

SEA ENVIRONMENTAL REPORT

APPENDIX II – NON-TECHNICAL SUMMARY

FOR THE

DRAFT ATHY LOCAL AREA PLAN 2021-2027

for: Kildare County Council

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Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for the Draft Athy Local Area Plan 2021-2027. The purpose of the Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan.

What is an SEA?

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

Why is it needed?

The SEA has been carried out in order to comply with the provisions of the Planning and Development (SEA) Regulations and in order to improve planning and environmental management within Athy. The output of the process is an Environmental Report that should be read in conjunction with the Plan.

How does it work?

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

The SEA was scoped in consultation with designated environmental authorities.

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

The Environmental Report contains the following information:

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

No significant difficulties have been encountered during the undertaking of the assessment to date.

What happens at the end of the process?

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

Section 2 The Draft Plan

Kildare County Council intends make a new Local Area Plan (LAP) for Athy under Section 20 of the Planning and Development Act 2000 (as amended). The Plan will set out an overall strategy for the proper planning and sustainable development over the years 2021-2027.

LAPs are required to be consistent with the policies and objectives of the County Development Plan and its Core Strategy, as well as the National Planning Framework and Regional Spatial Economic Strategies.

The Draft LAP should be read in conjunction with the Kildare County Development Plan 2017-2023 (as varied), which sets out the overarching development strategy for the County. Where any provisions of the LAP conflict with the provisions of the County Development Plan, the provisions of the LAP shall cease to have effect.

The Draft Plan comprises a Written Statement (including written policies and objectives) and associated maps (including land use zoning). The Plan will contribute towards the proper planning and sustainable development of the area. Subject areas covered include: Spatial Planning Context and Vision for Athy; Compliance with the Kildare County Core Strategy; Homes and Communities; Urban Centre and Retailing; Economic Development, Enterprise and Tourism; Movement and Transport; Built Heritage and Archaeology; Natural Heritage, Green Infrastructure and Strategic Open Space; Infrastructure and Environmental Services; and Implementation.

The Plan's Vision Statement is:

" To successfully fulfil Athy's role as a self-sustaining growth town by embracing the transition to a low carbon and climate resilient model of development which seeks to utilise and invest in the town's existing economic, social and environmental assets to generate sustainable economic development and job creation, thereby enhancing its status as the main economic and services centre of South Kildare.

The vision for the Local Area Plan will ensure that growth planned for the town over the life of the Plan and beyond occurs in a sustainable and sequential manner, characterised by a compact, consolidated and permeable pattern of development linked by sustainable modes of transport including a robust network of pedestrian and cycle routes, providing a high level of connectivity; facilitating and enabling the creation of a healthy, safe and age-friendly community.

In essence, by 2027 a series of concerted steps will have been taken to 'future proof' Athy and create a more sustainable inclusive settlement centred around a regenerated and vibrant town centre providing important retail and commercial services and hosting an improved tourist offer. The town will not only be more resilient to the effects of climate change but will also have adapted to the needs of a growing and aging population, through the development of integrated communities, served by an enhanced level of social infrastructure and an expanded green infrastructure network."

The Draft Plan sits within a hierarchy of strategic actions such as plans and programmes and is subject to a number of high-level environmental protection policies and objectives with which it must comply. The Plan must comply with relevant higher-level strategic actions and may, in turn, guide lower-level strategic actions. In this regard, Appendix I includes statutory provisions, plans, policies and strategies that set the context within which the Plan is framed and which have influenced the provisions of the Plan. Relevant planning plans and programmes forming the context for the Local Area Plan include:

- The National Planning Framework 2018 that sets out a high-level strategic plan for shaping the future growth of Ireland and provides 10 National Strategic Outcomes for realising the vision of the Plan.
- The Eastern and Midland Regional Spatial and Economic Strategy 2020 that provides a long-term strategic planning and economic framework for the Eastern and Midland Region in order to support the implementation of the National Planning Framework.
- The Kildare County Development Plan, adopted in 2017 and subsequently varied, that contains a suite of policies and objectives, and appendices to guide development.

Section 3 The Environmental Baseline

3.1 Introduction

The summary of the environmental baseline of Athy is described in this section. This baseline together with the Strategic Environmental Objectives, which are identified in Section 3.12, is used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Plan and in order to determine appropriate monitoring measures. The environmental baseline is described in line with the legislative requirements encompassing the following components: biodiversity, flora and fauna, population, human health, soil, water, air and climatic factors, material assets, cultural heritage, landscape and the interrelationship between these components.

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

In the absence of a new Plan, permission for new development would be applied for under the County Development Plan in force at the time. The Athy Town Development Plan 2012-2018 has contributed towards environmental protection within and surrounding the town. If the Plan was not to be replaced by the 2021-2027 Plan, this would result in a deterioration of the town's planning and environmental protection framework. Although higher level environmental protection objectives – such as those of various EU Directives and transposing Irish Regulations – would still apply, the deterioration of this framework would mean that it would be less comprehensive and new development would be less coordinated and controlled.

In the absence of a new Plan there would be a decreased likelihood in the extent, magnitude and frequency of the positive effects identified by this assessment (see summary at Section 5) occurring. Further, as a result of the less up-to-date planning framework, there would be an increased likelihood in the extent, magnitude and frequency of adverse effects identified by this assessment (see summary at Section 5) occurring.

3.3 Biodiversity and Flora and Fauna

Key ecological sensitivities within the Plan area include those relating to:

- The River Barrow and River Nore Special Area of Conservation (SAC) within central parts of the Plan area and their associated aquatic and riverine ecology (including: river lamprey; salmon; freshwater pearl mussel; and white-clawed crayfish); and
- The Grand Canal proposed Natural Heritage Area (pNHA) partially within/adjacent to the western parts of the Plan area.

European Sites comprise:

- Special Areas of Conservation¹ (SACs); and
- Special Protection Areas² (SPAs).

There are two European Sites within 15 km of the Plan boundary (see Figure 3.1): the River Barrow and River Nore SAC³, stretching from the north to south across the Plan area; and the Ballyprior Grassland SAC⁴ approx. 7 km to the west of the Plan area, in County Laois.

¹ SACs have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) due to their conservation value for habitats and species of importance in the European Union. The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each member state to designate SACs to protect habitats and species, which, together with the SPAs designated under the 1979 Birds Directive, form Natura 2000. The European Communities (Birds and Natural Habitats) Regulations 2011 consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010. The Regulations have been prepared to address several judgments of the Court of Justice of the European Union (CJEU) against Ireland, notably cases C-418/04 and C-183/05, in respect of failure to transpose elements of the Birds Directive and the Habitats Directive into Irish law.

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

Natural Heritage Areas (NHAs) are designated due to their national conservation value for ecological and/or geological/geomorphological heritage. Proposed NHAs (pNHAs) were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated. There is one pNHA, the Grand Canal pNHA, partially within/adjacent to the western parts of the Plan area. There are number of pNHAs in the wider 15 km buffer area, including the Barrow Valley at Tankardstown Bridge pNHA approx. 3 km to the south-east of the Plan area.

Within the Plan area, the freshwater pearl mussel species are found in the River Barrow catchment. These areas are identified as *catchments with previous records of Margaritifera, but current status unknown*.

Kildare County Council's 'Habitat Mapping and Green Infrastructure Survey for Athy' (2018) identified six main **green infrastructure corridors**, considered local biodiversity areas within Athy:

- The River Barrow;
- The Grand Canal;
- Bennetsbridge Stream;
- The Rail Line;
- Athy Stream and Prusselstown; and
- Barrowford.

These corridors are made up of various components including: rivers; streams, their tributaries and riparian zones; various woodlands; parks; gardens; hedgerows; treelines; and lands used for agriculture. These features provide habitats for flora and fauna and facilitate linkages, connecting habitats within the Plan area and the wider landscape.

