

Appropriate Assessment
Screening Report &
Natura Impact Report

CALLAN LOCAL AREA PLAN 2019

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INTRODUCTION

- 1.1 SLR Consulting Ireland (SLR) was commissioned by Kilkenny County Council in May 2018 to prepare an Appropriate Assessment (AA) screening report, and if necessary an Natura Impact Report (NIR), for Callan Local Area Plan (LAP).

General Description of the Plan Area

- 1.2 Callan is one of the four district towns in Co. Kilkenny, located to the south-west of county, within close proximity to Carrick on Suir, Clonmel and Waterford City. The town is located 16 km south-west of Kilkenny City, 24 km from Carrick on Suir, 27 km from Clonmel and 56 km from Waterford City. Callan is well connected by road, with the N76 traversing on the west side of the town centre making it accessible to Kilkenny City, and by extension with the M9 to Dublin.
- 1.3 Callan is an historic town and its characteristic medieval core developed during the beginning of 13th century. This historic core encompasses Mill Street, Upper and Lower Bridge Streets, Coyne Street, Mill Street and Clodine Lane and is designated as an Architectural Conservation Area. The streets are narrow and winding and centre primarily on Upper and Lower Bridge Street which contain a variety of traditional shop fronts. There is a distinct cross pattern to the street layout at the top of Bridge Street Upper, where the four most significant streets converge on one central point. This point is considered by many to be the centre of Callan.
- 1.4 The King's River traverses the town from east-west and two key public spaces along the shore of this river showcase some particularly fine features of architectural and cultural heritage; an Anglo-Norman motte and the Augustine Abbey.
- 1.5 A significant extension to the town was constructed in the 19th Century south of the historic core with more generous dimensions, a contrast to the narrow streets close to the river. This houses a group of landmark public administration buildings and represents the civic quarter of Callan, with larger plots and classical style facades.

Brief Plan Description

- 1.6 The following vision for Callan 2025 is extracted from the Callan LAP 2019-2025 and provides a broad summary description of the plan.

“By 2025, Callan will be a vibrant low carbon district town approaching a population of 3,000 people supported by a consolidated town centre and employment centred on retail, creative industries, arts, tourism and community service sectors as well as a strong local industrial sector. Enhanced north – south connections for pedestrians and cyclists will be provided. Focusing on Bridge Street, these measures will be combined with a range of traffic management proposals including additional off street parking which will improve vitality of the town centre and Bridge Street in particular as well as supporting healthy living. Historic landmarks and a series of improved public spaces will provide a focus for new activities. A masterplanning approach to design will create high quality sustainable low carbon and adaptable residential areas that are well integrated with existing neighbourhoods. All new development will respect and enhance the character and quality of the existing built and natural environment in Callan.”

Aims of the Report

- 1.7 The aim of this report is to provide supporting information to assist the competent authority, in this case Kilkenny County Council, to carry out screening for likely significant effects and, if required, to determine if the proposed Callan Local Area Plan will adversely affect the integrity of Natura 2000 sites within the potential zone of influence of the plan.

Objectives of Appropriate Assessment

- 1.8 The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures to be addressed in the AA process as follows:
- Firstly, a plan / project should aim to avoid any negative impacts on Natura 2000 sites by identifying possible impacts early and designing the project / plan to avoid such impacts.
 - Secondly, mitigation measures should be applied during the AA process to the point where no adverse impacts on the site(s) remain.
 - Thirdly a plan / project may have to undergo an assessment of alternative solutions. Under this stage of the assessment, compensatory measures are required for any remaining adverse effects, but they are permitted only if (a) there are no alternative solutions and (b) the plan / project is required for imperative reasons of overriding public interest (the 'IROPI test'). European case law highlights that consideration must be given to alternatives outside the plan / project boundary area in carrying out the IROPI test.

Evidence of Technical Competence and Experience

- 1.9 The appropriate assessment screening report and Natura Impact Report for Callan LAP 2019 – 2025 was prepared by Elaine Dromey MCIEEM. The technical review of this report was carried out by Aislinn O'Brien.
- 1.10 Elaine Dromey holds a BSc in Earth Science from University College Cork and an MSc in Vegetation Survey and Assessment from the University of Reading, UK. She is a full member of the Chartered Institute of Ecology and Environmental Management. Elaine has prepared AA screening reports and Natura Impact Statements (NIS) for a range of different projects including large wind farms, single turbine developments, power lines, pit developments, anaerobic digesters, industrial development and single small developments. Elaine was the lead ecologist responsible for the preparation of AA reports on a number of feasibility studies and masterplans including the Bull Island feasibility and Masterplan (2014) and Marina Park Masterplan (2012). Elaine has also prepared AA screening reports / Natura Impact Reports (NIR) for County Development Plans (CDP) and Local Area Plans (LAP) such as Ardaun LAP (2017).

RELEVANT LEGISLATION AND POLICY

European Nature Directives (Habitats and Birds)

- 1.11 The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) forms the basis for the designation of Special Areas of Conservation. Similarly, Special Protection Areas are classified under the Birds Directive (Council Directive 2009/147/EEC on the Conservation of Wild Birds). Collectively, Special Areas of Conservation (SAC) and Special Protection Areas (SPA) are referred to as the Natura 2000 network. In general terms, they are considered to be of exceptional importance for rare, endangered or vulnerable habitats and species within the European Community.
- 1.12 Under Article 6(3) of the Habitats Directive an Appropriate Assessment must be undertaken for any plan or project that is likely to have a significant effect on the conservation objectives of a Natura 2000 site. An Appropriate Assessment is an evaluation of the potential impacts of a plan or project on the conservation objectives of a Natura 2000 site¹, and the development, where necessary, of mitigation or avoidance measures to preclude negative effects.
- 1.13 Article 6, paragraph 3 of the EC Habitats Directive 92/43/EEC (“the Habitats Directive”) states that:
- “Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In the 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”.*

EC (Birds and Natural Habitats) Regulations 2011

- 1.14 Part 5 of the EC (Birds and Natural Habitats) Regulations 2011 sets out the circumstances under which an ‘appropriate assessment’ is required. Section 42(1) requires that ‘a screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site.’
- 1.15 Section 42(2) expands on this, stipulating that a public authority must carry out a screening for Appropriate Assessment before consent for a plan or project is given, or a decision to undertake or adopt a plan or project is taken. To assist a public authority to discharge its duty in this respect, Section 42(3)(a) gives them the authority to direct a third party to provide a Natura Impact Statement and Section 42(3)(b) allows them request any additional information that is considered necessary for the purposes of undertaking a screening. A Natura Impact Statement has to include

¹ Also referred to as European Sites in Irish legislation such as European Communities (Birds and Natural Habitats) Regulations 2011

such information or data as the public authority considers necessary to enable it to ascertain if the plan or project will affect the integrity of a Natura 2000 site. Where appropriate, a Natura Impact Statement also needs to include:

- I. the alternative solutions that have been considered and the reasons why they have not been adopted,
- II. the imperative reasons of overriding public interest that are being relied upon to indicate that the plan or project should proceed notwithstanding that it may adversely affect the integrity of a European site,
- III. the compensatory measures that are being proposed.

1.16 Section 42(6) requires that *'the public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site'*.

Ireland 2040 – The National Planning Framework (2018)

1.17 The National Planning Framework (NPF) sets the overarching context for planning policy in Ireland and has identified the requirement for growth of approximately one million additional people in Ireland by 2040. This means planning for a substantial increase in the number of people and jobs on the island of Ireland.

1.18 For southern region assembly area which includes County Kilkenny this means:

- 340,000 - 380,000 additional people i.e. a population of almost 2 million.
- around 225,000 additional people in employment i.e. 880,000 (0.875m) in total.

1.19 Under the objective of **'Securing Compact and Sustainable Growth'**, the NPF states that the physical form of urban development in Ireland is one of our greatest national development challenges. It states that more than anything else, getting the physical form and location of future development right offers the best prospects for unlocking regional potential.

1.20 The strategy as set out in the NPF is 'compact development that focuses on reusing previously developed land. This requires focus on four key areas:

1. The 'liveability' or quality of life of urban places;
2. Making the continuous regeneration and development of existing built up areas as attractive and as viable as greenfield development;
3. Tackling legacies such as concentrations of disadvantage in central urban areas;
4. Linking regeneration and redevelopment initiatives to climate action.

Kilkenny County Development Plan 2014-2020

1.21 It is a strategic aim of the Kilkenny County Development Plan 2014-2020, to implement the provisions of the Regional Planning Guidelines and to target the growth of Kilkenny City, Ferrybank/Belview, the District Towns, the other settlements in the hierarchy and rural areas to advance sustainable development.

1.22 In terms of the settlement hierarchy, the Core Strategy set out in the County Development Plan identifies Callan as a district town. District towns are identified in the RPGs as containing a

population of between 1,500 and 5,000 in the 2006 census. The role for Callan as a district town is identified as follows:

In general, these District Towns have well developed services and community facilities and have the capacity to accommodate additional growth (subject to certain physical infrastructural investments).

1.23 The CDP states that 'In the promotion of development generally, the Local Authority will focus on opportunities for the redevelopment and renewal of areas in need of regeneration, whether urban or rural. Objective 3E of the CDP also states

To ensure that the District Towns will in so far as practical be self-sufficient incorporating employment activities, sufficient retail services and social and community facilities.

1.24 Population projections for the City & County as set out in the 2014-2020 plan have recently been superseded by the projections set out in the Implementation Roadmap for the National Planning Framework (Department of Housing, Planning and Local Government, July 2018). The Transitional Regional and County Population Projections to 2031 released under this roadmap identify an estimated population of 110,000 for County Kilkenny up to 2026.

1.25 In County Kilkenny, much of this growth is expected in Kilkenny City and Ferrybank however the County's District Towns, which include Callan, have the capacity to accommodate additional growth. Callan's share of this growth is based on the existing CDP provision which states that Callan will continue to accommodate 2.4% of the County Population allocation. In line with the projections for the South-East Region contained in the National Planning Framework, Kilkenny County is expected to grow to 110,000 by 2031. As the population in Callan now makes up 2.49% of the County population, in accordance with the county development plan, Callan will accommodate 2.5% of the County allocation.

METHODS

Desk Study

- 1.26 A desk study was carried out to collate information available on Natura 2000 sites near or connected to the Callan LAP area, Co. Kilkenny. Kilkenny County Council planning portal² was accessed for information on other planning applications within the Site and the immediate area (last accessed 30 October 2018). The National Parks and Wildlife Service (NPWS) website³ (last accessed 30 October 2018) was accessed for information on Natura 2000 sites.

Potential Zone of Influence

- 1.27 The 'zone of influence' for a project is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2018).
- 1.28 A distance of 15 km is currently recommended in the case of plans, as a potential zone of influence, and this distance is derived from UK guidance (Scott Wilson *et al*, 2006). This approach has been adopted for the Callan Local Area Plan as it is considered that it is more than adequate to address the potential effects of the LAP.

Screening Report

- 1.29 The approach to preparing the AA screening report is as follows:
- Identify Natura 2000 sites, within the potential zone of influence of the plan.
 - Identify the features of interest of the Natura 2000 sites and review their conservation objectives.
 - Review whether there is potential for the features of interest to be affected by the plan based on information such as the vulnerabilities of the Natura 2000 site, proximity to the Site and the strategies and objectives of the plan.
 - Consider the likelihood of potential impacts occurring based on the information collated and professional judgement.
 - Consider the likelihood of cumulative impacts arising from the plan in-combination with other plans and projects.
 - Identify the likelihood of significant effects on Natura 2000 sites occurring because of the plan.

Natura Impact Report

- 1.30 The approach to preparing the Natura Impact Report (NIR) is summarised as follows:
- Describe the elements of the plan that are likely to give rise to significant effects on the Natura 2000 Sites.
 - Set out the conservation objectives of the Natura 2000 sites.

² <http://gis.kilkennycoco.ie/website/kilkennymaps/>

³ <https://www.npws.ie/protected-sites>

- Describe how the plan will affect the key species and key habitats of the Natura 2000 sites.
- Describe how the integrity of Natura 2000 sites is likely to be affected by the plan.
- Describe what mitigation measures are to be introduced to avoid, reduce or remedy the adverse effects on the integrity of the Natura 2000 site.
- Consider findings and determine if potential for adverse effects on Natura 2000 sites remains after mitigation has been implemented.

1.31 The approach taken in preparing this document is based on standard methods and current good practice guidance, as listed in the references section of this report.

APPROPRIATE ASSESSMENT SCREENING

- 1.32 This section of the report identifies the potential zone of influence of the plan, provides information on the Natura 2000 sites within the potential zone of influence and sets out the potential impacts and likelihood of significant effects.

Identification of Potential Zone of Influence

- 1.33 The potential zone of influence adopted for the proposed Callan LAP is 15 km from the boundary of the plan area. Natura 2000 sites beyond this distance are considered to be sufficiently distant from the plan area and / or have no ecological connectivity with the plan area such that significant effects are not likely to occur as a result of the proposed LAP.
- 1.34 There are four Natura 2000 sites within 15 km of the LAP area; three Special Areas of Conservation (SAC) and one Special Protection Area (SPA). The four Natura 2000 sites are River Barrow and River Nore SAC 002162, River Nore SPA 004233, Hugginstown Fen 000404 and Lower River Suir 002137, and these are discussed further in the following section.

