition of designated geological features.</p>	<p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA)</p> <p>EPA State of the Environment Report 2020.</p> <p>Monitoring for Geological Survey Irelands (GSI) Database.</p>	<p>In accordance with the monitoring provisions of EIA/ AA</p> <p>EPA, every 4 years.</p> <p>GSI, varies.</p>

Environmental Component	SEA Indicators	Monitoring Sources	Frequency/Responsibility
	Rates of brownfield site and contaminated land reuse and development. Rates of greenfield development.	Monitoring related to relevant Local Area Plans and County/City Development Plans or RSES's. CORINE mapping resurvey.	In accordance with the monitoring provisions of the lower-level plans. EPA, varies.
	Rates of re-use/recycling of construction waste. Quantity of waste sent to landfill within the LPA boundary. Number of bring banks in the Plan area. Achievement of the Objectives of the Eastern Midlands Region Waste Management Plan 2015-2021.	EPA National Waste Statistics Summary Report. The annual report on the implementation of the Eastern-Midlands Region Waste Management Plan.	EPA, annually. The Regional Waste Office, annually.
	Number and condition of designated geological features. Number of new developments in proximity to designated geological site.	Monitoring for Geological Survey Irelands (GSI) Database. Monitoring of the effects of capital investment project development required under separate processes (EIA, AA)	GSI, varies. In accordance with the monitoring provisions of EIA/ AA.
Water	Proportion of water bodies in the LAP boundary meeting their WFD Ecological Status objectives, as reported by the EPA Water Monitoring Programme for the WFD. The number of waterbodies within the LAP boundary that have deteriorated in ecological status or chemical status. Compliance of surface waters with national and international standards. Status of aquatic habitats and species within the LAP boundary, particularly the status of the Curragh Aquifer. Compliance with the recommendations outlined in Kildare Towns Surface Water Management Study.	Ireland's National Water Framework Directive Monitoring Programme, 2019-2021. River Basin Management Plan for Ireland 2018 -2021 (2022 – 2027) The Status of EU Protected Habitats and Species in Ireland Report (Department of Housing, Local Government and Heritage) EPA Water Quality of Ireland 2020 Report. EPA State of the Environment Report 2020. Monitoring of the Curragh Aquifer Status. Kildare Town Surface Water Study.	EPA, continuously. DHLGH, every 6 years. EPA, continuously. EPA, every 4 years. KCC, continuously. KCC, continuously.
	Number and location of nature-based solutions incorporated into the LAP boundary.	Monitoring of the effects of capital investment project development required under separate processes (EIA, AA)	In accordance with the monitoring provisions of EIA/ AA.

Environmental Component	SEA Indicators	Monitoring Sources	Frequency/Responsibility
	<p>Achievement of the Objectives of the River Basin Management Plan.</p> <p>Compliance of surface and ground waters with national and international standards</p>	<p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA)</p> <p>EPA Water Quality Status for surface and ground water.</p> <p>EPA Risk Status for surface and ground water.</p> <p>Ireland's National Water Framework Directive Monitoring Programme.</p>	<p>In accordance with the monitoring provisions of EIA/ AA.</p> <p>EPA, varies.</p> <p>EPA, varies.</p> <p>EPA, continuous.</p>
	<p>Number of past flood risk events within the LAP boundary.</p> <p>Annual costs of damage related to flood events within the LAP area.</p>	<p>Monitoring in the Review of Flood Risk Management Plans 2021.</p> <p>Monitoring for the EPA Catchments Unit and Local Authority Waters Programme.</p>	<p>OPW, every 3 years.</p> <p>EPA Catchment Unit, DHLGH and relevant local authorities, varies.</p>
Air, Noise and Climate	<p>Air Quality Monitoring Result in Ireland, both national and region-specific air emission data.</p> <p>Compliance with EPA emission limits for sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter.</p> <p>Number of compliances with EPA emission limits for sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter.</p> <p>Number of compliances with existing legislation/regulations/conditions for air quality e.g., IPPC/IE.</p> <p>Compliance with nitrogen deposition critical loads.</p>	<p>EPA Air Quality Monitoring.</p> <p>Monitoring in the Air Quality for Ireland 2021 Report.</p> <p>EPA State of the Environment Report.</p>	<p>EPA, continuously.</p> <p>EPA, annually.</p> <p>EPA, every 4 years.</p>
	<p>Compliance with national Air Quality Standards (AQS) and critical loads.</p> <p>Traffic, Transport and Vehicular survey data with the LAP boundary.</p> <p>Emission air, noise data from licensed facilities.</p>	<p>Air Quality Monitoring Stations around Ireland.</p> <p>EPA State of the Environment Report 2020.</p> <p>Monitoring related to relevant Local Area Plans and County/City Development Plans or RSES's such as noise action plans.</p>	<p>EPA, continuous.</p> <p>EPA, every 4 years.</p> <p>Any monitoring data carried out by KCC as part of LAP reviews should be gathered, accumulated and analysed by KCC, as available (at least every 6 years).</p>

Environmental Component	SEA Indicators	Monitoring Sources	Frequency/Responsibility
	<p>Travel patterns and the number of modes of transport within Kildare Town.</p> <p>Number of new air monitoring stations in Kildare Town.</p> <p>Implementation of the LAP, which will contribute towards the overall CDP and facilitate climate action and the relevant targets for emission reductions.</p> <p>Proportion of journeys made by private fossil fuel-based car compared to previous levels.</p> <p>Proportion of people reporting regular cycling / walking to school and work above previous CSO figures.</p> <p>Energy consumption, the amount of uptake in renewable options and solid fuels for residential heating.</p> <p>Rates of energy and or renewable energy consumption.</p> <p>The quantity of GHG emission increases within the LAP boundary over the plan period.</p> <p>GHG emission reductions over the Plan period.</p> <p>Noise monitoring data from any new developments arising as a result of the LAP.</p> <p>Onsite dust monitoring of new development.</p>	<p>EPA Air Quality in Ireland Report 2021.</p> <p>EPA Air Quality Monitoring Stations across Ireland.</p> <p>Monitoring related to relevant Local Area Plans and County/City Development Plans or RSES's.</p> <p>EPA Greenhouse Gas Reports.</p> <p>CSO Census Reports</p> <p>Sustainable Energy Authority of Ireland (SEAI) - Monitoring of Renewable Energy Sources in Ireland.</p> <p>Monitoring related to Local Authority Climate Action Plans,</p> <p>EPA Greenhouse Gas Emissions Report.</p> <p>EPA Climate Change Projections.</p> <p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA).</p>	<p>EPA, annually.</p> <p>EPA, continuously.</p> <p>In accordance with the monitoring provisions of the lower-level plans</p> <p>EPA, annually.</p> <p>CSO, every 6 years.</p> <p>SEAI, varies.</p> <p>KCC, every 5 years.</p> <p>EPA reports sectorally on an annual basis.</p> <p>EPA, varies.</p> <p>In accordance with the monitoring provisions of EIA/ AA</p>

Environmental Component	SEA Indicators	Monitoring Sources	Frequency/Responsibility
Archaeological, Architectural and Cultural Heritage	<p>Percentage of entries to the Record of Monuments and Places, and the context these entries within the surrounding landscape where relevant, protected from adverse effects resulting from development which is granted permission under the LAP in line with Kildare's CDP.</p> <p>Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the LAP in line with Kildare's CDP.</p> <p>Recorded numbers of non-designated built heritage e.g., vernacular buildings.</p> <p>Range and extent of areas of heritage potential within the LAP boundary.</p> <p>Number of uninhabited and derelict structures within the LAP boundary.</p> <p>Range and extent of areas of special planning controls.</p> <p>Archaeological Impact Assessments related to development, and or the number and types of archaeological investigations undertaken within the LAP boundary.</p> <p>Educational facilities and or opportunities to promote awareness of natural and cultural heritage.</p>	<p>An Bord Pleanála/Kildare County Council Planning Records.</p> <p>Registers of nationally protected sites and structures.</p> <p>The National Inventory of Architectural Heritage.</p> <p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA)</p> <p>Monitoring related to relevant Local Area Plans and County/City Development Plans or RSES's.</p> <p>County Kildare Heritage Plan 2019-2025.</p>	<p>Planning records from An Bord Pleanála or KCC should be reviewed and recorded at least at the plan min-term review stage. Assessment and recording of trends are recommended on an annual basis if feasible.</p> <p>NPWS (National Parks and Wildlife Services), NMS (National Monuments Service), UNESCO, continually.</p> <p>The Department of Housing, Local Government and Heritage are responsible for monitoring the conditions of, recording the presence of, and conserving Ireland's protected sites on a routine basis.</p> <p>In accordance with the monitoring provisions of EIA/ AA</p> <p>In accordance with the monitoring provisions of the lower-level plans.</p> <p>The Heritage Council, varies.</p> <p>KCC, County Kildare Heritage Forum, every six years.</p>