Existing Problems

Previous changes in land uses arising from human development have resulted in a loss of biodiversity and flora and fauna however, legislative objectives governing biodiversity and fauna were not identified as being conflicted with.

3.4 Population and Human Health

Population

Census 2016 recorded a population of 9,847 persons in Athy, which represents an increase of 2.7% (260 persons) in population from 2011 (9,587 persons). The future allocated population increase for Athy for 2027 is 2,160 persons and the population target is 11,837 persons. Athy is identified by the Kildare County Development Plan 2017-2023 (as varied) as a 'Self-Sustaining Growth Town' within the County's Kildare Settlement Hierarchy.

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

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

Human Health

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

³ Sensitive features include: estuaries; tidal mudflats and sandflats; reefs; Atlantic salt meadows; Mediterranean salt meadows; floating river vegetation; dry heath; petrifying springs; old oak woodlands; alluvial forests; Desmoulin's whorl snail; freshwater pearl mussel; white-clawed crayfish; sea lamprey; brook lamprey; river lamprey; twaite shad; Atlantic salmon; otter; Killarney fern; and Nore freshwater pearl mussel.

⁴Sensitive features include orchid-rich calcareous grassland.

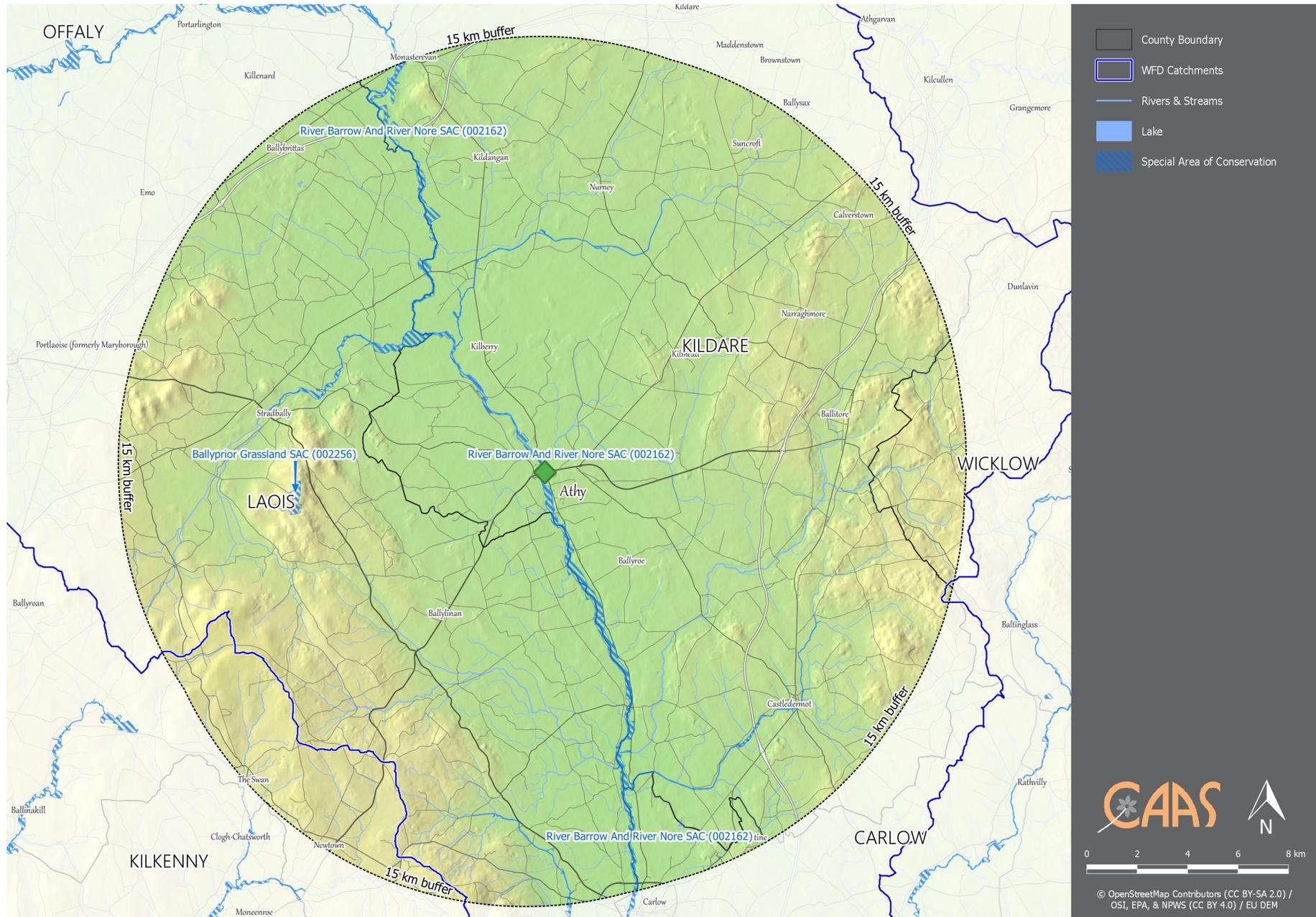


Figure 3.1 European Sites within 15km buffer of Athy Plan area

3.5 Soil

Outside of the urban area, luvisol soils⁵, occurring extensively within and surrounding the town, are the most dominant soil type across the Plan area. Other main soil types, include:

- Alluvial soils⁶ (in the flood plains of the rivers);
- Surface water gleys⁷ (occurring in the north-east of the Plan area); and
- Groundwater gleys (to the east - beyond the Plan area).

Peatlands are unique systems comprising of ombrotrophic (rain-fed) or minerotrophic (ground water-fed) peat soils, providing as significant carbon stores and supporting a range of unique species. There is an area of peat identified c. 1.5 km to the south-west of the Plan area.

As is the case with other urban and semi-urban areas across the country, there is potential for contamination at sites within the Plan area, especially where land uses occurred in the past in the absence of environmental protection legislation.

Source Protection Area delineation provides an assessment of the land area that contributes groundwater to a borehole or spring. Source reports have been undertaken by the Geological Survey Ireland (GSI) on behalf of Local Authorities since the mid-1990s.

Public Supply Source Protection Areas are identified within the northern half of the Plan area to the immediate west of the River Barrow.

3.6 Water

Water Status

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving *good status*.

Athy is located in the River Barrow catchment, drained by the River Barrow (flowing through the centre of the town in the north-south direction) and its tributaries. The Barrow Line of the Grand Canal flows through the north-west of the Plan area.

The current WFD (2013-2018) status of the section of the Barrow River (Barrow_140)⁸ within the Plan area is identified as *poor* due to unsatisfactory ecological/biological status as is its tributary the Bennetsbridge Stream. The status of the River Barrow downstream of the Plan area is *unassigned*; with *moderate* status at Ballyfoyle. The status of the Athy Stream (Athy Stream_120) in the north-west of the Plan area is *moderate*, while the status of the Grand Canal Barrow Line, is *good*. Figure 3.2 illustrates the WFD surface water and groundwater status (all good) within and surrounding the Plan area.

Aquifer Vulnerability

The Geological Survey of Ireland (GSI) rates groundwaters according to both their productivity and vulnerability to pollution. Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The aquifers underlying most the Plan area are generally classified as being of:

- **Moderate vulnerability** – across the central parts and along the river in the north-east and south-west of the Plan area;
- **High vulnerability** - surrounding the moderate vulnerability parts across the Plan area;
- **Extreme vulnerability and extreme (rock at or near surface or karst)** – in the west and north-west of the Plan area, associated with the Source Protection Areas; and

⁵ Luvisols are generally fertile, widely used for agriculture and associated with significant accumulation of clay.

⁶ These are associated with alluvial (clay, silt or sand) river deposits.

⁷ Surface water and groundwater gleys are wetland soils with slowly permeable horizons resulting in seasonal waterlogging.

