

# Natura Impact Report in support of the Appropriate Assessment Graiguenamanagh-Tinnahinch Draft Joint Local Area Plan (2020)



Forward Planning

Kilkenny County Council & Carlow County  
Council

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## **1 Introduction**

### **1.1 Background**

A new Joint Local Area Plan for Graiguenamanagh-Tinnahinch will be adopted for the period of 2020-2026. This Plan will replace the existing Graiguenamanagh LAP 2009-2015, extended until February 2020 and Tinnahinch LAP 2010-2016. This is a Screening Report in support of the Appropriate Assessment of the Draft Joint LAP in accordance with the requirements of Article 6(3) of the EU Council Directive 92/43/EEC on the Conservation of Natural Habitats of Wild Fauna and Flora (as amended) (hereafter referred to as the “Habitats Directive”).

The overall aim of the Habitats Directive is to maintain or restore the “Favourable Conservation Status” of habitats and species of European Community Interest. These habitats and species are listed in the Habitats and Birds Directives (Council Directive 2009/147/EC on the conservation of wild birds) with Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated to afford protection to the most vulnerable of them. These two designations are collectively known as European Sites.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the European Sites at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations (in particular Part XAB of the Planning and Development (Amendment) Act 2010 and the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended) to ensure the ecological integrity of these sites. Appropriate Assessment (AA) is an assessment of whether a plan or project, alone and in combination with other plans or projects, could have significant effects on a European site in view of the Site’s conservation objectives.

### **1.2 Legislative Context**

Appropriate Assessment is an assessment of the potential for adverse or negative effects of a plan or project, in combination with other plans or projects, on the conservation objectives of the European Site. These sites consist of SACs and SPAs and provide for the protection and long-term survival of Europe’s most valuable and threatened species and habitats.

The Habitats Directive provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU wide network of sites known as Natura 2000. In Ireland, these are SACs and SPAs, designated under the Birds Directive, hereafter referred to as European Sites.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites. Article 6(3) establishes the requirement for AA:

*“Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its*

*implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*

*If, in spite of a negative assessment of the implications for the [Natura 2000] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.*

*Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."*

These requirements are implemented in the Republic of Ireland by the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). These regulations consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in judgements of the Court of Justice of the European Union (CJEU).

If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project may nevertheless be carried out for "Imperative Reasons of Overriding Public Interest" (IROPI), including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

### **1.3 Guidance**

This Natura Impact Report (NIR) has been prepared in accordance with the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, 2010.*
- *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission Environment DG, 2002.*
- *Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC: European Commission, 2000.*

- *Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg (EC 2001);*
- *Guidance document on Article 6(4) of the ‘Habitats Directive’ 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the Commission. Office for Official Publications of the European Communities, Luxembourg (EC 2007).*
- *Flora (Protection) Order, 1999 (As amended 2015)*

The Appropriate Assessment is based on best scientific knowledge and has utilised ecological and hydrological expertise. In addition, a detailed online review of published scientific literature and ‘grey’ literature was conducted. This included a detailed review of National Parks and Wildlife Website including mapping and available reports for relevant sites and in particular sensitive qualifying interests/special conservation interests described and their conservation objectives. The EPA Envision Map-viewer ([www.epa.ie](http://www.epa.ie)) and available reports were also reviewed.

Definitions of conservation status, integrity and significance used in this assessment are defined in accordance with ‘Managing Natura 2000 sites: The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC’ (EC, 2000).

- The conservation status of a natural habitat is defined as the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species;
- The conservation status of a species is defined as the sum of influences acting on the species concerned that may affect the long-term distribution and abundance of its population;
- The integrity of a European Site is defined as the coherence of the site’s ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified; and
- Significant effect should be determined in relation to the specific features and environmental conditions of the protected site concerned by the plan or project, taking particular account of the site’s conservation objectives.

## **1.4 Approach**

There are four main stages in the AA process; the requirement for each stage depends on the likely impacts to the European Sites (SACs and SPAs)

### **Stage One: Screening**

The process which identifies the likely impacts upon a European site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant.

### **Stage Two: Appropriate Assessment**

The consideration of the impact on the integrity of the European site of the project or plan, either alone or in combination with other projects or plans, with respect to the site’s structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts. If adequate mitigation is proposed

to ensure no significant adverse impacts on European Sites, then the process may end at this stage. However, if the likelihood of significant impacts remains, then the process must proceed to Stage 3.

**Stage Three: Assessment of Alternative Solutions**

The process which examines alternative ways of achieving the objectives of the project or plan that avoids adverse impacts on the integrity of the European site.

**Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain**

An assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. First, the plan should aim to avoid any impacts on European Sites by identifying possible impacts early in the plan-making process and writing the plan in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If the plan is still likely to result in impacts on European sites, and no further practicable mitigation is possible, then it must be rejected. If no alternative solutions are identified and the plan is required for imperative reasons of overriding public interest (IROPI test) under Article 6(4) of the Habitats Directive, then compensation measures are required for any remaining adverse effect.

**1.4.1 Source-Pathway-Receptor Model**

Ecological impact assessment of potential indirect impacts on European Sites is conducted following a standard source-pathway-receptor model, where, in order for an effect to be established all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism is sufficient to conclude that a potential effect is not of any relevance or significance.

- Source(s) – e.g. pollutant run-off from proposed works.
- Pathway(s) – e.g. groundwater connecting to nearby qualifying wetland habitats.
- Receptor(s) – Qualifying aquatic habitats and species of European sites.

In the interest of this report, receptors are the ecological features which are known to be utilised by the qualifying interests or special conservation interests of a European Site. A source is any identifiable element of the LAP provision which is known to have interactions with ecological processes. The pathways are any connections or links between the source and the receptor. This report determines if direct, indirect and cumulative adverse effects (however minor) will arise from the Plan.

**1.4.2 Zone of Influence**

Following the source-pathway-receptor process a Zone of Influence (ZOI) is determined based on the characteristics of the development and the foreseen distribution of likely effects through any pathways is identified. All European Sites within the ZOI are assessed with specific reference to the sensitive receptors of each site and pathways for effect that relate to the ecological integrity of the site.

## **1.5 Relationship between the Appropriate Assessment process and the Plan**

Appropriate Assessment (AA) is fully integrated with the various stages of the LAP preparation process in order to help to ensure that the Plan does not affect European Sites. The screening and the assessment of the Plan provisions in the context of mitigation measures and potential effects on European Sites, has been an iterative process throughout each stage of the Plan-making process.

## 2 Description of the background to the Graiguenamanagh-Tinnahinch Local Area Plan 2020-2026

### 2.1 Kilkenny County Development Plan 2014-2020 & Carlow County Development Plan 2015-2021

The Kilkenny County Development Plan 2014-2020 and Carlow County Development Plan 2015-2021 sets out an overall strategy for the proper planning and sustainable development of the functional area of Kilkenny and Carlow County Council. The Plan presents the Kilkenny County Council's outlook for future development of its administrative area up to 2020 and Carlow up until 2021. It sets out the longer-term vision for the development of the respective County, while protecting and enhancing its environment through employing the principles of sustainable development in the policies and objectives set out therein. Local Area Plan Plans have been or will be prepared for the towns/areas with a population over 1,500 persons; however, the County Development Plan remains the overarching Plan for the County.

The Joint LAP builds on the strategies, policies and objectives of its respective County Development Plan, taking into account recent key development trends and national, regional and local policy developments. In particular, it also takes account of the increased emphasis on flooding, climate change, renewable energy and the need to support economic development. It also takes account of European Union (EU) requirements including the application of the Strategic Environmental Assessment and AA to the Plan.

Both the Kilkenny and Carlow County Development Plan was subject to SEA, AA and Strategic Flood Risk Assessment (SFRA). The Stage 2 AA of the Kilkenny CDP concluded that:

*“The assessment process for this report has resulted in a conclusion that mitigatory measures identified in Stage 2 are adequate to ensure that the integrity of the sites in the Natura 2000 network will not be significantly affected as a result of potential impacts of the objectives contained within the Kilkenny County Development Plan 2014-2020.”*

The Stage 2 AA of the Carlow CDP concluded that:

*“Having incorporated mitigation measures, it is considered that the Plan will not have a significant adverse effect on the integrity of the Natura 2000 network.”<sup>1</sup>*

Provisions of the Kilkenny and Carlow County Development Plan that relate to the protection of ecological processes are detailed on Table 2.1.

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<sup>1</sup> Except as provided for in Section 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.

**Table 2.1 Provisions of Kilkenny County Development Plan 2014-2020 for the Protection of Ecological Processes**

<p><b>Objective 1A</b> To implement the provisions of Articles 6(3) and 6(4) of the EU Habitats Directive.</p>
<p><b>Objective 1B</b> To ensure that any plan or project within the functional area of the Planning Authority is subject to appropriate assessment in accordance with the Guidance Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities, 2009 and is assessed in accordance with Article 6 of the Habitats Directive in order to avoid adverse impacts on the integrity and conservation objectives of the site.</p>
<p><b>Objective 1D</b> To prepare a Climate Change Adaptation plan following the adoption of the Development Plan.</p>
<p><b>Economic Development – Strategic Aim</b> To provide a framework for the implementation of the Council’s economic strategy and the protection of the environment and heritage, to position the county for sustainable economic growth and employment.</p>
<p><b>Objective 4B</b> To ensure the highest standards of environmental protection in the assessment of planning applications for all development proposals.</p>
<p><b>Rural Development – Strategic Aim</b> To manage rural change and guide development to ensure vibrant and sustainable rural areas whilst conserving and sustainably managing our environment and heritage.</p>
<p><b>Objective 7A</b> The Council shall seek the preservation and improvement of amenities and recreational amenity facilities, and shall facilitate and provide for the extension of recreational amenities in the county where appropriate, subject to environmental and heritage considerations.</p>
<p><b>Objective 7I</b> To establish an environmental management plan for the River Nore Linear Park.</p>
<p><b>Heritage – Strategic Aim</b> To seek the protection and sustainable management of heritage for the benefit of current and future generations; to encourage the collection of knowledge to inform its protection; and to promote access to, awareness of and enjoyment of heritage.</p>
<p><b>Objective 8A</b> To prepare and implement, in partnership with the Kilkenny Heritage Forum and all relevant stakeholders, a County Heritage Plan and County Biodiversity Plan.</p>
<p><b>Objective 8B</b></p>

To protect and, where possible, enhance the natural heritage sites designated under EU Legislation and National Legislation (Habitats Directive, Birds Directive, European Communities (Birds and Natural Habitats) Regulations 2011 and Wildlife Acts). This protection will extend to any additions or alterations to sites that may arise during the lifetime of this plan.

**Objective 8C**

To protect and, where possible, enhance the plant and animal species and their habitats that have been identified under European legislation (Habitats and Birds Directive) and protected under national Legislation (European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011), Wildlife Acts 1976-2010 and the Flora Protection Order (SI94 of 1999).

**Objective 8E**

To protect and where possible enhance wildlife habitats and landscape features which act as ecological corridors/networks and stepping stones, such as river corridors, hedgerows and road verges, and to minimise the loss of habitats and features of the wider countryside (such as ponds, wetlands, trees) which are not within designated sites. Appropriate mitigation and/or compensation measures to conserve biodiversity, landscape character and green infrastructure networks will be required where habitats are at risk or lost as part of a development.

**Infrastructure & Environment – Strategic Aim**

To provide a framework for the protection of the environment, including water quality, the avoidance of flood risk and the provision of a high-quality telecommunications infrastructure.

**Objective 9B**

Meet in full the requirements of the E.U. Urban Waste Water Treatment and Water Framework Directives and the Drinking Water Regulations.

**Objective 9D**

To promote compliance with environmental standards and objectives established—

- for bodies of surface water, by the European Communities (Surface Waters) Regulations 2009;
  - for groundwater, by the European Communities (Groundwater) Regulations 2010;
- which standards and objectives are included in the South East River Basin Management Plan.

**Objective 10M**

To review the progress of the Climate Change Strategy, report on the progress to date, and thereafter develop a new strategy and action plan in line with national policy.

**Requirements for Developments – Strategic Aim**

To encourage the creation of living and working environments of the highest quality by ensuring a high quality of design, layout and function for all development under the Planning Acts and Regulations, to conserve and build upon positive elements in the built and natural environment, and to protect amenities.

**Table 2.2 Provisions of Carlow County Development Plan 2015-2021 for the Protection of Ecological Processes**

**Strategic Goals**

Ensure a good quality of life and good health for the residents of Carlow through maintaining and improving waste water treatment and water supplies and to minimise the adverse impacts of development on the environment through policies for the management of waste and emissions

To protect, conserve and enhance the built and natural heritage and the landscape of County Carlow for future generations; and reinforce the distinctive character of

County Carlow through ensuring that sites and species of biodiversity importance are identified, conserved and managed appropriately and by promoting awareness and enjoyment of the heritage of the County

**SDO 6 Tourism**

The waterways product builds on the attractive nature of the Rivers Barrow and Slaney. Key requirements needed to build on this opportunity are identification of trails along and linking into the waterways corridor, assessment of visitors requirements, identification of services hubs and nodes along the canal corridor and planning for appropriate commercial uses at these locations. Design guidance as to how to accommodate development whilst protecting the quality of the natural and built heritage, including the safeguarding of the Natura 2000 network of sites is also important. Tourism development, particularly involving waterways will be subject to Appropriate Assessment in accordance with Article 6 of the Habitats Directive

**Policy IE52**

Adhere to the recommendations of the Groundwater Protection Scheme in decision making on the location, nature and control of developments and activities in order to protect groundwater

**ED Policy 5**

Secure high standards of landscape and environmental protection / enhancement

**ED Policy 10**

Rural Development will be subject to Appropriate Assessment in accordance with Article 6 of the Habitats Directive

**ED Policy 13**

Provide for quarry and extractive development where it can be demonstrated that the development would not result in a reduction of the visual amenity of designated scenic area, to residential amenities or give rise to potential damage to areas of scientific, geological, botanical, zoological and other natural significance including all designated European Sites

Ensure compliance with the overall objectives of the Water Framework Directive in the context of quarries, mining and extractive development.