Environmental Component	SEA Indicators	Monitoring Sources	Frequency/Responsibility
Landscape and Visual	<p>Compliance with planning conditions relating to landscape and development.</p> <p>Range and extent of Amenity Landscapes.</p> <p>Rates of development within designated landscapes.</p> <p>Rates of urban expansion.</p> <p>Rates of agricultural land re-development.</p> <p>Percentage change of land use from rural to urban.</p>	<p>An Bord Pleanála Planning Records.</p> <p>Monitoring related to relevant Local Area Plans and County/City Development Plans or RSES's.</p> <p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA).</p> <p>Corrine mapping resurveys.</p>	<p>Planning records from An Bord Pleanála or relevant County Council Authority should be reviewed and recorded at least at the plan min-term review stage (3 years). Assessment and recording of trends are conducted on an annual basis where possible.</p> <p>In accordance with the monitoring provisions of the lower-level plans.</p> <p>In accordance with the monitoring provisions of EIA/ AA. EPA, varies.</p>
	<p>Number of planning permissions granted in areas of high value landscape.</p> <p>Number of permissions granted within 500m of a scenic route.</p>	<p>An Bord Pleanála Planning Records.</p> <p>Monitoring related to relevant Local Area Plans and County/City Development Plans or RSES's e.g., Landscape Character Assessments as part of County Development Plans.</p> <p>Corrine mapping resurveys.</p>	<p>Planning records from An Bord Pleanála or relevant County Council Authority should be reviewed and recorded at least at the plan min-term review stage (3 years). Assessment and recording of trends are conducted on an annual basis where possible.</p> <p>In accordance with the monitoring provisions of the lower-level plans – Relevant Local Authority - KCC, continuously.</p> <p>EPA, varies.</p>
Material Assets	<p>Location and or level of infrastructure arising as a result of the LAP, including renewable energy developments granted planning permission.</p> <p>Achievement of development plan objectives.</p> <p>Rates of deprivation within Kildare Town.</p> <p>Economic statistics for Kildare Town.</p> <p>Employment Statistics for Kildare Town.</p> <p>Achievement of Ireland's legally binding GHG reduction targets and net zero requirements, including renewable energy targets and percentage renewable energy use within the LAP boundary.</p>	<p>An Bord Pleanála Planning Records.</p> <p>Monitoring related to relevant Local Area Plans and County/City Development Plans or RSES's.</p> <p>CSO Population, Health, Economic and Employment statistics.</p> <p>Sustainable Energy Authority of Ireland (SEAI) – Monitoring of Renewable Energy in Ireland.</p> <p>Monitoring related to relevant Local Area Plans and County/City Development Plans or RSES's.</p> <p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA).</p> <p>Monitoring related to Local Authority Climate Action Plans.</p> <p>Kildare Town's Surface Water Study.</p>	<p>Planning records from An Bord Pleanála or relevant County Council Authority should be reviewed and recorded at least at the plan min-term review stage (3 years). Assessment and recording of trends are conducted on an annual basis where possible.</p> <p>In accordance with the monitoring provisions of the lower-level plans – Relevant Local Authority - KCC, continuously.</p> <p>CSO, every 6 years.</p> <p>SEAI, varies.</p> <p>In accordance with the monitoring provisions of the lower-level plans – Relevant Local Authority - KCC, continuously.</p> <p>In accordance with the monitoring provisions of EIA/ AA.</p>

Environmental Component	SEA Indicators	Monitoring Sources	Frequency/Responsibility
	Compliance with the recommendations as outlined in Kildare Town's Surface Water Study.		KCC, every 5 years. KCC, continuously.
	<p>Proportion of people reporting regular cycling / walking to school and work above previous CSO figures.</p> <p>The amount of access to sustainable modes of transport.</p> <p>Location and/or level of transport related infrastructure arising as a result of the LAP in line with all higher-level plans.</p> <p>Innovation and technological advancements within the LAP boundary and the success rates of such.</p>	<p>CSO Transport data.</p> <p>Monitoring related to relevant Local Area Plans and County/City Development Plans or RSES's.</p> <p>Monitoring of the effects of capital investment project development required under separate processes (EIA, AA).</p> <p>An Bord Pleanála/Relevant County Council Planning Records.</p>	<p>CSO, every 6 years.</p> <p>In accordance with the monitoring provisions of the lower-level plans – Relevant Local Authority - KCC, continuously.</p> <p>In accordance with the monitoring provisions of EIA/ AA.</p> <p>Planning records from An Bord Pleanála or relevant County Council Authority should be reviewed and recorded at least at the plan min-term review stage (3 years). Assessment and recording of trends are conducted on an annual basis where possible.</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>Achievement of the objectives of the Eastern Midlands Region Waste Management Plan 2015-2021.</p>	<p>EPA National Waste Statistics Summary Report.</p> <p>EPA State of the Environment Report 2020.</p> <p>The annual report on the implementation of the Eastern-Midlands Region Waste Management Plan.</p>	<p>EPA, annually.</p> <p>EPA, every 4 years.</p> <p>The Regional Waste Office, annually.</p>
	<p>The number and extent of Water Treatment Plans on EPAs Remedial Action List with the LAP boundary.</p> <p>Upgrades to Kildare Town Wastewater Treatment Plant.</p>	<p>Monitoring for the EPA's Remedial Action List.</p> <p>EPA Urban Wastewater Treatment Reports.</p>	<p>The EPA releases a Remedial Action List every Quarter which identifies problems with drinking water supply. KCC should have regard to issues pertaining to KCC water treatment plants.</p> <p>The EPA publish an Urban Wastewater Treatment Report each year which identifies areas in Ireland where there are issues with treatment and effluent quality as well as capacity issues. KCC should have regard to issues pertaining to KCC treatment plants</p>

7. Final Appraisal: How Environmental Considerations were integrated into the Draft LAP

This Section summarises how environmental considerations were integrated into the adopted Kildare Town LAP, throughout the SEA process.

Identification of environmental constraints

As described in Section 4.1, the SEA team undertook an assessment of baseline environmental conditions of the LAP area, with reference to biodiversity, population and human health, land and soil, water, air and climate, heritage, landscape and material assets. This information was used to focus the SEA objectives, develop alternatives and assess positive and negative impacts associated with the implementation of the proposed LAP. An Environmental Sensitivity Map was prepared to enable this assessment and to influence alternatives discussions and assessment of policies.

SEA Scoping

As described in Section 3, the SEA Scoping was a key part of the assessment process as it provided information to allow consultation with defined statutory bodies and environmental authorities on the scope and level of detail to be considered and incorporated at an early stage in the assessment.

Assessment of alternatives

The environmental baseline and objectives were used to identify key sensitivities and inform development of the alternatives and ultimately the assessment of the preferred alternative.

Assessment of Plan Provisions

A detailed environmental assessment was carried out of the plan provisions in order to determine, and illustrate to KCC, the potential for significant negative effects as a result of implementing the plan, as it was then proposed.

Proposed mitigation measures

Mitigation measures were proposed to address negative environmental impacts identified during the assessment process. These included amendments to the wording of policies and objectives in the Kildare Town LAP.

Required environmental monitoring programme

A monitoring programme has been developed based on the indicators (noted in Section 6) in order to track progress towards achieving strategic environmental objectives and reaching targets, enabling positive and negative impacts on the environment to be measured.

The indicators have been developed to illustrate changes that would be attributable to the implementation of the draft Kildare Town LAP 2023-2029.

Final Consultation

Further to the SEA Scoping consultation, the SEA Environmental Report, the Report for the purposes of AA Screening the Draft Naas LAP, and the proposed material alterations to the Draft LAP were put on wider display on the Kildare County Council website (See Section 4.6). All changes to policies and actions have been screened by the SEA and AA teams to determine if they would result in significant effects, and all submissions and objections received were reviewed.

Appendix A

Appendix Title

A.1 SEA Scoping Report – Response to Submissions

The following table presents the responses to the SEA Scoping Report, as taken from the Environmental Report conducted under the Draft Kildare Town LAP 2023 – 2029.

Table 7.1 Scoping Report Responses

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
Environmental Protection Agency (EPA)	For land use plans at county and local level, we provide a ‘self-service approach’ via the attached guidance document ‘SEA of Local Authority Land Use Plans – EPA Recommendations and Resources’. This document is updated regularly and sets out our key recommendations for integrating environmental considerations into Local Authority land use plans. We recommend that you take this guidance document into account in preparing the Plan and SEA.	The guidance document ‘SEA of Local Authority Land Use Plans – EPA Recommendations and Resources’ has been reviewed and utilised throughout the SEA process.
	Available Guidance and Resources from the EPA website contains various SEA resources and guidance, including: - SEA process guidance and checklists - Inventory of spatial datasets relevant to SEA - topic specific SEA guidance (including Good practice note on Cumulative Effects Assessment (EPA, 2020), Guidance on SEA Statements and Monitoring (EPA, 2020), Integrating climatic factors into SEA (EPA, 2019), Developing and Assessing Alternatives in SEA (EPA, 2015), and Integrated Biodiversity Impact Assessment (EPA, 2012)) Access to these guidance notes and other resources is available at: https://www.epa.ie/ourservices/monitoring--assessment/assessment/strategic-environmental-assessment/sea-topicand-sector-specific-guidance/	All Guidance and Resources included in this submission have been reviewed and are welcomed. The guidance and resources namely ‘SEA process guidance and checklists - Inventory of spatial datasets relevant to SEA - topic specific SEA guidance (including Good practice note on Cumulative Effects Assessment (EPA, 2020), Guidance on SEA Statements and Monitoring (EPA, 2020), Integrating climatic factors into SEA (EPA, 2019), Developing and Assessing Alternatives in SEA (EPA, 2015), and Integrated Biodiversity Impact Assessment (EPA, 2012))’ have been reviewed and utilised throughout the SEA process.
	<p>Environmental Sensitivity Mapping (ESM) Webtool</p> <p>The ESM Webtool is a new decision support tool to assist SEA and planning processes in Ireland. The tool brings together over 100 datasets and allows users to explore environmental considerations within a particular area and create plan-specific environmental sensitivity maps.</p> <p>These maps can help planners anticipate potential land-use conflicts and help identify suitable development locations, while also protecting the environment. The ESM Webtool is available at www.enviromap.ie.</p>	Use of this webtool has been noted and reviewed as a useful support tool to assist the SEA process.