⁸ As per EPA classification system (gis.epa.ie/EPAMaps)

- **Low vulnerability** – adjacent to the lands in the south-east of the Plan area.

Flooding

A Strategic Flood Risk Assessment (SFRA) has been undertaken to inform the development strategy set out in the Draft LAP. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG and OPW, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014. The preparation of the Draft Plan, SEA and SFRA has taken place concurrently and the findings of the SFRA have informed both the Draft Plan and the SEA. Historical and predictive indicators of flood risk were taken into account by the SFRA.

3.7 Air and Climatic Factors

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

The National Climate Action Plan 2019 is an all of Government plan to tackle climate change and bring about a step change in Ireland's climate ambition over the coming years. The plan sets out an ambitious course of action over the coming years to address the diverse and wide-ranging impacts climate disruption is having on Ireland's environment, society, economic and natural resources. The Climate Action Plan sets out clear 2030 targets for each sector with the ultimate objective of achieving a transition to a competitive, low-carbon, climate-resilient, and environmentally sustainable society and economy by 2050. The Action Plan deals with both mitigation and adaptation.

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

The Climate Change Advisory Council's Annual Review 2019 identifies that the most recent projections demonstrate that, under different assumptions, Ireland will not meet its emissions reduction targets, even with the additional policies and measures included in the National Development Plan. The projections also show that progress on reducing emissions is sensitive to the future path of fuel prices. A significant and sustained rate of emissions reduction of approximately -2.5% per year is required to meet our objectives for 2050. However, it must be noted that additional measures within the recent Climate Action Plan are not included in the analysis to date.

Climate adaptation is a change in natural or human systems in response to the impacts of climate change. These changes moderate harm or exploit beneficial opportunities and can be in response to actual or expected impacts. The National Adaptation Framework Department of Communications, Climate Action and Environment, 2018), sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. The National Adaptation Framework outlines a whole of government and society approach to climate adaptation. Under the Framework, a number of Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for.

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

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

In order to apply with European Directives relating to air quality, the EPA manages the National Ambient Air Quality Network and measures the levels of a number of atmospheric pollutants at locations across the country. The current⁹ air quality in the Plan area (Air Quality Index Regions: Small Towns in the Rural East) is identified by the EPA as being *good*.

⁹ 09/12/2020 (<http://www.epa.ie/air/quality/>)

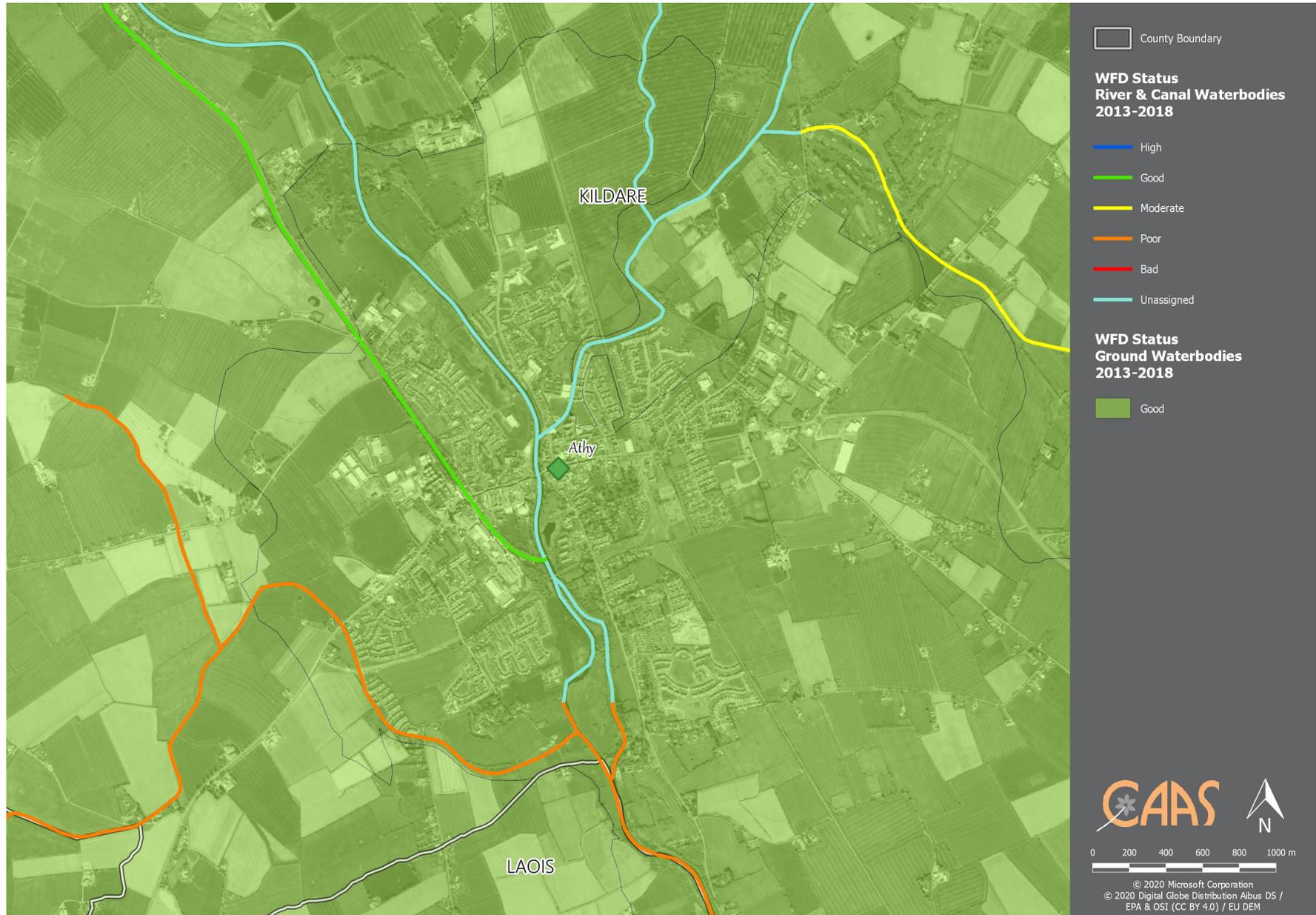


Figure 3.2 Surface and Ground Water Status (2013-2018)

3.8 Material Assets

Public Assets and Infrastructure

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

Athy is served by the 110kv Station at Woodstock South and by a natural gas supply transported to the town via a spur from the Cork to Dublin transmission pipe line. Gas is available throughout the town with transmission terminating at Ardreich Bridge.

Green Infrastructure

Parks and open space promote health and well-being, provide recreational facilities and range of habitats for various species. Green infrastructure is also a crucial component in building resilient communities capable of adapting to the consequences of climate change with trees, woodlands and wetlands providing carbon capture and slowing water flows while improving air quality.

Land

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

Transport

Athy occupies a strategic location on the National Road network with the N78 traversing the Plan area with links to Dublin going to the east and Waterford and Cork going to the south-west from the Plan area. The town is served by the Dublin to Waterford mainline and commuter train services. The Bus Éireann and a number of other private operators provide bus services to Athy.

Waste Water

Athy is served by the Athy Waste Water Treatment Plant (WWTP) at Fortbarrington Road to the south-west of the town. The Athy WWTP has currently designed capacity of 15,000 population equivalent (PE) with additional capacity for future expansion. The most recent figures available indicate that the loading capacity of the treatment plant is approximately 12,898 PE (spring 2020) leaving a treatment capacity of 2,102 PE. It is noted that there are no major infrastructural constraints on the sewerage network within the town.¹⁰ The WWTP environmental performance was identified as being non-compliant in 2018 with the Emission Limit Values set in the wastewater discharge licence as a result of a mechanical breakdown.