**ED Policy 14**

Take a positive approach to applications for agricultural developments generally, subject to the protection of groundwaters, residential amenities, designated habitats and the landscape, rural amenities, conservation areas and scenic views

**ED Policy 15**

Develop services along water courses which will be subject to Appropriate Assessment in accordance with appropriate environmental assessments including Habitats Directive Assessment

Ensure that the development of services along watercourses will also be subject to, and consistent with, the requirements of the Water Framework Directive and the relevant South Eastern River Basin Management Plan

**HSG – Policy 3**

Raise awareness of the challenges of peak oil, climate change and economic contraction with a view to empowering communities to plan a transition to a lower carbon community

**Trans – Policy 2**

Promote the development of lands for enterprise and industrial uses within existing settlements such as Tullow and Bagenalstown/Muinebheag. Such development will be subject to Appropriate Assessment in accordance with Article 6 of the Habitats Directive

**Trans – Policy 5**

Encourage and facilitate investment in the road network at National, Regional and Local level and prioritise delivery to maximise the economic benefit to the County and ensure that any plan or project associated with transportation (roads, rail or other forms) which has the potential to significantly affect a Natura 2000 site is appropriately assessed in accordance with Article 6 of the Habitats Directive in order to avoid adverse impacts on the integrity of the site

When designing or inputting into road schemes, the importance of hedgerows and roadside boundaries for wildlife and bio-diversity shall be recognised. Retention of such features should be incorporated into design and where this is not possible, replacement planting with native species of indigenous provenance will be provided

**Trans – Policy 6**

Encourage and facilitate, in consultation with relevant stakeholders, the development of green infrastructure that recognises the synergies that can be achieved with regard to the following:

- Sustainable transport
- Provision of open space amenities
- Sustainable management of water
- Protection and management of biodiversity
- Protection of cultural heritage
- Protection of protected landscape sensitivities

**Trans – Policy 8**

Promote walking and cycling, subject to appropriate environmental assessments, including Habitats Directive Assessment, as an alternative mode of transport for travelling to work and for recreational purposes, to require the provision of cycle ways and walkways and associated facilities as part of new development and to support safer walking and cycling routes to schools under the Green Schools Initiative where feasible

Provide, improve and extend cycle and pedestrian routes on existing roads, proposed roads, roads being upgraded and green corridors (including river corridors), where feasible and practical, subject to compliance with Habitats Directive, to create a more convenient, pleasant and user-friendly environment. The needs of walkers and cyclists will be given full consideration in proposals to upgrade any road network

**Energy - Policy 1**

Facilitate, promote and achieve a balance between responding to Central Government policy on renewable energy and enabling energy resources within the plan area to be harnessed in a manner which is in accordance with the principles of proper planning and sustainable development and in accordance with Article 6 of the Habitats Directive

**Energy – Policy 2**

Where impacts are inevitable mitigation features have been included proposals for energy infrastructure should be assessed in accordance with the requirements of Article 6 of the Habitats Directive

Ensure that the landscape and visual assessment of any proposal shall focus on the potential of the development to impact upon county landscape designations and important designated sites. Proposed overhead lines shall as far as possible seek to avoid areas of sensitivity (e.g. areas of high amenity, high sensitive landscape designations, scenic views, protected structures etc). Where avoidance is not possible full consideration shall be given to undergrounding the lines

Minimise, and avoid where possible, the development of telecommunication structures and antennae within the following areas:

- Areas within or adjoining the curtilage of protected structure
- Areas on or within the setting of archaeological sites
- Within a to Natura 2000 sites

**Energy – Policy 3**

Support the extension of the gas network within County Carlow, subject to Compliance with normal planning and environmental criteria and the Council's development management standards

**Energy – Policy 5**

Promote and facilitate wind energy development in accordance with current Wind Energy Development Guidelines by the DoECLG and best international practices and standards and subject to compliance with normal planning and environmental criteria and the development management standards

**Energy – Policy 7**

Support and encourage the development of the bioenergy sector within County Carlow and facilitate its development for energy production, heat storage and distribution, subject to compliance with normal planning and environmental criteria and development management standards

Encourage the development of anaerobic digesters and biofuel processing plants, (subject to the criteria for renewable energies) energy crops, sustainable construction and compliance with normal planning and environmental criteria and the development management standards

Facilitate the development of Organic Waste to Energy/Combined Heat and Power schemes, subject to the criteria for location of waste management facilities and compliance with normal planning and environmental criteria and the development management standards

Support and encourage the development of Biomass District Heating and facilitate its development for energy production, heat storage and distribution, subject to compliance with normal planning and environmental criteria and the development management standards

**Energy – Policy 8**

Promote the use of geothermal energy products in new developments, subject to compliance with normal planning and environmental criteria and development management standards

**Energy – Policy 12**

Promote the development and use of electric vehicles and facilitate the provision of appropriate infrastructure, such as electric charging points, at accessible locations throughout the county, subject to compliance with normal planning and environmental criteria and development management standards

Encourage the utilisation of sustainable modes of transport such as public transport, cycling and walking as a measure to reduce man-made Green House Gas emissions through the sustainable settlement policies in this Plan and the provision of appropriate infrastructure, subject to normal planning and environmental criteria and development management standards

**Telecom – Policy 1**

Ensure that the location of telecommunications structures should minimise and / or mitigate any adverse impacts on communities, public rights of way and the built or natural environment

Minimise, and avoid where possible, the development of telecommunication structures and antennae within the following areas:

- Areas within or adjoining the curtilage of protected structure
- Areas on or within the setting of archaeological sites
- Within a Natura 2000 sites

**Tourism Objective 1**

Carlow County Council will promote, encourage and facilitate the development of sustainable tourism through the conservation, protection and enhancement of the built and natural heritage, the protection of sensitive landscapes and cultural and community environments in order to maximise upon the economic benefits arising from the industry.

**Tourism – Policy 2**

Protect the natural resources upon which tourism is based through the enforcement of policies in relation to resource protection; landscape character assessment; architectural conservation areas; water quality; biodiversity

Encourage, support, facilitate and promote the development and expansion of rural tourism including agri-tourism, eco-tourism, farmhouse accommodation, open-farms, pet farms, horse trekking centres, eco, geo and green tourism, industrial tourism sites and similar tourism developments, subject to these developments demonstrating that the environment will not be impacted negatively

Reserve where feasible, land adjacent to river banks and lakes for public access and to facilitate the creation of linear parks to accommodate walking/cycling routes subject to the requirements of the Habitats Directive and in accordance with habitat management plans for designated sites

Work with the relevant authorities such as DoEHLG / National Parks and Wildlife Service to support development of recreational amenities of the Rivers Barrow and Slaney. All such developments should be undertaken in compliance with Articles 6 and 10 of the Habitats Directive and subject to an Appropriate Assessment

Protect and conserve those natural, built and cultural heritage features which form the basis of the county's tourism attraction and to seek to restrict development which would be detrimental to scenic and identified natural and cultural heritage assets

**Rec – Objective 2**

All proposals for new cycling or walking routes should be assessed in accordance with appropriate environmental assessments including Habitats Directive Assessment

**Rec – Policy 4**

Protect and improve the natural amenity potential and accessibility of River Barrow, River Slaney and River Burren subject to appropriate environmental assessments including Habitats Directive Assessment, the Water Framework Directive and Floods Directive

**Rec – Policy 5**

Require that development along rivers set aside land for pedestrian routes that could be linked to the broader area and any established settlements in their vicinity, subject to screening for potential impacts on European Sites in accordance with the EU Habitats Directive

**Rec – Policy 6**

Promote sustainable outdoor recreation in the form of walking and cycling and improve the recreational and tourist potential of walking and cycling routes in the county whilst ensuring the protection of the environment

Promote the development of riverside walking routes, whilst protecting areas of ecological value and ensuring that any development takes cognisance of the aims and objectives of the Water Framework Directive and ensuring that all development is undertaken in compliance with Articles 6 and Article 10 of the Habitats Directive

**Rec – Policy 7**

Ensure the protection of groundwater dependant Natura 2000 sites which rely on the continued supply of groundwater resources to secure the key environmental conditions that support the integrity of the site and through protection of groundwater standards by the South East Regional Basin Management Plan

**Heritage Protection Principles**

The policies and objectives for the natural and built heritage have been developed in accordance with the following principles:

1. The natural and built environment, particularly those elements that are nonrenewable and most valuable, need to be properly protected, managed and enhanced
2. The conservation and enhancement of biodiversity, natural heritage, landscape and the built environment should be promoted as important elements of the long-term economic growth and development of the County
3. The protection of County Carlow's physical heritage (including archaeology and historic buildings) is a tangible representation of the County's past and is a sound basis for economic growth and regeneration
4. The Polluter Pays Principle and the Precautionary Principle are important elements of any planning policies that deal with environmental and heritage matters

**Heritage – Policy 1**

The protection of natural heritage and biodiversity, including European sites that form part of the Natura 2000 network, will be implemented in accordance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines, including the following and any updated/superseding documents):

- EU Directives, including the Habitats Directive (92/43/EEC), the Birds Directive (2009/147/EC), the Environmental Impact Assessment Directive (85/337/EEC), the Water Framework Directive (2000/60/EC) and the Strategic Environmental Assessment Directive (2001/42/EC)
- National legislation, including the Wildlife Acts 1976 to 2010, the European Union (Water Policy) Regulations 2003 (as amended), the Planning and Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011)
- National policy guidelines, including the Landscape and Landscape Assessment Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessment Guidance 2010
- Catchment and Water Resource Management Plans, including the South Eastern River Basin District Management Plan 2009-2015
- Biodiversity Plans and Guidelines, including Actions for Biodiversity 2011- 2016 and Ireland's National Biodiversity Plan
- Ireland's Environment 2012 (EPA, 2012), and to make provision where appropriate to address the report's goals and challenges

#### **Heritage – Policy 2**

It is the policy of Carlow County Council to:

- Strive to protect and maintain the favourable conservation status and conservation value of all natural heritage sites designated or proposed for designation in accordance with European and National legislation and in other relevant international conventions, agreements and processes. This includes sites designated or proposed as Special Areas of Conservation (SACs) and proposed Natural Heritage Areas (pNHAs), wild bird species and their habitats, especially rare or vulnerable species and regularly occurring migratory species
- Screen all projects and plans arising from this plan for the need to undertake Appropriate Assessment under Article 6 of the Habitats Directive. A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Carlow County Council) has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and an Appropriate Assessment where necessary, that:
  1. The Plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European site (either individually or in combination with other plans or projects) or
  2. The Plan or project will have significant adverse effects on the integrity of any European site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000 or
  3. The Plan or project will have a significant adverse effect on the integrity of any European site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will

be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000

- Promote the maintenance and, as appropriate, the achievement of favourable conservation status of protected habitats and species in association with the NPWS
- Assess, in accordance with the relevant legislation, all proposed developments which are likely to have a significant effect (directly or through indirect or cumulative impact) on designated natural heritage sites, sites proposed for designation and protected species 216
- Comply fully with Article 6 of the EU Habitats Directive (as transposed into Irish Law by the EU Habitats Regulations 1997 and subsequent amendments) and assess whether the plan or project is likely to have a significant impact upon the integrity, conservation objectives and qualifying interests of any Natura 2000 site, when considering any plan or project prepared or assessed on the basis of this development plan
- Promote development that would not conflict with maintaining favourable conservation status and the meeting of the conservation objectives for designated sites, especially sites in the Landscape Character Assessment within this Plan
- Permit projects giving rise to significant cumulative, direct, indirect or secondary impacts on Natura 2000 sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects on the basis of this Plan (either individually or in combination with other plans or projects1 )
- Support the recommendations of the Site Specific Conservation Objectives (SSCO's) for Natura 2000 sites. This is in order to examine how the Conservation Objectives of the sites can be achieved in the context of the proper planning and sustainable development of the county. It shall be the policy of the Council to ensure that development in takes into account the relevant Management Plans for SACs and SPAs in the county
- Ensure all proposed agricultural projects and any associated improvement works or associated infrastructure, individually or in combination with other plans and projects shall be subject to Appropriate Assessment to ensure that there are no likely significant effects on the integrity of any Natura 2000 sites in the County
- Implement the relevant parts of the Planning and Development (Amendment) (No. 2) Regulations 2011 and the European Communities (Amendment to Planning and Development) Regulations 2011 which require planning permission to be applied for where the area impacted by works relating to the drainage or reclamation of a wetland exceeds 0.1 hectares or where such works may have a significant effect on the environment. Such planning applications would need to be supported by an Appropriate Assessment where relevant
- Ensure that all of the following proposed projects and any associated improvement works or associated infrastructure are subject to Appropriate Assessment: renewable energy projects; water supply and abstraction; wastewater and discharges; flood alleviation and prevention; new infrastructure, particularly roads, powerlines and telecommunications; and amenity and recreation provision where this could impact European Sites
- Ensure the recommendations of the Landscape Character Assessment contained within Appendix 6 of this plan be adhered to at all times during the lifetime of this plan

**Heritage Objective 1**

- Minimise the impact of new development on habitats of natural value that are key features of the County's ecological network. Developments likely to have an adverse effect on recognised sites of local nature conservation importance will be required to demonstrate the impacts on the

ecological value of the site and will not be approved unless it can be clearly demonstrated that there are reasons for the development that outweigh the need to safeguard the nature conservation value of the site

- Ensure that development proposals, where relevant, improve the ecological coherence of the Natura 2000 network and encourage the management of landscape features that are of major importance for wild fauna and flora as per Article 10 of the Habitats Directive.
- Ensure that proposals for development protect and enhance biodiversity, wherever possible, by minimising adverse impacts on existing habitats and by including mitigation and/ or compensation measures, as appropriate, which ensure that biodiversity is enhanced
- Ensure that no ecological networks, or parts thereof which provide significant connectivity between areas of local biodiversity, are lost without remediation as a result

### **Heritage Objective 3**

- To protect the biodiversity of rivers, streams and other water courses and maintain them in an open state and to discourage culverting and realignment
- To ensure that the County's watercourses are retained for their biodiversity and flood protection values and to conserve and enhance where possible, the wildlife habitats of the county's rivers, riparian zones and streams which occur outside of designated areas to provide a network of habitats and biodiversity corridors throughout the county
- To consult, as appropriate, with Inland Fisheries Ireland in relation to any development that could potentially impact on the aquatic ecosystems and associated riparian habitats
- To consult with Waterways Ireland and the National Parks and Wildlife Service, the DoEHLG, Inland Fisheries Ireland, Inland Waterways Association and local communities on development proposals that may affect inland waterways, rivers or other water courses
- To promote public use of the rivers where feasible and appropriate
- To require that run off from a proposed development does not result in a deterioration of downstream watercourses or habitats
- To ensure that lighting proposals along water courses, rivers, streams and canal corridors, are not in conflict with bat species, in order to mitigate impacts of lighting on bats and other species
- To have regard to the South East River Basin Management Plan
- Protect the water resources, including rivers, streams, lakes, wetlands, turloughs, groundwater, as well as aquatic and wetland habitats and freshwater and water dependant species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the South Eastern River Basin Management Plan 2009-2015 and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same). Support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development

### **Heritage Objective 5**

- Protect plant species and their associated habitats listed in the Flora (Protection) Order 1999
- Protect species and their associated habitats that require strict protection under the Habitats Regulations (S.I. No. 477/2011 - EC (Birds and Natural Habitats) Regulations 2011)

*Appropriate Assessment of the Graiguenamanagh-Tinnahinch Local Area Plan 2020-2026*

- Protect animal and bird species and their associated habitats protected under the Wildlife Act 1976 to 2010
- Ensure that development does not have a significant adverse impact, incapable of satisfactory mitigation, on plant, animal or bird species protected by law
- Consult with the National Parks and Wildlife Service (DoEHLG) and take account of any licensing requirements when undertaking, approving and authorising development which is likely to affect plant, animal or bird species protected by law
- Support the protection of habitats and species listed in the annexes to and/or covered by the EU Habitats Directive (92/43/EEC, as amended), Birds Directive (2009/147/EC), the Environmental Liability Directive (2004/35/EC) and European Communities (Environmental Liability) Regulations 2008, and regularly occurring-migratory birds and their habitats, and species protected under the Wildlife Acts 1976-2010 and the Flora Protection Order

**Env. – Policy 1**

Support the development of recycling sites/waste disposal sites or transfer stations and associated developments in appropriate locations, subject to normal planning and environmental sustainability considerations including Appropriate Assessment as required under Article 6 of the EU Habitats Directive. In assessing applications for these types of development, the Planning Authority will have regard to groundwater protection and appropriate response matrix

**Env. – Policy 2**

Continue to consult with the EPA in the remediation of contaminated lands

**Env – Objective 2**

The Local Authority will investigate the preparation of a County Climate Change Action Plan over the course of this Development Plan

**Env – Policy 7**

Protect existing and potential water resources for County Carlow, in accordance with the EU Water Framework Directive (2000/60/EC), the South- East River Basin Management Plan 2009-2015 and any updated version, the Pollution Reduction Programmes for designated shellfish waters, the provisions of Groundwater Protection Scheme for the County and any other protection plans for water supply sources

Ensure that developments permitted comply with the requirements of the EU Water Framework Directive, the relevant River Basin Management Plans and the Habitats Directive

**Env – Objective 3**

To ensure that where flood protection or alleviation works take place that the natural and cultural heritage and rivers, streams and watercourses are protected and enhanced. Such works will be subject to Appropriate Assessment as required under Article 6 of the EU Habitats Directive

Where resources are available and subject to compliance with the Habitats and Birds Directives, the Council will contribute towards the improvement and/or restoration of the natural flood risk management functions of flood plains

## 2.2 Graiguenamanagh-Tinnahinch Local Area Plan 2020-2026

This Draft Joint LAP is a land use plan and overall strategy for the development of Graiguenamanagh-Tinnahinch covering the period 2020-2027.