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	<p>EPA SEA WebGIS Tool</p> <p>The SEA WebGIS Tool has been updated recently and is now publicly available at https://gis.epa.ie/EPAMaps/SEA. It allows public authorities to produce an indicative report on key aspects of the environment in a specific geographic area. It is intended to assist public authorities in SEA screening and scoping exercises.</p>	<p>Use of this tool has been noted and reviewed as a useful support tool to assist the SEA process.</p>
	<p>EPA WFD Application</p> <p>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 at https://wfd.edenireland.ie/ and is available to public agencies. Publicly available data can be accessed via the catchments.ie website.</p>	<p>Use of this application has been noted and reviewed as a useful support tool to assist the SEA process.</p>
	<p>EPA AA GeoTool</p> <p>The AA GeoTool application has been developed in partnership with the NPWS. It allows users to select a location, specify a search area and gather available information for each European Site within the area. It is available at: https://gis.epa.ie/EPAMaps/AAGeoTool.</p>	<p>Use of this tool has been noted and reviewed as a useful support tool to assist the SEA process.</p>
	<p>State of the Environment Report – Ireland’s Environment 2020</p> <p>In preparing the Plan and SEA, the recommendations, key issues and challenges described within the State of the Environment Report Ireland’s Environment – An Integrated Assessment 2020 (EPA, 2020) should be considered, as relevant and appropriate to the Plan. It should also be taken into account, in preparing the Plan.</p>	<p>The State of the Environment Report Ireland’s Environment – An Integrated Assessment 2020 (EPA, 2020) Report has been reviewed in full and relied on for the description of much of the baseline environment in both the SEA Scoping Report and the Environmental Report.</p>
	<p>Environmental Authorities</p> <p>Under the SEA Regulations, you should consult with:</p> <ul style="list-style-type: none"> • Environmental Protection Agency; • Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media (formerly Minister for Culture, Heritage and the Gaeltacht (functions transferred from Minister for Environment, Heritage and Local Government/ Minister for Housing, Planning and Local Government to Minister for Culture, Heritage and the Gaeltacht by S.I. 192 of 2011); • Minister for Environment, Climate and Communications (formerly Minister of Communications, Climate Change and the Environment); • Minister for Agriculture, Food and the Marine; and 	<p>All of the aforementioned authorities/agencies have been consulted with and any comments received have been taken into account, as part of the making of the draft Plan and the SEA Environmental Report, in line with SEA Regulations.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	<ul style="list-style-type: none"> Any adjoining planning authority whose area is contiguous to the area of a planning authority which prepared a draft plan, proposed variation or local area plan. 	
Department of Housing, Local Government and Heritage (DHLGH)	<p>The SEA scoping report states that all designated sites within 15km of the plan area will be assessed in detail in the SEA and AA (Appropriate Assessment). Department guidance on AA1 advises that Natura 2000 sites that are more than 15km from the plan area should be included depending on the likely impacts of the plan, and the sensitivities of the ecological receptors, bearing in mind the precautionary principle. In the case of sites with water dependent habitats or species, and a plan that could affect water quality or quantity, for example, it may be necessary to consider the full extent of the upstream and/or downstream catchment.</p>	<p>This submission has been noted, the precautionary principal has been incorporated throughout the SEA and AA processes.</p> <p>An AA screening report was prepared for the draft LAP and the likely significant effects of the draft Plan on Natura 2000 sites have been screened.</p> <p>The AA Screening concluded:</p> <p>There are five European designated sites within the Zone of Influence (ZoI) of the draft Plan, namely Pollardstown Fen SAC, Mouds Bog SAC, Ballynafagh Lake SAC, River Barrow and River Nore SAC and Ballynafagh Bog SAC. Of these five European designated sites, there is only a potential impact pathway identified between the area covered by the draft Plan, and one site, namely the River Barrow and River Nore SAC. This is a hydrological connection via the Tully Stream and Armour Stream, along 13km of watercourse (including five confluences), to the Finnelly River which is designated as part of the River Barrow & River Nore SAC.</p> <p>The potential for Likely Significant Effect (LSE) of each individual objective/land-use zoning in the draft Plan on the integrity of the River Barrow & River Nore SAC has been systematically considered in the AA Screening Report and it is recommended that all objectives can be screened out from AA.</p>
	<p>Kildare town is underlain by the Regionally Important Gravel Aquifer, the Curragh Aquifer. The aquifer provides baseflow for the major river catchments in Kildare, namely the Liffey, the Barrow and the Boyne. It has been described as of ‘high vulnerability’ by the Geological Survey Ireland (GSI). The Barrow forms part of the River Barrow and River Nore Special Area of Conservation (SAC) (Site Code 002162), while the River Boyne is part of the River Boyne and River Blackwater SAC (Site Code 002299) and the River Boyne and River Blackwater Special Protection Area (SPA) (Site Code 004232). The Liffey flows into Dublin Bay which contains North Dublin Bay SAC (Site Code 000206), South Dublin Bay SAC (Site Code 000210), South Dublin Bay and River Tolka Estuary SPA (Site Code 004024) and North Bull Island SPA (Site Code 004006).</p> <p>Appropriate Assessment screening must determine the Natura 2000 sites which are within the plan’s zone of influence based on connections with the Curragh Aquifer. The Curragh Aquifer is also significant as the source of water for Pollardstown Fen Special Area SAC. Research indicates that Kildare Town is outside the groundwater</p>	<p>This submission has been noted, the precautionary principal has been incorporated throughout the SEA and AA processes.</p> <p>An AA screening report was prepared for the draft LAP and the likely significant effects of the draft Plan on Natura 2000 sites have been screened.</p> <p>The AA Screening concluded:</p> <p>There are five European designated sites within the Zone of Influence (ZoI) of the draft Plan, namely Pollardstown Fen SAC, Mouds Bog SAC, Ballynafagh Lake SAC, River Barrow and River Nore SAC and Ballynafagh Bog SAC.</p> <p>Of these five European designated sites, there is only a potential impact pathway identified between the area covered by the draft Plan, and one site, namely the River Barrow and River Nore SAC. This is a hydrological connection via the Tully Stream and Armour Stream, along 13km of watercourse (including five confluences), to the Finnelly River which is designated as part of the River Barrow & River Nore SAC.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	catchment for Pollardstown Fen. Nevertheless, AA screening should determine whether Pollardstown Fen SAC is within the zone of influence of the LAP.	The potential for Likely Significant Effect (LSE) of each individual objective/land-use zoning in the draft Plan on the integrity of the River Barrow & River Nore SAC has been systematically considered in the AA Screening Report and it is recommended that all objectives can be screened out from AA.
	There is a hydrological connection to the River Barrow and River Nore SAC (Site Code 002162) via the Tully Stream (approximately 13 km downstream (river length). Surface and storm water and other point-source discharges from Kildare Town discharge to the Tully Stream. The ecological status of the Tully stream is Poor in the upper reaches at Tully_010 (Q3-Poor Status biological water quality rating-invertebrates). Tully_010 is AT RISK due to unsatisfactory biology and chemistry. The Tully Stream_010 is a recommended 'area for action' for Water Framework Directive (WFD) third cycle (2022-2027). The Department recommends that downstream impacts of discharges of surface water and other diffuse and point-source discharges to the Tully Stream and effects on the River Barrow and River Nore SAC must be assessed.	<p>This submission has been noted, the precautionary principal has been incorporated throughout the SEA and AA processes.</p> <p>An AA screening report was prepared for the draft LAP and the likely significant effects of the draft Plan on Natura 2000 sites have been screened.</p> <p>The AA Screening concluded:</p> <p>There are five European designated sites within the Zone of Influence (ZoI) of the draft Plan, namely Pollardstown Fen SAC, Mouds Bog SAC, Ballynafagh Lake SAC, River Barrow and River Nore SAC and Ballynafagh Bog SAC.</p> <p>Of these five European designated sites, there is only a potential impact pathway identified between the area covered by the draft Plan, and one site, namely the River Barrow and River Nore SAC. This is a hydrological connection via the Tully Stream and Armour Stream, along 13km of watercourse (including five confluences), to the Finney River which is designated as part of the River Barrow & River Nore SAC.</p> <p>The potential for Likely Significant Effect (LSE) of each individual objective/land-use zoning in the draft Plan on the integrity of the River Barrow & River Nore SAC has been systematically considered in the AA Screening Report and it is recommended that all objectives can be screened out from AA.</p>
	SEA is a stepped process that involves collating baseline data, setting strategic environmental objectives, as well as the monitoring of the effects of the LAP on the environment. This final step is essential to the process and should underpin subsequent LAPs. Monitoring is a learning process that identifies issues and impacts. It follows, that the results of monitoring from the current LAP should inform the scoping for SEA of the proposed LAP. Without effective monitoring and follow up, each new plan operates from a shifted reference baseline for biodiversity and environment and as a result it is more likely that issues will perpetuate beyond each plan. The Department recommends that the description and assessment of the baseline environment incorporates the SEA monitoring from the current LAP.	<p>The comments in this submission have been noted. Strategic Environmental Assessment has been undertaken for the draft Kildare Town LAP 2023-2029 in line with the SEA Directive (2001/42/EC) and best practice guidance. It should also be noted, that as part of the preparation of the SEA Scoping Report and also the SEA Environmental Report, baseline information was collected from available sources, including the 2020 EPA State of the Environment report. The preparation of the emerging draft Plan and the SEA have been iterative processes, with one continually being informed/ aligning with the other. Section 9 of this ER contains a detailed monitoring plan and reporting relevant to the draft Plan.</p> <p>The description and assessment of the baseline environment in Section 5 of this ER was informed by the SEA monitoring data sources outlined in the current LAP, as appropriate.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	<p>Looking to the LAP for 2023- 2029, the SEA should establish definitive measurable indicators for environmental and particularly Biodiversity impacts. A key driver of biodiversity loss is habitat loss and the SEA process is particularly important for assessing the cumulative impact and wider trends of habitat loss that arise from sub-threshold Environmental Impact Assessment (EIA) projects and indirect effects of the LAP (i.e. population growth and recreational impacts to the Curragh proposed Natural Heritage Area for example). Consequently, monitoring should be embedded into the plan and given clear quantifiable targets. Specifically, the SEA should establish effective and implementable monitoring of habitat loss, e.g., quantify and monitor the area of hedgerow, native woodland, semi-natural grassland, peat based and/or heath habitat loss within the lifetime of the LAP. Such quantifiable data can be gained from stipulations within the LAP requiring all new development applications to quantify and state the predicted habitat or biodiversity loss associated with the project. Furthermore, all losses and gains of important biodiversity features should be quantified with regard to development over the lifetime of the plan and the SEA process should report on them at the beginning of the next draft plan.</p>	<p>This submission has been noted, a number of definitive measurable indicators have been included in Section 5.3 of the Scoping Report and Section 6 of this SEA ER. These indicators have been provided in relation to each environmental component:</p> <ul style="list-style-type: none"> • Biodiversity; • Population and human health; • Land and soil; • Water resources; • Air, noise and climate; • Archaeological, architectural and cultural heritage; • Landscape and visuals; and • Material assets. <p>This comment is welcomed, and the SEA ER makes reference to these areas in Section 6 – SEA Objectives, Targets and Indicators and Section 9 – Mitigation and Monitoring, as appropriate. Furthermore, 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.</p> <p>The Indicators 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. Section 6 of this ER details the Strategic Objectives, Targets and definitive measurable Indicators identified for the draft plan. Section 9 of this ER includes a detailed monitoring plan that 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. The Environmental Indicators have been developed to show changes that would be attributable to implementation of the draft LAP and any associated development of such.</p> <p>Furthermore, cumulative effects of the draft LAP have been considered furthermore and are detailed in Section 8.5 of this ER.</p>
	<p>The Department recommends that mitigation measures should be fully integrated into the LAP itself and the final LAP should fully reflect the findings of SEA and AA because they are integrated processes that mutually complement each other. Additionally, it is important to align the SEA and AA.</p>	<p>This comment is welcomed. The process of SEA, AA and the preparation of the draft Plan have been undertaken as an iterative process, with one continually being informed and aligned with the other although ensuring compliance with separate legislative requirements.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	<p>However, they are separate independent processes that serve to ensure compliance with separate legislative requirements, and cross referencing in these documents is to be avoided.</p>	