Water Supply

Irish Water is responsible for providing and maintaining adequate public water supply infrastructure throughout County Kildare. Athy has been served by the Srowland Water Treatment Plant located to the north of the town. This plant replaced all four previous sources and has the capacity to serve 11,000 PE. The average water demand in the town is three million litres per day (summer 2020). While there are no specific constraints on the water supply network, Irish Water (IW) advises that there is limited capacity at the treatment works and new connections will be on a first come/first served basis. It is noted that capacity will have to be expanded to accommodate the envisaged growth in the town over the life of the Plan.

Waste Management

Waste management within the Plan area is guided by the Eastern-Midlands Region Waste Management Plan 2015-2021. The Plan provides a framework for the prevention and management of waste in a sustainable manner in 12 local authority areas, including that of Kildare.

¹⁰ Draft Athy LAP 2021-2027

3.9 Cultural Heritage

Archaeological Heritage

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

Figure 3.3 shows the spatial distribution of recorded monuments and associated Zones of Notification within and surrounding the Plan area. Clusters of monuments are located within the centre of the Plan area at Athy's historic core, which is also identified as a Zone of Archaeological Potential. There are many important sites of significant archaeological interest within and surrounding Athy, including: a wall of St. John's Hospital and the medieval graveyard site on John's Lane; the ruins of St. Michael's Church; and the White Castle on the east bank of the River Barrow, adjacent to Cromaboo Bridge.

Architectural Heritage

The term architectural heritage is defined in the Architectural Heritage (National Inventory) and Historic Monuments Act 1999 as meaning all: structures and buildings together with their settings and attendant grounds, fixtures and fittings; groups of structures and buildings; and, sites which are of technical, historical, archaeological, artistic, cultural, scientific, social, or technical interest. Protected Structures are defined in the Planning and Development Act 2000 as amended as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view.

Similar to the general spatial spread of archaeological heritage, clusters of architectural heritage are indicated within the town's centre as shown on Figure 3.4. There are 150 entries to the Record of Protected Structures in within the Plan area¹¹ including many buildings of character and historical and architectural significance such as: White Castle (a prominent feature in the Town); Market House (heritage centre); the Model Farm and School; the former Dominican Church (now Athy Library); and the Presbyterian Church.

Architectural Conservation Areas (ACAs) are places, areas or groups of structures or townscape that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures, whose character it is an objective to preserve in a development plan. There is one ACA designated in the Plan area that encompasses much of the town centre of Athy. This ACA is divided into three sub-areas, which represent the different stages of the town's development: the 18th century western area including the Grand Canal dry dock and the Barrow lock; the historic/ medieval core including Emily Quay and Barrow Quay; and the 19th century eastern area including the railway station and the People's Park (as shown on Figure 3.4).

¹¹ Draft Athy LAP 2021-2027



Figure 3.3 Archaeological Heritage



Figure 3.4 Architectural Heritage

3.10 Landscape

Athy is largely characterised by the River Barrow corridor flowing through the settlement from north to south. The majority of the surrounding Plan area consists of pastures and agricultural lands with the Barrow Line of the Grand Canal traversing the Plan area.

The different landscapes found in the Plan area have varying visual and amenity values, topography, exposure levels and contain a variety of habitats. Each landscape type has varying capacity to absorb development related to its overall sensitivity.

The purpose of landscape character assessment is to provide the foundation for policy formulation and decision making for landscape management. The Landscape Character Assessment for County Kildare identifies eight Principal Landscape Character Areas and seven Sub-ordinate Landscape Character Areas. The Plan area is located within the Southern Lowlands Landscape Character Area and the River Barrow Valley Corridor Sub-ordinate Landscape Character Area.

The Southern Lowlands Landscape Character Area is identified as having a sensitivity rating of 'Class One: Low Sensitivity', as it has the capacity to generally accommodate a wide range of uses without significant adverse effects on the appearance or character of the area.

The Sub-ordinate Landscape Area of The River Barrow Valley Corridor is identified as having a sensitivity rating of 'Class Four: Special', as there is little or no capacity to accommodate uses without significant adverse effects on the appearance or character of the landscape having regard to unique and special sensitivity factors.

The County Development Plan provides for the protection of a number of scenic routes, views and prospects within the Council's administrative area. Under the provisions of the Kildare County Development Plan 2017-2023 there are no designated views or prospect within or adjacent to the Plan area. However, the Statement of Character for the Athy ACA outlines a number of key views/prospects which are deemed to be worthy of protection.

3.11 Appropriate Assessment and Flood Risk Assessment

Appropriate Assessment (AA) Screening and Stage 2 AA are being undertaken alongside the Plan. The requirement for AA is provided under the EU Habitats Directive. The emerging conclusion of the AA is that the Plan will not affect the integrity of the European Sites, alone or in combination with other plans or projects.¹² The preparation of the Plan, SEA and AA has taken place concurrently and the findings of the AA have informed the SEA.

A Strategic Flood Risk Assessment (SFRA) has been undertaken to inform the development strategy set out in the Draft Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG and OPW, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014. The preparation of the Draft Plan, SEA and SFRA has taken place concurrently and the findings of the SFRA have informed both the Draft Plan and the SEA.

¹² Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be:
(a) no alternative solution available,
(b) imperative reasons of overriding public interest for the plan to proceed; and
(c) adequate compensatory measures in place.

3.12 Strategic Environmental Objectives

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies that generally govern environmental protection objectives established at international, Community or Member State level e.g. the environmental protection objectives of various European Directives that have been transposed into Irish law and that are required to be implemented.

The SEOs are set out under a range of topics and are used as standards against which the provisions of the Plan and the alternatives are evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if - in the case of adverse effects - unmitigated.

The SEOs are linked to indicators that can facilitate monitoring the environmental effects of the Plan as well identifying targets that the Plan can help work towards.

Table 3.1 Strategic Environmental Objectives

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Biodiversity, Flora and Fauna	BFF	No net contribution to biodiversity losses or deterioration	<ul style="list-style-type: none"> To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species Enhance biodiversity in line with the National Biodiversity Strategy and its targets To protect, maintain and conserve natural capital
Population and Human Health	PHH	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	<ul style="list-style-type: none"> Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management Ensure that existing population and planned growth is matched with the required public infrastructure and the required services Safeguard citizens from environment-related pressures and risks to health and well-being
Soil (and Land)	S	Ensure the long-term sustainable management of land	<ul style="list-style-type: none"> Protect soils against pollution, and prevent degradation of the soil resource Promote the sustainable use of infill and brownfield sites over the use of greenfield Safeguard areas of prime agricultural land and designated geological sites
Water	W	Protection, improvement and sustainable management of the water resource	<ul style="list-style-type: none"> Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive Ensure water resources are sustainably managed to deliver proposed growth targets in the context of existing and projected water supply and waste water capacity constraints ensuring the protection of receiving environments Avoid inappropriate development in areas at risk of flooding and areas that are vulnerable to current and future erosion Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals

Appendix II: Non-Technical Summary

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Material Assets	MA	Sustainable and efficient use of natural resources	<ul style="list-style-type: none"> • Optimise existing infrastructure and provide new infrastructure to match population distribution proposals • Ensure access to affordable, reliable, sustainable and modern energy for all which encourages a broad energy generation mix to ensure security of supply – wind, wave solar, tidal, biomass, energy from waste and traditional fossil fuels • Promote the circular economy, reduce waste, and increase energy efficiencies • Ensure there is adequate sewerage and drainage infrastructure in place to support new development • Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes • Encourage the transition to a zero-carbon economy by facilitating the development of a grid infrastructure to support renewables and international connectivity. Reduce the average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart- buildings, cities and grids
Air	A	Support clean air policies that reduce the impact of air pollution on the environment and public health	<ul style="list-style-type: none"> • To avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air from all sectors with particular reference to emissions from transport, residential heating, industry and agriculture • Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency • Promote continuing improvement in air quality • Reduction of emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter which are responsible for acidification, eutrophication and ground-level ozone pollution • Meet Air Quality Directive standards for the protection of human health – Air Quality Directive • Significantly decrease noise pollution by 2020 and move closer to WHO recommended levels
Climatic Factors	C	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	<ul style="list-style-type: none"> • To minimise emissions of greenhouse gasses. • Integrate sustainable design solutions into infrastructure (e.g. energy efficient buildings; green infrastructure) • Contribute towards the reduction of greenhouse gas emissions in line with national targets • Promote development resilient to the effects of climate change • Promote the use of renewable energy, energy efficient development and increased use of public transport
Cultural Heritage	CH	Safeguard cultural heritage features and their settings through responsible design and positioning of development	<ul style="list-style-type: none"> • Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
Landscape	L	Protect and enhance the landscape character	<ul style="list-style-type: none"> • To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

Section 4 Alternatives

4.1 Introduction

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment.