The Vision of the Plan is:

*'This Joint Local Area Plan will promote population growth of Graiguenamanagh and Tinnahinch, reversing the recent trends of population decline. The plan envisages a consolidated town centre with enhanced east-west connections for pedestrians and cyclists, combined with a range of traffic management proposals which will improve accessibility to and vitality of the consolidated town centre. The Plan will encourage job creation by capitalising on local strengths, including the towns' unique setting, natural and built heritage and by enhancing the interface with the River Barrow, thereby supporting opportunities to sustainably exploit the river as a visual, recreational and tourism amenity. Development will be encouraged in a sustainable manner that promotes a healthy environment and healthy living and improved public spaces, while protecting the unique built and natural heritage of the settlement.'*

Key issues, considerations and challenges identified by the Joint Plan include:

- Common Vision: A common strategic vision needs to be developed that provides a positive framework for future growth, consolidation and enhancement of the settlement in accordance with the principles of proper planning and sustainable development.
- Core Strategy: To provide for the proportionate growth of Graiguenamanagh, 1.5% of County Kilkenny's population has been allocated to Graiguenamanagh which results in a requirement for approximately 8.88ha of zoned land for residential purposes in Graiguenamanagh.
- Tinnahinch will maintain a minimum 0.80% of County Carlow's population allocation, which results in a requirement for approximately 3.45ha of zoned land for residential purposes in Tinnahinch. A key factor in the preparation of the Draft Joint Plan has been the determination of the best locations for residential land uses within Graiguenamanagh-Tinnahinch to accommodate this future growth and to ensure residential development takes place in an orderly and sequential manner.
- Population Growth: Ensuring sustainable settlement patterns, including the provision of the necessary planning framework, to accommodate educational, community, leisure and recreational facilities to satisfactorily match the level of population growth, is a key issue in planning for the future.
- Infrastructure and Sustainable Transportation: Working towards ensuring that infrastructure is developed on an ongoing basis to service future developments in order to accommodate planned population growth, whilst ensuring compliance with the statutory obligations to achieve good water quality status under the EU Water Framework Directive and associated national legislation. Whilst the opportunities for public transport are limited in Graiguenamanagh-Tinnahinch, there is scope to focus on promoting and facilitating the use of sustainable modes of transport, such as walking and cycling, in and around the settlement area. The reduction of car

dependency and promoting Smarter Travel initiatives are also key considerations in the Local Area Plan process.

- **Economic Activity and Tourism:** Ensuring the enhancement of Graiguenamanagh-Tinnahinch's role as a centre for employment for residents of both the settlement and wider hinterland, through maximising its tourism opportunity presented by its location along the River Barrow. It is important to foster and maintain local and small-scale businesses through protecting the vitality and vibrancy of the town centre, promoting and facilitating appropriate tourism ventures.
- **Statutory Planning Context:** Statutory plans, in particular the previous Local Area Plans for Graiguenamanagh and Tinnahinch and the need for compliance and consistency with the current Kilkenny County Development Plan 2014-2020 and Carlow County Development Plan 2015-2021 and Regional Spatial and Economic Strategy for the Southern Region
- **Local Planning Context:** Local plans, strategies and studies, including: Kilkenny Cultural Strategy for Arts, Heritage and Libraries 2018-2022, Kilkenny Climate Change Adaptation Strategy 2019-2024, Kilkenny County Local Economic and Community Plan 2016-2021, Carlow Climate Change Adaptation Strategy 2019-2024, Carlow County Local Economic and Community Plan 2016-2021, Graiguenamanagh/Tinnahinch Tourism and Recreational Project Concept Study
- **Environmental Assessment:** Assessment of potential environmental impacts of the Draft Joint Local Area Plan, including a Strategic Environmental Assessment, Habitats Directive Assessment, the Strategic Flood Risk Assessment for County Kilkenny and Carlow and a Stage 2 Strategic Flood Risk Assessment for Graiguenamanagh-Tinnahinch, while ensuring that Graiguenamanagh-Tinnahinch remains an attractive place to work, live, visit and do business.
- **Heritage and Environment:** Promoting and facilitating appropriate growth of the settlement, while protecting the built, cultural and natural heritage of Graiguenamanagh-Tinnahinch in accordance with applicable legislation and policy. This also includes consideration of the environmental designations adjacent to and within the plan boundary.
- **Flooding:** Flood risk issues are an important consideration in the preparation of the Draft Joint Local Area Plan, particularly in zoning lands for appropriate uses in flood risk areas, and the Draft Joint Local Area Plan is guided by the Stage 2 Strategic Flood Risk Assessment for the Graiguenamanagh-Tinnahinch LAP which was carried out as part of the plan making process and aligns with the guidance contained within the document The Planning System and Flood Risk Management Guidelines for Planning Authorities Guidelines for Planning Authorities (2009), as updated and the DECLG Circular PL 2/2014.

### **2.3 Relationship with other Relevant Plans and Programmes**

The Draft Joint LAP sits within a hierarchy of strategic actions such as plans and programmes. The Draft Joint LAP must comply with Kilkenny CDP and Carlow CDP and relevant higher-level strategic actions and may, in turn, guide lower level strategic actions.

### 2.3.1 Ireland 2040 – Our Plan, the National Planning Framework

The National Planning Framework (NPF) is the Government’s high-level strategic plan for shaping the future growth and development of the country to the year 2040. It is a framework to guide public and private investment, to create and promote opportunities for people, and to protect and enhance the environment – from villages to cities, and everything around and in between.

The National Planning Framework and accompanying National Development Plan share ten National Strategic Outcomes as follows:

1. Compact Growth
2. Enhanced Regional Accessibility
3. Strengthened Rural Economies and Communities
4. Sustainable Mobility
5. A Strong Economy, supported by Enterprise, Innovation and Skills
6. High-Quality International Connectivity
7. Enhanced Amenity and Heritage
8. Transition to a Low-Carbon and Climate-Resilient Society
9. Sustainable Management of Water and other Environmental Resources
10. Access to Quality Childcare, Education and Health Services

### 2.3.2 The Regional Spatial and Economic Strategy for Southern Region

The Regional Spatial and Economic Strategy has now replaced the Regional Planning Guidelines (RPGs).

Both Kilkenny City and Carlow town were designated as a ‘Key Town’ for the southeast region. The Regional Spatial Economic Strategy states *“These Key Towns are self-sustaining regional drivers and have a comparable structure to the five regional growth centres identified in the NPF. Given their considerable scope for growth, it is envisaged that local authorities should plan for population growth of more than 30% by 2040.”*

The Regional Spatial Economic Strategy<sup>2</sup> believes that there is potential in Kilkenny to strengthen ‘steady state’ investment in existing rail infrastructure and seek investment for improved infrastructure and services to ensure its continued renewal and maintenance to high level in order to provide quality levels of safety, service, accessibility and connectivity.

The RSES sets out an objective for Carlow *‘To support development of underused lands along the River Barrow as a strategic natural asset for the town. Any future development of underused lands along the River Barrow or proposals for an additional bridge should be subject to further studies to inform the exact nature and intensity that could be accommodated without giving rise to adverse effects on sensitive Natura 2000 habitats and consider any in combination effects arising from proposals for a bridge.’*

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<sup>2</sup> [http://www.southernassembly.ie/uploads/minutes-files/Draft\\_RSES\\_2018\\_-\\_WEB1.pdf](http://www.southernassembly.ie/uploads/minutes-files/Draft_RSES_2018_-_WEB1.pdf)

### **2.3.3 Kilkenny County Development Plan 2014-2020**

Kilkenny County Council is committed to the role of Graiguenamanagh as a District Town. It is an objective of the Council

- To ensure the sustainable development of the District towns in the County to achieve their target populations and enhance their capacity to attract new investment in employment, services and public transport for the benefit of their own populations and that of their rural hinterlands.
- To promote a diverse and sustainable local economy through the designation of sufficient lands for employment related uses, including facilities, to promote SME growth through the local area plans for the District towns.
- To review the local area plans for the District towns in 2015 following the adoption of the county development plan.

### **2.3.4 Carlow County Development Plan 2015-2021**

Graiguenamanagh is bounded to the east by Tinnahinch, a designated village in Carlow County Development Plan. Carlow County Council acknowledges Tinnahinch is one of their attractive village's with notable heritage attractions. The Development Strategy of the County Development Plan will seek to develop the potential of all such locations so as to maximise the tourism offer and visitor experience.

### **2.3.5 Environmental Protection Objectives**

The Draft Joint Plan is subject to a number of high-level environmental protection policies and objectives with which it must comply. Examples of Environmental Protection Objectives include the aims of the EU Habitats Directive which is to contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of Member States and the purpose of Water Framework Directive which is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater which, among other things, prevents deterioration in the status of all water bodies and protects, enhances and restores all waters with the aim of achieving good status.

## 3 Screening for Appropriate Assessment

### 3.1 Introduction to Screening

#### 3.1.1 Background to Screening

This stage of the process identifies any likely significant effects to European Sites from a project or plan, either alone or in combination with other projects or plans. The screening phase was progressed in the following stages. A series of questions are asked during the Screening Stage of the AA process in order to determine:

- Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of a European Site.
- Whether the project will have a potentially significant effect on a European Site, either alone or in combination with other projects or plans, in view of the site's conservation objectives or if residual uncertainty exists regarding potential impacts.

An important element of the AA process is the identification of the "Conservation Objectives", "Qualifying Interests" (QIs) and/or "Special Conservation Interests" (SCIs) of European Sites requiring assessment. Qualifying Interests are the habitat features and species listed in Annexes I and II of the Habitats Directive for which each European Site has been designated and afforded protection. SCIs are wetland habitats and bird species listed within Annexes I and II of the Birds Directive. It is also vital that the threats to the ecological / environmental conditions that are required to support Qualifying Interests and Special Conservation Interests are considered as part of the assessment.

Site-Specific Conservation Objectives (SSCOs) have been designed to define favourable conservation status for a particular habitat or species at that site. According to the European Commission interpretation document 'Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC', paragraph 4.6(3) states:

*"The integrity of a site involves its ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the site's conservation objectives."*

Favourable conservation status of a habitat is achieved when:

- Its natural range, and area it covers within that range, are stable or increasing;
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and
- The conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The screening stage of the AA takes account of the elements detailed above with regard to the details and characteristics of the project or plan to determine if potential for effects to the integrity of the European Site are likely. The characteristics of the Plan were constructed through an iterative process, as a result of the European Sites which are screened below may differ from those high-level plans, due to refinements in the methods/project details available.

### **3.1.2 Desktop Studies**

The ecological desktop study completed for this AA of the Draft Joint LAP comprised the following elements:

- Identification of European Sites within 15km with identification of potential pathways links for specific sites (if relevant) greater than 15km from the LAP;
- Review of the NPWS site synopsis and conservation objectives for European Sites with identification of potential pathways from the LAP; and
- A series of ecological desktop studies were undertaken in May and November 2018. This included but is not limited to the collation of information on protected species including Bats, Otters, Bird species (including Annex I species), Annex II habitat types, protected and Red Data Book Flora species, invertebrates and amphibians. The results of these studies are included as part of the AA where they were deemed relevant to the European Sites and their QI's/SCI's.

## **3.2 Identification of Relevant European Sites**

This section of the screening process describes the European Sites which exist within the Zone of Influence (ZOI) of the site. The DoEHLG (2009) Guidance on AA recommends a 15km buffer zone to be considered.

European Sites that occur within a 15km of the Joint LAP are listed in Table 3.1 and illustrated in Figure 3.1 below. Details on the specific qualifying features and special conservation interests of each European site are also identified in Table 3.1.

In order to determine the potential effects from the Draft Joint LAP, information on the qualifying features, known vulnerabilities and threats to site integrity pertaining to any potentially affected European Sites was reviewed. Background information on threats to individual sites and vulnerability of habitats and species that was used during this assessment included the following:

- *Ireland's Article 17 Report to the European Commission "Status of EU Protected Habitats and Species in Ireland" (NPWS, 2013);*
- *Site Synopses; and*
- *NATURA 2000 Standard Data Forms.*

The assessment takes consideration of the SSCOs of each of the sites within the ZOI. Since the conservation objectives for the European Sites focus on maintaining the favourable conservation condition of the QIs/SCIs of each site, the screening process concentrated on the assessing the potential effects of the Draft Joint LAP against the QIs/SCIs of each site. The conservation objectives for each site were consulted throughout the assessment process.

The Habitats Directive establishes the requirement to assess potential effects of plans/projects on the qualifying interests, and conservation objectives (including structure and function) of designated European Sites (and, where relevant, non-qualifying interests that are important to the overall functioning of the site and its conservation objectives under Articles 10, and 12-16 of the Habitats Directive). Similarly, Article 4(4) of the Birds Directive identifies a requirement to consider special conservation interest species, pollution and the deterioration of bird habitats, which requires considerations beyond the footprints of designated areas.

The site-specific threats and vulnerabilities of each of the sites are detailed in Appendix I.

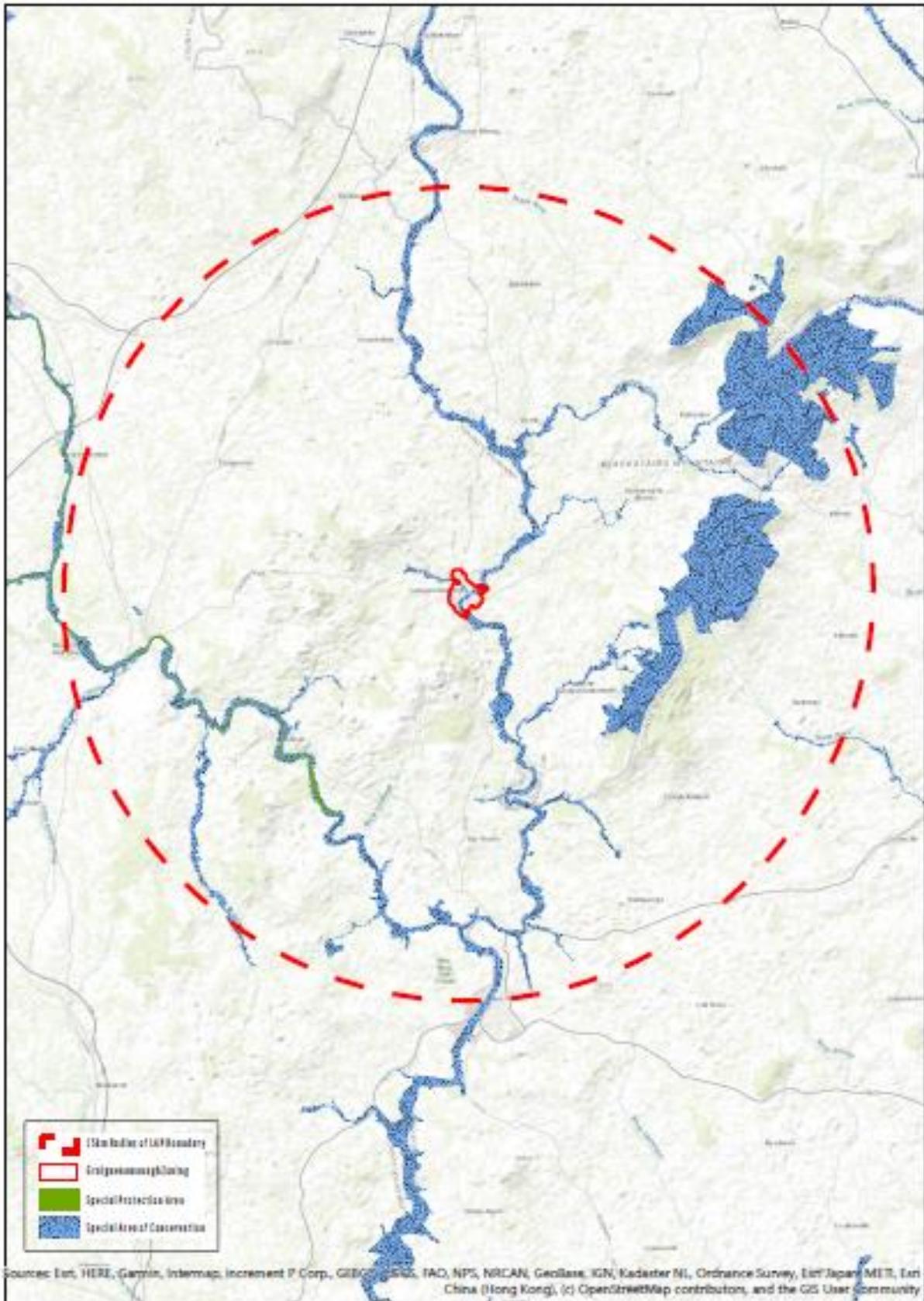


Figure 3.1: European Sites within 15km of the Draft Joint LAP Boundary

Table 3.1 Summary of Natura 2000 Sites within 15km of Plan Area

Special Areas of Conservation			
Site code & name	Qualifying interests	Conservation Objectives	Threats to site integrity
002162 River Barrow and River Nore SAC	<p>Annex I - priority habitat</p> <ul style="list-style-type: none"> <li>▪ Alluvial wet woodlands - Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) (91E0)</li> <li>▪ Petrifying springs - Petrifying springs with tufa formation (<i>Cratoneurion</i>) (7220)</li> </ul> <p>Annex I</p> <ul style="list-style-type: none"> <li>▪ Old oak woodlands - Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles (91A0)</li> <li>▪ Floating river vegetation - Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation (3260)</li> <li>▪ Estuary – (1130)</li> <li>▪ Tidal mudflats - <i>Spartina</i> swards (<i>Spartinion maritimae</i>) (1320)</li> <li>▪ <i>Salicornia</i> mudflats - <i>Salicornia</i> and other annuals colonizing mud and sand (1310)</li> <li>▪ Atlantic salt meadows - (<i>Glaucopuccinellietalia maritimae</i>) (1330)</li> <li>▪ Mediterranean salt meadows (<i>Juncetalia maritimi</i>) (1410)</li> </ul>	<p>Generic Conservation Objective: To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status.</p> <p>Detailed Conservation Objectives considered are set out in Version 1 of the NPWS Assessment dated 19 July 2011. This document, due to its length is not included but is available for reference here: <a href="https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002162.pdf">https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002162.pdf</a></p>	<ul style="list-style-type: none"> <li>▪ Fragmentation, abundance of alien invasive species, sub-optimal grazing regimes, drainage.</li> <li>▪ Land reclamation, drainage.</li> <li>▪ Invasive alien species, sub-optimal grazing.</li> <li>▪ Eutrophication, overgrazing, excessive fertilisation, afforestation, introduction of invasive alien species.</li> <li>▪ Aquaculture, fishing, leisure fishing coastal development and water pollution.</li> <li>▪ Aquacultures, fishing, bait digging, removal of fauna, reclamation of land, coastal protection works and invasive species. Hard coastal defence structures, sea-level rise.</li> <li>▪ Invasive species, natural erosion, accretion cycles and storms.</li> <li>▪ Overgrazing by sheep or cattle, and erosion. Presence of common cordgrass invasive species. Loss of habitats due to infilling and reclamation.</li> <li>▪ Over-grazing by cattle or sheep</li> </ul>

<p>continued . . . 002162 River Barrow and River Nore SAC</p>	<ul style="list-style-type: none"> <li>▪ Dry heath - European dry heaths (4030)</li> <li>▪ Eutrophic tall herbs - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels (6430)</li> </ul> <p>Annex II</p> <ul style="list-style-type: none"> <li>▪ Sea Lamprey - <i>Petromyzon marinus</i> (1095)</li> <li>▪ River Lamprey - <i>Lampetra fluviatilis</i> (1099)</li> <li>▪ Brook Lamprey – <i>Lampetra planeri</i> (1096)</li> <li>▪ Freshwater Pearl Mussel – <i>Margaritifera margaritifera</i> (1029)</li> <li>▪ Nore Freshwater Pearl Mussel – (<i>Margaritifera durrovensis</i>) (1990)</li> <li>▪ Crayfish – <i>Austropotamobius pallipes</i> (1092)</li> <li>▪ Twaité Shad – <i>Alosa fallax</i> (1103)</li> <li>▪ Atlantic Salmon – <i>Salmo salar</i> (1106)</li> <li>▪ Otter – <i>Lutra lutra</i> (1355)</li> <li>▪ Desmoulin’s Whorl Snail - <i>Vertigo moulinsiana</i> (1016)</li> <li>▪ Killarney Fern – <i>Trichomanes speciosum</i> (1421)</li> </ul>		<ul style="list-style-type: none"> <li>▪ Infilling and reclamation.</li> <li>▪ Afforestation, over-burning, over-grazing, under-grazing and bracken invasion.</li> <li>▪ Invasive species, arterial drainage and agricultural improvement at the river edge.</li> <li>▪ Weirs restricting access to spawning beds. Channel maintenance which removes silt deposits and gravel shoals used by lampreys.</li> <li>▪ Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.</li> <li>▪ Poor quality of river substrate.</li> <li>▪ Introduction of diseases transmitted by introduced American crayfish.</li> <li>▪ Restricted access to spawning grounds due to weirs.</li> <li>▪ Diseases, parasites, water pollution.</li> <li>▪ Road kill, fishing nets and lobster pots.</li> <li>▪ Drainage of wetlands and riparian management, spread of urban development.</li> </ul>
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			<ul style="list-style-type: none"> <li>▪ Modifications to the site's hydrology, through pollution, or woodland clearance.</li> </ul>
002252 Thomastown Quarry	<p>Priority status - Listed in Annex I of HD</p> <ul style="list-style-type: none"> <li>• Petrifying springs with tufa formation (Cratoneurion) (7220)</li> </ul>	<p>Generic Conservation Objective: To maintain or restore the Annex I habitats for which the SAC has been selected at favourable conservation status.</p>	<ul style="list-style-type: none"> <li>• Land reclamation</li> <li>• Drainage</li> <li>• Abandonment</li> </ul>
000770 Blackstairs Mountain	<p>Listed in Annex I of HD</p> <ul style="list-style-type: none"> <li>• European Dry Heath (4030)</li> <li>• Northern Atlantic wet heath with <i>Erica tetralix</i> (4010)</li> </ul>	<p>Generic Conservation Objective: To maintain the Annex I habitats for which the SAC has been selected at favourable conservation status; European dry heaths (all sub-types) (84% area of the site in mosaic with Dry Grassland and Exposed Rock) and North Atlantic Wet Heaths with <i>Erica tetralix</i> (1% area of the site). To maintain the extent, biodiversity and species richness of the site. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.</p>	<ul style="list-style-type: none"> <li>• All terrain vehicles (ATVs)</li> <li>• Burning</li> <li>• Decline of the Red Grouse Population</li> <li>• Grazing</li> <li>• Erosion</li> <li>• Group Water Schemes</li> </ul>
<b>Special Protection Area</b>			
<b>Site code &amp; name</b>	<b>Qualifying interests</b>	<b>Conservation Objectives</b>	<b>Threats to site integrity</b>
River Nore 0004233 SPA	<ul style="list-style-type: none"> <li>▪ Kingfisher (<i>Alcedo atthis</i>)</li> </ul>	<p>Generic Conservation Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA</p>	<ul style="list-style-type: none"> <li>▪ Disturbance,</li> <li>▪ Water Quality</li> <li>▪ Invasive Species.</li> </ul>

### **3.3 Assessment Criteria**

#### **3.3.1 Is the Plan Necessary to the Management of European Sites?**

Under the Habitats Directive, Plans that are directly connected with or necessary to the management of a European Site do not require AA. For this exception to apply, management is required to be interpreted narrowly as nature conservation management in the sense of Article 6(1) of the Habitats Directive. This refers to specific measures to address the ecological requirements of annexed habitats and species (and their habitats) present on a site(s). The relationship should be shown to be direct and not a by-product of the plan, even if this might result in positive or beneficial effects for a site(s).

The primary purpose of the Draft Joint LAP is not the nature conservation management of the sites, but to establish a framework for the planned, co-ordinated and sustainable development of the Graiguenamanagh-Tinnahinch area. Therefore, the Draft Joint LAP is not considered by the Habitats Directive to be directly connected with or necessary to the management of European designated sites.

#### **3.3.2 Elements of the Draft Joint LAP with Potential to Give Rise to Effects**

The plan provides a framework for the sustainable development of the Graiguenamanagh-Tinnahinch area. There are a number of environmental sensitivities within the area, the plan is considered as a holistic design and an assessment of effects indicates the potential effects relate to the following:

- Arising from both construction and operation of development and associated infrastructure:
  - Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna;
  - Habitat loss, fragmentation, deterioration, including patch size and edge effects; and
  - Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species.
- Potential interactions if effects upon environmental vectors such as water and air.
- Damage to the hydrogeological and ecological function of the soil resource.
- Adverse impacts upon the status of water bodies arising from changes in quality, flow and/or morphology.
- Increase in the risk of flooding.
- Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts).
- Emissions to air including greenhouse gas emissions and other emissions.

Graiguenamanagh-Tinnahinch is an existing urban townland and the surrounding landscape is dominated by agriculture. The elements of the Draft Joint LAP with the highest potential to give rise to the effects indicated above are associated with construction phase elements of the implementation of the plan. The operational phase elements of the plan are consistent with the existing condition of the area. All policies and objectives are considered in this assessment with respect to the ecological integrity of each of the European Sites identified. Considering the sensitivities/vulnerabilities of the QIs and SCIs in relation to all potential sources for effects and potential pathways for such effects.

Where sources and pathways for effects are identified potential effects will be assessed in relation to the SSCOs.

### **3.3.3 Identification of Potential Effects and Screening of Sites**

This section documents the final stage of the screening process. It has used the information collected on the sensitivity of each European Site and describes any potential effects to the ecological integrity of European Sites resulting from the Draft Joint LAP. This assumes the absence of any controls, conditions or mitigation measures. In determining the potential for significant effects, a number of factors have been taken into account. Firstly, the sensitivity and reported threats to the European Site. Secondly, the individual elements of the Draft Joint LAP and the potential effect they may cause to the site were considered. The elements of the Draft Joint LAP with potential to cause effect to the integrity of European Sites are presented in Table 3.2 below.

Sites are screened out based on one or a combination of the following criteria:

- Where it can be shown that there are significant pathways such as hydrological links between activities of the Draft Joint LAP, and the site to be screened;
- Where the site is located at such a distance from the Draft Joint LAP that effects are not foreseen; and
- Where it is that known threats or vulnerabilities at a site cannot be linked to potential impacts that may arise from the Draft Joint LAP.

The elements detailed above were considered with specific reference to each of the European Sites identified in Section 3.2, and the SSCOs, with respect to the potential effects identified in Section 3.3.2

Sources considered in the compilation of Table 3.1:

- NPWS (2011) Conservation Objectives: River Barrow and River Nore SAC 002162. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.
- NPWS (2019) Conservation Objectives: Thomastown Quarry SAC 002252. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.
- NPWS (2019) Conservation Objectives: Blackstairs Mountains SAC 000770. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.

**Table 3.2 Screening of European Sites within 15km of the Draft Joint LAP Boundary**

Site Code	European Site	Distance (km)	Qualifying Features (Qualifying Interests and Special Conservation Interests)	Potential Effects	Pathway for Effects	Potential for Significant Effects
002162	River Barrow and River Nore SAC	Within LAP Boundary	<p>Annex I - priority habitat</p> <ul style="list-style-type: none"> <li>▪ Alluvial wet woodlands - Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) (91E0)</li> <li>▪ Petrifying springs - Petrifying springs with tufa formation (<i>Cratoneurion</i>) (7220)</li> </ul> <p>Annex I</p> <ul style="list-style-type: none"> <li>▪ Old oak woodlands - Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles (91A0)</li> <li>▪ Floating river vegetation - Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation (3260)</li> <li>▪ Estuary – (1130)</li> </ul>	<p>The SAC runs through the study area. For the most part, appropriate zonings have been applied, such as Open Space, to ensure no change to the site. There are some small areas where the zoning and development objectives appear to conflict with the SAC. In particular those relating to tourism and recreational development, principally relating to the development of recreational infrastructure along and in the vicinity of the River Barrow.</p> <p>The potential threats as a result of developments facilitated by this plan are to water quality which will have the potential to result in:</p> <ul style="list-style-type: none"> <li>• A reduction in the extent, distribution and/or status of floating river vegetation and tall herb fringe habitats within the plan area and along the River Barrow</li> <li>• Disturbance to species occurring within the main channel of the River Barrow</li> </ul>	Yes	Yes

		<ul style="list-style-type: none"> <li>▪ Tidal mudflats - <i>Spartina</i> swards (<i>Spartinion maritimae</i>) (1320)</li> <li>▪ <i>Salicornia</i> mudflats - <i>Salicornia</i> and other annuals colonizing mud and sand (1310)</li> <li>▪ Atlantic salt meadows - (<i>Glauco-Puccinellietalia maritimae</i>) (1330)</li> <li>▪ Mediterranean salt meadows (<i>Juncetalia maritimi</i>) (1410)</li> <li>▪ Dry heath - European dry heaths (4030)</li> <li>▪ Eutrophic tall herbs - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels (6430)</li> </ul> <p>Annex II</p> <ul style="list-style-type: none"> <li>▪ Sea Lamprey - <i>Petromyzon marinus</i> (1095)</li> <li>▪ River Lamprey - <i>Lampetra fluviatilis</i> (1099)</li> <li>▪ Brook Lamprey – <i>Lampetra planeri</i> (1096)</li> </ul>	<ul style="list-style-type: none"> <li>• A decline in the status of freshwater habitats which the above species rely on</li> <li>• Reduction in densities of species supported by the River Barrow</li> </ul> <p>Disturbance, water quality and invasive species are the main threats. This site is designated for wading bird populations. Also, best practice construction methods will be undertaken by all developments within the Plan Area to minimise any effects at source. The largest threat to the qualifying interests would be due to noise and physical disturbance. Therefore, there are no effects foreseen to the conservation objects of the SPA.</p>		
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			<ul style="list-style-type: none"> <li>▪ Freshwater Pearl Mussel – <i>Margaritifera margaritifera</i> (1029)</li> <li>▪ Nore Freshwater Pearl Mussel – (<i>Margaritifera durrovensis</i>) (1990)</li> <li>▪ Crayfish – <i>Austropotamobius pallipes</i> (1092)</li> <li>▪ Twaiter Shad – <i>Alosa fallax</i> (1103)</li> <li>▪ Atlantic Salmon – <i>Salmo salar</i> (1106)</li> <li>▪ Otter – <i>Lutra lutra</i> (1355)</li> <li>▪ Desmoulin’s Whorl Snail - <i>Vertigo moulinsiana</i> (1016)</li> <li>▪ Killarney Fern – <i>Trichomanes speciosum</i> (1421)</li> </ul>			
<b>002252</b>	Thomastown Quarry	12km from LAP boundary	<p>Priority status - Listed in Annex I of HD</p> <ul style="list-style-type: none"> <li>• Petrifying springs with tufa formation (Cratoneurion) (7220)</li> </ul>	The main threats to this site are land reclamation, drainage and abandonment. This site is located approximately 12km from the Draft LAP boundary it is unlikely to be affected by this Plan.	No	No