	<p>Surface water</p> <p>Disposal of surface water drainage from Kildare town is constrained. In general, the existing surface water drainage system is a combination of soakaways, combined sewers and connections to the carrier pipe serving the M7 Kildare Town Bypass. The Department welcomes the commitment to preparing a Surface Water Study in addition to a Strategic Flood Risk Assessment. In urban areas, where natural infiltration is reduced, rainfall runoff can be 400% greater in volume than in rural areas and prone to extreme flows in severe 4 rainfall events. Furthermore, the runoff from urban areas includes a toxic cocktail of pollutants washed off the urban impermeable areas into receiving waterbodies.</p> <p>Run-off from car parks is of particular concern. This polluting effect has been identified by the Environmental Protection Agency (EPA) as one of the primary sources of pollution from urban areas, alongside discharges from urban wastewater systems.</p>	<p>The impacts surface water and groundwater quality due to development and the impacts on designated SACs and SPAs within 15km of the plan area as a result of surface water pollution have been addressed as a key issue in Section 4.5.2 and will be considered furthermore within the preparation of the SEA Environmental Report of the draft LAP.</p> <p>A Strategic Flood Risk Assessment and Surface Water Study have been prepared for the draft LAP, refer to both for further detailed information.</p> <p>The Surface Water Study was carried out for the plan area, whereby the overall objective was to identify a municipal-level, multi-site, nature-based solutions to surface water (SW) management for Kildare Town. The study includes a number of recommendations for sustainably managing surface water in future developments within the Study Area around Kildare Town and concluded that:</p> <p>‘This report explores options for sustainably managing surface water in future developments within the Study Area around Kildare Town. Flow route analysis was carried out in the development zones to identify natural drainage paths and potential NBMA sites.</p> <p>A hierarchical approach to managing SW in discrete subcatchments is proposed with areas reserved in each for the implementation of nature-based solutions. The development of green corridors between subcatchments is encouraged with surface-based conveyances such as swales and open low flow channels utilised to mimic natural drainage processes as closely possible. Appendix A provides a conceptual overview of the recommended measures throughout the Study Area. The exact route of the drainage corridors are subject to the design and landscaping proposals for each development’.</p> <p>An AA screening report was prepared for the draft LAP and the likely significant effects of the draft Plan on Natura 2000 sites have been screened.</p> <p>The AA Screening concluded:</p> <p>There are five European designated sites within the Zone of Influence (ZoI) of the draft Plan, namely Pollardstown Fen SAC, Mouds Bog SAC, Ballynafagh Lake SAC, River Barrow and River Nore SAC and Ballynafagh Bog SAC.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
		<p>Of these five European designated sites, there is only a potential impact pathway identified between the area covered by the draft Plan, and one site, namely the River Barrow and River Nore SAC. This is a hydrological connection via the Tully Stream and Armour Stream, along 13km of watercourse (including five confluences), to the Finnelly River which is designated as part of the River Barrow & River Nore SAC.</p> <p>The potential for Likely Significant Effect (LSE) of each individual objective/land-use zoning in the draft Plan on the integrity of the River Barrow & River Nore SAC has been systematically considered in the AA Screening Report and it is recommended that all objectives can be screened out from AA.</p>
	<p>Nature-based Sustainable Urban Drainage Systems (SuDs) are designed to absorb, retain, store and treat urban runoff prior to discharge back into the environment. As outlined in the Department’s recently published Best Practice Interim Guidance Document ‘Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas, Water Sensitive Urban Design (2021)’, the implementation of nature-based solutions at the scale of the settlement results in a co-ordinated “whole of settlement” approach to the implementation of nature-based solutions and is preferable to the implementation of solutions at site or development level. One of the key messages of this guidance document is that rainfall, including extreme rainfall, will occur at various times and within various areas of the urban plan area and this needs to be planned for. The Department advises that a Rainwater Management Plan and Strategic SUDS measures are considered as part of the Surface Water Study.</p>	<p>This comment is welcomed and is for the attention of KCC.</p> <p>A Strategic Flood Risk Assessment and Surface Water Study have been prepared for the draft LAP, refer to both for further detailed information.</p>
	<p>The Tully Stream</p> <p>As previously mentioned, the Tully Stream lies to the south of the town. Kildare Town surface water and storm water overflow and other point source discharges enters the Tully Stream south of the National Stud and Japanese Gardens. The Tully Stream 010 is a recommended ‘area for action’ for the third cycle of the WFD. The recommended area for action subcategory is ‘Local Authority Areas for Restoration’, with Kildare County Council as the lead organisation. The Department recommends that consideration should be given to revising the LAP boundary to include the Tully Stream and green infrastructure surrounding it to the east of St. Bridget’s garden well. This area includes the surface water discharge from Kildare town and is mapped as green infrastructure in the Kildare Local Area Plan 2012 – 2018 and it is likely hydrologically connected to St. Bridget’s Garden well and other springs in the area.</p>	<p>This comment is for the attention of KCC.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	<p>The Curragh Aquifer</p> <p>Kildare town is underlain by the Regionally Important Gravel Aquifer, the Curragh Aquifer. Its hydrogeology is significant as it is an important source of baseflow for rivers and streams and the source of water for Pollardstown Fen SAC, the Grand Canal proposed Natural Heritage Area (pNHA) (Site Code 002104) as well as other habitats including the ponds at the Japanese Gardens and National Stud. This aquifer is recharged from rainwater percolating through the topsoil and unsaturated sand and gravel deposits. Surface runoff from such gravel aquifers is considered to be low, not more than 20% of effective rainfall. The Department advises that the effects of LAP implementation on groundwater quality and quantity are assessed. This should include an assessment of the impacts of any proposed nature-based SUDs, such as soakaways and retention basins, due to the aquifer's high vulnerability status. Monitoring of the aquifer should be considered.</p>	<p>This comment has been noted and the SEA ER has since been prepared to reflect these areas of concern, as appropriate.</p> <p>A Strategic Flood Risk Assessment and Surface Water Study have been prepared for the draft LAP, refer to both for further detailed information.</p> <p>An AA screening report was prepared for the draft LAP and the likely significant effects of the draft Plan on Natura 2000 sites have been screened.</p> <p>The AA Screening concluded:</p> <p>There are five European designated sites within the Zone of Influence (ZoI) of the draft Plan, namely Pollardstown Fen SAC, Mouds Bog SAC, Ballynafagh Lake SAC, River Barrow and River Nore SAC and Ballynafagh Bog SAC.</p> <p>Of these five European designated sites, there is only a potential impact pathway identified between the area covered by the draft Plan, and one site, namely the River Barrow and River Nore SAC. This is a hydrological connection via the Tully Stream and Armour Stream, along 13km of watercourse (including five confluences), to the Finnelly River which is designated as part of the River Barrow & River Nore SAC.</p> <p>The potential for Likely Significant Effect (LSE) of each individual objective/land-use zoning in the draft Plan on the integrity of the River Barrow & River Nore SAC has been systematically considered in the AA Screening Report and it is recommended that all objectives can be screened out from AA.</p>
	<p>The Curragh Plain</p> <p>The Curragh is a pNHA located directly adjacent to Kildare Town, adjoining the eastern LAP boundary. Habitats within the Curragh are dominated by dry-humid acid grassland (GS3) and gorse dominated scrub (WS1).</p> <p>The grassland at the Curragh supports high species richness in a particular fungal group i.e. Hygrocybe species or waxcaps. The Curragh is ranked as the top site nationally for this grassland type. Sites rich in grassland fungi are scarce and threatened on a world scale, and the extent of this habitat in northern Europe has declined dramatically. Grazing by sheep is important to maintain this grassland. The greenbelt zoning in the current LAP is specifically intended to protect the Curragh and National Stud by providing a buffer between them and the urban area. The Department recommends that the National Stud/Greenbelt zoning in the current LAP is retained to protect this site.</p>	<p>These comments are welcomed and have been noted. The monitoring table in Section 9 of this report has considered the areas of concern noted, as appropriate.</p> <p>Section 5 of this ER has also been updated to make reference to the effect of nitrogen deposition as a result of draft LAP implementation on the Curragh Plain grassland and its waxcap fungi.</p> <p>An AA screening report was prepared for the draft LAP and the likely significant effects of the draft Plan on Natura 2000 sites have been screened.</p> <p>The AA Screening concluded:</p> <p>There are five European designated sites within the Zone of Influence (ZoI) of the draft Plan, namely Pollardstown Fen SAC, Mouds Bog SAC, Ballynafagh Lake SAC, River Barrow and River Nore SAC and Ballynafagh Bog SAC.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	<p>Given the absence of a dedicated town park within the town, it is further recommended that recreational impacts on the Curragh Plain, such as trampling, erosion and disturbance of meadow pipit and skylark, a ground-nesting birds of high and medium conservation concern respectively, are considered as part of the monitoring of the LAP.</p> <p>Alternative recreation areas should be also considered to reduce recreational pressure on this important conservation site. Air pollutants are known to have played a role in the Europe-wide decline of tree-associated ectomycorrhizal fungi, both through a reduction in the trees' ability to photosynthesise and through changes in soil acidification and nitrogen accumulation. Similar, but less studied effects are probable for grasslands. The effect of nitrogen deposition as a result of LAP implementation on the Curragh Plain grassland and its waxcap fungi should be considered. The Department recommends that SEA scoping refers to the Conservation Management Plan for the Curragh which has been commissioned by Kildare County Council and the Department of Defence.</p>	<p>Of these five European designated sites, there is only a potential impact pathway identified between the area covered by the draft Plan, and one site, namely the River Barrow and River Nore SAC. This is a hydrological connection via the Tully Stream and Armour Stream, along 13km of watercourse (including five confluences), to the Finnelly River which is designated as part of the River Barrow & River Nore SAC.</p> <p>The potential for Likely Significant Effect (LSE) of each individual objective/land-use zoning in the draft Plan on the integrity of the River Barrow & River Nore SAC has been systematically considered in the AA Screening Report and it is recommended that all objectives can be screened out from AA.</p>
	<p>Invasive Species</p> <p>An objective to ensure the containment and control of Invasive Alien Species (IAS), in accordance with the EC (Birds and Natural Habitats) Regulations, 2011 – 2021 and EU Regulation (1143/2014) on the prevention and management of the introduction and spread of invasive alien species should be included in the LAP. It is noted that Giant hogweed (<i>Heracleum mantegazzium</i>) and Japanese knotweed (<i>Fallopia japonica</i>) have been found within the former Magee Barracks site. These are alien invasive species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011- 2021. It is noted that an invasive species management plan is being implemented at the site by the landowner.</p>	<p>These comments are welcomed and have been noted. The SEA Scoping Report has made reference to invasive species throughout, particularly within Section 4.3.2.3. Similarly, the SEA ER has also made reference to this issue. The inclusion of such within the draft LAP is for the attention of KCC.</p>
	<p>Green Infrastructure (GI)</p> <p>The incorporation of Green Infrastructure (GI) in spatial planning is one of the ways in which the National Biodiversity Action Plan 2017- 2021 proposes to address the main drivers of biodiversity loss in Ireland. There should be a clear commitment made to protect existing ecological corridors associated with the railway corridor's embankment and the road corridor of the 'M7'. Consideration should be given to inclusion of a proposed Strategic Green Infrastructure Network within the LAP.</p> <p>A distinction should be made between GI and greenways and other trail development within the LAP. Development of new greenways should look to support rather than replace existing green infrastructure. Existing areas of green infrastructure mostly coincide with important areas for biodiversity and such areas should be avoided by hard infrastructure. Route selection can be used to examine alternatives in this regard.</p>	<p>For the attention of KCC.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	<p>Annex IV Species (Bats and Otter)</p> <p>Clear and robust objectives are required to ensure the strict protection of all bat species and otter, species listed under Annex IV species under the European Communities (Birds and Natural Habitats) Regulations, 2011 to 2021. The recent Department publication ‘Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland’, should be consulted. The Department advises that plans and projects relating to the restoration and re-use of historic buildings must be accompanied by a bat survey report. The Department recommends that objectives are included within the LAP to reduce the impact of lighting on wildlife, including bat species.</p> <p>Reported declines in insect populations have sparked global concern, with artificial light at night (ALAN) identified as a potential contributing factor. Recent scientific evidence indicates that ALAN and the ongoing shift toward white LEDs (i.e., from narrow to broad-spectrum lighting) will have substantial consequences for insect populations and ecosystem processes. The Department advises that there should be a presumption against the lighting of entire footpaths and cycle tracks, in areas with low or no levels of background light and along ecological/green corridors, riparian corridors, woodlands and other habitat areas. The Department recommends that documents which provide further information on reducing lighting impacts, such as EUROBATS12, Dark Sky Ireland13 and Institute of Lighting Professions lighting guidance, should be consulted.</p>	<p>These comments are welcomed, however as they relate to suggested objectives for the draft Plan, are for the attention of KCC.</p>