4.2 Development of Alternatives

The Plan is required to be prepared by the Planning and Development Act 2000 (as amended), which specifies various types of objectives that must be provided for by the Plan.

The alternatives available for the Plan are limited by the provisions of higher-level planning objectives, including those of the land use policy, plans and programmes (e.g. the National Planning Framework, the Eastern and Midland Regional Spatial and Economic Strategy, the Kildare County Development Plan, as varied, and other land use plans). These documents set out various requirements for the content of the Plan.

Four alternative plan scenarios have been developed by the Council. The development of scenarios has been informed by the National Planning Framework (2040) and the provisions in regard to compact growth and the requirement for 30% of an areas growth to be located within to the existing built-up area (National Policy Objective 3c).

The scenarios considered provide for alternative methods of meeting this requirement ranging from an extreme of exceeding a 30% compact growth within or in close proximity (c.400m or 5-minutes walking distance) to the town centre of Athy to more broader alternatives where the minimum 30% compact growth requirement is met with remaining growth allocated to lands either within or adjoining the 'defined built up area'.

The now expired Athy Town Development Plan (2012-2018) previously zoned 75.5 hectares of 'C: New Residential' lands. It is noted the no residential units have been developed on these lands since 2012. The 2021 Local Area Plan intends to reduce the amount of zoned residential land outside the town centre to circa 25 hectares. This is in order to promote sequential development, strengthen the urban core of Athy and align the LAP with the transitional population projections set out in the Implementation Roadmap for the National Planning Framework and Kildare County Development Plan 2017-2023 (as varied).

The scenarios outlined have been fully informed by the findings of a Sustainable Planning and Infrastructure Assessment which has been carried out for the Plan area and which has informed the development strategy proposed for the town of Athy.

The importance of Athy at a county level is emphasised in Variation No. 1 of the Kildare County Council Development Plan 2017 - 2023, which has designated Athy as a '*Self-Sustaining Growth Town*'. The Regional Spatial and Economic Strategy describes these towns as having '*a moderate level of jobs and services. Such settlements include sub-county market towns and commuter towns with good transport links and capacity for continued commensurate growth to become more self-sustaining.*'

Under the Core Strategy of the County Kildare Development Plan 2017 – 2023 (CDP) Athy has been allocated 4.8% of the county's overall housing growth. Applying this figure to the Athy LAP translates into a requirement for **771 additional units** to be developed over the life of the Plan to 2027. Using a unit occupancy rate of 2.8 persons per household, as provided for in the CDP, would result of an

increase of 2,160 persons in Athy by the end of the LAP period. **This would result in a population of 11,837 and a dwelling forecast of 5,052 units by 2027.**¹³

Government policy outlined in *Sustainable Residential Development in Urban Areas: Guidelines for Planning Authorities* (DECHG, 2009) and *Urban Development and Building Heights: Guidelines for Planning Authorities* (DHP&LG, 2018) state that land is a scarce resource and should be managed efficiently. The guidelines provide, inter alia, indicative appropriate residential density standards to apply to settlements depending on population size. For towns in excess of 5,000 persons, i.e. Athy no upper limit should, in principle, apply to town centres subject to specified requirements. Similarly, on brownfield sites higher densities would also apply. On public transport corridors in proximity to bus stops or rail stations minimum net densities of 50 units per hectare (uph) are advised. Whereas outer suburban/greenfield sites should be encouraged at net densities around 35-50 uph and net densities below 30uph being discouraged.

It is therefore considered sites outside the town centre should be developed at an average density of 35 uph, while infill sites in the town centre should be developed at 40 uph. These are adjudged acceptable densities for Athy, considering its population, location and history of development.

4.3 Summary of Description and Assessment of Available Reasonable Alternatives

4.3.1 Alternative 1: Developing Greenfield Sites to the North of the Town Centre

Alternative 1 focuses on the development of greenfield sites to the north of the Town Centre. Many of the sites selected would undermine the principles of compact growth and would not provide for development on centrally located sites in the town.

This Alternative would adversely affect the ability water supply, waste water, compact growth, public transport and co-ordinated development considerations to be adequately integrated into the Plan and deficits would be more likely. Lands identified for development would be premature and would not wholly align with objectives relating to sequential development.

Much of the greenfield development would be unnecessary given other lands closer to the centre within the existing built-up footprint of the town and so would result in unnecessary and avoidable potential impacts upon various environmental components. Development under this Alternative would: reduce benefits from infrastructural investment; decrease the likelihood of brownfield development; harm efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health); and would adversely the protection of multiple environmental components. Conflicts with the protection of the Special Area of Conservation as a result of developing Site No. 4 would have to be mitigated.

New developments would be distant from the primary amenity areas for the town, public services, and shopping, and would therefore adversely affect the long-term vibrancy of the town centre.

By providing for development within the Plan area, Alternative No. 1 reduces the need to develop more sensitive, less well- serviced, less well-connected greenfield sites beyond the Plan area; however, as described above, none of the sites are centrally located.

¹³ These figures only include projected population growth on lands zoned for town centre and new residential uses. It does not include any increases in population on existing residential/infill lands.

4.3.2 Assessment of Alternative 2: Compact Growth/Consolidation and densification of existing Town Centre

By providing for development in centrally located sites within the Plan area, Alternative No. 2 reduces the need to develop more sensitive, less well-serviced, less well-connected greenfield sites beyond the Plan area. Although potentially adverse effects associated with brownfield development would exist, they would be mitigated to a significant degree.

However, this Alternative would not facilitate a sufficient amount of development to allow the town to meet population targets. As a result, development may be pushed outside of the Plan area - increasing the need to develop more sensitive, less well-serviced, less well-connected greenfield sites in other areas. Water supply, waste water, compact growth, public transport and co-ordinated development considerations could be integrated into the Plan; however, deficits would occur where development is pushed out of the Plan area.

Within the Plan area, this Alternative may present the least amount of potential environmental conflicts to be mitigated in the short term; however, this Alternative would not ensure the continued sustainable development of the town into the future.

4.3.3 Assessment of Alternative 3: Developing Greenfield sites to the South of the Town Centre

Alternative No. 3 focuses on the development of greenfield sites to the south of the Town Centre. Many of the sites selected would undermine the principles of compact growth and would not provide for development on centrally located sites in the town.

This Alternative would adversely affect the ability water supply, waste water, compact growth, public transport and co-ordinated development considerations to be adequately integrated into the Plan and deficits would be more likely. Lands identified for development would be premature and would not wholly align with objectives relating to sequential development.

Much of the greenfield development would be unnecessary given other lands closer to the centre within the existing built-up footprint of the town and so would result in unnecessary and avoidable potential impacts upon various environmental components. Development under this Alternative would: reduce benefits from infrastructural investment; decrease the likelihood of brownfield development; harm efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health); and would adversely the protection of multiple environmental components. Conflicts with the protection of the Special Area of Conservation as a result of developing Site No. 8 would have to be mitigated.

New developments would be distant from the primary amenity areas for the town, public services, and shopping, and would therefore adversely affect the long-term vibrancy of the town centre.