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000770	Blackstairs Mountain	6km from LAP boundary	Listed in Annex I of HD <ul style="list-style-type: none"> <li>European Dry Heath (4030)</li> <li>Northern Atlantic wet heath with <i>Erica tetralix</i> (4010)</li> </ul>	The main threats to this site as identified are: all-terrain vehicles (ATVs), burning, decline of the Red Grouse population, grazing erosion and group water schemes. Due to the distance of the SAC from the plan area (6km at the nearest point) none of these threats will be affected by this Plan.	No	No
0004233	River Nore SPA	9.5km from LAP Boundary	Kingfisher ( <i>Alcedo atthis</i> )	Disturbance, water quality and invasive species are the main threats. This site is designated for king fisher bird populations. Any effects to water quality are thought to be very low due to the distance between the site and the Plan Area. Also, best practice construction methods will be undertaken by all developments within the Plan Area to minimise any effects at source. The largest threat to the special conservation interest would be due to noise and physical disturbance. Therefore, there are no effects foreseen to the conservation objects of the SPA. The distance between the Plan Area and the SPA boundary is extensive, and the hydrological link is low. Therefore, the Plan is foreseen to have very low effects on the conservation objectives of the Natura 2000 sites.	No	No

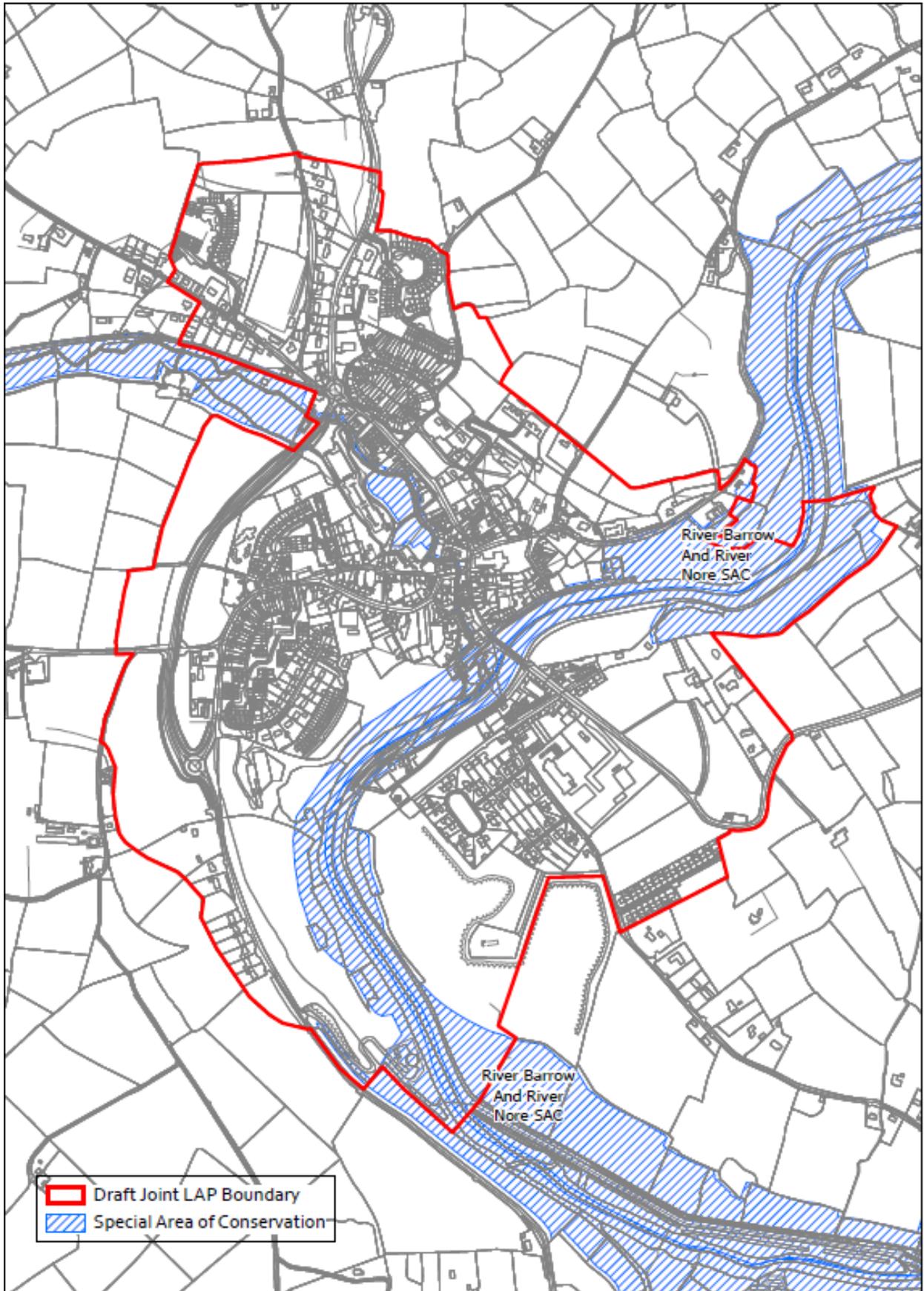


Figure 3.2 Location of the River Barrow and Nore SAC (002162) in relation to the LAP Boundary

### **3.4 Other Plans and Programs**

Article 6(3) of the Habitats Directive requires an assessment of a plan or project to consider other plans or programmes that might, in combinations with the plan or project, have the potential to adversely impact upon European sites. Table 3.3 outlines plans or programmes that may interact with the Draft Joint LAP to cause in-combination effects to European sites. The plans are listed according to a spatial hierarchy of National, Regional/Local Projects and Plans, as follows:

- Ireland 2040 – Our Plan, the National Planning Framework
- Grid 25
- Energy Policy Framework 2007-2020, Governments White Paper
- Irish Water’s Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan 2014-2016
- Regional Spatial and Economic Strategy for the Southern Region
- Smarter Travel – A Sustainable Transport Future – A New Transport Policy for Ireland 2009-2020 (2009)
- Irelands First National Cycle Policy Framework (2009)
- Kilkenny County Development Plan 2020-2026
- Carlow County Development Plan 2015-2021
- Graiguenamanagh/Tinnahinch Tourism and Recreational Project Concept Study

All projects within the Draft Joint LAP area and receiving environment will be considered in combination with any and all lower tiers projects that may arise due to the implementation of the Plan. Given the uncertainties that exist with regard to the scale and location of developments facilitated by the Draft Joint LAP, it is recognised that the identification of in-combination effects is limited and that the assessment of in-combination effects will need to be undertaken in a more comprehensive manner at the project-level.

**Table 3.3 Plans or Programmes that may Interact with the Draft Joint LAP**

<b>Plan or Project</b>	<b>Status</b>	<b>Overview</b>	<b>Possible significant effects from plan or project</b>	<b>Is there risk of in-combination effects</b>	<b>Possible significant in-combination effects</b>
Ireland 2040 – Our Plan, the National Planning Framework	Published	The National Planning Framework is the Government’s high-level strategic plan for shaping the future growth and development of to the year 2040. It is a framework to guide public and private investment, to create and promote opportunities for people, and to protect and enhance the environment - from villages to cities, and everything around and in between.	This Framework was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.	Potential in-combination effect may arise where there is a requirement to provide for new infrastructure or where new development occurs. Provision of infrastructure/development may result in: Habitat loss Alteration of hydrology Deterioration in water quality Disturbance during construction / operation	No, The mitigation measures contained within both documents prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these documents will not be significant.
Grid 25	Published	Grid25 is a high-level strategy outlining how EirGrid intends to undertake the development of the electricity transmission grid in the short, medium and longer terms, to support a longterm sustainable and reliable electricity	This Plan was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.	Potential in-combination effects may arise where there is a requirement to provide for new electrical infrastructure or where associated development occurs. Provision of infrastructure/development may result in: Habitat loss	No, The mitigation measures contained within both plans prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant

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		supply. The Grid25 strategy thereby seeks to implement the provisions of the 2007 Government White Paper on Energy - “Delivering a Sustainable Energy Future for Ireland” in terms of development of electricity transmission infrastructure. The Grid25 Implementation Programme (IP) is a practical strategic overview of how the early stages of Grid25 are intended to be implemented.		Alteration of hydrology Deterioration in water quality Disturbance during construction / operation	
Energy Policy Framework 2007-2020, Governments White Paper	Published	This policy states that the Government is committed to delivering a significant growth in renewable energy as a contribution to fuel diversity in power generation with a 2020 target of 33% electricity consumption	This Plan was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.	Potential in-combination effects may arise where there is requirement to provide for new wind energy infrastructure or where new associated development occurs. Provision of infrastructure/development may result in: Habitat loss Alteration of hydrology	No, The mitigation measures contained within both plans prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant

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				Deterioration in water quality Disturbance during construction / operation	
Irish Water's Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan 2014-2016	Published	This Water Services Strategic Plan sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. It details current and future challenges which affect the provision of water services and identifies the priorities to be tackled in the short and medium term.	This Plan was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.	Potential in-combination effects may arise where there is a requirement to provide for new water and waste water infrastructure and capacity. Meeting additional potable water demands and waste water treatment demands arising from the proposed increase in population has the potential to adversely affect, in the case of abstractions from and effluent discharges to surface waters, the ecological status of surface waters and, in the case of groundwater abstractions, the quantitative status of groundwater. Such demands would occur	No, The mitigation measures contained within both plans prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant

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				<p>in-combination with those in adjoining counties. Adverse effects on the ecological status of surface waters and on the quantitative status of groundwater would have the potential to impact upon protected species and habitats. Provision of infrastructure and increases in capacity may result in:</p> <ul style="list-style-type: none"> <li>Habitat loss</li> <li>Alteration of hydrology</li> <li>Deterioration in water quality</li> <li>Disturbance during construction / operation</li> </ul>	
Regional					
Regional Spatial & Economic Strategy for the Southern Region	Published	A 12-year strategic regional development framework to guide change. It establishes a broad framework for the way in which our society, environment, economy and the use of land should evolve.	This Plan was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.	<p>Potential in-combination impacts may arise where there is a requirement to provide for new infrastructure. Provision of infrastructure may result in:</p> <ul style="list-style-type: none"> <li>Alteration of hydrology</li> <li>Deterioration in water quality</li> <li>Disturbance during construction/ operation</li> </ul>	No, The mitigation measures contained within both plans prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant

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<p>Smarter Travel – A Sustainable Transport Future – A New Transport Policy for Ireland 2009-2020 (2009)</p>	<p>Published</p>	<p>Outlines policies for how sustainable travel and transport systems can be achieved to create a connected city region driven by smarter mobility</p>	<p>This Plan was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.</p>	<p>Potential for in-combination effects may arise where there is a requirement to provide for new transport infrastructure, or increase capacity of existing infrastructure/services. Provisions for the development of transport infrastructure/associated development may potentially result in:          Habitat loss          Alteration of hydrology          Deterioration in water quality          Disturbance during construction / operation</p>	<p>No, The mitigation measures contained within both plans prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant</p>
<p>Local</p>					

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<p>Kilkenny County Development Plan 2014-2020 Carlow County Development Plan 2015-2021</p>	<p>Published</p>	<p>Overall strategies for the proper planning and sustainable development of the administrative area of the relevant Local Authorities.</p>	<p>These plans were subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects</p>	<p>Kilkenny and Carlow share its boundaries with a number of counties. Furthermore, a number of European sites are located in more than one county. Similar development plans are in existence throughout the region, accordingly these plans acting alone or in combination can have a cumulative impact on European sites located within County Kilkenny and Carlow. Provision of infrastructure or where new development occurs may result in: Habitat loss Alteration of hydrology Deterioration in water quality Disturbance during construction/ operation</p>	<p>No, The mitigation measures contained within these plans and the Draft Joint LAP itself prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant.</p>
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<p>Graiguenamanagh/Tinnahinch Tourism and Recreational Project Concept Study</p>	<p>To be published with Draft Joint LAP</p>	<p>Assess the existing and potential economic and cultural tourism offering in Graiguenamanagh-Tinnahinch, with a particular focus along the riverbank, downstream of the George Semple Bridge over the River Barrow, hereafter referred to as the Riverbank area. The study would be appended to the forthcoming Joint LAP.</p>	<p>This plan was not subject to SEA or AA</p>	<p>Potential in-combination impacts may arise where there is a requirement to provide for new infrastructure. Provision of infrastructure may result in: Habitat loss Alteration of hydrology Deterioration in water quality Disturbance during construction/operation</p>	<p>Yes</p>
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### **3.5 Conclusion**

The likely effects that could arise from the Graiguenamanagh-Tinnahinch Draft Joint Local Area Plan 2020-2026 have been examined in the context of a number of factors that could potentially affect the integrity of any European Site. On the basis of the findings of this Screening for AA, it is concluded that the Draft Joint LAP:

- Is directly connected with and necessary to the management of a European Site; and
- May have significant impacts on any European Site.

Therefore, applying the precautionary principle and in accordance with Article 6(3) of the Habitats Directive, a Stage 2 AA is required (see Section 4 of this report).

## 4 Stage 2 Appropriate Assessment

### 4.1 Introduction

The main objective of the Stage 2 AA is to determine whether the Draft Joint LAP would result in significant adverse impacts on the integrity of any European Site with respect to the site's structure, function, and/or conservation objectives.

The Stage 1 AA Screening presented above has identified one European Sites with potential to be affected by the Draft Joint LAP (see Table 4.1). Therefore, taking a precautionary approach, Stage 2 AA is required. The potential adverse effects considered at this stage will either be effects occurring as a result of the implementation of the Draft Joint LAP alone or in-combination with other plans, programmes, and/or projects.

Detailed information relevant to the sites that has been reviewed to inform the AA includes the following:

- *NPWS Site Synopsis*
- *Natura 2000 Standard Data Form*
- *Conservation Objectives and supporting documents*

Site Name	SAC Site Code	Distance from LAP boundary
River Barrow & Nore	002162	Within LAP boundary

### 4.2 Characterisation of European Sites Potentially Affected

The Appropriate Assessment Screening identified one European Site with pathway receptors for potential effects. Therefore, it is necessary to characterize the site and the sensitivities of its qualifying interest, special conservation interests or its conservation objectives.

Appendix 1 characterises each of the qualifying features of the European Site brought forward from Stage 1 (Table 4.1). These are described in context of each of the sites' vulnerabilities in each of these sites' characteristics derived from the NPWS website<sup>3</sup>.

### 4.3 Identifying and Characterising Potential Significant Effects

The following parameters are described when characterising impacts (following CIEEM (2016; 2018), EPA (2002) and NRA (2009)):

**Direct and Indirect Impacts** - An impact can be caused either as a direct or as an indirect consequence of a proposed development.

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<sup>3</sup> NPWS (2016), last accessed 10<sup>th</sup> March 2020; <https://www.npws.ie/protected-sites>

**Magnitude** - Magnitude measures the size of an impact, which is described as high, medium, low, very low or negligible.