Natura 2000 Sites

- 1.35 There are four Natura 2000 sites within the 15 km zone of influence adopted for the LAP and these are individually described below. The description of each site has been prepared using the supporting information available on the NPWS website⁴.

River Barrow and River Nore SAC 002162

“This site consists of most of the freshwater stretches of the Barrow/Nore River catchments. The larger of the many tributaries include the Lerr, Fushoge, Mountain, Aughavaud, Owenass, Boherbaun and Stradbally Rivers of the Barrow and the Delour, Dinin, Erkina, Owveg, Munster, Arrigle and King's Rivers on the Nore. Both rivers rise in the Old Red Sandstone of the Slieve Bloom Mountains. They traverse limestone bedrock for a good proportion of their routes. A wide range of habitats associated with the rivers are included within the site, including substantial areas of woodland (deciduous, mixed), dry heath, wet grassland, swamp and marsh vegetation, salt marshes, a small dune system, biogenic reefs and intertidal sand and mud flats. Areas of improved grassland, arable land and coniferous plantations are included in the site for water quality reasons

*The site supports many Annexed habitats including the priority habitats of alluvial woodland and petrifying springs. Quality of habitat is generally good. The site also supports a number of Annex II animal species - *Salmo salar*, *Margaritifera margaritifera*, *M.m. durrovensis*, *Alosa fallax fallax*, *Austropotamobius pallipes*, *Petromyzon marinus*, *Lutra lutra*, *Lampetra fluviatilis* and *L. planeri*. Annex I Bird species include *Anser albifrons flavirostris*, *Falco peregrinus*, *Cygnus cygnus*, *Cygnus columbianus bewickii*, *Limosa lapponica*, *Pluvialis apricaria* and *Alcedo atthis*. A range of rare plants and invertebrates are found in the woods along these rivers and rare plants are also associated with the saltmarsh.”*

River Nore SPA 004233

*“The River Nore SPA is a long linear site that includes the Kings River from its junction with the River Nore to a bridge at Mill Island Co. Kilkenny. The site includes the river channel and marginal vegetation. The River Nore supports nationally important numbers of *Alcedo**

⁴ <https://www.npws.ie/protected-sites>

atthis. Other species which occur within the site include Cygnus olor, Anas platyrhynchos, Phalacrocorax carbo, Ardea cinerea, Gallinula chloropus, Gallinago gallinago and Riparia riparia.”

Hugginstown Fen 000404

“Hugginstown Fen is situated approximately 4 km south-west of Ballyhale, Co. Kilkenny. The site consists of a relatively large, isolated area of swamp and floating fen developed in a small valley in hilly country. It is underlain by limestone glacial till overlying and surrounded by acid Old Red Sandstone. The catchment is relatively small and iron-rich springs are an important source of water for the wetland.

Two uncommon insect species recorded from Hugginstown Fen are Scarce Emerald Damselfly (Lestes dryas) and the Hoverfly Parhelophis consimilis. The Common Frog, a Red Data Book species, is frequent at the site. Although this site has been damaged to some extent by drainage, especially in the southern part, it contains an important example of an alkaline fen, a habitat listed on Annex I of the E.U. Habitats Directive and remains one of the most interesting and diverse fen sites in Ireland.”

Lower River Suir 002137

“Lower River Suir SAC consists of the freshwater stretches of the River Suir immediately south of Thurles, the tidal stretches as far as the confluence with the Barrow/Nore immediately east of Cheekpoint in Co. Waterford, and many tributaries including the Clodiagh in Co. Waterford, the Lingaun, Anner, Nier, Tar, Aherlow, Multeen and Clodiagh in Co. Tipperary. The Suir and its tributaries flow through the counties of Tipperary, Kilkenny and Waterford.

The Lower River Suir contains excellent examples of a number of Annex I habitats, including the priority habitats alluvial forest and Yew woodland. The site also supports populations of several important animals species, some listed on Annex II of the Habitats Directive or listed in the Irish Red Data Book. The presence of two legally protected plants (Flora (Protection) Order, 1999) and the ornithological importance of the site adds further to the ecological interest and importance.”

Features of Interest (Qualifying Interests)

- 1.36 Species and habitat types for which SAC are designated and bird species for which SPA are classified are referred to as Features of Interest on the NPWS website pages for protected sites⁵. However, Features of Interest are also referred to as Qualifying Interests and NPWS (2010) guidance states that *“The annexed habitats and species for which each site is selected correspond to the qualifying interests of the sites; from these the conservation objectives of the site are derived.”* The Features of Interest / Qualifying Interests are listed for each Natura 2000 site identified within 15 km of the LAP boundary are listed within Table 1 below. The information presented in Table 1 was obtained from the NPWS website (last accessed 30 October 2018).

Conservation Objectives for the Natura 2000 sites

- 1.37 The Habitats Directive defines when the conservation status of the listed habitats and species is considered as favourable. The definitions it uses for this are specific to the Directive. In summary, they require that the range and areas of the listed habitats, and the range and population of the listed species, should be at least maintained at their status at the time of

⁵ <https://www.npws.ie/protected-sites>

designation. Site-specific conservation objectives aim to define favourable conservation conditions for a particular habitat or species at that site.

1.38 Article (1) of the Habitats Directive (92/43/EEC) describes favourable conservation status for habitats and species as follows.

1.39 Favourable conservation status of a habitat is achieved when:

- Its natural range, and area it covers within that range, are stable or increasing, and
- 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.

1.40 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, and
- 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.

1.41 The conservation objectives for the four Natura 2000 sites within 15 km are available on the NPWS website and are summarised in Table 1 below. The information presented in Table 1 was obtained from the NPWS website (last accessed 30 October 2018).

Table 1 Features of Interest and Conservation Objectives for Natura 2000 sites within 15 km

Natura 2000 Site	Distance from Plan Boundary	Features of Interest	Conservation objectives
River Barrow and River Nore SAC 002162	Within plan area	<ul style="list-style-type: none"> • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Reefs [1170] • Salicornia and other annuals colonising mud and sand [1310] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260] • European dry heaths [4030] • Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] • Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220] • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] • 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] • <i>Vertigo moulinsiana</i> (Desmoulin's Whorl Snail) [1016] • <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] • <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092] • <i>Petromyzon marinus</i> (Sea Lamprey) [1095] • <i>Lampetra planeri</i> (Brook Lamprey) [1096] • <i>Lampetra fluviatilis</i> (River Lamprey) [1099] • <i>Alosa fallax fallax</i> (Twaite Shad) [1103] • <i>Salmo salar</i> (Salmon) [1106] • <i>Lutra lutra</i> (Otter) [1355] • <i>Trichomanes speciosum</i> (Killarney Fern) [1421] • <i>Margaritifera durrovensis</i> (Nore Pearl Mussel) [1990] 	<p>To maintain or restore the favourable conservation condition of the habitats and species listed as features of interest for the River Barrow and River Nore SAC, which is defined by a specific list of attributes and targets.</p> <p>Detailed conservation objectives can be accessed at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002162.pdf</p>
River Nore SPA 004233	Ca. 623 m south	<ul style="list-style-type: none"> • <i>Alcedo atthis</i> (Kingfisher) [A229] 	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. Generic Conservation objectives for the SPA can</p>

Natura 2000 Site	Distance from Plan Boundary	Features of Interest	Conservation objectives
			<p>be accessed at: https://www.npws.ie/protected-sites/spa/004233</p>
<p>Lower River Suir SAC 002137</p>	<p>Ca. 10 km south - west</p>	<ul style="list-style-type: none"> • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260] • Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] • 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] • <i>Taxus baccata</i> woods of the British Isles [91J0] • <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] • <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092] • <i>Petromyzon marinus</i> (Sea Lamprey) [1095] • <i>Lampetra planeri</i> (Brook Lamprey) [1096] • <i>Lampetra fluviatilis</i> (River Lamprey) [1099] • <i>Alosa fallax fallax</i> (Twaiite Shad) [1103] • <i>Salmo salar</i> (Salmon) [1106] • <i>Lutra lutra</i> (Otter) [1355] 	<p>To maintain or restore the favourable conservation condition of the species listed and features of interest in the Lower River Suir SAC which is defined by a specific list of attributes and targets. These attributes and targets can be accessed at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002137.pdf</p>
<p>Hugginstown Fen SAC 000404</p>	<p>Ca. 15 km south - east</p>	<ul style="list-style-type: none"> • Alkaline fens [7230] 	<p>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. Generic Conservation Objectives for this SAC can be accessed at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000404.pdf</p>

Identification of Potential Impacts and Effects

- 1.42 The available information on the Natura 2000 sites was reviewed to establish whether or not Callan LAP 2019 – 2025 is likely to have a significant effect on the conservation objectives of those sites. The likelihood of impacts on the features of interest of the Natura 2000 sites identified in this report is based on information collated from the desk study and other available existing information.
- 1.43 The likelihood of impacts occurring are established in light of the type and scale of the proposed objectives, the location of the objectives and zoning with respect to Natura 2000 sites and the features of interest and conservation objectives of the Natura 2000 sites.
- 1.44 This report is prepared following the Cause – Pathway – Effect model⁶. The potential impacts are summarised into the following categories for screening purposes.
- Direct impacts refer to habitat loss or fragmentation arising from land-take requirements for development or agricultural purposes. Direct impacts can be as a result of a change in land use or management, such as the removal of agricultural practices that prevent scrub encroachment. The LAP objectives and strategies do not include activities or development within Natura 2000 sites that could result in the loss or fragmentation of the habitats listed as features of interest.
 - Indirect and secondary impacts do not have a straight-line route between cause and effect. It is potentially more challenging to ensure that all the possible indirect impacts of the plan – in combination with other plans and projects - have been established. These can arise, for example, when a development alters the hydrology of a catchment area, which in turn affects the movement of groundwater to a site and the qualifying interests that rely on the maintenance of water levels. Deterioration in water quality can occur as an indirect consequence of development, which in turn changes the aquatic environment and reduces its capacity to support certain plants and animals. The introduction of invasive species can also be defined as an indirect impact. Disturbance to fauna can arise directly through the loss of habitat (e.g. bat roosts) or indirectly through noise, vibration and increased activity associated with developments and other human activities. The indirect impacts most likely to occur as a result of the strategic and development management objectives are emissions of pollutants and suspended solids to the King's River in Callan town.
- 1.45 NPWS (2010) guidance for planning authorities states *“If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA). Screening should be undertaken without the inclusion of mitigation, unless potential impacts clearly can be avoided through the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan. The greatest level of evidence and justification will be needed in circumstances when the process ends at screening stage on grounds of no impact.”* This approach is adopted in this report to appraising likely significant effects of Callan Lap 2019 – 2025.
- 1.46 A significant effect is defined in paragraph 49 of the [Waddenzee Case C-127/02](#) as follows *“..... pursuant to the first sentence of Article 6(3) of the Habitats Directive, where a plan or project not directly connected with or necessary to the management of a site is likely to undermine the site's conservation objectives, it must be considered likely to have a significant effect on that site. The*

⁶ The approach is broadly based on information contained in Cooper, L. M. (2004), *Guidelines for Cumulative Effects Assessment in SEA of Plans, EPMG Occasional Paper 04/LMC/CEA*, Imperial College London.

assessment of that risk must be made in the light inter alia of the characteristics and specific environmental conditions of the site concerned by such a plan or project.”

Identification of potential impacts on Natura 2000 sites

- 1.47 The potential impacts of Callan Local Area Plan 2019 - 2025 on the four Natura 2000 sites within 15 km of the plan boundary are discussed in this section. The potential impacts and effects of the proposed Objectives and Development Management Standards of the Callan LAP 2019 – 2025 on Natura 2000 sites are also set out in detail in Appendix A of this report.

Direct impacts

- 1.48 Direct impacts such as habitat loss (within the Natura 2000 sites) are not considered likely to occur as the River Nore SPA 004233, Hugginstown Fen SAC 000404 and Lower River Suir SAC 002137 are all outside the Callan LAP boundary. River Barrow and River Nore SAC 002162 is within the LAP boundary but habitats listed as features of interest such as the following are not known to occur within this area of the SAC:
- Estuaries [1130]
 - Mudflats and sandflats not covered by seawater at low tide [1140]
 - Reefs [1170]
 - Salicornia and other annuals colonising mud and sand [1310]
 - Atlantic salt meadows (*Glauco-Puccinellietalia maritima*) [1330]
 - Mediterranean salt meadows (*Juncetalia maritimi*) [1410]
 - European dry heaths [4030]
 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]
 - Petrifying springs with tufa formation (*Cratoneurion*) [7220]
 - Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0]
 - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0]
- 1.49 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] habitat is not known to occur within the King’s River in Callan town but could potentially be present. However, the objectives of the LAP do not propose works within the SAC that could result in indirect loss of this habitat or any other habitats listed as features of interest i.e. habitats listed as features of interest of the SAC will not be fragmented or reduced in area as a result of the LAP strategies and objectives.
- 1.50 Direct impacts, such as habitat loss or fragmentation, on Natura 2000 sites within 15 km of the LAP boundary are not considered likely to occur as a result of the strategic and development management objectives of Callan LAP 2019 – 2025.

Indirect Impacts

- 1.51 Indirect impacts on Natura 2000 sites within 15 km of the LAP boundary considered include emissions of pollutants such as wastewater and surface water both during construction and operational phases of developments as well as disturbance of features of interest such as otter. Changes in water quality or water chemistry as a result of emissions of pollutants may affect features of interest such as lamprey, salmon, white – clawed crayfish and freshwater pearl mussel. Similarly, the changes in water quality and / or chemistry may result in indirect habitat loss of features of interest such as ‘*Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]*’. Emissions to air are also

- considered as indirect impacts as these are likely to increase as a result of the LAP objectives to develop additional housing and increase retail
- 1.52 The indirect impacts considered are tabulated in Appendix A of this report and the Natura 2000 sites likely to be affected are identified. Hugginstown Fen SAC and Lower River Suir SAC are not ecologically connected to the LAP area and both sufficiently distant from the LAP area as to be unaffected by the strategic and development management objectives of Callan LAP 2019 – 2025.
- 1.53 The potential indirect impacts and effects identified are not predicted to extend beyond the River Barrow and River Nore SAC and River Nore SPA. The predicted impacts are likely to affect aquatic or riparian features of interest of the SAC such as:
- freshwater pearl mussel,
 - white – clawed crayfish
 - lamprey (sea, brook, river)
 - salmon
 - otter
 - Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation [3260]
- 1.54 Habitats listed as features of interest such as salt meadows, mudflats and reefs are all found only in lower reaches of the SAC while oak, yew and alluvial woodlands are not present in the LAP area. The Nore pearl mussel is only found within the main channel of the River Nore. Twaite shad is also confined largely to the lower reaches of the SAC.
- 1.55 Kingfisher is the single feature of interest of the River Nore SPA and this species could be indirectly affected by changes to water quality causing a reduction in prey populations or bankside works that may alter the river flow causing a loss of suitable nesting habitat downstream of the LAP area.

Cumulative Impacts

- 1.56 Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects are particularly important in EclA as ecological features may be already exposed to background levels of threat or pressure and may be close to critical thresholds where further impact could cause irreversible decline. Cumulative effects can also make habitats and species more vulnerable or sensitive to change (CIEEM, 2018).
- 1.57 Other plans and projects to be considered would include the following types of future development within the same zone of influence:
- proposals for which consent has been applied which are awaiting determination in any regulatory process (not necessarily limited to planning permission)
 - projects which have been granted consent (not limited to planning permissions) but which have not yet been started or which have been started but are not yet completed (i.e. under construction)
 - proposals which have been refused permission but which are subject to appeal and the appeal is undetermined
 - to the extent that their details are in the public domain, proposed projects that will be implemented by a public body but for which no consent is needed from a competent authority. (CIEEM, 2018).
- 1.58 The following plans and projects were considered together with the objectives of Callan LAP 2019 – 2025 for potential cumulative impacts and effects:
- Kilkenny County Development Plan 2014 – 2020

- Kilkenny County Councils planning portal⁷ was accessed for planning applications in the plan area.
- 1.59 The applications in the plan area in close proximity to the King's River are mainly house extensions, erection of agricultural sheds, extension of duration for developments and a single application for a recreational trail.
- 1.60 There is potential for other plans and projects, as set out above, to act in-combination and to give rise to cumulative effects.

Likelihood of Significant Effects on Natura 2000 Sites

- 1.61 The strategic and development management objectives of Callan LAP 2019 – 2025 were examined and it is considered that significant effects are likely, or that the significance of effects is uncertain, as a result of some of the objectives. The detailed appraisal of potential impacts and effects of the LAP and the Natura 2000 sites affected is tabulated and presented in Appendix A of this document. Table 2 below sets out the objectives that are considered likely to result in significant effects or where the significance of potential effects is uncertain.
- 1.62 Hugginstown Fen SAC is excluded from further consideration as the favourable conservation status of the fen is determined by the hydrological and hydrogeological regime and as such is sufficiently distant (ca. 15 km) from the plan area that there is no potential for effects through discharges to groundwater or alteration to groundwater levels. Hugginstown Fen SAC is not considered likely to be affected by the strategic and development management objectives of Callan LAP 2019 – 2025.
- 1.63 Lower River Suir SAC is excluded from further consideration as it is at least 10 km from the LAP boundary and there are no surface water pathways or other ecological linkages between the plan area and this SAC. Lower River Suir SAC is not considered likely to be affected by the strategic and development management objectives of Callan LAP 2019 – 2025.
- 1.64 River Barrow and River Nore SAC and River Nore SPA are considered likely to be affected by the strategic and development management objectives of Callan LAP 2019 – 2025. However, given the strategic nature of the LAP and objectives the significance of such effects is uncertain. Therefore, in line with the recommendations of guidance and case law it is considered that Callan LAP 2019 – 2025 should progress to the next stage of the process to determine if it will adversely affect the integrity of the River Barrow and River Nore SAC and the River Nore SPA.

⁷ <http://gis.kilkennycoco.ie/website/kilkennymaps/> - Last accessed 30/10/2018

Table 2: LAP Objectives with potential for Likely Significant Effects (alone or in – combination with other plans and projects)

Objectives and Development Management Standards

Strategic Objective 1: It is an objective of Kilkenny County Council to identify the individual vacant sites in the town 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).

Strategic Objective 2: It is an objective of Kilkenny County Council to support the delivery of projects submitted as funding applications to the Rural Regeneration and Development Fund.

Strategic Objective 3: It is an objective of Kilkenny County Council to support the development and implementation of the Town Centre Living – Pilot Project

Strategic Objective 4: It is an objective of Kilkenny County Council to implement land use zoning objectives for the plan area as set out in Map 01 and Appendix 1 of the Draft Plan.

Core Strategy: To provide for the proportionate growth of Callan maintaining its 2.5% of the County’s population allocation to 2026 in accordance with the National Planning Framework and the County Development Plan Settlement Strategy.

RD1: It is a policy of the Council to ensure that sufficient zoned land is available at appropriate locations in Callan to satisfy the housing needs of the town over the period of the plan.

RD2: To make provision for serviced sites with appropriate infrastructure to enable people build their own homes.

RD3: To implement the Vacant Sites provisions of the Urban Regeneration and Housing Act 2015 as amended.

EO1: It is an objective of this Local Area Plan to facilitate an increase in employment locally in tandem with the population growth rate.

EO2: To support the sustainable development of Callan and enhance its capacity to attract new investment in employment, services and public transport for the benefit of the town and its hinterland.

EO3: To promote a diverse and sustainable local economy through the designation of sufficient lands for the promotion of employment related uses including facilities to assist SME growth

EO4: To identify the individual vacant sites in the town for regeneration and housing and establish and maintain a register of vacant sites (entitled the vacant sites register) in the plan area.

EO5: To work with the owners of the Westcourt Industrial Estate to ensure the continued improvement of road infrastructure.

EO6: Encourage a diversity of uses in the town centre throughout the day and evening.

Objectives and Development Management Standards

TCO1: Vitality and Viability

It is an objective of the County Retail Strategy and the Local Area Plan to ensure that the vitality and viability of district towns is maintained and enhanced. To achieve this, the Plan will support:

- Callan town as the focus of all new retail development in appropriate scale and location;
- development that encourages the appropriate re-use, regeneration of derelict, vacant and underutilised sites and in particular vacancies and underused sites on Green Street, Bridge Street and Mill Street;
- the sensitive redevelopment of a number of historic landmark buildings in the town; and
- the sequential approach and the assessment criteria, outlined in the County Development Plan, which will be applied to any proposals for retail development within Callan.

TCO3: Addressing town centre dereliction and vacancy, on upper bridge street in particular will be supported by the preparation of the Bridge Street/Mill Street Regeneration and Mobility Management Plan.

TCO4: It is an objective of Kilkenny County Council to support the work of the town team and assist with the implementation of the town renewal plan and the town centre living pilot project.

TCO6: The delivery of projects/recommendations identified within the town centre health check, where these are compatible with the proper planning and sustainable development of the town.

TCO7: To support the delivery of projects submitted under the Rural Regeneration and Development Fund, where details are compatible with the proper planning and sustainable development of the town. Projects include:

- Bridge Street/Mill Street Regeneration and Mobility Management Plan
- The Friary Conservation Plan
- Callan Motte Fields Amenity
- Callan Fair Green Re-development

TCO9: Prepare a car parking strategy, focusing on the management of existing on street Car Parking on Green Street and the provision of additional off street car parking in and around the town centre.

HC1: It is an objective of this LAP to consolidate residential development within the town boundary, linking delivery of new development to the provision of required services and where appropriate applying the sequential approach to the development of housing land.

Objectives and Development Management Standards

HC3: Housing on Lands Zoned for Agriculture

Land within the agricultural zone will not be considered for intensive commercial or residential development during the lifetime of this LAP. This is to allow for the strategic expansion of the plan area, and to prevent urban generated development which would interfere with the operation of farming and prejudice the future planning and development of the area. On lands zoned for agriculture within the development boundary of the Callan LAP, housing will be restricted (for their own housing need) to the following categories of persons:

- Persons whose primary employment is in agriculture, horticulture, forestry or bloodstock, or other rural based activity, in the area which they wish to build,
- Sons and daughters of the landowner, all of whom are long standing residents of the “Agricultural” zoned rural area, providing for their first home,
- Persons who are long standing residents in the “Agricultural” zoned area, providing for their first home.

HC9: It is an objective of the Plan to allow for the development of 10 community housing units at Westcourt. See also HC-SDO 1.

NHB5: It is an objective of Kilkenny County Council to support the implementation of the Callan River Project under the Town and Village Renewal Scheme. The project will consist of the removal of sediment deposits and associated vegetation that has developed within the river channel in recent years.

OS1: It is an objective of Kilkenny County Council to improve the quality of these strategic open spaces through improved linkages and support for active uses surrounding these sites.

SDO- OS2: To develop the Motte Field as part of the Green infrastructure Strategy for the town with all stakeholders and to incorporate an appropriate pedestrian access to the Westcourt Industrial Estate and the Callan Bacon site as part of the Motte Fields Nature and Heritage Trail.

TO5: To support the development of linkages between historical sites within and around Callan.

IN2: To ensure that any significant additional development in Callan is only allowed once the necessary water and wastewater capacity is in place.

IN3: IN3: It is an objective of Kilkenny County Council to align future development with capacity at the Callan Waste Water Treatment Plant to ensure that **any** improvements needed are sufficient to meet standards required to avoid significant adverse effects on the River Nore and River Barrow SAC.’

IN4: In conjunction with Irish Water, the Council will endeavour to maintain an adequate water supply sufficient for the development needs of the Plan.

FDM4: The Council will support the introduction of attenuation measures that would reduce levels of surface water discharge into the main water course, thereby reducing the risk of flooding and supporting improvements to the quality of water. To do this, the Council will encourage surface water management for all green-field developments, whereby surface water run-off will be limited to pre-development levels.

Objectives and Development Management Standards

TSD06: It is an objective of Kilkenny County Council to support the provision of pedestrian / cycle access, through provision of bridge infrastructure in order to enhance connectivity between the town and the Motte Field.

TSD07: It is an objective of Kilkenny County Council to provide a walking and cycling route from Clodeen Lane to the car park at Mill lane / friary meadow.

TSD08 – it is a long term objective to improve road connections between the Windgap road and Golf Club Road.

TSD09 – it is a long term objective to improve road connections between the Windgap road and Mill Street as well as between north and south Callan over the King’s River.

DMO1: It is an objective of Kilkenny County Council to implement land use zoning objectives for the plan area as set out in Appendix 1 of the LAP.

RD DMO 1: In accordance with policies set out in the National Planning Framework, it is an objective of Kilkenny County Council to encourage the appropriate redevelopment of brownfield and infill sites for residential uses within the LAP boundary subject to compliance with the relevant development management standards as set out in the County Development Plan.

RD DMO 2: To ensure that a good mix of housing types and sizes is provided to meet the future needs of the population of the town.

BHDM 4: To support the sensitive restoration of protected structures and their attendant grounds and operate flexibly as regards facilitating the ongoing use of these buildings subject to good conservation principles.

NHB - DM1: The King’s River which forms part of the River Barrow and River Nore SAC has considerable potential to be used as a recreational asset for the town and the Local Area Plan will seek to promote the natural amenity potential of this site subject to:

- Protection of this site in accordance with National and European legislation ensuring that any development in or near the SAC will avoid any adverse impact on the features for which the site has been designated;
- Consultation with the prescribed bodies and relevant government agencies when assessing developments which are likely to impact on designated natural heritage sites or those sites proposed to be designated; and
- The requirement for an appropriate assessment in respect of any proposed development likely to have an impact on a designated natural heritage site, or those sites proposed to be designated.

NHB – DM4: To support and facilitate the development of pedestrian/cycle routes along suitable routes subject to relevant environmental assessments.

NHB – DM5: To support the development of outdoor leisure activities on lands designated as open space, subject to the protection of landscape character and natural heritage.

OSDM2: In terms of future enhancement, together with the improvements identified as part of the qualitative open space assessment, it is an objective of Kilkenny county Council

Objectives and Development Management Standards

to;

- Protect and enhance the strategic role of areas likely to flood, through the identification of a flood risk buffer and linear park, where appropriate, alongside the Kings River and elsewhere where surface water features are present;
- Protect and enhance these areas in terms of their biodiversity value particularly in areas close to River Barrow and River Nore SAC;
- Improving access to and management of public spaces and pockets parks in the town centre;
- Achieve design principles set out in the County Development Plan and specifically designing for active frontages and natural surveillance; and
- Improve management of these spaces through natural means, avoiding the use of the herbicide glyphosate.

NATURA IMPACT REPORT

- 1.65 The aim of the Natura Impact Report (NIR) is to provide supporting information to assist the competent authority, in this case Kilkenny County Council, to determine if the proposed Callan Local Area Plan will adversely affect the integrity of the River Barrow and River Nore SAC and River Nore SPA. The significance of the potential effects identified at screening stage was deemed to be uncertain and progression to ‘appropriate assessment’ required as a result.
- 1.66 The Competent Authority will be required to carry out an ‘appropriate assessment’ to determine whether the LAP would adversely affect the integrity of the River Barrow and River Nore SAC and the River Nore SPA. The *‘integrity of the site’* can be 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’*⁸.
- 1.67 The headings within the appropriate assessment report template provided in the European Commission (2001) guidance document *‘Assessment of plans and projects significantly affecting Natura 2000 sites’* have been used to provide a basis to examine the potential effects objectives of the Callan LAP 2019 - 2025 on the integrity of the River Barrow and River Nore SAC and the River Nore SPA.

Assessment of the effects of the project or plan on the integrity of Natura 2000 sites

- 1.68 This section of the report sets out the potential implications of the proposed Callan LAP 2019 - 2025 (either alone or in combination with other projects or plans) on the integrity of the River Barrow and River Nore SAC and River Nore SPA with respect to the conservation objectives of these sites and to their structure and function. The focus is on demonstrating, with supporting evidence, that there will be no adverse effects on the integrity of the River Barrow and River Nore SAC and River Nore SPA. Where this is not the case, adverse effects must be assumed.

Describe the elements of the project or plan (alone or in combination with other projects or plans) that are likely to give rise to significant effects on the environment.

- 1.69 The elements of Callan LAP 2019 – 2025 likely to give rise to significant effects on the environment are objectives relating to residential development, commercial and retail development and recreational activities. The objectives of the LAP identified as likely to give rise to significant effects are set out in Table 2 above.

Set out the conservation objectives of the site

- 1.70 The detailed conservation objectives for the Natura 2000 sites, where available, are summarised and set out below.

River Barrow and River Nore SAC 002162

- 1.71 The conservation objectives for the River Barrow and River Nore SAC and the list of specific attributes and targets defining the conservation objectives for each feature of interest (likely to be affected) is listed within the supporting information available online on the NPWS website⁹. These were reviewed and considered for the relevant features of interest when preparing this report.

⁸ http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_en.pdf

⁹ <https://www.npws.ie/protected-sites/sac/002162>

- 1.72 The conservation objective for the features of interest within the SAC likely to be affected by the LAP can be broadly summarised as follows:
- To restore the favourable conservation condition of Otter in the River Barrow and River Nore SAC
 - To maintain the favourable conservation condition of White-clawed crayfish in the River Barrow and River Nore SAC
 - To restore the favourable conservation condition of Sea lamprey in the River Barrow and River Nore SAC
 - To restore the favourable conservation condition of Brook lamprey in the River Barrow and River Nore SAC
 - To restore the favourable conservation condition of River lamprey in the River Barrow and River Nore SAC
 - To restore the favourable conservation condition of Salmon in the River Barrow and River Nore SAC
 - The status of the freshwater pearl mussel (*Margaritifera margaritifera*) as a qualifying Annex II species for the River Barrow and River Nore SAC is currently under review. The outcome of this review will determine whether a site-specific conservation objective is set for this species.

River Nore SPA 004233

- 1.73 There are no specific conservation objectives available for the River Nore SPA and a single generic conservation objection is available for the SPA on the NPWS website¹⁰. The generic conservation objective for the River Nore SPA is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA – Kingfisher.

Describe how the project or plan will affect key species and key habitats. Acknowledge uncertainties and gaps in information

- 1.74 The key features of interest, habitats and species, likely to be affected by the strategic and development management objectives of Callan LAP 2019 – 2025 are set out in Table 3 below. Only features of interest with potential to be affected by the objectives of the LAP are considered as other features of interest are sufficiently distant and / or unconnected to the LAP area and thus unlikely to be affected.
- 1.75 The objectives of the LAP that may require development or activities such as construction works or recreation in close proximity to the King's River may result in short-term disturbance to otter as they are known to use the river channel within Callan town for commuting and feeding.
- 1.76 Similarly working in close proximity to the channel has the potential to release suspended solids to the river. The release of suspended solids has could result in deposition of silt in gravel areas that may be used as spawning grounds by salmon. Similarly the deposition of these materials in areas used for spawning lamprey may reduce the suitability of the habitats for spawning. Salmon require very good water quality (Hendry & Cragg-Hine, 2003), which may be reduced by the release of suspended solids.

¹⁰ <https://www.npws.ie/protected-sites/spa/004233>

- 1.77 Freshwater pearl-mussel relies on the presence of salmonids within the river system during their larval stages. As a result, a reduction in the abundance of salmonids within a river system can cause an effect on freshwater pearl mussel. Furthermore, increased siltation can impact freshwater pearl mussel by suffocating young mussels (Skinner *et al.*, 2003).
- 1.78 The noise from increased human activities and the potential increase in suspended solids as a result of the projects arising from the LAP could affect these species both within and downstream of the LAP area.

Cumulative Effects

- 1.79 The following plans and projects were considered:
- Kilkenny County Development Plan 2014 – 2020
 - Kilkenny County Council planning portal¹¹ was accessed for planning applications in the plan area.
- 1.80 The planning applications close to the King's River within the LAP area consist primarily of house extensions, erection of agricultural sheds, extension of duration for developments and a single application for a recreational trail. It is considered that these projects could act in-combination with the proposed LAP to result in effects on key species and habitats.

¹¹ <http://gis.kilkennycoco.ie/website/kilkennymaps/> - Last accessed 03/10/2018

Table 3: The effects of Callan LAP on key species and habitats of the River Barrow and River Nore SAC and the River Nore SPA

Natura 2000 site	Feature of Interest	Effects of Callan LAP
River Barrow and River Nore SAC 002162	Freshwater pearl mussel	Increased surface water run-off and / or emissions of wastewater, sewage and suspended solids due to increased residential and commercial development could result in deterioration of water quality or changes to water chemistry. Such effects could result in the reduction of suitable habitat for the species or mortality.
River Barrow and River Nore SAC 002162	White – clawed crayfish	Release of suspended solids and emissions of pollutants due to activities associated with development of lands for residential, commercial or other purposes could result in deterioration of water quality or changes to water chemistry. Such effects could result in the reduction of suitable habitat for the species or mortality.
River Barrow and River Nore SAC 002162	Lamprey (sea, river, brook)	Release of suspended solids and emissions of pollutants due to activities associated with development of lands for residential, commercial or other purposes could result in deterioration of water quality or changes to water chemistry. Such effects could result in the reduction of suitable habitat for the species or mortality.
River Barrow and River Nore SAC 002162	Salmon	Release of suspended solids and emissions of pollutants due to activities associated with development of lands for residential, commercial or other purposes could result in deterioration of water quality or changes to water chemistry. Such effects could result in the reduction of suitable habitat for the species or mortality.
River Barrow and River Nore SAC 002162	Otter	Otter is known to utilise the river channel within Callan town for commuting and foraging. The proposed recreational and natural heritage objectives could result in increased activity within the river corridor and associated riparian zone. Such activity could disturb otter and cause temporary or long-term displacement of the species from the LAP area. Displacement could affect the otter population through reduction in numbers should there be insufficient prey availability and breeding habitat elsewhere to support those displaced from the LAP area/
River Barrow and River Nore SAC 002162	Water courses of plain to montane levels with the ranunculion fluitantis and callitricho-batrachion vegetation [3260]	Release of suspended solids and emissions of pollutants due to activities associated with development of lands for residential, commercial or other purposes could result in deterioration of water quality or changes to water chemistry. Such effects could result in the loss of this feature of interest within affected areas of the SAC.
River Nore SPA 004233	Kingfisher	Release of suspended solids and emissions of pollutants due to activities associated with development of lands for residential, commercial or other purposes could result in deterioration of water quality or changes to water chemistry. Such effects could result in the reduction of prey species. Works on or close to the river banks could result in alteration of the hydrological flow of the river which may result in erosion or rise in water levels in areas previously used for nesting.

Describe how the integrity of the site (determined by structure and function and conservation objectives) is likely to be affected by the project or plan (e.g. loss of habitat, disturbance, disruption, chemical changes, hydrological changes and geological changes, etc.). Acknowledge also uncertainties and any gaps in information.

- 1.81 The integrity of the River Barrow and River Nore SAC 002162 and River Nore SPA 004233 is likely to be affected by emissions of suspended solids and pollutants arising from development that may result in deterioration in water quality or change in water chemistry. Disturbance and resultant displacement of species such as otter could occur due to proposed recreational activities and development in close proximity to the King's river. These effects could result in population reduction through mortality or reduction in the distribution of habitat. The effects described could undermine the conservation objectives for the features of interest affected which would adversely affect the integrity of both the River Barrow and River Nore SAC and River Nore SPA.

Describe what mitigation measures are to be introduced to avoid, reduce or remedy the adverse effects on the integrity of the site. Acknowledge uncertainties and any gaps in information.

- 1.82 Callan LAP 2019 – 2025 is by its nature a high level strategic document and by default the mitigation measures proposed will also be relatively high level in nature. Mitigation has also been incorporated into Callan LAP 2019 – 2025 in the form of Development Management Objectives. The mitigation measures focus on the protection of the water quality of the river as deterioration in the quality or changes in chemistry has the potential to adversely affect features of interest of both the River Barrow and River Nore SAC and River Nore SPA.
- 1.83 The mitigation measures proposed are set out in detail within Table 4 and Table 5 but can be broadly summarised as follows:
- Identified vacant sites will be developed or redeveloped in a manner that is sensitive to the natural and built heritage of Callan LAP area.
 - Wastewater, surface water drainage and drinking water infrastructure must be in place prior to development.
 - Contractors appointed to undertake any construction works within Callan town centre, areas in close proximity to the King's River or where there is an ecological connection to the river will be informed of the sensitivities of the King's River and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works.
 - Measures to protect the environment will be incorporated into projects or plans to avoid adverse effects to the integrity of Natura 2000 sites. These will include, but will not limited to, measures such as those set out in:
 - *Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters* (IFI, 2016)' and
 - *Environmental Good Practice on Site Guide* (CIRIA, 2015)
- 1.84 Kilkenny County Council will be responsible for ensuring that the mitigation measures proposed are implemented fully and that the measures are implemented for the lifetime of Callan LAP 2019 – 2025.
- 1.85 It must also be noted that the appropriate assessment at plan level does not exempt projects or plans arising from the plan from the assessment requirements of Article 6(3) at a later stage, when much more details about them are known. In other words, projects or plans that result from the strategies and objectives of Callan LAP 2019 – 2025 are also required to undergo

Article 6 assessment before they can proceed or be permitted. Kilkenny County Council will also be responsible for ensuring that projects or plans that result from the strategies and objectives of Callan LAP 2019 – 2025 are also required to undergo Article 6 assessment before they can be permitted or proceed.

Table 4: Mitigation measures for LAP Objectives

Objectives	Mitigation Measures	Effect of the Mitigation Measures
<p>Strategic Objective 1: It is an objective of Kilkenny County Council to identify the individual vacant sites in the town 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>	<ul style="list-style-type: none"> • Identified vacant sites will be developed or redeveloped in a manner that is sensitive to the natural and built heritage of Callan LAP area. • Wastewater, drainage and drinking water infrastructure must be in place prior to development. • Contractors appointed to undertake any construction works within Callan town centre, areas in close proximity to the King’s River or where there is an ecological connection to the river will be informed of the sensitivities of the King’s River and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works. • 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"> ○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 2016)’ and ○ <i>Environmental Good Practice on Site Guide</i> (CIRIA, 2015) • If it is proposed to abstract water from the King’s 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 	<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>Strategic Objective 2: It is an objective of Kilkenny County Council to support the delivery of projects submitted as funding applications to the Rural Regeneration and Development Fund.</p>		
<p>Strategic Objective 3: It is an objective of Kilkenny County Council to support the development and implementation of the Town Centre Living – Pilot Project</p>		
<p>Strategic Objective 4: It is an objective of Kilkenny County Council to implement land use zoning objectives for the plan area as set out in Map 01 and Appendix 1 of the Draft Plan.</p>		
<p>Core Strategy: To provide for the proportionate growth of Callan maintaining its 2.5% of the County’s population allocation to 2026 in accordance with the National Planning Framework and the County Development Plan Settlement Strategy.</p>		
<p>RD1: It is a policy of the Council to ensure that sufficient zoned land is available at appropriate locations in Callan to satisfy the housing needs of the town over the period of the plan.</p>		
<p>RD2: To make provision for serviced sites with appropriate infrastructure to enable people build their own homes.</p>		
<p>RD3: To implement the Vacant Sites provisions of the Urban Regeneration and Housing Act 2015 as amended.</p>		
<p>EO1: It is an objective of this Local Area Plan to facilitate an increase in</p>		

Objectives	Mitigation Measures	Effect of the Mitigation Measures
employment locally in tandem with the population growth rate.	abstraction.	
<p>EO2: To support the sustainable development of Callan and enhance its capacity to attract new investment in employment, services and public transport for the benefit of the town and its hinterland.</p>	<ul style="list-style-type: none"> • 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. • Regular maintenance of Callan town 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 King's River. 	
<p>EO3: To promote a diverse and sustainable local economy through the designation of sufficient lands for the promotion of employment related uses including facilities to assist SME growth</p>		
<p>EO4: To identify the individual vacant sites in the town for regeneration and housing and establish and maintain a register of vacant sites (entitled the vacant sites register) in the plan area.</p>		
<p>EO5: To work with the owners of the Westcourt Industrial Estate to ensure the continued improvement of road infrastructure.</p>		
<p>EO6: Encourage a diversity of uses in the town centre throughout the day and evening.</p>		
<p>TCO1: Vitality and Viability</p> <p>It is an objective of the County Retail Strategy and the Local Area Plan to ensure that the vitality and viability of district towns is maintained and enhanced. To achieve this, the Plan will support:</p> <ul style="list-style-type: none"> • Callan town as the focus of all new retail development in appropriate scale and location; • development that encourages the appropriate re-use, regeneration of derelict, vacant and underutilised sites and in particular vacancies and underused sites on Green Street, Bridge Street and Mill Street; • the sensitive redevelopment of a number of historic landmark buildings in the town; and • the sequential approach and the assessment criteria, outlined in the County Development Plan, which will be applied to any proposals for retail development within Callan. 		
<p>TCO3: Addressing town centre dereliction and vacancy, on upper bridge street</p>		

Objectives	Mitigation Measures	Effect of the Mitigation Measures
<p>in particular will be supported by the preparation of the Bridge Street/Mill Street Regeneration and Mobility Management Plan.</p>		
<p>TCO4: It is an objective of Kilkenny County Council to support the work of the town team and assist with the implementation of the town renewal plan and the town centre living pilot project.</p>		
<p>TCO6: The delivery of projects/recommendations identified within the town centre health check, where these are compatible with the proper planning and sustainable development of the town.</p>		
<p>TCO7: To support the delivery of projects submitted under the Rural Regeneration and Development Fund, where details are compatible with the proper planning and sustainable development of the town. Projects include:</p> <ul style="list-style-type: none"> • Bridge Street/Mill Street Regeneration and Mobility Management Plan • The Friary Conservation Plan • Callan Motte Fields Amenity • Callan Fair Green Re-development 		
<p>TCO9: Prepare a car parking strategy, focusing on the management of existing on street Car Parking on Green Street and the provision of additional off street car parking in and around the town centre.</p>		
<p>HC1: It is an objective of this LAP to consolidate residential development within the town boundary, linking delivery of new development to the provision of required services and where appropriate applying the sequential approach to the development of housing land.</p>		
<p>HC3: Housing on Lands Zoned for Agriculture</p> <p>Land within the agricultural zone will not be considered for intensive commercial or residential development during the lifetime of this LAP. This is to allow for the strategic expansion of the plan area, and to prevent urban generated development which would interfere with the operation of farming</p>	<ul style="list-style-type: none"> • One – off houses or other developments in areas zoned as agricultural should have wastewater treatment systems in place that comply with required EPA standards to prevent any effects to surface or groundwater. • Wastewater, drainage and drinking water infrastructure 	<p>If the zoning classification of the LAP and mitigation measures proposed are implemented fully it is considered that adverse</p>

Objectives	Mitigation Measures	Effect of the Mitigation Measures
<p>and prejudice the future planning and development of the area. On lands zoned for agriculture within the development boundary of the Callan LAP, housing will be restricted (for their own housing need) to the following categories of persons:</p> <ul style="list-style-type: none"> • Persons whose primary employment is in agriculture, horticulture, forestry or bloodstock, or other rural based activity, in the area which they wish to build, • Sons and daughters of the landowner, all of whom are long standing residents of the “Agricultural” zoned rural area, providing for their first home, <p>Persons who are long standing residents in the “Agricultural” zoned area, providing for their first home.</p>	<p>must be in place prior to development.</p> <ul style="list-style-type: none"> • 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"> ○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 2016)’ and ○ <i>Environmental Good Practice on Site Guide</i> (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. 	<p>effects on the integrity of the SAC and SPA can be avoided.</p>
<p>HC9: It is an objective of the Plan to allow for the development of 10 community housing units at Westcourt. See also HC-SDO 1.</p>	<ul style="list-style-type: none"> • Wastewater, drainage and drinking water infrastructure must be in place prior to development. • Measures to protect the environment will be adopted during construction of community housing units 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"> ○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 2016)’ and ○ <i>Environmental Good Practice on Site Guide</i> (CIRIA, 2015) 	
<p>NHB5: It is an objective of Kilkenny County Council to support the</p>	<ul style="list-style-type: none"> • The proposed works will only be carried out in low flow 	<p>If the zoning classification of</p>

Objectives	Mitigation Measures	Effect of the Mitigation Measures
<p>implementation of the Callan River Project under the Town and Village Renewal Scheme. The project will consist of the removal of sediment deposits and associated vegetation that has developed within the river channel in recent years.</p>	<p>conditions during the summer months.</p> <ul style="list-style-type: none"> • Consultation will be undertaken with IFI and NPWS to agree a method for sediment removal • The contractor appointed to carry out the works will be informed of the sensitivities of the King’s River and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works. • Silt removal will be limited to just above the low flow water level. • Appropriate mitigation to prevent disturbance of species and release of suspended solids will be developed and incorporated into the plan of works. • Measures to protect the environment will be incorporated into the project specific method statements. Examples of such measures are set out in guidance such as, but not limited to: <ul style="list-style-type: none"> ○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 2016)’ and ○ <i>Environmental Good Practice on Site Guide</i> (CIRIA, 2015) • 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 King’s River. 	<p>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>OS1: It is an objective of Kilkenny County Council to improve the quality of these strategic open spaces through improved linkages and support for active uses</p>	<p>The design of linkages, paths and cycleways must be prepared with the sensitivities of the SAC and SPA in mind. Any such</p>	<p>If the zoning classification of the LAP and mitigation</p>

Objectives	Mitigation Measures	Effect of the Mitigation Measures
surrounding these sites.	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.	measures proposed are implemented fully it is considered that adverse effects on the integrity of the SAC and SPA can be avoided.
SDO- OS2: To develop the Motte Field as part of the Green infrastructure Strategy for the town with all stakeholders and to incorporate an appropriate pedestrian access to the Westcourt Industrial Estate and the Callan Bacon site as part of the Motte Fields Nature and Heritage Trail.	The design of linkages between historical sites within and around Callan 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.	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.
TO5: To support the development of linkages between historical sites within and around Callan.	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.	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.
ACCE4: It is an objective of Kilkenny County Council to investigate the feasibility of providing additional cultural facilities in Callan.	<ul style="list-style-type: none"> Contractors appointed to undertake any construction works within Callan town centre, areas in close proximity to the King's River or where there is an ecological connection to the river will be informed of the sensitivities of the King's River and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works. 	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.
IN2: To ensure that any significant additional development in Callan is only allowed once the necessary water and wastewater capacity is in place.	<ul style="list-style-type: none"> 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 	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.
IN3: It is an objective of Kilkenny County Council to align future development with capacity at the Callan Waste Water Treatment Plant to ensure that improvements are sufficient to meet standards required to avoid significant adverse effects on the River Nore and River Barrow SAC.		
IN4: In conjunction with Irish Water, the Council will endeavour to maintain an adequate water supply sufficient for the development needs of the Plan.		

Objectives	Mitigation Measures	Effect of the Mitigation Measures
	<p>limited to:</p> <ul style="list-style-type: none"> ○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 2016)' and ○ <i>Environmental Good Practice on Site Guide</i> (CIRIA, 2015) <ul style="list-style-type: none"> ● 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 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 King's River. 	
<p>FDM4: The Council will support the introduction of attenuation measures that would reduce levels of surface water discharge into the main water course, thereby reducing the risk of flooding and supporting improvements to the quality of water. To do this, the Council will encourage surface water management for all green-field developments, whereby surface water run-off will be limited to pre-development levels.</p>	<ul style="list-style-type: none"> ● Contractors appointed to undertake any construction works within Callan town centre, areas in close proximity to the King's River or where there is an ecological connection to the river will be informed of the sensitivities of the King's River and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works. ● 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"> ○ <i>Drainage of development sites - a guide (X108)</i> 	

Objectives	Mitigation Measures	Effect of the Mitigation Measures
	<p>(CIRIA, 2004).</p> <ul style="list-style-type: none"> ○ <i>The SuDs Manual</i> (CIRIA, 2015) ● 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"> ○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 2016)' and ○ <i>Environmental Good Practice on Site Guide</i> (CIRIA, 2015) 	
<p>TSD06: It is an objective of Kilkenny County Council to support the provision of pedestrian / cycle access, through provision of bridge infrastructure in order to enhance connectivity between the town and the Motte Field.</p>	<ul style="list-style-type: none"> ● The design of the proposed bridge infrastructure 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 ● Consultation with NPWS and IFI should be carried out as early as early as possible during the design stage. ● 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"> ○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 2016)' and ○ <i>Environmental Good Practice on Site Guide</i> (CIRIA, 	<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>TSD07: It is an objective of Kilkenny County Council to provide a walking and cycling route from Clodeen Lane to the car park at Mill lane / friary meadow.</p>		
<p>TSD07: It is an objective of Kilkenny County Council to provide a walking and cycling route from Clodeen Lane to the car park at Mill lane / friary meadow.</p>		
<p>TSD08 – it is a long term objective to improve road connections between the Windgap road and Golf Club Road.</p>		
<p>TSD09 – it is a long term objective to improve road connections between the Windgap road and Mill Street as well as between north and south Callan over the King’s River.</p>		

Objectives	Mitigation Measures	Effect of the Mitigation Measures
	2015)	

Table 5: Development Management Objectives Mitigation Measures

Development Management Objectives	Mitigation Measures	Effect of the Mitigation Measures
<p>DMO1: It is an objective of Kilkenny County Council to implement land use zoning objectives for the plan area as set out in Appendix 1 of the LAP.</p>	<ul style="list-style-type: none"> • Adhere to land use zoning objectives • Projects arising from this objective will still be required to be assessed under Article 6 of the Habitats Directive. 	<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>RD DMO 1: In accordance with policies set out in the National Planning Framework, it is an objective of Kilkenny County Council to encourage the appropriate redevelopment of brownfield and infill sites for residential uses within the LAP boundary subject to compliance with the relevant development management standards as set out in the County Development Plan.</p>	<ul style="list-style-type: none"> • Ensure that the potential effects of redevelopment of brownfield and infill sites on or connected to Natura 2000 sites are adequately evaluated and addressed by appropriately qualified professionals. This should include hydrology / hydrogeology, geotechnical specialist, noise, air and ecology. • Measures to ensure noise levels do not disturb wildlife should also be considered and incorporated as required. • Mitigation measures to prevent contaminated soil or water reaching the King’s River should be incorporated into the design. • 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"> ○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 2016)’ and ○ <i>Environmental Good Practice on Site Guide</i> (CIRIA, 2015) 	<p>The mitigation measures proposed, if fully and correctly implemented, are considered sufficient to avoid adverse effects on the integrity of the SAC and SPA.</p>
<p>RD DMO 2: To ensure that a good mix of housing types and sizes is provided to</p>	<ul style="list-style-type: none"> • Identified vacant sites will be developed or redeveloped in 	<p>The mitigation measures proposed, if</p>

Development Management Objectives	Mitigation Measures	Effect of the Mitigation Measures
<p>meet the future needs of the population of the town.</p>	<p>a manner that is sensitive to the natural and built heritage of Callan LAP area.</p> <ul style="list-style-type: none"> • Wastewater, drainage and drinking water infrastructure must be in place prior to development. • Contractors appointed to undertake any construction works within Callan town centre, areas in close proximity to the King’s River or where there is an ecological connection to the river will be informed of the sensitivities of the King’s River and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works. • Mitigation measures to prevent contaminated soil or water reaching the King’s River should be incorporated into the design. • 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. • 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. • Regular maintenance of Callan town 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 King’s River. • Measures to protect the environment will be incorporated 	<p>fully and correctly implemented, are considered sufficient to avoid adverse effects on the integrity of the SAC and SPA.</p>

Development Management Objectives	Mitigation Measures	Effect of the Mitigation Measures
	<p>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:</p> <ul style="list-style-type: none"> ○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 2016)' and ○ <i>Environmental Good Practice on Site Guide</i> (CIRIA, 2015) 	
<p>BHDM 4: To support the sensitive restoration of protected structures and their attendant grounds and operate flexibly as regards facilitating the ongoing use of these buildings subject to good conservation principles.</p>	<p>One – off houses or other developments in areas zoned as agricultural must have appropriate wastewater treatment systems in place that comply with required EPA standards to prevent any effects to surface or groundwater.</p>	<p>The mitigation measures proposed, if fully and correctly implemented, are considered sufficient to avoid adverse effects on the integrity of the SAC and SPA.</p>
<p>NHB - DM1: The King’s River which forms part of the River Barrow and River Nore SAC has considerable potential to be used as a recreational asset for the town and the Local Area Plan will seek to promote the natural amenity potential of this site subject to:</p> <ul style="list-style-type: none"> • Protection of this site in accordance with National and European legislation ensuring that any development in or near the SAC will avoid any adverse impact on the features for which the site has been designated; • Consultation with the prescribed bodies and relevant government agencies when assessing developments which are likely to impact on designated natural heritage sites or those sites proposed to be designated; and • The requirement for an appropriate assessment in respect of any proposed development likely to have an impact on a designated natural heritage site, or those sites proposed to be designated. 	<ul style="list-style-type: none"> • Wastewater, drainage and drinking water infrastructure must be in place prior to development. • Contractors appointed to undertake any construction works within Callan town centre, areas in close proximity to the King’s River or where there is an ecological connection to the river will be informed of the sensitivities of the King’s River and will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works. • 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"> ○ <i>Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters</i> (IFI, 	<p>The mitigation measures proposed, if fully and correctly implemented, are considered sufficient to avoid adverse effects on the integrity of the SAC and SPA.</p>

Development Management Objectives	Mitigation Measures	Effect of the Mitigation Measures
	<p>2016)' and</p> <ul style="list-style-type: none"> ○ <i>Environmental Good Practice on Site Guide (CIRIA, 2015)</i> ● 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 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 King's River. 	
<p>NHB – DM4: To support and facilitate the development of pedestrian/cycle routes along suitable routes subject to relevant environmental assessments.</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 ecologists and planners to ensure there is no risk of adverse effect on the integrity of the SAC and SPA.</p>	<p>The mitigation measures proposed, if fully and correctly implemented, are considered sufficient to avoid adverse effects on the integrity of the SAC and SPA.</p>
<p>NHB – DM5: To support the development of outdoor leisure activities on lands designated as open space, subject to the protection of landscape character and natural heritage.</p>	<p>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.</p> <p>The design or layout of any access tracks or paths linking these areas or opening up new areas in close proximity to the King's River must fully consider any effects during construction as well as during operation (use).</p>	<p>The mitigation measures proposed, if fully and correctly implemented, are considered sufficient to avoid adverse effects on the integrity of the SAC and SPA.</p>
<p>OSDM2: In terms of future enhancement, together with the improvements identified as part of the qualitative open space assessment, it is an objective of</p>	<p>The proposed access to existing open space and where necessary create areas of new open space must consider the</p>	<p>The mitigation measures proposed, if fully and correctly implemented, are</p>

Development Management Objectives	Mitigation Measures	Effect of the Mitigation Measures
<p>Kilkenny county Council to;</p> <ul style="list-style-type: none"> • Protect and enhance the strategic role of areas likely to flood, through the identification of a flood risk buffer and linear park, where appropriate, alongside the Kings River and elsewhere where surface water features are present; • Protect and enhance these areas in terms of their biodiversity value particularly in areas close to River Barrow and River Nore SAC; • Improving access to and management of public spaces and pockets parks in the town centre; • Achieve design principles set out in the County Development Plan and specifically designing for active frontages and natural surveillance; and • Improve management of these spaces through natural means, avoiding the use of the herbicide glyphosate. 	<p>potential for recreational pressures that may cause adverse effects on the integrity of the SAC and SPA.</p> <p>The design or layout of any access tracks or paths linking these areas or opening up new areas in close proximity to the King’s River must fully consider any effects during construction as well as during operation (use).</p>	<p>considered sufficient to avoid adverse effects on the integrity of the SAC and SPA.</p>

CONSIDERATION OF FINDINGS

- 1.86 If the zoning classification of the LAP as shown on the Zoning Objective Map are full adopted and mitigation measures proposed are implemented it is considered that adverse effects on the integrity of the River Barrow and River Nore SAC and River Nore SPA can be avoided. However, projects arising from the LAP objectives will themselves require assessment under Article 6 of the Habitats Directive. If significant effects on Natura 2000 sites are likely as a result of such projects then they will be required to undergo 'appropriate assessment' and project specific mitigation measures will be implemented. Kilkenny County Council will also be responsible for ensuring that projects or plans that result from the strategies and objectives of Callan LAP 2019 – 2025 are also required to undergo Article 6 assessment before they can be permitted or proceed. Kilkenny County Council will be responsible for ensuring that the mitigation measures proposed are implemented fully for the lifetime of Callan LAP 2019 – 2025.
- 1.87 Callan Local Area Plan 2019 -2025 is therefore not considered likely to result in adverse effects to the integrity of either the River Barrow and River Nore SAC (002162) nor the River Nore SPA assuming that the mitigation measures detailed in this report are implemented as proposed.

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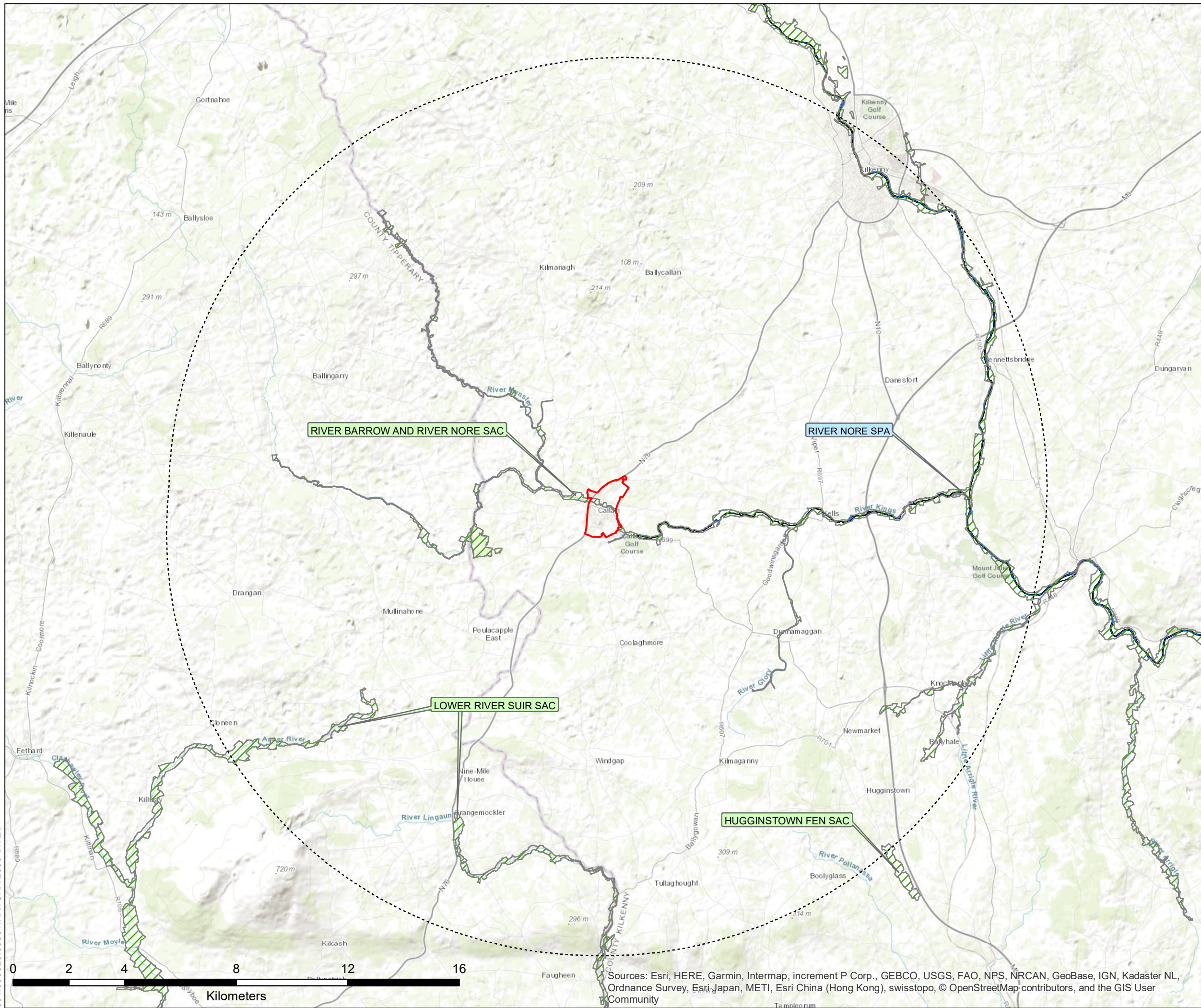
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FIGURES

501.000526.00001.NATURA 2000 SITES



LEGEND

-  LOCAL AREA PLAN BOUNDARY
-  15 KM BOUNDARY
-  SPECIAL AREA OF CONSERVATION
-  SPECIAL PROTECTION AREA



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KILKENNY COUNTY COUNCIL

CALLAN LOCAL AREA PLAN

LOCATION OF PLAN AND NATURA 2000 SITES

FIGURE 1

Scale: 1:130,000 @ A3

Date: OCTOBER 2018

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

APPENDIX A: POTENTIAL NEGATIVE IMPACTS & EFFECTS OF CALLAN LAP 2019 -2025 OBJECTIVES

Table 6: Potential Negative Impacts & Effects of LAP Objectives

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of Interest	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
Strategic Objective 1: It is an objective of Kilkenny County Council to identify the individual vacant sites in the town 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).	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
Strategic Objective 2: It is an objective of Kilkenny County Council to support the delivery of projects submitted as funding applications to the Rural Regeneration and Development Fund.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
Strategic Objective 3: It is an objective of Kilkenny County Council to support the development and implementation of the Town Centre Living – Pilot Project	✓	✓	✓	✓	✓	✓	✓	River Nore SPA 004233
Strategic Objective 4: It is an objective of Kilkenny County Council to implement land use zoning objectives for the plan area as set out in Map 01 and Appendix 1 of the Draft Plan.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
Core Strategy: To provide for the proportionate growth of Callan maintaining its 2.5% of the County's population allocation to 2026 in accordance with the National Planning Framework and the County Development Plan Settlement Strategy.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
RD1: It is a policy of the Council to ensure that sufficient zoned land is available at appropriate locations in Callan to satisfy the housing needs of the town over the period of the plan.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
RD2: To make provision for serviced sites with appropriate infrastructure to	✓	✗	✓	✓	✓	✓	✓	River Barrow and River

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
enable people build their own homes.								Nore SAC 002162 River Nore SPA 004233
RD3: To implement the Vacant Sites provisions of the Urban Regeneration and Housing Act 2015 as amended.	✗	✗	✗	✓	✗	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
EO1: It is an objective of this Local Area Plan to facilitate an increase in employment locally in tandem with the population growth rate.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
EO2: To support the sustainable development of Callan and enhance its capacity to attract new investment in employment, services and public transport for the benefit of the town and its hinterland.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
EO3: To promote a diverse and sustainable local economy through the designation of sufficient lands for the promotion of employment related uses including facilities to assist SME growth	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
EO4: To identify the individual vacant sites in the town for regeneration and housing and establish and maintain a register of vacant sites (entitled the vacant sites register) in the plan area.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
EO5: To work with the owners of the Westcourt Industrial Estate to ensure the continued improvement of road infrastructure.	✓	✓	✗	✓	✗	✗	✗	River Barrow and River Nore SAC 002162 River Nore SPA 004233
EO6: Encourage a diversity of uses in the town centre throughout the day and	✓	✓	✗	✓	✗	✗	✗	River Barrow and River

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
evening.								Nore SAC 002162 River Nore SPA 004233
<p>TCO1: Vitality and Viability</p> <p>It is an objective of the County Retail Strategy and the Local Area Plan to ensure that the vitality and viability of district towns is maintained and enhanced. To achieve this, the Plan will support:</p> <ul style="list-style-type: none"> • Callan town as the focus of all new retail development in appropriate scale and location; • development that encourages the appropriate re-use, regeneration of derelict, vacant and underutilised sites and in particular vacancies and underused sites on Green Street, Bridge Street and Mill Street; • the sensitive redevelopment of a number of historic landmark buildings in the town; and • the sequential approach and the assessment criteria, outlined in the County Development Plan, which will be applied to any proposals for retail development within Callan. 	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233	
<p>TCO2: The County Retail Strategy sets out the role and function of Callan within the retail hierarchy providing guidance on the distribution of new floorspace. The Retail Strategy defines Callan as a Tier 1 Level 2 Sub County Town. The distribution of new floorspace should be linked to Callan's role in the retail hierarchy for the county and should be appropriate in scale and character to the hierarchical role of the centre. The type of shopping that is appropriate to this level of the hierarchy includes middle convenience and (tourism related) comparison. For retail proposals above the 500m² gross floorspace threshold a retail impact assessment will be required in accordance with County Retail Strategy.</p>	✗	✗	✗	✗	✗	✗	✗	None

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
TCO3: Addressing town centre dereliction and vacancy, on upper bridge street in particular will be supported by the preparation of the Bridge Street/Mill Street Regeneration and Mobility Management Plan.	✓	✓	✗	✗	✗	✗	✗	River Barrow and River Nore SAC 002162 River Nore SPA 004233
TCO4: It is an objective of Kilkenny County Council to support the work of the town team and assist with the implementation of the town renewal plan and the town centre living pilot project.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
TCO5: It is an objective of Kilkenny County Council to prepare an up-to-date retail strategy during the lifetime of the plan. The strategy will include current figures on footfall, shopping patterns and expenditure capacity.	✗	✗	✗	✗	✗	✗	✗	None
TCO6: The delivery of projects/recommendations identified within the town centre health check, where these are compatible with the proper planning and sustainable development of the town.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
TCO7: To support the delivery of projects submitted under the Rural Regeneration and Development Fund, where details are compatible with the proper planning and sustainable development of the town. Projects include: <ul style="list-style-type: none"> • Bridge Street/Mill Street Regeneration and Mobility Management Plan • The Friary Conservation Plan • Callan Motte Fields Amenity • Callan Fair Green Re-development 	✓	✓	✓	✓	✗	✗	✗	River Barrow and River Nore SAC 002162 River Nore SPA 004233
TCO8: Ensuring accessibility of the retail area by a range of transport modes.:	✗	✗	✗	✗	✗	✗	✗	None
TCO9: Prepare a car parking strategy, focusing on the management of existing on street Car Parking on Green Street and the provision of additional off street car	✓	✓	✗	✗	✗	✗	✗	River Barrow and River

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
parking in and around the town centre.								Nore SAC 002162 River Nore SPA 004233
TCO10: Create an attractive and safe town centre for pedestrians/cyclists.	×	×	×	×	×	×	×	None
TCO11: Provide improved pedestrian connections along Chapel Lane, notwithstanding the restrictive width along parts of the lane.	×	×	×	×	×	×	×	None
LFEO1: It is an objective of Kilkenny County Council to encourage and support <ul style="list-style-type: none"> strong reciprocal relationships between local producers and the local retail/catering enterprises, growth of local shops and restaurants, coffee/ tea shops both opening and offering local food and beverages. the integration of the 'Callan's' food culture into the tourism offerings of the County as a whole. 	×	×	×	×	×	×	×	None
LFEO2: It is an objective of Kilkenny County Council to consider the potential of this sector as part of any emerging regeneration strategy for the town centre, particular where this involves the re use of historic landmark structures.	×	×	×	×	×	×	×	None
LFEO3: It is an objective of Kilkenny County Council to investigate the feasibility of developing a local food hub on Bridge Street.	×	×	×	×	×	×	×	None
HFO1: It is an objective of Kilkenny County Council to support and implement proposals that will benefit public health, particularly where this meets a defined local need and does not involve displacement of existing services.	×	×	×	×	×	×	×	None
HC1: It is an objective of this LAP to consolidate residential development within the town boundary, linking delivery of new development to the provision of	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
required services and where appropriate applying the sequential approach to the development of housing land.								River Nore SPA 004233
HC2: Proposals for residential development should have regard to the Guidelines on Sustainable Residential Development in Urban Areas, and in particular, the objective of limiting the size of individual proposals to 10% - 15% of the existing housing stock. In Callan, the existing housing stock is approximately 1,032 units, which provides a basis for an indicative maximum range of 103 – 155 units, for development proposals.	×	×	×	×	×	×	×	None
<p>HC3: Housing on Lands Zoned for Agriculture</p> <p>Land within the agricultural zone will not be considered for intensive commercial or residential development during the lifetime of this LAP. This is to allow for the strategic expansion of the plan area, and to prevent urban generated development which would interfere with the operation of farming and prejudice the future planning and development of the area. On lands zoned for agriculture within the development boundary of the Callan LAP, housing will be restricted (for their own housing need) to the following categories of persons:</p> <ul style="list-style-type: none"> • Persons whose primary employment is in agriculture, horticulture, forestry or bloodstock, or other rural based activity, in the area which they wish to build, • Sons and daughters of the landowner, all of whom are long standing residents of the “Agricultural” zoned rural area, providing for their first home, • Persons who are long standing residents in the “Agricultural” zoned area, providing for their first home. 	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
HC4: The Local Area Plan will ensure that sites are reserved for community facilities as appropriate and to seek to remedy the deficiency in existing developed areas. Where possible, the provision of community facilities will be	×	×	×	×	×	×	×	None

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
linked to the increases in the residential population.								
HC5: It is an objective of Kilkenny County Council to facilitate the amalgamation of secondary schools St. Brigid's College and Colaiste Eamonn Ris.	✗	✗	✗	✗	✗	✗	✗	None
HC6: It is an objective of this Local Area Plan to support the provision of a centrally located library space alongside the emergent creative hub of Callan within the landmark building of the Friary Complex.	✗	✗	✗	✗	✗	✗	✗	None
HC7: It is an objective of the Plan to promote the sustainable development of vacant residential and regeneration sites in Callan through the application of the Urban Regeneration and Housing Act 2015, Vacant Site Levy, on lands zoned 'General Business' and 'Residential'.	✗	✗	✗	✗	✗	✗	✗	None
HC8: It is an objective of the Plan to support the actions set out in Kilkenny Age Friendly County Strategy 2017 – 2022 where practicable.	✗	✗	✗	✗	✗	✗	✗	None
HC9: It is an objective of the Plan to allow for the development of 10 community housing units at Westcourt. See also HC-SDO 1.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
BNH1: To encourage and apply flexibility in order to secure the appropriate reuse, renovation and rehabilitation of a Protected Structure.	✗	✗	✗	✗	✗	✗	✗	None
BNH2: To protect and enhance the historic landscape and character of Callan.	✗	✗	✗	✗	✗	✗	✗	None
BNH3: To make additions to the Record of Protected Structures as appropriate using the provisions of Part IV of the Planning and Development Act 2000 as amended.	✗	✗	✗	✗	✗	✗	✗	None
BNH 4: Kilkenny County Council considers that the historic core of Callan town	✗	✗	✗	✗	✗	✗	✗	None

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
comprises an area of special architectural, archaeological, historic interest, presents an attractive townscape and is worthy of protection. It is therefore proposed to continue to designate the area indicated in Figure 3, as an Architectural Conservation Area.								
BNH5: It is the policy of the Council to support the protection of archaeological heritage through preservation in situ of, or preservation by record of recorded monuments and any other archaeological features in Callan.	X	X	X	X	X	X	X	None
BNH6: It is an objective of Kilkenny County Council to support the National Policy on Town Defences which sets out national policy for the protection, preservation and conservation of the defences of towns and cities.	X	X	X	X	X	X	X	None
NHB1: In seeking to protect and enhance the natural environment, Kilkenny County Council will seek to; <ul style="list-style-type: none"> • Protect natural heritage sites designated in National and European legislation, specifically the River Barrow and Rivers Nore SAC (See also NH2); • Protect and conserve non-designated habitats and species; and • Protect and incorporate existing biodiversity features such as trees, hedgerows and surface water features into the design and construction of new development and public realm and enhancing the biodiversity value of existing open spaces. • Where development proposals are made along the riparian corridor, ensure that a condition of consent is to establish a vegetated strip along the river in consultation with the National Parks and Wildlife Service. 	X	X	X	X	X	X	X	None
NHB2: It is an objective of Kilkenny County Council to protect and incorporate existing biodiversity features such as hedgerows and surface water features into the design and construction of new development and public realm. Where the	X	X	X	X	X	X	X	None

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
loss of the existing features is unavoidable new biodiversity features should incorporate native species, and species of local provenance to replace the existing hedgerow.								
NHB3: It is an objective of Kilkenny County Council to retain the character the Motte Field and Abbey Meadow as high value locally important areas for nature conservation and to enhance biodiversity value within these areas where possible.	×	×	×	×	×	×	×	None
NHB4: It is an objective of Kilkenny County Council to ensure best practice is followed as regards tree retention and replacement.	×	×	×	×	×	×	×	None
NHB5: It is an objective of Kilkenny County Council to support the implementation of the Callan River Project under the Town and Village Renewal Scheme. The project will consist of the removal of sediment deposits and associated vegetation that has developed within the river channel in recent years.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
NHB6: It is an objective of Kilkenny County Council to avoid the spread of alien invasive species, to promote good practice in the control of invasive species and to raise awareness in relation to invasive species present within the LAP area and thereby preventing the spread of invasive species.	×	×	×	×	×	×	×	None
GI1: It is an objective of Kilkenny County Council to develop a Green Infrastructure Strategy for the town, linked to its urban regeneration. The strategy will identify a youth space on existing open space within the town.	×	×	×	×	×	×	×	None
OS1: It is an objective of Kilkenny County Council to improve the quality of these strategic open spaces through improved linkages and support for active uses surrounding these sites.	×	×	✓	✓	✓	✓	×	River Barrow and River Nore SAC 002162 River Nore SPA 004233

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Loss Indirect Habitat	Changes in Water Chemistry	Natura 2000 sites potentially affected
SDO- OS1: To implement the Fair Green Regeneration Scheme in line with a recently approved part 8 application.	×	×	×	×	×	×	×	None
SDO- OS2: To develop the Motte Field as part of the Green infrastructure Strategy for the town with all stakeholders and to incorporate an appropriate pedestrian access to the Westcourt Industrial Estate and the Callan Bacon site as part of the Motte Fields Nature and Heritage Trail.	×	×	✓	×	×	×	×	River Barrow and River Nore SAC 002162 River Nore SPA 004233
SDO- OS3: To allow for a potential public space /pocket park at St. Mary's Church and graveyard through development of a joint proposal by key stakeholders that takes into account built heritage constraints and management requirements.	×	×	×	×	×	×	×	None
SF1: It is an objective of Kilkenny County Council to support/advance the provision of additional district level indoor sports facility in Callan	×	×	×	×	×	×	×	None
SF2: It is an objective of Kilkenny County Council to support the development of facilities at John Lockes GAA.	×	×	×	×	×	×	×	None
SF3: It is an objective of Kilkenny County Council to retain sports and recreational facilities in the town for the benefit of the town inhabitants and the wider catchment area.	×	×	×	×	×	×	×	None
TO1: It is an objective of Kilkenny County Council to carry out an asset mapping exercise for Callan.	×	×	×	×	×	×	×	None
TO2: It is an objective of Kilkenny County Council in conjunction with the Town Team to prepare a marketing and communications strategy aimed at increasing visitor numbers.	×	×	×	×	×	×	×	None
TO3: To facilitate tourism activities such as eco-tourism, niche retailing, food markets, local and other craft type activities so as to diversify the tourism	×	×	×	×	×	×	×	None

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
product in Callan, subject to relevant environmental assessments.								
TO4: To support the development of standardised signage and interpretation for tourism facilities and tourist attractions throughout Callan.	X	X	X	X	X	X	X	None
TO5: To support the development of linkages between historical sites within and around Callan.	X	X	✓	X	X	X	X	River Barrow and River Nore SAC 002162 River Nore SPA 004233
ACCE1: It is an objective of Kilkenny County Council to support festivals and cultural events across the County.	X	X	X	X	X	X	X	None
ACCE2: It is an objective of Kilkenny County Council to enhance the role of venues within district towns to facilitate satellite events associated with some of the County's signature festivals.	X	X	X	X	X	X	X	None
ACCE3: It is an objective of Kilkenny County Council to support the Friary Conservation Plan and the development of the Friary Complex as a cultural and creative hub with a modern library service at its centre.	X	X	X	X	X	X	X	None
ACCE4: It is an objective of Kilkenny County Council to investigate the feasibility of providing additional cultural facilities in Callan and to investigate the feasibility of providing additional cultural facilities in the town.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
ACCE5: It is an objective of Kilkenny County Council to support the development of the various arts organisations in the town	X	X	X	X	X	X	X	None
ACCE6: It is an objective of Kilkenny County Council to support the development of Callan Workhouse as a civic and cultural cluster.	X	X	X	X	X	X	X	None

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Loss Indirect Habitat	Changes in Water Chemistry	Natura 2000 sites potentially affected
IN1: Kilkenny County Council will support the completion of an Irish Water survey over the next 2-3 years to assess the constraints on the waste water network in Callan. This will include an assessment of existing overflows, (one of which is located at the Clodeen pump station).	×	×	×	×	×	×	×	None
IN2: To ensure that any significant additional development in Callan is only allowed once the necessary water and wastewater capacity is in place.	×	×	✓	×	×	×	×	River Barrow and River Nore SAC 002162 River Nore SPA 004233
IN3: It is an objective of Kilkenny County Council to align future development with capacity at the Callan Waste Water Treatment Plant to ensure that improvements are sufficient to meet standards required to avoid significant adverse effects on the River Nore and River Barrow SAC.	×	×	✓	×	×	×	×	River Barrow and River Nore SAC 002162 River Nore SPA 004233
IN4: In conjunction with Irish Water, the Council will endeavour to maintain an adequate water supply sufficient for the development needs of the Plan.	×	×	✓	×	×	×	×	River Barrow and River Nore SAC 002162 River Nore SPA 004233
IN5: To support optimal utilisation of existing pumping stations and limit the number of additional / future pumping stations to a minimum.	×	×	×	×	×	×	×	None
IN6: To have regard to the suite of Irish Water objectives for development as set out in Appendix 3 in assessing applications for all new developments within this Local Area Plan.	×	×	×	×	×	×	×	None
FDM1: To adopt a comprehensive risk-based planning approach to flood management to prevent or minimise future flood risk. In accordance with the Planning System and Flood Risk Management – Guidelines for Planning Authorities, the avoidance of development in areas where flood risk has been	×	×	×	×	×	×	×	None

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
identified shall be the primary response.								
FDM2: In areas at risk from flooding, (particularly at riverside locations) a precautionary approach will apply and the methodology set out in the Planning Guidelines 'The Planning System and Flood Risk Management' will be applied to development proposals.	×	×	×	×	×	×	×	None
FDM3: Where flood risk may be an issue for any proposed development, including pluvial flood risk, a flood risk assessment (<i>including an assessment of drainage infrastructure</i>) shall be carried out that is appropriate to the scale and nature of the development and the risks arising. This shall be undertaken in accordance with the Flood Risk Assessment Guidelines. Proposals for mitigation and management of flood risk will only be considered where avoidance is not possible and where development can be clearly justified with the Guidelines' Justification Test.	×	×	×	×	×	×	×	None
FDM4: The Council will support the introduction of attenuation measures that would reduce levels of surface water discharge into the main water course, thereby reducing the risk of flooding and supporting improvements to the quality of water. To do this, the Council will encourage surface water management for all green-field developments, whereby surface water run-off will be limited to pre-development levels.	✓	×	×	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
FDM5: A site specific flood risk assessment should be completed for development in areas liable to surface water flooding, as identified in the SFRA.	×	×	×	×	×	×	×	None
EO1: It is an objective of Kilkenny County Council to require all new development to designed in such a way as to maximise energy efficiency.	×	×	×	×	×	×	×	None

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Loss Indirect Habitat	Changes in Water Chemistry	Natura 2000 sites potentially affected
EO2: It is an objective of Kilkenny County Council to require all development to consider the potential for decentralised energy systems and for renewable energy to be integrated into the design of new development. Proposals should be accompanied by a 'low and zero carbon energy statement' outlining proposals for energy efficiency as well as the use low and zero carbon technologies.	×	×	×	×	×	×	×	None
TSDO1: It is an objective of Kilkenny County Council to carry out a Bridge Street / Mill Street Regeneration and Mobility Management Plan.	×	×	×	×	×	×	×	None
TSDO2: Safety improvements on the National Road at the junction of the N76 and R699 are required to address general safety issues and sight lines in particular in consultation with the TII.	×	×	×	×	×	×	×	None
TSDO3: Improve Pedestrian crossing facilities on the N76 at the R695 and L1020 junctions.	×	×	×	×	×	×	×	None
TSDO4: to implement the Fair Green Regeneration Scheme in line with a recently approved part 8 application.	×	×	×	×	×	×	×	None
TSDO5: It is an objective of Kilkenny County Council to carrying out a high level car parking strategy for the town centre that identifies an improved and managed approach to parking on Green Street and provide more opportunities for off street parking elsewhere in the town.	×	×	×	×	×	×	×	None
TSDO6: It is an objective of Kilkenny County Council to support the provision of pedestrian / cycle access, through provision of bridge infrastructure in order to enhance connectivity between the town and the Motte Field.	✓	×	✓	✓	×	×	×	River Barrow and River Nore SAC 002162 River Nore SPA 004233
TSDO7: It is an objective of Kilkenny County Council to provide a walking and cycling route from Clodeen Lane to the car park at Mill lane / friary meadow.	×	×	✓	✓	×	×	×	River Barrow and River Nore SAC 002162

Objectives	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of	Indirect Habitat Loss	Changes in Water Chemistry	Natura 2000 sites potentially affected
								River Nore SPA 004233
TSD08 – it is a long term objective to improve road connections between the Windgap road and Golf Club Road.	✓	✓	✗	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
TSD09 – it is a long term objective to improve road connections between the Windgap road and Mill Street as well as between north and south Callan over the King's River.	✓	✓	✗	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
TSD010: To require all significant developments to be accompanied by Traffic and Transport Assessments (TTA) and Road Safety Audit (RSA) to be assessed in association with their cumulative impact with neighbouring developments on the road network. Regard should be had to the thresholds advised in the TII Traffic and Transport Assessment Guidelines (2014) and sub threshold TAA requirements for proposals affecting National Roads.	✗	✗	✗	✗	✗	✗	✗	None

Table 7: Potential Negative Impacts & Effects of Development Management Objectives

Development Management Objectives	Potential Impacts and Effects							Natura 2000 sites potentially affected
	Emissions to water	Emissions to Air	Disturbance of Features of Interest	Deterioration in water quality	Reduction in populations of Features of Interest	Indirect Habitat Loss	Changes in Water Chemistry	
DMO1: It is an objective of Kilkenny County Council to implement land use zoning objectives for the plan area as set out in Appendix 1 of the LAP.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
RD DMO 1: In accordance with policies set out in the National Planning Framework, it is an objective of Kilkenny County Council to encourage the appropriate redevelopment of brownfield and infill sites for residential uses within the LAP boundary subject to compliance with the relevant development management standards as set out in the County Development Plan.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
RD DMO 2: To ensure that a good mix of housing types and sizes is provided to meet the future needs of the population of the town.	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
HCDMO 1: To promote Universal Design and Lifetime Housing in accordance with best practice and the policies and principles contained in Building for Everyone: A Universal Approach and Sustainable Residential Development in Urban Areas and its associated document Urban Design Manual: A Best Practice Guide.	✗	✗	✗	✗	✗	✗	✗	None

Development Management Objectives	Potential Impacts and Effects							Natura 2000 sites potentially affected
HCDMO 2: In terms of design and layout, new residential developments of over 3-4 units should submit design statements in conjunction with applications for permission, explaining the principles and concept behind the design, demonstrating how the proposal relates to the wider context and meets urban design objectives and principles.	X	X	X	X	X	X	X	None
HCDMO 3: To facilitate the development of housing for older people in order to improve the quality of living for our ageing population. Any new residential development should focus on complying with the Universal Design approach, so as to facilitate older persons' living.	X	X	X	X	X	X	X	None
BHDM1: It is an objective of Kilkenny County Council to require an architectural heritage assessment/architectural impact assessment report to be submitted with all applications related to Protected Structures. This should be prepared in accordance with Appendix B of the <i>“Architectural Heritage Protection, Guidelines for Planning Authorities”</i> .	X	X	X	X	X	X	X	None
BHDM2: It is an objective of Kilkenny County Council to encourage the retention and restoration of existing buildings and streetscape in a manner which respects its special character and improves that character with appropriate new developments when opportunities arise.	X	X	X	X	X	X	X	None
BHDM 3: It is an objective of Kilkenny County Council to require an assessment of the archaeological implications of all development proposals within the zone of archaeological potential.	X	X	X	X	X	X	X	None
BHDM 4: To support the sensitive restoration of protected structures and their attendant grounds and operate flexibly as regards facilitating the ongoing use of these buildings subject to good conservation principles.	X	X	X	X	X	X	X	None
BHDM 5: To protect and preserve items of both architectural and archaeological heritage from inappropriate development that would adversely affect and/or detract from the interpretation and setting of these sites. These include recorded monuments, structures contained in the Record	X	X	X	X	X	X	X	None

Development Management Objectives	Potential Impacts and Effects							Natura 2000 sites potentially affected
of Protected Structures, the National Inventory of Architectural Heritage and structures within the Architectural Conservation Area.								
BHDM 6: Require consultation with the Council's Heritage and Conservation Officers to ensure the protection of archaeological heritage of the town and the associated historic landscape. This includes terrestrial archaeology and underwater archaeology for in river works.	X	X	X	X	X	X	X	None
BHDM 7: The recognition of embodied energy found within the historic buildings within the town, as an energy saving source.	X	X	X	X	X	X	X	None
BHDM8: Assessment for new developments in the ACA should have regard to scale, height, fenestration, roofs and facades, which will enable such architectural details and context to be maintained and strengthened.	X	X	X	X	X	X	X	None
<p>NHB - DM1: The King's River which forms part of the River Barrow and River Nore SAC has considerable potential to be used as a recreational asset for the town and the Local Area Plan will seek to promote the natural amenity potential of this site subject to:</p> <ul style="list-style-type: none"> • Protection of this site in accordance with National and European legislation ensuring that any development in or near the SAC will avoid any adverse impact on the features for which the site has been designated; • Consultation with the prescribed bodies and relevant government agencies when assessing developments which are likely to impact on designated natural heritage sites or those sites proposed to be designated; and • The requirement for an appropriate assessment in respect of any proposed development likely to have an impact on a designated natural heritage site, or those sites proposed to be designated. 	✓	✓	✓	✓	✓	✓	✓	River Barrow and River Nore SAC 002162 River Nore SPA 004233
NHB – DM2: New development should ensure, including where necessary	✓	✓	✓	✓	✓	✓	✓	River Barrow and River

Development Management Objectives	Potential Impacts and Effects							Natura 2000 sites potentially affected
<p>through appropriate developer contributions, the efficient and effective use of environmental resources by:</p> <ul style="list-style-type: none"> • Having regard to sustainable energy considerations set out in Department Guidelines on Quality Housing for Sustainable Communities (2007) and Chapter 10 of the County Development Plan; and • Through the use of sustainable drainage methods. 								Nore SAC 002162 River Nore SPA 004233
<p>NHB – DM3: It is an objective of Kilkenny County Council to require all new development to be designed in such a way as to maximise energy efficiency. All new development must consider the potential for decentralised energy systems and renewable or low/zero carbon energy. Planning applications should be accompanied by a ‘low and zero carbon energy statement’ outlining approach to energy efficiency and the use of low and zero carbon technologies.</p>	X	X	X	X	X	X	X	None
<p>NHB – DM4: To support and facilitate the development of pedestrian/cycle routes along suitable routes subject to relevant environmental assessments.</p>	X	X	✓	X	X	X	X	River Barrow and River Nore SAC 002162 River Nore SPA 004233
<p>NHB – DM5: To support the development of outdoor leisure activities on lands designated as open space, subject to the protection of landscape character and natural heritage.</p>	X	X	✓	X	X	X	X	River Barrow and River Nore SAC 002162 River Nore SPA 004233
<p>NHB – DM6: Require the incorporation of natural features where appropriate and to protect existing trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character, and to ensure that proper provision is made for their protection and management or replacement, when undertaking, approving or authorising development.</p>	X	X	X	X	X	X	X	None
<p>NHB – DM7: To ensure that when approving or authorising development that sufficient information is provided to enable an assessment of impacts on</p>	X	X	X	X	X	X	X	None

Development Management Objectives	Potential Impacts and Effects							Natura 2000 sites potentially affected
woodlands, trees and hedgerows.								
NHB – DM8: All lighting within the Plan area will be directional lighting designed specifically in relation to biodiversity.	X	X	X	X	X	X	X	None
OSDM1: According to quantitative standards, sufficient quantity of open space is currently in place. A qualitative assessment is now required to understand the scope for improvements with respect to each green space both in terms of its usability together with its value for biodiversity.	X	X	✓	X	X	X	X	River Barrow and River Nore SAC 002162 River Nore SPA 004233
<p>OSDM2: In terms of future enhancement, together with the improvements identified as part of the qualitative open space assessment, it is an objective of Kilkenny county Council to;</p> <ul style="list-style-type: none"> • Protect and enhance the strategic role of areas likely to flood, through the identification of a flood risk buffer and linear park, where appropriate, alongside the Kings River and elsewhere where surface water features are present; • Protect and enhance these areas in terms of their biodiversity value particularly in areas close to River Barrow and River Nore SAC; • Improving access to and management of public spaces and pockets parks in the town centre; • Achieve design principles set out in the County Development Plan and specifically designing for active frontages and natural surveillance; and • Improve management of these spaces through natural means, avoiding the use of the herbicide glyphosate. 	✓	X	✓	X	X	✓	X	River Barrow and River Nore SAC 002162 River Nore SPA 004233
PSDM1: New residential development is required to be consistent with standards set out in the County Development Plan where playable space is to be provided as an integral part of each new development. This playable space can form part of the overall open space provision of a development but must be dedicated to play and must be accessible in accordance with the	X	X	X	X	X	X	X	None

Development Management Objectives	Potential Impacts and Effects							Natura 2000 sites potentially affected
standards in the County Development Plan.								
TDMO1: All new tourism development should be designed to ensure that assets and features are universally accessible with a view to promoting inclusive tourism.	X	X	X	X	X	X	X	None