	<p>Swifts</p> <p>The swift is an urban bird species of conservation concern in Ireland. The town’s swift population is a significant biodiversity asset. The Department recommends that swift conservation measures are included in the LAP. The Department suggests that the Local Authorities include an objective that all new public buildings consider swift nest bricks/boxes at development pre-planning stage.</p>	<p>These comments are welcomed, however as they relate to suggested objectives for the draft Plan, are for the attention of KCC.</p>
	<p>All-Ireland Pollinator Plan</p> <p>Measures in the All-Ireland Pollinator Plan 2021 – 2025 should be included in the LAP, in particular actions outlined in the ‘Council’s Actions to Help Pollinators Guide. The All-Ireland Pollinator Plan advises against planting wildflower seed outside a garden setting. The Department agrees that wildflower seed mixes can be harmful to existing wildflower biodiversity. The Local Authority should consider the management of existing natural seedbanks to allow for wildflower meadow establishment as an alternative to sowing wildflower seed.</p>	<p>These comments are welcomed, for the attention of KCC.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
Geological Survey of Ireland (GSI)	<p>Recommends using these various data sets, when conducting the EIAR, SEA, planning and scoping processes. Use of our data or maps should be attributed correctly to ‘Geological Survey Ireland’. Please find attached a list of our publicly available datasets that may be useful to the environmental assessment and planning process. We recommend that you review this list and refer to any datasets you consider relevant to your assessment.</p>	<p>Use of the various data sets included in this submission have been noted and reviewed as useful support tools to assist the SEA process.</p>
	<p>Geoheritage</p> <p>Geological Survey Ireland is in partnership with the National Parks and Wildlife Service (NPWS, Department of Housing, Local Government and Heritage), to identify and select important geological and geomorphological sites throughout the country for designation as geological NHAs (Natural Heritage Areas). This is addressed by the Geoheritage Programme of Geological Survey Ireland, under 16 different geological themes, in which the minimum number of scientifically significant sites that best represent the theme are rigorously selected by a panel of theme experts.</p> <p>County Geological Sites (CGSs), as adopted under the National Heritage Plan, include additional sites that may also be of national importance, but which were not selected as the very best examples for NHA designation. All geological heritage sites identified by Geological Survey Ireland are categorised as CGS pending any further NHA designation by NPWS. CGSs are now routinely included in County Development Plans and in the GIS of planning departments, to ensure the recognition and appropriate protection of geological heritage within the planning system. CGSs can be viewed online under the Geological Heritage tab on the online Map Viewer.</p> <p>The audit for Co. Kildare was carried out in 2005. The full report details can be found here. Our records show that there is a there are CGS in the vicinity of the LAP. St. Bridget’s Well - Japanese Gardens, Co. Kildare (GR 273501, 210930), under IGH theme: IGH 16 Hydrogeology. Spring supplying Japanese Gardens. This site is simply a good example of a spring in a publicly accessible place, and is of County Geological Site status, but not of national importance. Link to Site Report: KE018.</p>	<p>Noted. The GSI website and records, National Heritage Plan and the Kildare County Development Plan have all been reviewed with reference to County Geological Sites (CGSs) and reference to St. Bridget’s Well - Japanese Gardens has been made throughout the Scoping Report, particularly in Section 4.4. GSI Geological Heritage Sites have also been illustrated in Figure A5 of the SEA Scoping Report and are included in Appendix A of this Environmental Report.</p>
	<p>Dimension Stone/Stone Built Ireland</p> <p>Stone Built Ireland was a research collaboration agreement between Geological Survey Ireland, Trinity College Dublin & the office of Public Works. The project aims to document building and decorative stone in Ireland to inform government agencies, building owners and conservationists of the sources for suitable replacement stone in restoration work and to develop a greater awareness among the general public.</p>	<p>These comments have been noted and www.stonebuiltireland.com has since been reviewed.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	<p>In addition to promoting citizen science and awareness of local materials, the inventory will aid the public in complying with part 4 of the Planning and Development Act 2000, which requires owners to conserve protected structures. It will also assist local authorities in issuing Section 57 Declarations, which outline ‘the type of works which it considers would or would not materially affect the character of the structure or any element of the structure’.</p> <p>This project builds on work already completed funded by the Irish Research Council (March 2019 - September 2020) that carried out primary research on the topic and developed a simple database and web-based platform as well as hosting various heritage displays at venues (www.stonebuiltireland.com). The complete STONEBUILT IRELAND online database is due to be released shortly.</p>	
	<p>Geotourism</p> <p>Over the past number of years geology has become a large part of Irish tourism. Ireland currently has three UNESCO Global Geoparks, and a number of other geotourism projects. These Geoparks, along with other tourism initiatives such as the Wild Atlantic Way, Irelands Ancient East, and Ireland’s Hidden Heartlands have bolstered tourism in various parts of Ireland and helped to increase its levels in areas that were previously not as popular with tourists. GSI encourages Kildare County Council to continue this trend of geotourism, and to use the geological audit information making it easily available to the general public.</p>	<p>These comments are welcomed. For the attention of KCC.</p>
	<p>Groundwater</p> <p>Geological Survey Ireland’s Groundwater and Geothermal Unit, provides advice, data and maps relating to groundwater distribution, quality and use, which is especially relevant for safe and secure drinking water supplies and healthy ecosystems. Proposed developments need to consider any potential impact on specific groundwater abstractions and on groundwater resources in general.</p> <p>We recommend using the groundwater maps on our Map viewer which should include: wells; drinking water source protection areas; the national map suite - aquifer, groundwater vulnerability, groundwater recharge and subsoil permeability maps. For areas underlain by limestone, please refer to the karst specific data layers (karst features, tracer test database; turlough water levels (gwlevel.ie)). Background information is also provided in the Groundwater Body Descriptions. Please read all disclaimers carefully when using Geological Survey Ireland data.</p>	<p>This comment is welcomed. Use of GSI’s Groundwater Resources have been reviewed and utilised throughout the SEA process. Groundwater Body Quality Status in the vicinity of the plan area has been illustrated in Figure A9, Groundwater Vulnerability has been illustrated in Figure A10.</p> <p>Protected Drinking Water (Ground Water) has been illustrated in Figure A11 and Groundwater Features and Public Supply Source Protection Zones have been illustrated in Figure A12, Appendix A of the SEA Scoping Report and also in Appendix A of this ER.</p> <p>A Strategic Flood Risk Assessment and Surface Water Study have also been prepared for the draft Plan, refer to both for further information.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	<p>The Groundwater Data Viewer indicates several aquifers classed as a ‘Regionally Important Aquifer - Karstified (diffuse)’, a ‘Regionally important gravel aquifer’, a ‘Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones’ and a ‘Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones’ underlie the LAP. The Groundwater Vulnerability map indicates the range of groundwater vulnerabilities within the area covered is variable. GSI would therefore recommend use of the Groundwater Viewer to identify areas of High to Extreme Vulnerability and ‘Rock at or near surface’ in your assessments, as any groundwater-surface water interactions that might occur would be greatest in these areas.</p> <p>GWClimate is a groundwater monitoring and modelling project that aims to investigate the impact of climate change on groundwater in Ireland. This is a follow on from a previous project (GWFlood) and the data may be useful in relation to Flood Risk Assessment (FRA) and management plans. Maps and data are available on the Map viewer. Geological Survey Ireland has completed Groundwater Protection Schemes (GWPSs) in partnership with Local Authorities, and there is now national coverage of GWPS mapping. A Groundwater Protection Scheme provides guidelines for the planning and licensing authorities in carrying out their functions, and a framework to assist in decision-making on the location, nature and control of developments and activities in order to protect groundwater.</p> <p>The Kildare Groundwater Protection Response overview and link to the main reports is here: https://www.gsi.ie/en-ie/publications/Pages/Kildare-Groundwater-Protection-SchemeReports.aspx.</p>	
	<p>Geological Mapping</p> <p>Geological Survey Ireland maintains online datasets of bedrock and subsoils geological mapping that are reliable and accessible. We would encourage you to use these data which can be found here, in your future assessments. Please note we have recently launched QGIS compatible bedrock (100K) and Quaternary geology map data, with instructional manuals and videos. This makes data more accessible to general public and external stakeholders. QGIS compatible data can be found in our downloadable bedrock 100k .zip file on the Data & Maps section of the GSI website.</p>	<p>Use of the Geological Survey Ireland’s online datasets of bedrock and subsoils geological mapping have been reviewed in full and incorporated throughout the SEA Scoping and SEA Environmental Report.</p>
	<p>Geotechnical Database</p> <p>Resources Geological Survey Ireland continues to populate and develop the national geotechnical database and viewer with site investigation data submitted voluntarily by industry. The current database holding is over 7500 reports with 134,000 boreholes; 31,000 of which are digitised which can be accessed through downloads from our Geotechnical Map Viewer.</p>	<p>Use of the GSI database included in this submission have been noted and reviewed as useful support tools to assist the SEA process.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	<p>We would encourage the use of this database as part of any baseline geological assessment of the proposed development as it can provide invaluable baseline data for the region or vicinity of proposed development areas. This information may be beneficial and cost saving for any site-specific investigations that may be designed as part of the project.</p>	
	<p>Geohazards</p> <p>Geohazards can cause widespread damage to landscapes, wildlife, human property and human life. In Ireland, landslides, flooding and coastal erosion are the most prevalent of these hazards. We recommend that geohazards be taken into consideration, especially when developing areas where these risks are prevalent, and we encourage the use of our data when doing so. Geological Survey Ireland has information available on landslides in Ireland via the National Landslide Database and Landslide Susceptibility Map both of which are available for viewing on our dedicated Map Viewer. Associated guidance documentation relating to the National Landslide Susceptibility Map is also available. Geological Survey Ireland also engaged in a national project on Groundwater Flooding. The data from this project may be useful in relation to Flood Risk Assessment (FRA) and management plans and is described in more detail under ‘Groundwater’ above.</p>	<p>Use of the GSI databases included in this submission have been noted and reviewed as useful support tools to assist the SEA process.</p> <p>A Strategic Flood Risk Assessment and Surface Water Study have also been prepared for the draft Plan , refer to both for further information.</p>
	<p>Geothermal Energy</p> <p>Geothermal energy harnesses the heat beneath the surface of the Earth for heating applications and electricity generation, and has proven to be secure, environmentally sustainable and cost effective over long time periods. Geothermal applications can range in depth from a few metres below the surface to several kilometres.</p> <p>Ireland has widespread shallow geothermal resources for small and medium-scale heating applications, which can be explored online through Geological Survey Ireland’s Geothermal Suitability maps for both domestic and commercial use. GSI recommends use of our Geothermal Suitability maps to determine the most suitable type of ground source heat collector for use with heat pump technologies. Ireland also has recognised potential for deep geothermal resources. The Roadmap for a Policy and Regulatory Framework for Geothermal Energy was launched at the Geoscience 2020 Conference in November 2020. The Assessment of Geothermal Resources for District heating in Ireland and the Roadmap for a Policy and Regulatory framework for Geothermal Energy in Ireland documents have been developed to support the Government’s commitments under the Climate Action Plan 2019 and the Programme for Government. For further information please see our Geoenergy pages on our website or contact the Groundwater and Geothermal Unit of the Geological Survey Ireland directly.</p>	<p>This comment is welcomed, and Geological Survey Ireland’s Geothermal Suitability maps have been reviewed as useful support tools to assist the SEA process.</p>

Consultee/ Stakeholder	SEA Scoping Response	SEA Actions
	<p>Geochemistry of soils, surface waters and sediments Geological Survey Ireland provides baseline geochemistry data for Ireland as part of the Tellus programme. Baseline geochemistry data can be used to assess the chemical status of soil and water at a regional scale and to support the assessment of existing or potential impacts of human activity on environmental chemical quality. Tellus is a national-scale mapping programme which provides multi-element data for shallow soil, stream sediment and stream water in Ireland.</p> <p>At present, mapping consists of the border, western and midland regions. Data is available at https://www.gsi.ie/enie/data-and-maps/Pages/Geochemistry.aspx. This page also hosts Geochemical Mapping of Agricultural and Grazing Land Soil of Europe (GEMAS) and litho-geochemistry (rock geochemistry) from southeast Ireland datasets. Geological Survey Ireland and partners are undertaking applied geochemistry projects to provide data for agriculture (Terra Soil), waste soil characterisation (Geochemically Appropriate Levels for Soil Recovery Facilities) and mineral exploration (Mineral Prospectivity Mapping)</p>	<p>This comment is welcomed, and Geological Survey Ireland’s Tellus programme has been reviewed as useful support tools to assist the SEA process.</p>

A.2 SEA Environmental Report – Response to Submissions

In the consultation period from 2^{1st} March to 4th May 2023, a total of 142 submissions or observations were received from persons, public bodies, groups and stakeholders. This Appendix (A.1) contains a summary of submissions which related to the SEA report only.

Table 7.2 Response to Submissions

Stakeholder/ Reference	SEA Report Response	SEA Report Action
<p>Environmental Protection Agency (EPA) KCC-C127-17</p>	<p>The EPA submission outlines its role as one of the statutory environmental authorities under the SEA Regulations in which it focuses on the full integration of the findings of the Environmental Assessment into the Plan. The submission makes reference to the ‘self-service approach’ via the guidance document ‘SEA of Local Authority Land Use Plans – EPA Recommendations and Resources’.</p> <p>The submission makes reference to the information to be contained in an Environmental Report such as an Assessment of Alternatives and their assessment against the ‘Strategic Environmental Objectives’, the Assessment of Environmental Effects including cumulative effects, Mitigation Measures including clear commitments to implement the measures and a flexible Monitoring programme. In respect of monitoring both positive and negative effects should be considered.</p> <p>The EPA also refer to their ‘State of the Environment Report’ in which the key issues and challenges identified should be taken into account in preparing the Plan and the SEA.</p> <p>The submission reminds the Council that any future amendments to the Plan should be screened for likely significant effects and that once the Plan is adopted an SEA Statement should be prepared and sent to the environmental authorities.</p> <p>The submission additionally reminds that once the Plan is adopted, preparation of an SEA Statement should be carried out.</p>	<p>The items referred to the in the EPA submission are noted and accepted.</p> <p>Reviewed and SEA ER cross-checked. No changes needed.</p> <p>An assessment of all of the Material Alterations was carried out and detailed in the SEA Addendum which went on public display alongside the proposed Material Alterations.</p>
<p>Department of the Environment, Climate and Communications Ref. No. KCC-C127-106</p>	<p>The submission from the Department of Environment, Climate and Communications also includes a letter from Geological Survey Ireland (GSI). The submission recommends that the data sets available on their website should be used for EIAR, SEA, planning and scoping process and should be attributed correctly to GSI.</p> <p>They state they are pleased to see use of their Bedrock, Geological Heritage Sites, Groundwater Vulnerability, Groundwater Source Protection Areas, Groundwater Wells and Springs and Groundwater Flooding maps and datasets within the draft SEA Report and the Strategic Flood Risk Assessment Report.</p>	<p>The comments in the submissions were noted.</p>

Stakeholder/ Reference	SEA Report Response	SEA Report Action
Ref. No. KCC-C127- 59	<p>Submissions states that the draft Plan has failed to comply with Strategic Environmental Assessment (SEA) requirements under EU SEA Directive (2001/42/EC) and the Planning and Development (SEA) Regulations 2004 (as amended). In this regard, it is stated that the draft Plan has failed to properly assess the proposal from a planning, social, economic and environmental perspective in a range of ways, including the deleterious social impact of the walkway, and that it will not strengthen the settlement, contrary to the aim of the RSES.</p> <p>Submission refers to a range of core strategy objectives and states that there is no evidence that council took into account objective 13 which requires that the design of future development complies with the 10- minute settlement or objective 20 as it is premature without a full Settlement Capacity Audit and Social Infrastructure Audit for each local area plan.</p>	<p>In accordance with the SEA Directive, an assessment of the Plan has been carried out on the following environmental aspects:</p> <ul style="list-style-type: none"> • Population and Human Health; • Biodiversity (including Flora and Fauna); • Land and Soils • Water Resources; • Air, Noise and Climate Factors; • Archaeological, Architectural and Cultural Heritage; • Landscape and Visual; and • Material Assets.

A.3 Proposed Material Alterations to LAP – Responses to Submissions

In the consultation period from 4th August to 4th September 2023, a total of 45 submissions or observations were received from persons, public bodies, groups and stakeholders. This Appendix (A.2). and Table 7.3 contains a summary of submissions which related to the SEA report only.