**Extent** - The area over which the impact occurs – this should be predicted in a quantified manner.

**Duration** - The time for which the effect is expected to last prior to recovery or replacement of the resource or feature.

- Temporary: Up to 1 Year;
- Short Term: The effects would take 1-7 years to be mitigated;
- Medium Term: The effects would take 7-15 years to be mitigated;
- Long Term: The effects would take 15-60 years to be mitigated; and
- Permanent: The effects would take 60+ years to be mitigated.

**Likelihood** – The probability of the effect occurring taking into account all available information.

- Certain/Near Certain: >95% chance of occurring as predicted;
- Probable: 50-95% chance as occurring as predicted;
- Unlikely: 5-50% chance as occurring as predicted; and
- Extremely Unlikely: <5% chance as occurring as predicted.

The Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines for ecological impact assessment (2016) define: an ecologically significant impact as an impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographic area; and the integrity of a site as the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.

The Habitats Directive requires the focus of the assessment at this stage to be on the integrity of the site as indicated by its Conservation Objectives. It is an aim of NPWS to draw up conservation management plans for all areas designated for nature conservation. These plans will, among other things, set clear objectives for the conservation of the features of interest within a site.

SSCOs have been prepared for a number of European Sites. These detailed SSCOs aim to define favourable conservation condition for the qualifying habitats and species at that site by setting targets for appropriate attributes which define the character habitat. The maintenance of the favourable condition for these habitats and species at the site level will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

***Favourable conservation status of a species can be described as being achieved when:  
'population data on the species concerned indicate that it is maintaining itself, and the natural***

*range of the species is neither being reduced or likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.'*

**Favourable conservation status of a habitat** can be described as being achieved when: *'its natural range, and area it covers within that range, is stable or increasing, and the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and the conservation status of its typical species is favourable'.*

Generic Conservation Objectives for SACs have been provided as follows:

- *To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.*

One generic Conservation Objective has been provided for SPAs as follows:

- *To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*

#### **4.3.1 Identification of Potential Effects**

Potential impacts from the Draft Joint LAP which have, alone or in combination, been identified to result in adverse effects upon the QI's/SCI's or integrity of European Sites. Ecological impact assessment of potential impacts on European Sites is conducted utilizing a standard source-pathway-resource process; where, all three elements of this mechanism must be in place to establish an effect arising.

As outlined in the European Commission Environment DG document *"Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC"*, impacts that could potentially occur through the implementation of the Draft Joint LAP can be categorised under a number of headings:

- Loss / reduction of habitat area (e.g. due to the development of new projects)
- Disturbance of Key Species (e.g. increased public access to protected sites, or during the construction phase of infrastructure projects)
- Habitat or species fragmentation
- Changes in key indicators of conservation value such as decrease in water quality / quantity (e.g. through inadequate waste water treatment, run-off of pollutants during construction and operation of developments, agriculture run-off)

Each of these elements is considered below with reference to the QI's/SCI's of all of the European Sites brought forward from Stage 1 of the AA process. A detailed analysis of each site individually can be found below in Table 4.2.

The Draft Joint LAP contributes towards the framework for sustainable development within Graiguenamanagh-Tinnahinch. The Draft Joint LAP also prescribes particular locations (site specific) of developments of infrastructure. Overall, the Draft Joint LAP, in combination with other plans and programmes, underpins the development of housing, waste water treatment, tourism, communities

and the town centre with supporting transport, water, energy, and communication infrastructure within the Graiguenamanagh-Tinnahinch area.

#### **4.3.1.1 Reduction of Habitat Area**

The Draft Joint LAP boundary encompasses the River Barrow/River Nore SAC as shown in Figure 3.2. The policies and objectives of the Plan aim to support the protection of all European Sites and detail the need for all lower tiered projects to conduct a site-specific AA. Specifically, policy AAO1.1 will ensure that no permissions will be granted to any development that may result in significant adverse effects to the ecological integrity of any European Site. These mitigation measures will ensure that there will be no effects on the reduction of Habitat Area of any European Site as a result of the implementation of the Plan.

#### **4.3.1.2 Fragmentation**

Habitat fragmentation is an issue for biodiversity, the Graiguenamanagh-Tinnahinch area is already an urbanised area. The Draft Joint LAP contains policies and objectives that focus on the protection of habitat connectivity and ensure that no barriers to the free movement of protected species are introduced.

- Objective NHO1.1: To identify, protect, conserve and enhance wherever possible, wildlife habitats and species of local importance, not otherwise protected by legislation. Such habitats would include woodland, river, grassland areas and field boundaries (hedgerows, stone walls and ditches). Such features form part of a network of habitats and corridors, which allow wildlife to exist and flourish and contribute to compliance with Article 10 of the Habitats Directive.
- Objective NHO 1.2: Support the protection of biodiversity and ecological connectivity within the plan area including woodlands, trees, hedgerows, roadside verge vegetation, rivers, streams, natural springs, wetlands, stonewalls, fens, geological and geo-morphological systems, other landscape features and associated wildlife, where these form part of the ecological network. Seek to retain and incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive:
  - a) Seek to retain and incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors and stepping stones.
  - b) Protect and enhance the water quality and ecology of the River Barrow, in the plan area and their function as ecological corridors, by maintaining the existing banks and channel.
  - c) Maintain and enhance biodiversity through the appropriate planting of native trees, shrubs and hedgerows indigenous to the area and of Irish provenance in public and private areas and in new developments.
  - d) Seek to prevent inappropriate development along the banks of the river which would negatively impact on the ecological quality and biodiversity of the waters and ecological corridor.
  - e) Seek to prevent the introduction of imported ash trees/plants or other such species into the plan area in line with the Plant Health Directive and any updated legislation.

- f) In order to protect light sensitive species such as crayfish, lighting fixtures should provide only the amount of light necessary for personal safety and should be designed so as to avoid creating glare or emitting light above a horizontal plane.
- Objective NHO 1.3 - To ensure the protection of water quality due to the implementation of this Draft Joint LAP.
  - Objective NHO1.4: To limit the removal of vegetation and/or alteration of bank characteristics by reserving land along the river bank for ecological corridors and maintain them free from inappropriate development and discourage culverting or realignment. The Planning Authorities shall consult with Inland Fisheries Ireland and other statutory bodies as required by the planning regulations in respect of this and shall have regard to their comments in the making of any planning decision.
  - Objective GIO 1.1: To carry out, as resources allow, Habitat and Green Infrastructure Mapping for Graiguenamanagh-Tinnahinch in order to reduce and avoid fragmentation or deterioration of the Green Infrastructure network and strengthen ecological links within Graiguenamanagh-Tinnahinch and to the wider regional network.

These mitigation measures will prioritise the avoidance of effects and ensure that when site specific information is known about a project. These policies highlight the importance of ecological features in the landscape. An emphasis is placed on the protection of these features within the Draft Joint LAP to ensure the connectivity of habitats, the Draft Joint LAP also recognises the need for ecological networks (Objective NHO 1.1). The need for construction environmental management plans within the LAP area on large scale projects also identifies the need to protect the landscape from short term effects and have regard to connectivity throughout the construction phase of such projects.

#### 4.3.1.3 Disturbance to Key Species

Disturbance to species supported by a European site is likely to occur where there is an increase in activity levels from recreation and amenity or from developments within or adjacent to designated areas. Sources of disturbance include noise, vibration, light, construction and operation activities or other sources of disturbance arising from recreation and amenity or from the inappropriate timing of works.

The European Site potentially affected is the River Barrow and Nore SAC. The SAC is designated for Otter (*Lutra lutra*) (see Table 3.2 above). Otter are particularly vulnerable to disturbance impacts particularly during breeding. The zone of influence of the SAC is designated for the protection of White Clawed Crayfish and Old Oak Woodlands. In the past the SAC has recorded catchments with previous records of *Margaritifera* (Fresh Water Pearl Mussel and Nore Fresh Water Pearl Mussel) which is vulnerable to disturbance from any activities that result in changes in river flow, increased levels of silt, and increased levels of nutrients. In addition to drainage, and changes to river channel morphology, increased intensification of land use in river catchment areas can contribute to inadequate conditions for freshwater pearl mussel survival.

Alterations to river flow will be maintained throughout the lifetime of this Plan through the following measures:

Objective NHO 1.1

Objective NHO 1.2

Objective NHO 1.3

Objective NHO 1.4

Objective GIO 1.1

These policies and objectives provide additional measures to protect the ecological integrity of European Sites in conjunction with those contained within the existing Kilkenny and Carlow County Development Plan. There is potential for the QI species to be present on site. Graiguenamanagh-Tinnahinch is urban in nature. The Draft Joint LAP supports the development of tourism and recreational amenity in close proximity to the River Barrow. These projects have potential to cause disturbance impacts to the key species as they are located adjacent to the River Barrow and River Nore SAC. Therefore, the operational phase is expected to be consistent with the current receiving environment. Anthropogenic disturbance to key species will be associated with construction phase elements of projects which are temporary effects. The need for construction environmental management plans within the Joint LAP area on large scale projects also identifies the need to protect the landscape from short term effects and have regard to connectivity throughout the construction phase of such projects.

#### **4.3.1.4 *Changes of Indicators of Conservation Value***

Water quality is a key indicator of conservation value which will be mitigated through the following objectives:

##### **Measures from the Draft Joint Local Area Plan**

- Objective NHO 1.2
- Objective NHO 1.3
- Objective INFO 2.1
- Objective INFO 2.2

##### **Measures from the Kilkenny County Development Plan**

- Infrastructure and Environment Strategic Aim
- Water Quality Objectives
  - 9D
  - 9E
  - 9F

##### **Measures from the Carlow County Development Plan**

- Environment Policy 7
- Tourism Policy 2

The use of construction environmental management plans on large scale projects will reduce the potential for adverse effects at project level during construction. All lower tiered plans will be subject to their own AA considerations and flood risk assessments. The Draft Joint LAP provides details on the need for the protection of water bodies and watercourses, suds schemes etc. All of these mitigation measures will ensure the protection of water quality and ensure no project will be permitted during the course of the LAP lifespan that will have significant adverse effects to water quality.

Table 4.2 Characterisation of Potential Effects arising from the Draft Joint LAP

Site Code	European Site	Distance (km)	Qualifying Features (Qualifying Interests and Special Conservation Interests)	Potential Effects	Residual effects Once Mitigated
002162	River Barrow & Nore SAC	Within LAP Boundary	<p>Annex I - priority habitat</p> <ul style="list-style-type: none"> <li>▪ Alluvial wet woodlands - Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) (91E0)</li> <li>▪ Petrifying springs - Petrifying springs with tufa formation (<i>Cratoneurion</i>) (7220)</li> </ul> <p>Annex I</p> <ul style="list-style-type: none"> <li>▪ Old oak woodlands - Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles (91A0)</li> <li>▪ Floating river vegetation - Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation (3260)</li> <li>▪ Estuary – (1130)</li> <li>▪ Tidal mudflats - <i>Spartina</i> swards (<i>Spartinion maritimae</i>) (1320)</li> <li>▪ <i>Salicornia</i> mudflats - <i>Salicornia</i> and other annuals colonizing mud and sand (1310)</li> <li>▪ Atlantic salt meadows - (<i>Glaucopuccinellietalia maritimae</i>) (1330)</li> <li>▪ Mediterranean salt meadows (<i>Juncetalia maritimi</i>) (1410)</li> <li>▪ Dry heath - European dry heaths (4030)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fragmentation, abundance of alien invasive species, sub-optimal grazing regimes, drainage.</li> <li>▪ Land reclamation, drainage.</li> <li>▪ Invasive alien species, sub-optimal grazing.</li> <li>▪ Eutrophication, overgrazing, excessive fertilisation, afforestation, introduction of invasive alien species.</li> <li>▪ Aquaculture, fishing, coastal development and water pollution.</li> <li>▪ Aquacultures, fishing, bait digging, removal of fauna, reclamation of land, coastal protection works and invasive species.</li> <li>▪ Hard coastal defence structures, sea-level rise.</li> <li>▪ Invasive species, natural erosion, accretion cycles and storms.</li> <li>▪ Overgrazing by sheep or cattle, and erosion. Presence of common cordgrass invasive species. Loss of habitats due to infilling and reclamation.</li> <li>▪ Over-grazing by cattle or sheep</li> <li>▪ Infilling and reclamation.</li> <li>▪ Afforestation, over-burning, over-grazing, under-grazing and bracken invasion.</li> </ul>	No

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			<ul style="list-style-type: none"> <li>▪ Eutrophic tall herbs - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels (6430)</li> </ul> <p>Annex II</p> <ul style="list-style-type: none"> <li>▪ Sea Lamprey - <i>Petromyzon marinus</i> (1095)</li> <li>▪ River Lamprey - <i>Lampetra fluviatilis</i> (1099)</li> <li>▪ Brook Lamprey – <i>Lampetra planeri</i> (1096)</li> <li>▪ Freshwater Pearl Mussel – <i>Margaritifera margaritifera</i> (1029)</li> <li>▪ Nore Freshwater Pearl Mussel – (<i>Margaritifera durrovensis</i>) (1990)</li> <li>▪ Crayfish – <i>Austropotamobius pallipes</i> (1092)</li> <li>▪ Twait Shad – <i>Alosa fallax</i> (1103)</li> <li>▪ Atlantic Salmon – <i>Salmo salar</i> (1106)</li> <li>▪ Otter – <i>Lutra lutra</i> (1355)</li> <li>▪ Desmoulin’s Whorl Snail - <i>Vertigo moulinsiana</i> (1016)</li> <li>▪ Killarney Fern – <i>Trichomanes speciosum</i> (1421)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Invasive species, arterial drainage and agricultural improvement at the river edge.</li> <li>▪ Weirs restricting access to spawning beds. Channel maintenance which removes silt deposits and gravel shoals used by lampreys.</li> <li>▪ Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.</li> <li>▪ Poor quality of river substrate.</li> <li>▪ Introduction of diseases transmitted by introduced American crayfish.</li> <li>▪ Restricted access to spawning grounds due to weirs.</li> <li>▪ Diseases, parasites, water pollution.</li> <li>▪ Road kill, fishing nets and lobster pots.</li> <li>▪ Drainage of wetlands and riparian management, spread of urban development.</li> <li>▪ Modifications to the site’s hydrology, through pollution, or woodland clearance.</li> </ul>	
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## **5 Mitigation Measures**

### **5.1 Introduction**

Where it cannot be demonstrated that there will be no adverse effects from the implementation of the Plan, mitigation measures have been devised. The measures that are recommended are compatible with those proposed by the SEA Environmental Report and with other relevant plans and programmes e.g. Programme of Measures proposed by the River Basin Management Plan and SEA.

Based on the types of impacts identified above, the mitigation measures presented below are split into two main categories, 'Measures to Protect Habitats and Species' and 'Measures to Protect Water Quality'.

### **5.2 Measures to Protect Habitats and Species**

As outlined in Section 3.3 of this assessment a number of significant effects that could impact on habitats and species have been identified.

Measures have been included in the policies and objectives of the Plan that will ensure these impacts are avoided, additional measures are recommended to mitigate against adverse impacts on European sites.

As a result of the Appropriate Assessment and Strategic Environmental Assessment of the Plan, a number of policies and objectives have been developed and existing policies amended to strengthen the protection afforded to the Natura 2000 network of sites.

Amongst other things, these policies and objectives will ensure that appropriate assessments are carried out where development projects are likely to have significant effects on European designated sites. This will ensure that project level effects, which cannot be predicted at the Plan level, will be mitigated and impacts on protected sites through inappropriate development will be avoided.

Objectives and policies within the Draft Joint LAP 2020-2026 that will act to protect the Natura 2000 network include the following:

#### **Policies for Designated Sites**

##### **NH1 Natural Heritage**

It is the policy of Kilkenny and Carlow County Councils 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 development with potential to impact the integrity of the Natura 2000 network will be subject to Appropriate Assessment.

## **Objectives for Designated Sites, Nature Conservation and Biodiversity**

**NHO1.1:** To identify, protect, conserve and enhance wherever possible, wildlife habitats and species of local importance, not otherwise protected by legislation. Such habitats would include woodland, river, grassland areas and field boundaries (hedgerows, stone walls and ditches). Such features form part of a network of habitats and corridors, which allow wildlife to exist and flourish and contribute to compliance with Article 10 of the Habitats Directive.

**NHO 1.2:** Support the protection of biodiversity and ecological connectivity within the plan area including woodlands, trees, hedgerows, roadside verge vegetation, rivers, streams, natural springs, wetlands, stonewalls, fens, geological and geo-morphological systems, other landscape features and associated wildlife, where these form part of the ecological network. Seek to retain and incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive:

- a) Seek to retain and incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors and stepping stones.
- b) Protect and enhance the water quality and ecology of the River Barrow, in the plan area and their function as ecological corridors, by maintaining the existing banks and channel.
- c) Maintain and enhance biodiversity through the appropriate planting of native trees, shrubs and hedgerows indigenous to the area and of Irish provenance in public and private areas and in new developments.
- d) Seek to prevent inappropriate development along the banks of the river which would negatively impact on the ecological quality and biodiversity of the waters and ecological corridor.
- e) Seek to prevent the introduction of imported ash trees/plants or other such species into the plan area in line with the Plant Health Directive and any updated legislation.
- f) In order to protect light sensitive species such as crayfish, lighting fixtures should provide only the amount of light necessary for personal safety and should be designed so as to avoid creating glare or emitting light above a horizontal plane

**NHO1.3:** To ensure the protection of water quality due to the implementation of this Draft Joint LAP.

**NHO1.4:** To limit the removal of vegetation and/or alteration of bank characteristics by reserving land along the river bank for ecological corridors and maintain them free from inappropriate development and discourage culverting or realignment. The Planning Authorities shall consult with Inland Fisheries Ireland and other statutory bodies as required by the planning regulations in respect of this and shall have regard to their comments in the making of any planning decision.

### **Objectives for Landscape Character**

**SRVO1.1:** To protect the visual amenity and character of scenic routes and views in Graiguenamanagh-Tinnahinch and its hinterland as identified in the Kilkenny and Carlow County Development Plans.

**SRVO1.2:** To require a Visual Impact Assessment of proposals for development that may impact the special character and visual amenity of scenic routes and views as part of the planning application process. Prohibit development that will block or interfere with a significant view or prospect. Where it is considered that a development may impact on views or prospects, have regard to the significance of any such impact and any appropriate mitigation measures that should be incorporated.

**SRVO1.3:** Protect the landscape character in the plan area included in the Landscape Character Assessment for County Kilkenny and Carlow. Ensure that new developments are responsive to the high and special sensitivity landscapes within the plan area, visually vulnerable areas, elevated areas or locally important townscape contexts.

### **5.3 Measures to Protect Water Quality**

Section 3 of this assessment identified that impacts on water quality to the River Barrow and River Nore SAC have potential to arise through, discharges of wastewater, and possible discharges of sediment and other pollutants from future development and associated works.

In addition, any newly proposed or upgraded wastewater treatment plants should fully comply with all Urban Waste Water Regulations requirements 2001 – 2004, and should furthermore comply with all wastewater discharge authorisation requirements as per 2007 Regulations and Urban Wastewater Regulations 2001.

As stated in the Plan, the Waste Water Treatment Plant (WWTP) that services the town has sufficient capacity to treat wastewater produced by the existing development in the town as well as the proposed residential and commercial development allowed for by the Plan. The Plan also provides for the permitting of new development only where adequate and appropriate waste water infrastructure has been provided.

Policies and objectives within the Plan that will act to protect the water quality and quantity of River Barrow and River Nore SAC against the potential impacts identified include the following:

#### **Objectives in relation to Water Supply and Wastewater**

**INFO1.1:** To work with Irish Water to protect, manage and optimise water services infrastructure in Graiguenamanagh-Tinnahinch

**INFO2.1:** To carry out surface water infrastructure improvement works as required, subject to relevant environmental assessments.

**INFO2.2:** To maintain, improve and enhance, where possible, the environmental and ecological quality of surface waters and groundwater in Graiguenamanagh-Tinnahinch in accordance with the South Eastern River Basin District River Basin Management Plan and in conjunction with the EPA.

### **Objectives in relation to Flood Risk and Protection**

**INFO3.1:** To support and co-operate with the OPW and other stakeholders in delivering Graiguenamanagh-Tinnahinch Flood Relief Scheme under the South Eastern CFRAM Programme, whilst ensuring heritage considerations inform the design of proposed works and to ensure development maximises the protection of the integrity of the historical settlement.

**INFO3.2:** To manage flood risk in Graiguenamanagh-Tinnahinch in accordance with the requirements of the Planning System and Flood Risk Management Guidelines for Planning Authorities, DECLG and OPW (2009) and Circular PL02/2014 (August 2014).

**INFO3.3:** To 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 being proposed.

**INFO3.4:** To require the preparation of Drainage Impact Assessments, in line with the SFRA for this Draft Joint LAP, for all development proposals within the plan area.

Table 5.1 Mitigation Measures for LAP Objective		
Objectives	Mitigation Measures	Effect of the Mitigation Measures
<p><b>VSO1.1:</b> To identify vacant sites in the settlement for regeneration and housing and establish and maintain a register of vacant sites (entitled the vacant sites register) in the plan area for the purpose of the Vacant Site Levy (Urban Regeneration and Housing Act 2015).</p> <p><b>TCO1.1:</b> To support the delivery of projects for town centre regeneration which comply with the provisions of the relevant CDP and this Joint LAP submitted as funding applications to the Rural Regeneration and Development Fund.</p> <p><b>COM1.2:</b> To support and facilitate the refurbishment of the existing Parish Hall in Graiguenamanagh during the Plan period.</p> <p><b>COM1.3:</b> To support and facilitate the refurbishment and expansion of the existing library facility in Graiguenamanagh during the Plan period.</p> <p><b>CPO1.4:</b> To provide for the development of parking facilities for car and coach at the Turf Market area, adjacent to the town centre of Graiguenamanagh.</p> <p><b>SO1:</b> To provide for the proportionate growth of Graiguenamanagh to achieve a target of 1.5% of the County Kilkenny’s population over the lifetime of the Plan and Tinnahinch to maintain at a minimum 0.80% of County Carlow’s population allocation in accordance with the respective County Development Plan Settlement Strategies and any reviews thereto.</p> <p><b>CSO1.1:</b> To support and facilitate development on zoned lands at appropriate locations and deliver at least 30% of all new homes within the existing built-up footprints in Graiguenamanagh and Tinnahinch to</p>	<ul style="list-style-type: none"> <li>• Identified vacant sites will be developed or redeveloped in a manner that is sensitive to the natural and built heritage of Graiguenamanagh-Tinnahinch LAP area</li> <li>• Wastewater, drainage and drinking water infrastructure must be in place prior to development.</li> <li>• Contractors appointed to undertake any construction works within the town centre, areas in close proximity to the Duiske River and River Barrow or where there is an ecological connection to the river will be informed of the sensitivities of the Duiske River and River Barrow and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works.</li> <li>• Measures to protect the environment will be adopted during construction (and operation as appropriate) to avoid adverse effects to the integrity of Natura 2000 sites. Examples of such measures are set out in guidance such as, but not limited to: <ul style="list-style-type: none"> <li>○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 2016)’ and</li> <li>○ <i>Environmental Good Practice on Site Guide</i> (CIRIA, 2015)</li> </ul> </li> <li>• If it is proposed to abstract water from the Duiske River or River Barrow or where drawdown from groundwater abstraction may affect the</li> </ul>	<p>If the zoning classification of the LAP and mitigation measures proposed are implemented fully it is considered that adverse effects on the integrity of the SAC and SPA can be avoided.</p>

<p>satisfy the housing needs of the settlement over the period of the Plan.</p>	<p>hydrological regime of the river and the features of interest of the SAC a suitably qualified hydrogeologist will be appointed to assess the zone of influence of the abstraction.</p>	
<p><b>RDO1.1:</b> To ensure that sufficient zoned land is available at appropriate locations in Graiguenamanagh-Tinnahinch to satisfy the housing needs of the settlement over the period of the plan.</p>	<ul style="list-style-type: none"> <li>• Lighting of buildings and features along the river channel will be avoided wherever possible. If lighting is required within the riparian zone or along the riverbank it should be designed in consultation with an appropriately qualified ecologist to avoid adverse effects on species such as otter.</li> </ul>	
<p><b>CSO1.2:</b> To provide for serviced sites with appropriate infrastructure in accordance with Objective 18(b) of the National Planning Framework (ca.3.52ha of land has been identified in the settlement to facilitate such a proposal).</p>	<ul style="list-style-type: none"> <li>• Regular maintenance of the towns drainage system to prevent build-up of silt or other blockages that could hinder the correct functioning of such a system and cause uncontrolled release of polluted surface water to the Duiske River and River Barrow.</li> </ul>	
<p><b>RDO1.4:</b> To facilitate the development of low density serviced sites on lands to the east of Graiguenamanagh Ring Road, as an alternative to rural housing and to stimulate future growth within the town.</p>		
<p><b>VSO1.2:</b> To promote the sustainable development of vacant residential and regeneration sites in Graiguenamanagh-Tinnahinch through the application of the Derelict Sites Act 1990 and Urban Regeneration and Housing Act 2015, Vacant Site Levy, on lands zoned 'Mixed Use' for Regeneration and 'New Residential', 'Low Density Residential' and 'Existing Residential' for housing.</p>		
<p><b>EDO1.1:</b> To ensure that there is a sufficient supply of appropriately zoned lands at suitable locations in the settlement to accommodate and promote a wide range of enterprise and employment development types.</p>		
<p><b>TCO1.2:</b> To encourage and facilitate the re-use and regeneration of vacant or underused buildings for appropriate town centre uses through incentives such as Small Business Vacant Premises Scheme .</p>		

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<p><b>REO1.1:</b> To promote the town centre for retail development and restrict further significant retail development (convenience and comparison) outside of the lands zoned 'Mixed Use' within the Plan.</p>		
<p><b>CSO1.4:</b> To manage the provision of one-off housing on lands zoned as 'Agriculture'. Limited one-off housing will be permitted in accordance with the policy set out under Section 6.4 of Kilkenny County Development Plan 2014-2020 and Section 2.7 of Carlow County Development Plan 2015-2021 or as maybe amended in any subsequent reviews.</p>	<ul style="list-style-type: none"> <li>• One-off houses or other developments in areas zoned as agriculture should have wastewater treatment systems in place that comply with required EPA standards to prevent any effects to surface or groundwater.</li> <li>• Wastewater, drainage and drinking water infrastructure must be in place prior to development</li> <li>• Measures to protect the environment will be adopted during construction to avoid adverse effects to the integrity of Natura 2000 sites. Examples of such measures are set out in guidance such as, but not limited to: <ul style="list-style-type: none"> <li>○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 2016)' and</li> <li>○ <i>Environmental Good Practice on Site Guide</i> (CIRIA, 2015)</li> </ul> </li> <li>• If it is proposed to abstract water from the river or where drawdown from groundwater abstraction may affect the hydrological regime of the river and the features of interest of the SAC a suitably qualified hydrogeologist will be appointed to assess the zone of influence of the abstraction.</li> </ul>	<p>If the zoning classification of the LAP and mitigation measures proposed are implemented fully it is considered that adverse effects on the integrity of the SAC and SPA can be avoided.</p>
<p><b>TO2.2:</b> To support the implementation of the Graiguenamanagh-Tinnahinch Tourism and Recreational Project Concept Study, and the development of outdoor leisure activities and a River Park and associated uses on lands that are designated</p>	<ul style="list-style-type: none"> <li>• The development of outdoor leisure activities on lands designated as open space must be carried out with sensitivities of the SAC and SPA in mind</li> </ul>	<p>If the zoning classification of the LAP and mitigation measures proposed are implemented fully it is considered that adverse effects on</p>

<p>as open space, subject to the protection of landscape character and natural heritage (Natura 2000 conservation objectives) and inclusion of construction management plans.</p>	<ul style="list-style-type: none"> <li>• The design of the proposed bridge infrastructure must be prepared with the sensitivities of the SAC and SPA incorporated i.e. the bridge design must consider the sensitivities of the receiving environment in order to ensure that it will not adversely affect the integrity of the SAC and / or SPA</li> <li>• The design or layout of any access tracks or paths linking these areas or opening up new areas in close proximity to the Duiske River must fully consider any effects during construction as well as during operation (use).</li> <li>• The proposed works will only be carried out in low flow conditions during the Summer months</li> <li>• Consultation will be undertaken with IFI and NPWS to agree a method for sediment removal</li> <li>• The contractor appointed to carry out the works will be informed of the sensitivities of the Duiske River and River Barrow and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works.</li> <li>• Silt removal will be limited to just above the low flow water level.</li> <li>• Appropriate mitigation to prevent disturbance of species and release of suspended solids will be developed and incorporated into the plan of works.</li> <li>• Measures to protect the environment will be adopted during construction to avoid adverse effects to the integrity of Natura 2000 sites. Examples of such measures are set out in guidance such as, but not limited to:</li> </ul>	<p>the integrity of the SAC and SPA can be avoided.</p>
<p><b>MTO1.8:</b> To undertake a mobility management plan that will consider the feasibility of all options for improving pedestrian and cyclist mobility between Graiguenamagh and Tinnahinch and to implement the recommendations of the plan.</p>		
<p><b>MPO1.1:</b> To prepare a masterplan for the lands within the ownership of 'The Hub' Activity Centre, Graiguenamanagh in co-operation with relevant stakeholders, and to actively secure the implementation of these plans and the achievement of specific objectives.</p>		
<p><b>MPO1.2:</b> To require the preparation of a masterplan for the lands identified 'Masterplan 2' along the River Barrow, Tinnahinch and to actively secure the implementation of these plans and the achievement of specific objectives.</p>		
<p><b>TO2.1:</b> To support the implementation of the Graiguenamanagh-Tinnahinch Tourism and Recreational Project Concept Study, and the development of tourism infrastructure (in particular at The Hub), overnight accommodation (in particular Brandondale House), attractions and facilities at appropriate locations subject to the appropriate protection of architectural heritage and natural amenities.</p>		
<p><b>MTO1.9:</b> Dependent upon the success of other public realm projects the Draft LAP will provide for a high-quality shared surface area along 'The Quay'</p>		

<p>Graiguenamanagh and Tinnahinch to further facilitate recreational use of the River Barrow.</p>	<ul style="list-style-type: none"> <li>○ Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters (IFI, 2016)' and</li> <li>○ Environmental Good Practice on Site Guide (CIRIA, 2015)</li> <li>● Regular maintenance of the town drainage system must be carried out to prevent build-up of silt or other blockages that could hinder the correct functioning of such a system and cause uncontrolled release of polluted surface water to the Duiske River and River Barrow.</li> </ul> <p>Any developments in or directly adjacent to the River Barrow River / Nore SAC must undertake dedicated surveys focused on the identification of invasive species. If any invasive species is identified, then a targeted invasive species management plan must be designed and implemented.</p> <p>All proposed development in or directly adjacent to the SAC boundary that introduce a risk of increased leisure fishing pressures, must develop detailed control measures to ensure there are no significant negative implication to the aquatic populations of the River Nore with specific reference to the qualifying interest species and conservation objectives of the River Barrow / River Nore SAC.</p>	
<p><b>OSO2.1:</b> To support and facilitate the provision of open spaces with ecological and recreational corridors to aid the movement of biodiversity and people, subject to appropriate environmental assessment.</p>	<p>The design of linkages paths and cycleways must be prepared with the sensitivities of the SAC and SPA in mind. Any such proposal must consider the potential for increased disturbance of species such as otter due to any increase of human activities along the riverbank. Paths and cycleways should be prepared with input from ecologists and planners to ensure there is no risk of adverse effect on the SAC and SPA.</p>	<p>If the zoning classification of the LAP and mitigation measures proposed are implemented fully it is considered that adverse effects on the integrity of the SAC and SPA can be avoided.</p>
<p><b>OSO2.2:</b> To promote a network of paths and cycle tracks (Refer to Map 1) to enhance the use of the strategic open spaces in the town, while ensuring that</p>		

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<p>the design and operation of the routes responds to the ecological protection needs of each site.</p>	<p>Any developments in or directly adjacent to the River Barrow River / Nore SAC must undertake dedicated surveys focused on the identification of invasive species. If any invasive species is identified, then a targeted invasive species management plan must be designed and implemented.</p>	
<p><b>ACCE1.3:</b> To support the development of linkages between historical sites within and around Graiguenamanagh-Tinnahinch and the amenity sites in its hinterland</p>	<p>The design of linkages between historical sites within and around Graiguenamanagh-Tinnahinch must be prepared with the sensitivities of the SAC and SPA in mind. Any such proposal must consider the potential for increased disturbance of species such as otter due to any increase of human activities along the riverbank.</p>	<p>If the zoning classification of the LAP and mitigation measures proposed are implemented fully it is considered that adverse effects on the integrity of the SAC and SPA can be avoided</p>
<p><b>TO2.5:</b> To support the development of linkages between historical sites within and around Graiguenamanagh-Tinnahinch including pedestrian access to St. Michaels Well in Tinnahinch.</p>		
<p><b>ACCE1.1:</b> To support, where appropriate, the continued growth of the craft and creative economy in Graiguenamanagh-Tinnahinch.</p>	<p>The provision of additional cultural facilities must consider the sensitivities of the SAC and SPA and the potential for increased disturbance of species such as otter due to any increase of human activities along the riverbank.</p>	<p>If the zoning classification of the LAP and mitigation measures proposed are implemented fully it is considered that adverse effects on the integrity of the SAC and SPA can be avoided</p>
<p><b>INFO1.1:</b> To work with Irish Water to protect, manage and optimise water services infrastructure in Graiguenamanagh-Tinnahinch.</p>	<ul style="list-style-type: none"> <li>• Contractors appointed to undertake any construction works within the town centre, areas in close proximity to the Duiske River and River Barrow or where there is an ecological connection to the river will be informed of the sensitivities of the Duiske River and River Barrow and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works.</li> <li>• Measures to protect the environment will be adopted during construction (and operation as</li> </ul>	<p>If the zoning classification of the LAP and mitigation measures proposed are implemented fully it is considered that adverse effects on the integrity of the SAC and SPA can be avoided</p>
<p><b>SO9:</b> To phase future growth in line with the capacity of supporting physical infrastructure and to ensure that it occurs in accordance with proper planning and sustainable development.</p>		
<p><b>SO2:</b> To promote and support the economic development of Graiguenamanagh-Tinnahinch that capitalises on its location on the River Barrow, with the heritage and tourism assets being identified as key economic strengths for the settlements.</p>		

**SO4:** To support the creation and enhancement of a network of pedestrian walkways, footbridges and open spaces connecting the River Barrow and other recreational and tourist attractions within the settlement.

appropriate) to avoid adverse effects to the integrity of Natura 2000 sites. Examples of such measures are set out in guidance such as, but not limited to:

- *Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters (IFI, 2016)* and
- *Environmental Good Practice on Site Guide (CIRIA, 2015)*
- If it is proposed to abstract water from the river or where drawdown from groundwater abstraction may affect the hydrological regime of the river and the features of interest of the SAC a suitably qualified hydrogeologist will be appointed to assess the zone of influence of the abstraction.
- Regular maintenance of the town drainage system must be carried out to prevent build-up of silt or other blockages that could hinder the correct functioning of such a system and cause uncontrolled release of polluted surface water to the Duiske River and River Barrow.

All proposed development in or directly adjacent to the SAC boundary that introduce a risk of increased leisure fishing pressures, must develop detailed control measures to ensure there are no significant negative implication to the aquatic populations of the River Nore with specific reference to the qualifying interest species and conservation objectives of the River Barrow / River Nore SAC.

Any developments in or directly adjacent to the River Barrow/River Nore SAC must undertake dedicated surveys focused on the identification of invasive species. If any invasive species is identified, then a targeted invasive

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	species management plan must be designed and implemented.	
<p><b>INFO2.1:</b> To carry out surface water infrastructure improvement works as required, subject to relevant environmental assessments.</p>	<ul style="list-style-type: none"> <li>• Contractors appointed to undertake any construction works within the town centre, areas in close proximity to the Duiske River and River Barrow or where there is an ecological connection to the river will be informed of the sensitivities of the Duiske River and River Barrow and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works.</li> <li>• Design and construction of attenuation measures shall be in line with current good practice. Guidance such as that produced by CIRIA shall be used to inform the development of such measures. Guidance to be considered, but not limited to, includes: <ul style="list-style-type: none"> <li>○ <i>Drainage of development sites - a guide (X108)</i></li> <li>○ <i>The SuDs Manual (CIRIA, 2015)</i></li> </ul> </li> <li>• Measures to protect the environment will be adopted during construction (and operation as appropriate) to avoid adverse effects to the integrity of Natura 2000 sites. Examples of such measures are set out in guidance such as, but not limited to: <ul style="list-style-type: none"> <li>○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters (IFI, 2016)</i> and</li> <li>○ <i>Environmental Good Practice on Site Guide (CIRIA, 2015)</i></li> </ul> </li> </ul>	<p>If the zoning classification of the LAP and mitigation measures proposed are implemented fully it is considered that adverse effects on the integrity of the SAC and SPA can be avoided</p>
<p><b>MT01.2:</b> To undertake a Mobility Management Plan for Graiguenamanagh/Tinnahinch which will include</p>		<p>If the zoning classification of the LAP and mitigation measures proposed</p>

<p>investigation of the appropriate interventions for the provision of upgrades to footpaths and public lighting throughout the town. Particular consideration shall be given to the following locations (Map 1):</p> <p>a) Approaches on both sides to and across the George Semple Bridge</p> <p>b) The Quay Graiguenamanagh and Tinnahinch</p>	<ul style="list-style-type: none"> <li>• The design of the pedestrian element to the George Semple Bridge must be prepared with the sensitivities of the SAC and SPA incorporated i.e. the bridge design and associated pedestrian / cycle access must consider the sensitivities of the receiving environment in order to ensure that it will not adversely affect the integrity of the SAC and / or SPA</li> <li>• Consultation with NPWS and IFI should be carried out as early as possible during the design stage.</li> <li>• Measures to protect the environment will be incorporated into any project or plan that has potential to adversely affect the integrity of a Natura 2000 sites. Examples of such measures are set out in guidance such as, but not limited to:             <ul style="list-style-type: none"> <li>○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters (IFI, 2016)</i> and</li> <li>○ <i>Environmental Good Practice on Site Guide (CIRIA, 2015)</i></li> </ul> </li> </ul>	<p>are implemented fully it is considered that adverse effects on the integrity of the SAC and SPA can be avoided</p>
<p><b>MTO1.4:</b> To provide an enhanced pedestrian and cycle network in Graiguenamanagh-Tinnahinch including the provision of footpath improvements to ensure ease of access to public transport, the town centre, heritage sites and other recreational / community facilities.</p>		
<p><b>MTO1.5:</b> To require the co-location of pedestrian and cycle routes on all new infrastructure connecting key destinations within the settlement, particularly between the schools, community centre and heritage sites such as Duiske Abbey etc.</p>		
<p><b>TCO1.4:</b> To facilitate enhancement and improvement of the physical fabric and environment of the town centre through public realm initiatives including footpath and public lighting improvements to assist in making the town centre a more pedestrian friendly place.</p>		
<p><b>TCO1.5:</b> To investigate traffic managements options for strengthening the pedestrian links across the River Barrow to better integrate the town centres of Graiguenamanagh and Tinnahinch and maximise access to local shops, schools and other amenities.</p>		
<p><b>TO2.3:</b> To support the promotion of strategic tourist sites, the sensitive restoration/conservation of heritage buildings and sites including Tinnahinch Castle and operate flexibly with regard to the use of</p>	<p>Buildings will be developed or redeveloped in a manner that is sensitive to the natural and built heritage of Graiguenamanagh-Tinnahinch LAP area</p>	<p>The mitigation measures proposed, if fully and correctly implemented, are considered sufficient to avoid</p>

converted buildings to facilitate heritage tourism/social enterprise.		adverse effects on the integrity of the SAC and SPA
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**Table 5.2 Development Management Objectives Mitigation Measures**

<b>Development Management Objectives</b>	<b>Mitigation Measures</b>	<b>Effect of the Mitigation Measures</b>
<b>CSO1.3:</b> To implement the zoning objectives set out in Appendix A of this Draft Joint LAP	<ul style="list-style-type: none"> <li>• Adhere to land use zoning objectives</li> <li>• Projects arising from this objective will still be required to be assessed under Article 6 of the Habitats Directive</li> </ul>	If the zoning classification of the LAP and mitigation measures proposed are implemented fully it is considered that adverse effects on the integrity of the SAC and SPA can be avoided.
<b>RDO1.2:</b> To require that all new residential development has regard to the character of the settlement(s), is of a high standard and provides for a sustainable mix of house types, sizes and tenures.	<ul style="list-style-type: none"> <li>• Identified vacant sites will be developed or redeveloped in a manner that is sensitive to the natural and built heritage of Graiguenamanagh-Tinnahinch LAP area</li> <li>• Wastewater, drainage and drinking water infrastructure must be in place prior to development.</li> <li>• Contractors appointed to undertake any construction works within the town centre, areas in close proximity to the Duiske River or River Barrow or where there is an ecological connection to the river will be informed of the sensitivities of the Duiske River and River Barrow and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works.</li> <li>• Mitigation measures to prevent contaminated soil or water reaching the Duiske River or River Barrow should be incorporated into the design.</li> </ul>	The mitigation measures if proposed, if fully and correctly implanted, are considered sufficient to avoid adverse effects on the integrity of the SAC and SPA

	<ul style="list-style-type: none"><li>• If it is proposed to abstract water from the river or where drawdown from groundwater abstraction may affect the hydrological regime of the river and the features of interest of the SAC a suitably qualified hydrogeologist will be appointed to assess the zone of influence of the abstraction.</li><li>• Lighting of buildings and features along the river channel will be avoided wherever possible. If lighting is required within the riparian zone or along the riverbank it should be designed in consultation with an appropriately qualified ecologist to avoid adverse effects on species such as otter.</li><li>• Regular maintenance of the towns drainage system to prevent build-up of silt or other blockages that could hinder the correct functioning of such a system and cause uncontrolled release of polluted surface water to the Duiske River.</li><li>• Measures to protect the environment will be incorporated into any project or plan that has potential to adversely affect the integrity of a Natura 2000 sites. Examples of such measures are set out in guidance such as, but not limited to:<ul style="list-style-type: none"><li>○ Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters (IFI, 2016)' and</li></ul></li></ul>	
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<p><b>TO2.4:</b> To facilitate tourism activities such as waterways activities, eco-tourism, niche retailing, food markets, local and other craft type activities so as to diversify the tourism product in Graiguenamanagh-Tinnahinch, subject to relevant environmental assessments.</p>	<ul style="list-style-type: none"> <li>○ Environmental Good Practice on Site Guide (CIRIA, 2015)</li> <li>● Wastewater, drainage and drinking water infrastructure must be in place prior to development.</li> <li>● Contractors appointed to undertake any construction works within the town centre, areas in close proximity to the Duiske River or River Barrow or where there is an ecological connection to the river will be informed of the sensitivities of the Duiske River and River Barrow and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works.</li> <li>● Measures to protect the environment will be incorporated into any project or plan that has potential to adversely affect the integrity of a Natura 2000 sites. Examples of such measures are set out in guidance such as, but not limited to:             <ul style="list-style-type: none"> <li>○ Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters (IFI, 2016)' and</li> <li>○ Environmental Good Practice on Site Guide (CIRIA, 2015)</li> </ul> </li> <li>● If it is proposed to abstract water from the river or where drawdown from groundwater abstraction may affect the hydrological regime of the river and the features of interest of the SAC a suitably</li> </ul>	<p>The mitigation measures if proposed, if fully and correctly implanted, are considered sufficient to avoid adverse effects on the integrity of the SAC and SPA</p>
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	<p>qualified hydrogeologist will be appointed to assess the zone of influence of the abstraction.</p> <ul style="list-style-type: none"> <li>• Regular maintenance of the towns drainage system to prevent build-up of silt or other blockages that could hinder the correct functioning of such a system and cause uncontrolled release of polluted surface water to the Duiske River.</li> </ul> <p>Any developments in or directly adjacent to the River Barrow River / Nore SAC must undertake dedicated surveys focused on the identification of invasive species. If any invasive species is identified, then a targeted invasive species management plan must be designed and implemented.</p> <p>All proposed development in or directly adjacent to the SAC boundary that introduce a risk of increased leisure fishing pressures, must develop detailed control measures to ensure there are no significant negative implication to the aquatic populations of the River Nore with specific reference to the qualifying interest species and conservation objectives of the River Barrow / River Nore SAC.</p>	
<p><b>TCO1.3:</b> To improve the accessibility of the town centre with particular emphasis on creating an environment that is accessible to pedestrians and cyclists through improved parking and pedestrian facilities.</p>	<p>The design of pedestrian/cycle routes must be prepared with the sensitivities of the SAC and SPA in mind. Any such proposal must consider the potential for increased disturbance of species such as otter due to any increase of human activities along the riverbank. Pedestrian/cycle routes should be prepared with input from</p>	<p>The mitigation measures if proposed, if fully and correctly implanted, are considered sufficient to avoid adverse effects on the integrity of the SAC and SPA</p>
<p><b>MTO1.3:</b> To improve the pedestrian and cyclist environment and promote ease of movement</p>		

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<p>within the settlement to include facilities for older people. Direct, attractive, well-lit and overlooked linkages between community, education, retail and recreational facilities will encourage the residents and visitors to the settlement to walk rather than using unsustainable modes of transport.</p>	<p>ecologists and planners to ensure there is no risk of adverse effect on the integrity of the SAC and SPA.</p>	
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## **6 Conclusion**

Stage 1 Screening and Stage 2 Appropriate Assessment of the Graiguenamanagh-Tinnahinch Draft Joint Local Area Plan has been carried out. Implementation of the Plan has the potential to result in effects to the integrity of the European sites that form part of the Natura 2000 network if unmitigated.

The risks to the safeguarding and integrity of the qualifying interests and conservation objectives of the European Sites have been addressed by the inclusion of mitigation measures that will prioritise the avoidance of impacts in the first place and mitigate impacts where these cannot be avoided. In addition, all lower level plans and projects arising through the implementation of the Plan will themselves be subject to Appropriate Assessment when further details of design and location are known.

Having incorporated mitigation measures, it is considered that the Plan will not have a significant adverse effect on the integrity of any European Site within the Natura 2000 network.<sup>4</sup>

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<sup>4</sup>Except as provided for in Section 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.