By providing for development within the Plan area, Alternative No. 3 reduces the need to develop more sensitive, less well- serviced, less well-connected greenfield sites beyond the Plan area; however, as described above, none of the sites are centrally located.

4.3.4 Assessment of Alternative 4: 30% Compact Growth and Hybrid of Northern and Southern Sites

This alternative combines the sites considered most suited for residential development within Alternatives 1, 2 and 3 with the proposed reuse of existing building stock within the town centre. It would facilitate compact growth, including on centrally located sites, without extending the built-up footprint of the town.

This alternative is the most sustainable of the four alternatives and would be likely to contribute towards environmental protection and management the most. By providing for compact development

in centrally located sites within the Plan area, Alternative 4 reduces the need to develop more sensitive, less well-serviced, less well-connected greenfield sites beyond the Plan area.

By consolidating the zoning and helping to curtailing further sprawl of the town, this alternative would: help to maximise benefits from infrastructural investment; increase the likelihood of brownfield development; contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health); and would benefit the protection of multiple environmental components.

This approach would allow for water supply, waste water, compact growth, public transport and co-ordinated development considerations to be integrated into the Plan to the highest degree. This approach would benefit the protection of various environmental components.

Although potentially adverse effects associated with brownfield and infill greenfield development would exist, they would be mitigated to a significant degree.

4.3.5 Selected Alternative

The Selected Alternative is Alternative 4. This alternative provides the best balance for achieving a high level of compact growth while infilling vacant greenfield sites which lie in between existing residential housing estates. It does not extend the built-up footprint of Athy and aims to curtail any further sprawl of the town.

Section 5 Summary of Effects arising from the Plan

Kildare County Council have integrated various recommendations arising from the SEA, AA and SFRA processes into the Draft Plan (see Section 6).

Table 5.1 summarises the overall environmental effects arising from Draft Plan provisions.

The effects encompass all in-combination/cumulative effects arising from implementation of the Plan. The potentially significant adverse environmental effects (if unmitigated) arising from implementation of the Plan are detailed as are residual effects, taking into account mitigation – see Section 6.

Environmental impacts which occur will be determined by the nature and extent of multiple or individual projects and site-specific environmental factors. Strategic Environmental Objective (SEO) codes are taken from Table 3.1.

Table 5.1 Overall Findings – Environmental Effects arising from Plan Provisions

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, the Kildare County Development Plan and adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the town and beyond. Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats. Contribution towards protection and/or maintenance of biodiversity and flora and fauna by contributing towards the protection of natural capital including the environmental vectors of air, water and soil. Biodiversity and flora and fauna includes biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species (including birds and bats), listed/protected species, ecological connectivity and non-designated habitats (including terrestrial and aquatic habitats), and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna. 	<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; Habitat loss, fragmentation and deterioration, including patch size and edge effects; and Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats. 	<ul style="list-style-type: none"> Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces. Losses or damage to ecology (these would be in compliance with relevant legislation). 	BFF

Appendix II: Non-Technical Summary

Environmental Component	Environmental Effects, in combination with the wider planning framework			SEO Codes
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, the Kildare County Development Plan and adjacent Development Plans and lower-tier land use plans.			
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
Population and Human Health	<ul style="list-style-type: none"> • Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the town and beyond. • Contribution towards the protection of human health by facilitating development of lands that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the town and beyond. • Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water. 	<ul style="list-style-type: none"> • Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors. 	<ul style="list-style-type: none"> • Potential interactions with residual effects on environmental vectors – please refer to residual adverse effects under “Soil”, “Water” and “Air and Climatic Factors” below. 	PHH
Soil	<ul style="list-style-type: none"> • Contribution towards the protection of soils (including those used for agriculture) by facilitating development of lands that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the town and beyond. • Contribution towards the protection of the environment from contamination the highest standards of remediation, and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land. 	<ul style="list-style-type: none"> • Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. • Potential for riverbank erosion. 	<ul style="list-style-type: none"> • Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces. 	S

Appendix II: Non-Technical Summary

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, the Kildare County Development Plan and adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
Water	<ul style="list-style-type: none"> • Contribution towards the protection of water by facilitating development of lands that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the town and beyond. • Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations. • Contribution towards flood risk management and appropriate drainage. 	<ul style="list-style-type: none"> • Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. • Increase in flood risk and associated effects associated with flood events. 	<ul style="list-style-type: none"> • Any increased loadings as a result of development to comply with the River Basin Management Plan. • Flood related risks remain due to uncertainty with regard to extreme weather events – however such risks will be mitigated by measures that have been integrated into the Plan. 	W
Material Assets	<ul style="list-style-type: none"> • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the town and beyond. • Contribution towards compliance with national and regional water services and waste management policies. • Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments. • Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth. • Contribution towards reductions in average energy consumption per capita including promoting energy efficient buildings. 	<ul style="list-style-type: none"> • Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Increases in waste levels. • Potential impacts upon public assets and infrastructure. 	<ul style="list-style-type: none"> • Exceedance of capacity in critical infrastructure risks remain, including due to uncertainty with regard to climate – however, such risks will be mitigated by: measures, including those requiring the timely provision of critical infrastructure, and compliance with the Water Framework Directive and associated River Basin Management Plan. • Residual wastes to be disposed of in line with higher-level waste management policies. • Any impacts upon public assets and infrastructure to comply with statutory planning/consent-granting framework. 	MA

Appendix II: Non-Technical Summary

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

Section 6 Mitigation and Monitoring Measures

6.1 Mitigation

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Plan. Various environmental sensitivities and issues have been communicated to the Council through the SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes.

By integrating SEA recommendations into the Plan, the Council has helped to ensure that:

- The potential significant adverse effects of implementing the Plan are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan are maximised.

By integrating various recommendations into the Plan, the Council is helping to ensure that both the beneficial environmental effects of implementing the Plan have been and will be maximised and that potential adverse effects have been and will be avoided, reduced or offset.

Mitigation was achieved through the:

- Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development;
- Considering alternatives for the Plan;
- Integration of environmental considerations into zoning provisions of the Plan; and
- Integration of written environmental measures into the text of the Plan.

Table 6.1 shows the measures that will mitigate the potential significant adverse environmental effects of implementing the Plan, if unmitigated.

6.2 Monitoring

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section details the measures that will be used in order to monitor the likely significant effects of implementing the Plan. Monitoring can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

Monitoring is based around indicators that allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified in Section 3.12 and used in the evaluation. Each indicator to be monitored is accompanied by the target(s) that were identified with regard to the relevant strategic actions.

Table 6.1 shows the indicators that have been selected for monitoring.

The Monitoring Programme may be updated to deal with specific environmental issues - including unforeseen effects - as they arise. Such issues may be identified by the Council or identified to the Council by other agencies.