Table 7.3 Response to Material Alterations

Stakeholder / Reference	Material Alterations Response	SEA Report Action
<p>Environmental Protection Agency (Ref. No. 005)</p>	<p>The submission from the EPA notes the determination regarding the need for Strategic Environmental Assessment (SEA) of the Alterations. The submission states that for land use plans at a county and local level the EPA provide a self-service approach through the guidance document ‘SEA and Local Authority Land Use Plans – EPA Recommendations and Resources’ and should be considered as appropriate and relevant to the alterations.</p> <p>The submission sets out a summary of what should be contained in the SEA statement once the Plan has been made, a copy of which should be sent to any environmental authority consulted during the process</p>	<p>The contents of the submission received from the EPA are noted. Kildare County Council in accordance with Section 20 of the Planning and Development Act 2000 (as amended), has screened the Proposed Material Alterations and determined that a Strategic Environmental Assessment (SEA) was required with respect to eight of the Proposed Material Alterations (No.’s 8, 31, 85, 91, 92, 110, 111 and 106,) which have the potential to result in significant environmental effects. The SEA Addendum report provided an assessment with respect to the proposed material alterations and a SEA Screening Report, SEA Screening Determination and SEA Environmental Report pursuant to the SEA Directive and Planning and Development (Strategic Environmental Assessment) Regulations 2004-2011 were prepared.</p> <p>The Addendum Report detailed considered that the mitigation measures set out in Chapter 9 of the SEA Environmental Report will work to avoid or reduce any potential negative environmental effects identified in this Addendum and should be complied with. Further, in accordance with environmental legislation, where the potential for significant environmental effects exist, site-specific environmental assessment will be carried out, as required. These assessments will include the incorporation of site-specific detailed mitigation measures to ameliorate the potential for significant environmental effects.</p> <p>An SEA Statement (with Non-technical Summary) will be prepared upon the final adoption of the Local Area Plan.</p>
<p>An Taisce (Ref No.040)</p>	<p>The submission noted in the SEA Addendum Report in respect of the removal of permeability measures that no further assessment is required on foot of the removal of the measures. However, An Taisce would consider that further assessment is in fact required as the deletions are inconsistent with higher level plans and evaluation of the potential changes in direct, indirect and cumulative impacts to air quality, climate and human health resulting from the reduction in permeability and active travel infrastructure is required. It is also stated that the deletions may reduce the emissions mitigation potential of the LAP. An Taisce recommend and updated assessment to be carried out and the Environmental Report be updated.</p>	<p>The comment made by An Taisce are noted. It is considered that where Material Alterations are to be removed from the Draft Plan, the baseline environment is reverted to for strategic environmental assessment purposes. There is no requirement in the legislation for an assessment of the material alterations against the provisions of the Draft Plan. Until the plan is finalised, the baseline environment remains ‘as existing’.</p>

Stakeholder / Reference	Material Alterations Response	SEA Report Action
<p>Friends of the Irish Environment (Ref 034)</p>	<p>In relation to the Kildare Town SEA Report the submission highlights the following:</p> <ul style="list-style-type: none"> • The Current State of the Environment includes an assessment of sustainable travel modes. • Kildare Town Transport Strategy (KTTS) supports the preparation of the LAP with regards to improving movement and transport within Kildare Town. • The Summary of Potential Environmental Effects includes an Assessment of likely Significant Effects with respect to sustainable travel modes under Section 8.4.5. <p>The mitigation measure to ‘Facilitate sustainable transport modes and the use of walking, cycling and public transport.’ and the relevant County Development Plan objectives and Draft LAP objectives.</p>	<p>Noted</p>

A.4 SEA Non-Technical Summary

Kildare County Council

Kildare Town Local Area Plan

Strategic Environmental Assessment Non-
Technical Summary

Reference:

| 12 November 2023

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number

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Non-Technical Summary

Introduction

This Non-Technical Summary (NTS) has been prepared to support the Strategic Environmental Assessment (SEA) of the Kildare Town Local Area Plan (LAP) (referred to hereafter as ‘the Kildare Town LAP’ and ‘Plan’), established by Kildare County Council (KCC) for the period 2023-2029. This document has been prepared in accordance with relevant EU and national legislation to summarise, in non-technical language, the Environmental Report for the SEA of the Plan. It draws attention to the most important issues outlined in the SEA Environmental Report and describes the key outcomes. Further detail can be found in the Environmental Report.

The relevant planning legislation comprises the Planning and Development Act 2000, as amended. Key planning documents reviewed as part of the assessment included:

- Project Ireland 2040 National Planning Framework;
- Regional Spatial and Economic Strategy (RSES) for the Eastern and Midlands Region;
- Kildare County Development Plan 2023-2029.

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

Kildare Town LAP 2023 – 2029

The Plan provides the main public statement of planning policies and objectives for Kildare Town for the duration of the Plan (2023-2029) and will replace the existing Kildare Town Local Area Plan 2012-2018.

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 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 Kildare Town should develop over the years 2023-2029 and beyond.

SEA Methodology

European Council Directive 2001/42/EC (the SEA Directive) provides guidance on the assessment of effects of certain plans and programmes. Article 1 identifies that the objective of the 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’.

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 methodology for this SEA is based on legislative requirements and guidance from the Environmental Protection Agency (EPA) to ensure compliance with the SEA Directive and associated national legislation.

Current State of the Environment

The SEA considers the current environmental conditions, hereafter referred to as the baseline environment. This description of the baseline considers the local level nature of the Plan and is cognisant of the pressures and interrelationships between environmental topics within the Plan area. Likely significant environmental effects of a transboundary nature, between the Republic of Ireland and Northern Ireland were also considered in this report.

The baseline considers the following environmental aspects:

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

The Plan is a Local Area Plan and, as such, the general state of the environment in the local area of Kildare Town, County Kildare was considered in order to inform the Plan, any updates to the same over its lifetime, as well as this assessment. In doing so, the recently published State of the Environment Report (EPA, 2020) was reviewed to determine a baseline environment, amongst a suite of other documentation, including but not limited to, the Heritage Council's County Kildare Hedgerow Survey Report, Geological Survey of Ireland's Geological Heritage of Kildare Report, the Environmental Protection Agency's Water Quality in Ireland Report, the Kildare County Development Plan 2023-2029 and the Kildare Town Transport Strategy.

According to Census 2016 data, the population of Kildare Town in 2016 was 8,634 over an area of 3.105 km². This represents an annual population change of 1.2% from 2011 to 2016 (CSO, 2022)⁴. According to 2016 Census Data, 1.7 – 2.3% of Kildare Town has identified themselves as having Bad or Very Bad health. The number of individuals who stated that their health either bad or very bad in 2016 was 191 (CSO, 2016)⁵.

Natural heritage in County Kildare 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 across the County. Kildare Town is located within the commuter belt that serves the greater Dublin area and like many towns in County Kildare, has seen an increase in residential development in recent years. Nonetheless, like many County Kildare towns, the outer fringes of Kildare Town are dominated by agricultural pastureland, bounded by treelines and hedgerows.

Improved agricultural grassland is the most dominant habitat in Kildare Town reflecting the large tracts of agricultural pastureland associated with the area. Areas of biodiversity value in Kildare Town include the array of semi-natural habitats associated with the Curragh proposed Natural Heritage Area (Site code: 000392), pockets of highly modified woodland (WD), a pocket of semi-natural woodland (WN) at Silliothill and wet grassland (GS4) associated with the margins of the Tully River, Japanese Gardens and National Stud. Further habitats and features which are of particular importance for biodiversity throughout Kildare Town includes woodlands, hedgerows, field boundaries, wet grasslands, urban parks and gardens.

Kildare Town is also home to several rare, protected and/or threatened plants and animals. Plants that are legally protected under the Flora Protection Order within the Wildlife (Amendment) Act 2000 include, Opposite leaved Pondweed, Basil Thyme or Hairy St. John's-wort. Various animals are also afforded protection within the Wildlife Acts including, all native mammals. Species listed on Annex II of the European Union Habitats Directive include, Otters, White-clawed Crayfish, Marsh Fritillary Butterfly and Annex I of the EU Birds Directive include, Golden Plover, Kingfisher are also protected and found in Kildare Town.

⁴ CSO (2022) Population Statistics. Available at: [Home - CSO - Central Statistics Office](#)

⁵ CSO (2022) Maps ArcGIS. Available at: [Map 4.2: General health bad and very bad by electoral division, 2016 \(arcgis.com\)](#)

According to the report ‘The Geological Heritage of Kildare’ (Geological Survey of Ireland (GSI), 2005), the predominant rock type in County Kildare is sedimentary rock, limestone of Carboniferous age in particular⁶. The soils underlying the study area are identified by the Geological Survey of Ireland as being predominantly Made Ground in the urban centre. Overall, the soil in this area is well suited for agriculture and forestry⁷.

Kildare Town is situated in Water Framework Directive (WFD) Catchment 14, namely the Barrow (EPA, 2022)⁸. There are no rivers situated within Kildare Town LAP but the Tully River, a tributary of the River Barrow is situated to the south of the LAP boundary. An area of concern that was highlighted in the EPA Report⁹ for the River Barrow overall, was its nitrate concentrations. Ground Waterbody WFD Status from 2013-2018 for the area of Kildare Town has been assessed by the EPA as overall ‘Good Quality’. No other waterbodies can be found in the LAP area of Kildare Town¹⁰.

Kildare Town is located in Air Quality Zone D. All pollutants recorded for Zone D are well within compliance with Air Quality Standards. However, no information has been provided for Zone D in relation to Benzene in the latest EPA Air Quality in Ireland Report.

The third Noise Action Plan (2019-2023) prepared for County Kildare concludes that there are an estimated 745 people in Kildare above the L_{den} threshold for noise from road traffic sources, and an estimated 5,185 people above the L_{night} threshold from road traffic sources.

The existing climate for Kildare Town 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 and the mean annual wind speed is at approximately 4 m/sec in the east midlands (Met Eireann, 2022)¹¹.

According to the Record of Monuments and Places (RMP) database, there are approximately 43 Recorded Monuments within the Plan area (National Monuments Service, 1995)¹². Kildare Town also 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 database, there are approximately 39 protected structures in Kildare Town.

The landscape of County Kildare comprises a central plain bounded to the east by the Kildare uplands, which lie at the foot-hills of the Wicklow and Dublin Mountains. The Curragh, the boglands of north-west Kildare and the fertile lowlands of the south all comprise part of the central plain. The plain lands are interrupted by two groups of isolated hills, the Chair of Kildare and the Newtown Hills and the location of these hills within the central plain has a considerable impact on the landscape of Kildare. Inland waters comprise the River Liffey, River Barrow, River Slate, River Boyne, Royal Canal, Grand Canal and Rye Water River that traverse the county, providing important landscape features.

⁶ Geological Survey of Ireland (GSI) (2005) The Geological Heritage of Kildare. Available at: [Geology of Kildare - Kildare County Council \(kildarecoco.ie\)](https://www.kildarecoco.ie)

⁷ Geological Survey of Ireland (GSI) (2005) The Geological Heritage of Kildare. Available at: [Geology of Kildare - Kildare County Council \(kildarecoco.ie\)](https://www.kildarecoco.ie)

⁸ EPA (2022) EPA water catchments interactive map. Available at: [EPA Water Quality 2020 indicators-report.pdf](#)

⁹ EPA (2020) Water Quality in Ireland 2020. Available at: [EPA Water Quality 2020 indicators-report.pdf](#)

¹⁰ EPA (2022) EPA water catchments interactive map. Available at: [EPA Water Quality 2020 indicators-report.pdf](#)

¹¹ Met Eireann (2022) Climate of Ireland. Available at: [Climate of Ireland - Met Éireann - The Irish Meteorological Service](#)

¹² National Monuments Service (1995) Record of Monuments and Places – Archaeology Kildare. Available at: [Archaeology-RMP-Kildare-Manual-\(1996\)-0020.pdf](#)

Irish Water is responsible for all aspects of public water services planning, delivery and operation in Kildare Town. The provision of an adequate supply of water and wastewater treatment facilities is critical to facilitate and sustain the growth of Kildare Town. Kildare Town's wastewater is served within Kildare Town Wastewater Treatment Plant (WWTP) which is located South of the M7 Kildare Bypass.

Over recent decades Kildare Town has seen steady growth in its population, the population has doubled since the early 1990s; leading to the spread of housing estates across the urban area, particularly surrounding the town centre. This rapid expansion has increased pressure on the town's amenities, transport infrastructure and parking supply. Car dependency is relatively high, which presents a key challenge in the promotion of sustainable travel. However, AECOM in collaboration with KCC have developed the Kildare Town Transport Strategy (KTTS) to support the preparation of the Kildare Town LAP and improve local transportation amongst all areas of Kildare Town.

Consideration of Alternatives

Alternative development scenarios were considered in the preparation of the LAP. The Plan is based on the principles of sustainable development which means that development will be promoted in accordance with the appropriate international, national, regional and county guidelines.

The LAP is positioned within an overall plan hierarchy under the National Planning Framework (NPF), Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland Region and the Kildare County Development Plan 2023-2029, which pre-determined the scope of the strategic alternatives.

The Core Strategy of the Kildare County Development Plan 2023-2029 allocates 430 units for the period 2023-2029 for Kildare Town. The Kildare County Development Plan 2017-2023 indicated that the Kildare Town Local Area Plan 2012-2018 had a capacity surplus of 2,027 units at that time, which was required to be addressed through the relevant local area plan. Thus, the development of alternative scenarios had regard to the level of over-zoning and also the high level of extant planning permissions that will be delivered during the lifetime of the Plan.

KCC recognised that alternatives must be realistic, reasonable, viable and implementable. In the context of creating alternatives, the following parameters were of note for Kildare Town:

- Kildare Town is designated as a Self-Sustaining Growth Town in the CDP;
- The County Core Strategy allocation for the settlement (as adapted to 2029 and to include 25% additional housing provision) is 628 residential units over the lifetime of the Plan;
- There are currently 985 residential units with extant planning permissions within the settlement, and a further 551 residential units at pre-planning or planning application consideration stage;
- For Kildare Town to reach a job ratio of 0.70, an additional 1,127 jobs are required during the lifetime of the Plan;
- There are deficiencies in public open space provision and childcare for the existing population;
- To cater for the planned population growth, additional school places and employment opportunities are required in addition to open space and childcare;
- Surface water management is a significant issue in Kildare Town; and
- The Curragh Natural Heritage Area (pNHA) (site code 000392) immediately adjoins the Plan area to the east. This is designated as a High Sensitivity Landscape in the CDP.

The preferred alternative for the Kildare Town LAP from an environmental perspective is Scenario 3 - Delivery of extant residential permissions, town centre consolidation, protection of the Green Belt at the Curragh and a combination of sites that could potentially be delivered.

Objectives, Targets, and Indicators

The SEA is designed to assess the potential environmental impact of the Plan and its associated policies and objectives against the established baseline. The policies and objectives outlined in the Plan are assessed against a range of established environmental objectives and targets.

Indicators recommended in this Environmental Report are utilised over the lifetime of the Plan to quantify the level of impact that the policies and recommendations may have on the environment. This enables the measurement of whether KCC were successful in promoting environmental protection, sustainable development and the guiding of activities and indicating priority areas for action and investment by the Council. The Objectives, Indicators and Targets relating to the Plan are set out in the SEA Environmental Report.

Assessment of likely Significant Effects

The policies and objectives in the LAP were assessed with respect to the existing environmental baseline and the environmental objectives and targets.

As the policies included in the 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. A summary is provided below of the key environmental effects identified.

Population and Human Health

The potential impacts on Population and Human Health are predominantly positive with regards the provision of residential, economic, and sustainable transport opportunities in the LAP area.

It is proposed to consolidate the town centre through the regeneration and redevelopment of vacant and under-utilised sites. This will likely result in a positive impact on population and human health, as it discourages urban sprawl, reduces traffic movements, enhances the public realm and encourages more sustainable transport methods.

Policies and objectives relating to improvements to the public realm and accessibility of the town centre will also positively impact the population of Kildare Town.

It is proposed to provide new residential development upon sites of extant permission, sites with active planning history and sites acceptable for development within the lifetime of the Plan, however a number of these sites are greenfield sites. Residential development will be provided predominantly in the extant permission sites, namely the Magee Barracks, along with one site outside of the town centre namely Grey Abbey and other sites sequential to the Census 2016 defined settlement area. This will seek to ensure that the longer-term development of Kildare town is provided for. The promotion of enterprise and employment development in the South-west Quadrant will also result in a positive impact on the population on Kildare town, through increased job opportunities.

Positive impacts will also occur where new transport infrastructure is provided for, or existing infrastructure is upgraded through the provision of improved access through the LAP area. This is particularly true in considering new sustainable transport infrastructure/opportunities.

Biodiversity

The land use zonings and objectives of the LAP will primarily result in a neutral impact on Biodiversity. Development will be largely consolidated within existing zoned or developed lands, with a large portion of development within the existing urban centre of the LAP area.

However, there is the potential for negative impacts to occur where greenfield lands have been zoned for development - such as the lands to the south-west of the Plan area, which has the potential, even with the provision of mitigation, to impact on habitats and species. Similarly, potential negative effects on biodiversity are identified where large-scale infrastructure is proposed such as new road schemes, the construction of Northern Link Street and associated one-way streets or the creation of a walking trail/greenway from Kildare Town to the Curragh, as part of the International Thoroughbred Trail.

Neutral impacts are predicted to arise due to the various green infrastructure objectives where the works are considered minor, such as cycle paths. Most natural green infrastructure features are likely to result in a positive impact on biodiversity, through species and habitat provision, while often man-made features such as greenways can result in a negative impact on the existing biodiversity through increased human interaction.

Land and Soils

The majority of potential impacts for Land and Soils are neutral as development will primarily be consolidated within existing zoned or developed lands.

However, there is also the potential for negative impact to occur where greenfield lands have been zoned for development - such as the land at the south-west of the Plan area, as well as where new roads are proposed.

Uncertainties will occur where the precise nature and extent of proposed new development is unknown.

Water Resources

The land use zonings and objectives of the LAP will primarily result in a neutral impact on Water as development will largely take place with existing zoned or developed lands.

However, there is the potential for negative impacts to occur where greenfield lands have been zoned for development - such as the land to the south-west of the Plan area. Similarly, potential negative effects on water are identified where large-scale infrastructure is proposed such as new road schemes, the construction of Northern Link Street and associated one-way streets or the creation of a walking trail/ greenway from Kildare Town to the Curragh, as part of the International Thoroughbred Trail.

A Strategic Flood Risk Assessment (SFRA) has been carried out in support of the LAP. The SFRA has recommended a number of flood risk management objectives for specific areas, ensuring planning applications, where applicable, will require a Flood Risk Assessment (FRA) of appropriate detail. The level of detail within the FRA will depend on the risks identified and the proposed land use. A Surface Water Study (SWS) was also prepared as a precursor to the SFRA. The aim of the SWS is to find a municipal-level, multi-site nature-based solution(s) to surface water management for Kildare Town.

Air, Noise and Climate

The potential impacts on Air, Noise and Climate are predominantly positive or neutral as the proposals to consolidate the town centre will likely result in a reduction in traffic movements.

The Plan also promotes sustainable travel modes while making provisions for improved pedestrian and cycle routes in, and around the town centre. Such measures will have a positive effect on air, noise and climate.

This Plan comprises a range of climate change adaptation objectives relating to the promotion of sustainable transport, uptake in renewable energy etc. These objectives will likely result in a positive impact on air quality and climate change mitigation.

Uncertainties will occur where the precise nature and extent of proposed new development is unknown. There is the potential for negative impacts to occur where new roads objectives are proposed. Proposed new road schemes are likely to result in a negative air quality, noise, and climate impacts due to both the materials used in construction, but also by means of the encouragement of private vehicle use.

Archaeology, Architectural and Cultural Heritage

The land use zonings and objectives of the LAP will primarily result in neutral impacts on Heritage as development will largely take place with existing zoned or developed lands.

Where urban regeneration or redevelopment is proposed in the town centre, it is not possible to fully ascertain if this is likely to result in a negative impact on heritage, as much of the town comprises an ACA. There are certain implications for development within an ACA - protection generally relates to the external appearance of structures and features of the streetscape.

Generally, any works that may have a potential impact on the exterior would require planning permission, such as changes to the original roofing material, windows, boundary walls etc. The aim of ACA designation is not to prevent development, rather to guide sensitive, good quality development, which will enhance both the historical character of the area and the amenity of those who enjoy it.

Other uncertainties will occur where the precise nature and extent of proposed new development is unknown and where the discovery of heritage features cannot be ruled out.

The Plan does however place a significant emphasis on the retention, protection and enhancement of existing heritage features within the LAP area.

There is the potential for negative impacts to occur where greenfield lands have been zoned for development - such as the land at south-west of the Plan area, as this has the potential to impact on archaeology.

Landscape and Visual

The majority of potential impacts for Landscape and Visual are predominantly neutral.

A number of positive impacts on the townscape of Kildare Town will likely result from the range of regeneration and urban realm proposals included in the Plan.

However, there is the potential for negative impacts to occur where greenfield lands have been zoned for development - such as the land at such as the land at south-west of the Plan area, or where new roads objectives are proposed. This is particularly relevant with regards the proposed new road schemes

Material Assets

In general, the potential impacts on Material Assets are largely considered as positive or neutral. This is because development will occur in a manner that is balanced and self-sustaining occurring in tandem with physical and social infrastructure.

The proposed consolidation of development in the town centre of Kildare Town has however the potential to result in a negative impact on material assets. A high population density could put a strain on material assets, and it should be ensured that there is sufficient water and wastewater capacity to facilitate any residential development. However, the recent upgrades to Kildare town's WWTP and sewer network should accommodate all development proposed under the Plan.

Mitigation Measures

This Environmental Report has highlighted some potential negative environmental impacts that may arise from the implementation of the 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 LAP.

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

Monitoring Measures

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 LAP.

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 LAP.

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

KCC, 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.