Table 6.1 Summary of Mitigation Measures and Indicators for Monitoring

Topic	Recommendations integrated into the Plan, included in:	Indicators for Monitoring
All	<p>EDTO3.1 Support the development of the Barrow Blueway route along the Barrow Line of the Grand Canal and Barrow Navigation system as a multi-use tourism and amenity resource, subject to the required environmental assessments.</p> <p>EDTO3.2 Support and facilitate the development of Athy as an 'activity hub' for water-based sports and associated recreational activities including the development of a Blueway Sports Hub / Education Centre within the Dominican lands, subject to the required environmental assessments.</p> <p>EDTO3.3 Support the development of the necessary infrastructure to service the expansion of water-based activities in the town, including safe and convenient mooring facilities, subject to the required environmental assessments.</p> <p>MT01.4 To work with the National Transport Authority (NTA) to implement the Greater Dublin Area Cycle Network Plan (2013) proposals for Athy, subject to detailed engineering design and any mitigation measures presented in the Strategic Environmental Assessment (SEA) and Natura Impact Statement (NIS) accompanying the NTA Plan.</p>	n/a
Biodiversity and flora and fauna	<p>Policy NH1 – Natural Heritage</p> <p>NH1 <i>It is the policy of the Council to support the protection of species and habitats that are designated under the Wildlife Acts 1976 and 2000, the Birds Directive 1979 and the Habitats Directive 1992 as well as areas of high local biodiversity value and to ensure that developments with potential to impact the integrity of the Natura 2000 network will be subject to Appropriate Assessment.</i></p> <p>Objectives</p> <p>NH1.1 Protect, conserve and manage the River Barrow and River Nore SAC and contribute to the protection of the ecological, visual, recreational, environmental and amenity value of the Grand Canal pNHA.</p> <p>NH1.2 Ensure screening for Appropriate Assessment (AA), in accordance with Article 6(3) of the Habitats Directive is carried out with respect to any plan or project, including masterplans.</p> <p>NH1.3 Ensure that any proposal for development within or adjacent to the Grand Canal pNHA is located and designed to minimise its impact on the biodiversity, geological, water and landscape value of the pNHA.</p> <p>NH1.4 Ensure all applications for planning permission within or adjacent to the Grand Canal pNHA are accompanied by an Ecological Impact Assessment (EcIA) prepared by a suitably qualified professional.</p> <p>NH1.5 Identify, protect, conserve and enhance wherever possible, wildlife habitats and species of local importance, not otherwise protected by legislation. Such habitats would include woodland, river, canal, wetlands and grassland areas along with field boundaries (hedgerows, stone walls and ditches). These features form part of a network of habitats and corridors, which allow wildlife to exist and flourish and contribute to compliance with Article 10 of the Habitats Directive.</p> <p>NH1.6 Protect and conserve the integrity of soils that supports the rich biodiversity and ecological networks in Athy.</p> <p>Action To survey existing bridge structures in Athy to identify whether any such structure currently supports bat roosts</p> <p>GI1.1 Reduce fragmentation of the existing Green Infrastructure network while protecting and enhancing its biodiversity by strengthen ecological links including stepping stone habitats (according to their value).</p> <p>GI1.5 Provide for wildlife bridges (eco links) as part of any new pedestrian and cycle links across the River Barrow, the Barrow Line Canal and railway, thereby facilitating the free movement of people and species throughout the Plan area.</p> <p>GI1.7 Maintain a biodiversity protection zone of 60 metres from the top bank of the River Barrow, 20 metres from the canal and not less than 10 metres from the top bank of smaller watercourses, with the full extent of the protection zone to be determined on a case by case basis by the Planning Authority, based on site specific characteristics and sensitivities. Strategic green routes and trails will be open for consideration within the biodiversity protection zone, subject to appropriate safeguards and assessments.¹⁴</p> <p>GI1.9 Seek to protect trees with a particular local amenity or conservation value.</p> <p>GI1.10 Promote appropriate tree planting within the public realm with a particular focus on strategic open spaces as well as along transport networks.</p>	<ul style="list-style-type: none"> • Condition of European sites • Number of spatial plans that have included ecosystem services content, mapping and policy to protect ecosystem services when their relevant plans are either revised or drafted • SEA and AA as relevant for new Council policies, plans, programmes etc. • Status of water quality in water bodies • Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Chapter 9: Natural Heritage, Green infrastructure and Strategic Open Space as well as relevant measures from the County Plan
Population and human health	<p><u>See measures under other environmental components including Soil, Water and Air and Climatic Factors</u></p>	<ul style="list-style-type: none"> • Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 6 "Economic Development, Enterprise and Tourism" • Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan • Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures • Number of spatial plans that include specific green infrastructure mapping
Soil	<p><u>Also see measures under other environmental components including Water and Plan provisions relating to compact development</u></p> <p>NH1.6 Protect and conserve the integrity of soils that supports the rich biodiversity and ecological networks in Athy.</p>	<ul style="list-style-type: none"> • Proportion of population growth occurring on infill and brownfield lands compared to greenfield • Volume of contaminated material generated from

¹⁴ Any such green route or trail should be designed in accordance with the guidelines and principles outlined in 'Planning for Watercourses in the Urban Environment' (Inland Fisheries Ireland, 2020)

Appendix II: Non-Technical Summary

Topic	Recommendations integrated into the Plan, included in:	Indicators for Monitoring
Water	<p><u>Also see measures under other environmental components including Soil and Material Assets.</u></p> <p>Policy I2 – Surface Water and Groundwater I2 <i>It is the policy of the Council to maintain and enhance the existing surface water drainage systems in Athy and to protect surface and ground water quality in accordance with the Water Framework Directive.</i></p> <p>Objectives</p> <p>IO2.1 Carry out an audit of the existing surface water infrastructure to identify improvement works as required.</p> <p>IO2.2 Ensure that all new developments maintain surface water discharge at greenfield runoff rate, including an allowance for climate change.</p> <p>IO2.3 Incorporate Sustainable Urban Drainage Systems (SuDS) and other nature-based surface water drainage solutions as part of all plans and development proposals in Athy. Priority shall be given to SuDS that incorporate green infrastructure and promote biodiversity including green roofs, walls and rain gardens. Proposals for all new residential developments and for the development of 'H' and 'Q' zoned employment lands must consider the potential for SuDS to control surface water outfall and protect water quality, with underground retention solutions only being considered when all other options have been exhausted.</p> <p>IO2.4 Maintain, improve and enhance the environmental and ecological quality of surface waters and groundwater in Athy in accordance with the River Basin Management Plan for Ireland and in conjunction with the Environmental Protection Agency.</p> <p>IO2.5 Require applicants, where necessary, to demonstrate that proposals will not negatively impact on any groundwater or surface water body and be compliant with the requirements of the Water Framework Directive and measures to protect and improve our water bodies set down in the River Basin Management Plan for Ireland 2018 – 2021 and future Cycles of this Plan.</p> <p>IO2.6 Protect both ground and surface water resources and to work with Irish Water to develop and implement Water Safety Plans to protect sources of public water supply and their contributing catchments.</p> <p>IO2.7 Ensure that development along urban watercourses must comply with the Inland Fisheries Ireland Guidance '<i>Planning for Watercourses in the Urban Environment</i>' (2020), including the maintenance of a minimum riparian zone of 35 metres for river channels greater than 10 metres in width, and 20 metres for rivers channels less than 10 metres in width. Development within this zone will only be considered for water compatible developments.¹⁵</p> <p>Action To encourage 'daylighting'/deculverting¹⁶ and the restoration of culverted water bodies within the town as a natural method of flood management.</p> <p>Policy I3 – Flood Risk Management I3 <i>It is the policy of the Council to manage flood risk in Athy in conjunction with the Office of Public Works and in accordance with the requirements of the Planning System and Flood Risk Management Guidelines for Planning Authorities (2009) and circular PL02/2014 (August 2014).</i></p> <p>Objectives</p> <p>IO3.1 Manage flood risk in Athy in accordance with the requirements of <i>The Planning System and Flood Risk Management Guidelines for Planning Authorities</i>, DECLG and OPW (2009) and Circular PL02/2014 (August 2014).</p> <p>IO3.2 Ensure development proposals within the areas outlined on the Flood Risk Map are the subject of Site-Specific Flood Risk Assessment, appropriate to the nature and scale of the development proposed.</p> <p>IO3.3 Maintain all existing overland flow routes.</p> <p>IO3.4 Support and co-operate with the OPW in delivering the Athy Flood Relief Scheme, subject to the statutory environmental considerations.</p>	<ul style="list-style-type: none"> • brownfield and infill • Number of AA determinations and environmental assessments undertaken to support applications for brownfield and infill development prior to planning permission • Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD • Number of incompatible developments permitted within flood risk areas
Air and Climatic Factors	<p><u>Also refer to the overall approach to land use zoning, transport and sustainability provided by the Plan.</u></p> <p>Policy CAM 1 – Climate Adaptation and Mitigation <i>It is the policy of the Council to future proof Athy to ensure that it becomes a climate resilient town by promoting the economic, social and environmental benefits of low-carbon development, creating an integrated green infrastructure network, prioritising sustainable mobility within the town and building at sustainable densities in appropriate locations.</i></p> <p>Objective CAM01.1 Support the full implementation of the Kildare County Council Climate Change Adaptation Strategy 2019-2024, or any succeeding document, with regards to its goals, objectives and actions relating to the planning and development of Athy.</p> <p>Action To ensure all plans and projects carried out in Athy encourage and provide for climate resilient measures.</p> <p>HC02.3 Require that residential schemes in close proximity to heavily trafficked roads within the Plan area are designed and constructed to minimise noise disturbance, follow a good acoustic design process and clearly demonstrate that significant adverse noise impacts will be avoided.</p> <p>Policy UCR1 – Urban Regeneration and Development UCR1 <i>It is the policy of the Council to support the implementation of the Athy Urban Regeneration Framework to maximise the potential of Athy's unique built and natural assets in order to instigate transformative place-based change in the town, where a revitalised town centre becomes a major visitor destination and contributes to a model of low carbon development and the creation of a climate resilient, healthy, connected and more inclusive settlement.</i></p> <p>MT04.9 Reduce the harmful effects of traffic noise by ensuring noise mitigation measures are implemented into new developments in proximity to national</p>	<ul style="list-style-type: none"> • Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74% • NO_x, SO_x, PM10 and PM2.5 as part of Ambient Air Quality Monitoring • Implementation of Plan measures relating to climate reduction targets as provided for by Plan provisions including Policy CAM 1 – Climate Adaptation and Mitigation • Proportion of journeys made by private fossil fuel-based car compared to 2016 levels • Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures

¹⁵ Water compatible developments as defined in the OPW Planning System and Flood Risk Management Guidelines for Planning Authorities (2009)

¹⁶ 'Daylighting' is the action of returning a culverted river to open water. At its simplest it is taking the lid off the culvert, but most designs aim to create a more natural river shape and re-introduce ecological habitats.

Appendix II: Non-Technical Summary

Topic	Recommendations integrated into the Plan, included in:	Indicators for Monitoring
	<p>routes, regional routes and significant urban streets. Developers shall engage a suitably qualified acoustic specialist to prepare an Acoustic Design Statement for all new developments with the potential to impact sensitive noise receptors from traffic noise. The Statement shall have regard to the thresholds set out in the Kildare Noise Action Plan 2019-2023 (or any subsequent plan).</p> <p>IO5.3 Avoid, prevent or reduce harmful effects on human health and the environment as a whole through promoting the preservation of best ambient air quality with sustainable development.</p> <p>IO5.4 Support the take-up and use of ultra-low emissions vehicles and encourage, through the development management process the provision of electric vehicle charging infrastructure, where appropriate.</p>	
Material Assets	<p><u>Also see measures under other environmental components including Population and Human Health and various Land Use and Phasing provisions from the Plan.</u></p> <p>EDTO1.3 Ensure the provision of adequate and appropriate water, wastewater treatment and waste management facilities to accommodate future economic growth of the town.</p> <p>MT04.6 Ensure that development proposals within Athy Town Centre are subject to a Traffic Impact Assessment (TIA), to be carried out in accordance with the Traffic and Transport Assessment Guidelines (2014). The requirement for all other developments will be determined on a case-by-case basis.</p> <p>MT04.8 Provide for traffic calming and speed reduction measures throughout the town, where necessary as funding allows, and ensure that all new developments are designed to incorporate appropriate traffic calming measures as set out in the Design Manual for Urban Roads and Streets.</p> <p>Policy I1 – Water Supply and Wastewater</p> <p>I1 <i>It is the policy of the Council to work in conjunction with Irish Water to protect existing water and wastewater infrastructure in Athy, to maximise the potential of existing capacity and to facilitate the timely delivery of new water services infrastructure to facilitate future growth.</i></p> <p>Objectives</p> <p>IO1.1 Work in conjunction with Irish Water to promote the ongoing upgrade and expansion of water supply and wastewater services to meet the future needs of Athy.</p> <p>IO1.2 Maximise the sustainable and efficient use of existing capacity in water services in the planning of new development.</p> <p>IO1.3 Seek to ensure that adequate water services will be available to service development prior to the granting of planning permission for development.</p> <p>IO1.4 Seek to ensure that development proposals comply with the standards and requirements of Irish Water in relation to water and wastewater infrastructure.</p> <p>IO5.1 Adequately maintain recycling facilities and to secure the provision of additional facilities, as required, including in conjunction with development.</p> <p>IO5.2 Support the development of a local bring bank recycling facility at an appropriate location, proximate to either the Stradbally Road or Kilkenny Road, within the boundaries of the Local Area Plan.</p>	<ul style="list-style-type: none"> • Programmed delivery of Irish Water infrastructure for all key growth towns in line with Irish Water Investment Plan and prioritisation programme to ensure sustainable growth can be accommodated • Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan • Proportion of population within who report regular cycling / walking to school and work above 2016 CSO figures
Cultural Heritage	<p>UCRO1.9 Prioritise the enhancement of the streetscape and heritage assets of the town centre, to continue environmental improvements, to sustain and improve its attraction for living, working, visiting and investment.</p> <p>Policy BH1 – Protected Structures</p> <p>BH1 <i>It is the policy of the Council to preserve and enhance the buildings identified on the Record of Protected Structures and to carefully consider any proposals for development that would affect the special value of such structures, including their historic curtilage, both directly and indirectly.</i></p> <p>BH1.1 Ensure the protection and preservation of all protected structures (or parts of structures), including the curtilage and attendant grounds of structures contained in the Record of Protected Structures (refer to Table 8.1, Map 3: Built Heritage and Archaeology and Map 3a: Built Heritage and Archaeology – Town Centre).</p> <p>BH1.4 Proactively address dereliction, endangerment, neglect and vacancy in the town centre through the use of the Council's legal process and through the promotion of appropriate uses and the sensitive conservation of historic buildings, in conjunction with other relevant initiatives.</p> <p>BH1.5 Encourage the protection, retention, appreciation and appropriate revitalisation of the vernacular and industrial heritage of Athy.</p> <p>Policy BH2 – Architectural Conservation Area</p> <p>BH2 <i>It is the policy of the Council to protect the character of the Architectural Conservation Area (ACA) and to carefully consider any proposals for development that would affect the special value of the ACA, while providing guidance through the publication of a Statement of Character to support property owners located within the ACA.</i></p> <p>Policy BH3 – Archaeological Heritage</p> <p>BH3 <i>It is the policy of the Council to safeguard the archaeological heritage located within the boundary of the Local Area Plan and avoid negative impacts on sites, monuments, features or objects of significant historical or archaeological interest.</i></p> <p>Objectives</p> <p>BH3.1 Prioritise the protection/preservation in situ (or upon agreement preservation by record) of items of archaeological interest as listed in Table 8.3 and shown on Map 3: Built and Natural Heritage from inappropriate development that would adversely affect and/or detract from the interpretation and setting of these sites.</p> <p>BH3.5 Ensure that development proposals contribute towards the protection and preservation of the archaeological value of underwater or archaeological sites associated with the River Barrow, the Grand Canal and associated features.</p>	<ul style="list-style-type: none"> • Percentage of entries to the Record of Monuments and Places, and the context these entries within the surrounding landscape where relevant, protected from adverse effects resulting from development which is granted permission under the Plan • Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the Plan
Landscape	<p>EDTO2.1 To support the continued operation and reasonable expansion of existing non-conforming uses, provided they do not:</p> <ul style="list-style-type: none"> • Result in loss of amenity to adjoining properties; • Cause adverse impact on the environment; • Cause adverse impact on the visual amenity or character of the area; or <p>GI.1.11 Protect and enhance the existing character and setting along the route of the Barrow Blueway.</p>	<ul style="list-style-type: none"> • Number of developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan