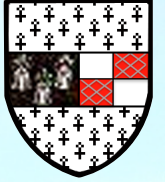
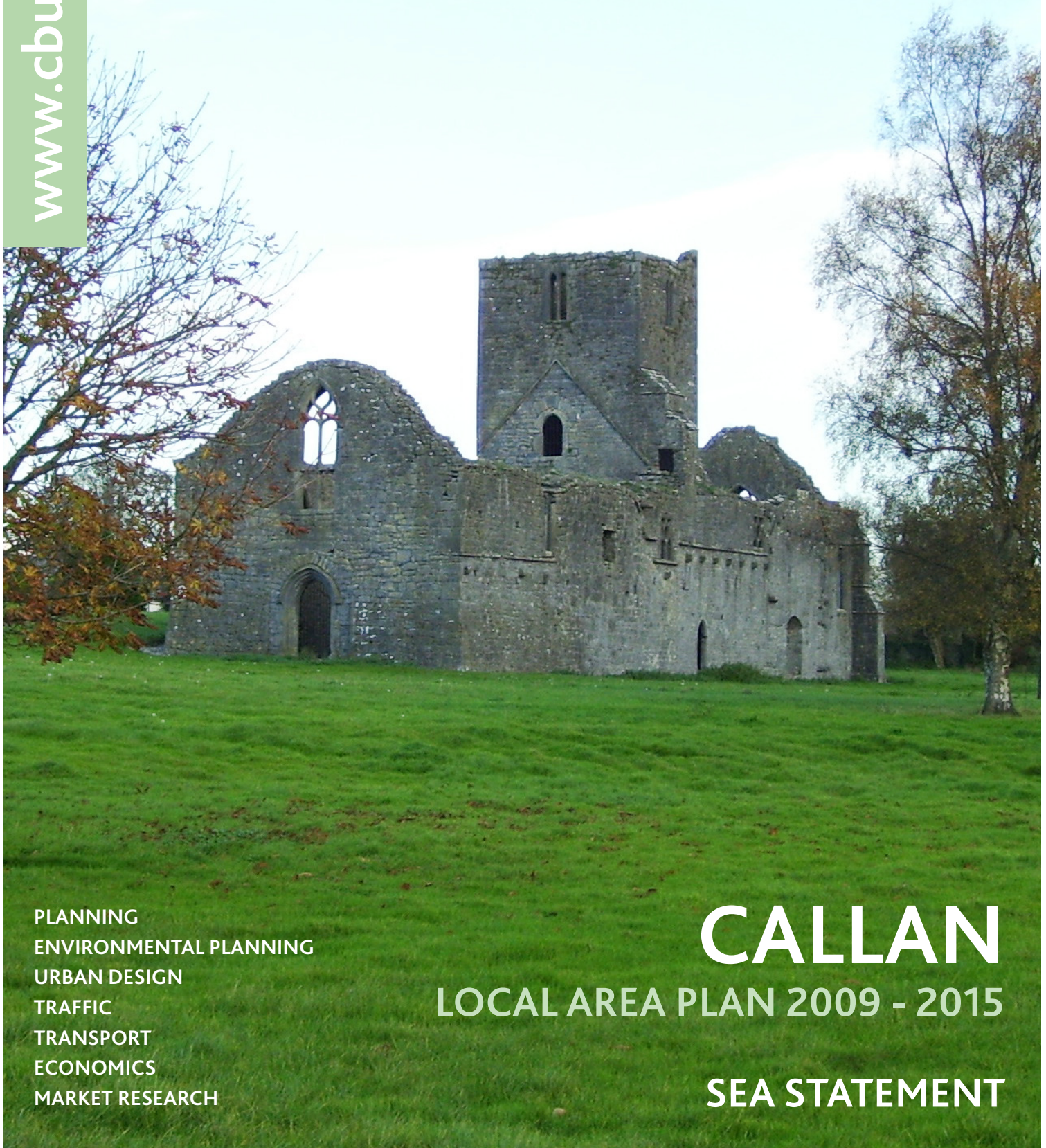


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# CALLAN

## LOCAL AREA PLAN 2009 - 2015

### SEA STATEMENT

# Callan Local Area Plan SEA Statement

Project No: 137941  
April 2009

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## 1 Introduction

- 1.1.1 This is the Strategic Environmental Assessment (SEA) Statement for the Callan Local Area Plan 2009 – 2015 (LAP). The Callan Local Area Plan 2009 – 2015 (LAP) was adopted 16th February, 2009 and is available from [www.kilkennycoco.ie](http://www.kilkennycoco.ie) and for inspection at the Planning Department at County Hall, John Street, Kilkenny between the hours of 9 a.m. to 4 p.m. Monday to Friday.
- 1.1.2 The SEA Statement has been carried out in accordance with Article 14I and 14J of the Planning and Development (Strategic Environmental Assessment) Regulations, 2004 and has been structured in accordance with the *Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment, 2004*. The Statement is structured as follows:
- How environmental considerations and the Environmental Report were factored into the LAP
  - Summary of how submissions / consultations were taken into account
  - Reasons for choosing the plan as adopted, in the light of other reasonable alternatives considered
  - Monitoring measures
- 1.2 Summary of SEA process
- 1.2.1 The preparation of the LAP has been subject to the Strategic Environmental Assessment process and has included the following steps:
- Stage 1: Screening**
- 1.2.2 A screening statement was prepared to establish whether it was necessary to carry out a Strategic Environmental Assessment. Screening was required as the population in the Callan is less than 10,000 persons.
- 1.2.3 The screening process highlighted a number of existing environmental issues relevant to the Plan area and established that the River Barrow and River Nore candidate Special Area of Conservation (cSAC) traverses the study area. It was therefore determined that a Strategic Environmental Assessment was appropriate given that significant effects on the environment may arise.
- Stage 2: Scoping and statutory consultation**
- 1.2.4 Scoping was carried out to establish the appropriate level of detail for consideration in the environmental assessment. The scoping exercise included consultation with the following statutory consultees:
- Tadhg O'Mahony, Environmental Protection Agency (EPA)
  - The Manager, Development Applications Unit, Department of the Environment, Heritage & Local Government (DoEHLG)
- Stage 3: Environmental assessment of the draft LAP**
- 1.2.5 The environmental assessment of the Draft LAP was completed and documented within the Environmental Report. This report also considered the comments made during the scoping consultation and included the following steps:
- Consideration of relationship between the Plan and other relevant plans and programmes

- Collation and assessment of baseline data relating to key environmental characteristics within the plan area
- Identification of key environmental issues affecting the plan area
- Identification of environmental objectives and indicators
- An assessment of plan alternatives
- Evaluation of the likely significant environmental effects of the Plan
- Mitigation measures
- Monitoring proposals

***Stage 4: Statutory consultation on draft LAP and Environmental Report***

- 1.2.6 Public consultation was carried out in accordance with Section 20 (3 (b) of the Planning and Development Act 2000. The draft LAP and Environmental Report were put on public display for six weeks during which time submissions and observations were invited.
- 1.2.7 Draft LAPs and Environmental Reports were also sent to the following statutory bodies:
- Tadhg O'Mahony, Environmental Protection Agency
  - The Manager, Development Applications Unit, Department of the Environment, Heritage & Local Government

***Stage 5: Manager's report on submissions received***

- 1.2.8 Following the public display period, submissions and observations on the draft Plan and Environmental Report were considered. A Manager's report was prepared which considered and made recommendations on all submissions and observations received. Where appropriate and in the context of environmental vulnerabilities, the Manager's Report also considered the environmental implication of submissions made. Submissions in respect of the SEA were also considered in the Manager's report.

***Stage 6: Statutory consultation on amended draft LAP and associated amended Environmental Report***

- 1.2.9 Following the preparation of the Manager's report, Proposed Amendments to the Draft Plan and an associated Environmental Report with respect to these amendments was completed.
- 1.2.10 The amended draft LAP and the amended Environmental Report were then placed on public display for a further period of five weeks, during which time submissions and observations were invited. The amended Draft LAP and amended Environmental Report were also sent to the EPA and DoEHLG for their comments.
- 1.2.11 A Manager's report was prepared in relation to submissions and observations received on the amended draft LAP and amended Environmental Report.

***Stage 7: Adoption of LAP***

- 1.2.12 Following consideration of the Manager's Report on the amended draft LAP and the amended Environmental Report, appropriate amendments were made and the LAP was adopted on 16<sup>th</sup> February 2009.

***Stage 8: SEA Statement***

- 1.2.13 This SEA Statement has been prepared following the adoption of the Plan.

## 2 How environmental considerations and the Environmental Report were factored into the Plan

### 2.1 Introduction

2.1.1 This chapter outlines how the Plan responds to environmental issues and how the Plan and SEA processes were integrated and iterative. The collection of baseline data identified the following **key environmental issues** facing Callan:

- Poor river water quality - rivers water bodies can be described as being at significant risk of failing to meet good status by 2015
- The presence of regionally important aquifer and the prevalence of high groundwater vulnerability
- The replacement of natural and semi-natural habitats and loss of soil resulting from development on greenfield sites
- A higher reliance on private transport with subsequent impacts on air quality and emissions
- The presence of areas liable to flooding
- Limited waste water treatment capacity
- Lack of additional capacity exists in terms of water supplies
- Possible impacts on areas of archaeological potential, structures on the record of protected structures and national inventory of architectural heritage
- Relatively high levels of social deprivation
- The presence of designated biodiversity sites which may be sensitive to impacts of future development

2.1.2 The identification of key environmental issues at the scoping stage allowed policies and zoning designations to respond to environmental issues from the outset of the process. SEA objectives developed as a result of the scoping process were used to evaluate the objectives and policies set out in the Plan.

#### ***Environmental Assessment of the draft LAP***

2.1.3 The Environmental Report for the draft and amended draft LAP assessed Plan objectives and policies against SEA Objectives. **SEA objectives** are:

- Conserve and enhance the diversity of habitats and species, including designated sites which may be sensitive to development
- Improve the socio-economic profile of Callan
- Prevent pollution and contamination of groundwater
- Protect and improve river water quality in Callan
- Protect and improve water quality and supply
- Reduce vulnerability to effects of climate change, including flood risk
- Protect and conserve Callan's cultural heritage, including areas of archaeological interest, protected structures, important monuments and sites and hedgerows
- Protect and enhance valued natural and historic landscapes and features within them
- Protect and enhance soil and / or air quality

2.1.4 The preparation of the Environmental Report accompanying the draft and amended draft LAP also involved the consideration of alternative plan scenarios and the selection of a preferred plan strategy. This consideration assessed scenarios in light of environmental issues already identified. The assessment of alternatives is detailed further in Chapter 4.

## 2.2 Summary of SEA Influence

2.2.1 As a result of the SEA process, policies in the draft, amended draft and adopted Plan were able to respond to the environmental issues and potential impacts. **Table 2.1** sets out how policies in the adopted Plan addressed key environmental issues.

**Table 2.1: Incorporation of Environmental Considerations into plan policies**

<b>Recommendation In Environmental Report / Environmental Issue Identified</b>	<b>Callan Local Area Plan Policy Response</b>
<p><b>River Water Quality</b> - Poor river water quality - rivers water bodies can be described as being at significant risk of failing to meet good status by 2015</p>	<p>Policy IN2 (Waste Water Treatment Works) seeks to upgrade the existing Waste Water Treatment Facility for Callan to accommodate development as proposed in this Local Area Plan to enable development as proposed in this Local Area Plan and that improvements are sufficient to meet standards required to avoid significant adverse effects on the River Nore and River Barrow SAC.</p> <p>Additionally, Policies F2 (Attenuation Measures), NH1 (Natural Heritage / Biodiversity) and NH2 (The River Barrow and River Nore SAC) all seek to avoid deterioration of river water quality.</p>
<p><b>Groundwater</b> - The presence of regionally important aquifer and the prevalence of high groundwater vulnerability</p>	<p>Policy IN2 (Waste Water Treatment Works) aims to upgrade the waste water treatment works in order to avoid adverse effects on groundwater. In addition, Policies NH1 and NH2 seek to protect the integrity of and avoid any adverse impacts on the SAC. Policy F2 (Flood Risk) encourages the introduction of attenuation measures which will support improvements in water quality.</p>
<p><b>Habitats</b> - The replacement of natural and semi-natural habitats and loss of soil resulting from development on greenfield sites</p>	<p>Policies R1 and RES1 seek to guide development towards the town centre, thereby avoiding development on greenfield land and potential negative impacts on habitats.</p> <p>In addition Policy RES3 (Design and Layout of New Residential Development), OS3 Enhancing Open Space and NH1 Natural Heritage / Biodiversity seeks to support biodiversity through good quality landscaping and the protection of existing biodiversity features such as trees and hedgerows.</p>
<p><b>Transport</b> - A higher reliance on private transport with subsequent impacts on air quality and emissions</p>	<p>Policy RES3 (Design and Layout of New Residential Development) supports increased permeability and linkages, encouraging walking, cycling and access by public transport.</p> <p>In addition, Policies T1 (Connectivity and Permeability) and T3 (Walking and Cycling) support and seek to facilitate sustainable transport measures.</p>
<p><b>Flooding</b> - The presence of areas liable to flooding</p>	<p>Policies F1 (Areas at Risk of Flooding) and F2 (Attenuation Measures) specifically seek to apply the precautionary approach with regard to development proposals in areas at risk of flooding and support attenuation measures which would reduce surface water discharge into the main water course.</p> <p>In addition, Policy OS3 seeks to provide a linear</p>



Recommendation In Environmental Report / Environmental Issue Identified	Callan Local Area Plan Policy Response
	park alongside the River Barrow and River Nore SAC. This measure will maintain / provide a buffer between the River and development, thereby helping to mitigate the impact of flooding events elsewhere.
<b>Waste water treatment</b> - Limited waste water treatment capacity	Policy IN2 (Waste Water Treatment Works) seeks to upgrade the existing Waste Water Treatment Facility for Callan to accommodate development as proposed in this Local Area Plan to enable development as proposed in this Local Area Plan and that improvements are sufficient to meet standards required to avoid significant adverse effects on the River Nore and River Barrow SAC.
<b>Water Supply</b> - Lack of additional capacity exists in terms of water supplies	Policy IN1 (Water Supply) specifically seeks to maintain adequate water supply to serve the development needs of the town. In addition, Policy ER1 (Efficient Use of Environmental Resources) seeks to provide high levels of water efficiency.
<b>Cultural Heritage</b> - Possible impacts on areas of archaeological potential, structures on the record of protected structures and national inventory of architectural heritage	<p>Policy R1 seeks to encourage the appropriate reuse and regeneration of derelict, vacant and underutilised sites in the town centre.</p> <p>Policy AC1 (Designation of Architectural Conservation Area) and AC2 (Purpose of Architectural Conservation Area) seeks to designate Callan town centre as an Architectural Conservation Area.</p> <p>In addition Policies RPS1 and RPS2 (Protected Structures) seek to protect and preserve RPS structures and to encourage and apply flexibility in order to secure the appropriate reuse, renovation and rehabilitation of RPS structures.</p>
<b>Social Deprivation</b> - Relatively high levels of social deprivation	<p>A number of policies have been included in the LAP which support improvements with regard to social deprivation. These include:</p> <ul style="list-style-type: none"> <li>▪ E1 – seeks to designate sufficient land for the promotion of employment related uses</li> <li>▪ RES3 – seeks to encourage quality new residential developments through a number of design measures</li> <li>▪ OS3 – enhancing open space provision</li> <li>▪ OS4 – qualitative enhancements to open space (Fairgreen)</li> <li>▪ PS1 &amp; PS2 - provision of playspace</li> <li>▪ CF1 – provision of community facilities</li> <li>▪ CF2 – development of new primary health care facility at Callan Workhouse</li> </ul>
<b>Biodiversity</b> - The presence of designated biodiversity sites which may be sensitive to impacts of future development	Policies NH1 (Natural Heritage / Biodiversity) and NH2 (The River Barrow and River Nore SAC) specifically seek to protect natural habitats and designated sites. Policy IN2 (Waste Water

Recommendation In Environmental Report / Environmental Issue Identified	Callan Local Area Plan Policy Response
	<p>Treatment Works) seeks to upgrade the existing Waste Water Treatment Facility for Callan to accommodate development as proposed in this Local Area Plan to enable development as proposed in this Local Area Plan and that improvements are sufficient to meet standards required to avoid significant adverse effects on the River Nore and River Barrow SAC.</p>

***Mitigation measures***

2.2.2

Mitigation measures can be described as measures to avoid, reduce or offset significant adverse effects on the environment. The SEA process resulted in the identification of significant environmental effects and measures envisaged to prevent reduce and as fully as possible offset these effects. Table 2.2 details how mitigation measures were incorporated into the plan.

**Table 2.2: Plan’s consideration of proposed mitigation measures**

Mitigation measure	Incorporation of mitigation measures and assessment results
<b>Biodiversity, Fauna and Flora</b>	
Incorporate a riverside buffer zone that limits development in close proximity to the River Dinin.	Addition to NH1: Natural Heritage / Biodiversity
Require the preservation of hedgerows within new development	<p style="text-align: center;"><b>All Site Development Briefs</b>                      New heading: Natural Environment                      Developments will be required to protect and enhance biodiversity and existing natural features of the site.</p>
Avoid development on and establish a buffer around designated ecological sites, the size of which will be dependent on local ecological and drainage conditions established through appropriate assessment.	Addition to NH1: Natural Heritage / Biodiversity
Improvement to waste water treatment	IN2:Infrastructure
<b>Material Assets</b>	
Applications for development within or adjacent to a Site on the Sites and Monument Register or the zone of archaeological potential should submit an archaeological assessment detailing the impacts which the relevant development would have on archaeology in the area	ARC1
Development on the floodplain should be restricted	F1 / F2
<b>Cultural Heritage</b>	
Where development takes place in areas of archaeological potential ensure that ensure all necessary	ARC 1

measures are taken to preserve items in situ	
Include policies to ensure that new development has a minimal impact on Protected Structure, National Monuments, structures on the National Inventory of Architectural Heritage	RPS 1 / RPS 2 / HL1
Development in or close to Bridge Street and particularly for buildings that may be visually prominent should require visual impact assessments.	Site Development Briefs
Incorporate design measures to reduce street clutter into road improvement schemes	Not applicable
<b>Landscape</b>	
In visually sensitive areas new development should use visual screening and planting	Site Development Briefs
Reduce light pollution through appropriate design measures e.g. using full cut off lighting	Site Development Briefs
Development in upland areas or areas with sensitive landscapes to be subject to an assessment of the potential visual impacts of the proposed development.	Site Development Briefs
Restrict residential development on the floodplain.	F1 / F2
New pedestrian/cycle bridge infrastructure should consider the need for project level AA and avoid impacts on designated biodiversity sites.	OS3:Enhancing Open Space Provision
<b>Water and Soil</b>	
Ensure that adequate capacity in the waste water treatment plant is available to serve all new development	IN2:Infrastructure
Ensure that adequate capacity in water supply is available to serve new development	IN1: Infrastructure
Focus development where possible initially on brownfield land	Town centre retail opportunity sites

To encourage the reuse soils generated from housing and other development	N/a
<b>Population and Human Health</b>	
The plan identify measures to support sustainable forms of transport;	Not within the remit of the Plan
The plan should actively encourage the take up of Travel Plans for new educational and employment sites;	Not within the remit of the Plan
The plan should seek to improve accessibility to employment, education, healthcare, food retailing and to a range of housing types and community and recreation facilities.	<p>T1: Transport and Connectivity <b>Action:</b> To support the provision of pedestrian / cycle access, through provision of bridge infrastructure in order to enhance connectivity between the town and the Motte.</p> <p>T3:Transport and Connectivity Action OS3: To develop a neighbourhood park to the North of the town, with a children’s play area</p> <p>Special Objective Community Housing Community Facilities zoning: Workhouse</p>
<b>Air</b>	
Speed restrictions in the town centre could have a beneficial effects in certain locations as slower speeds conserve fuel and increase fuel efficiency, thereby minimising emissions	TC1 Town Centre T3:Transport and Connectivity
<b>Climatic Factors</b>	
Mitigating this increase in greenhouse gas emissions by promoting sustainable travel modes than	Proposals with respect to public transport are



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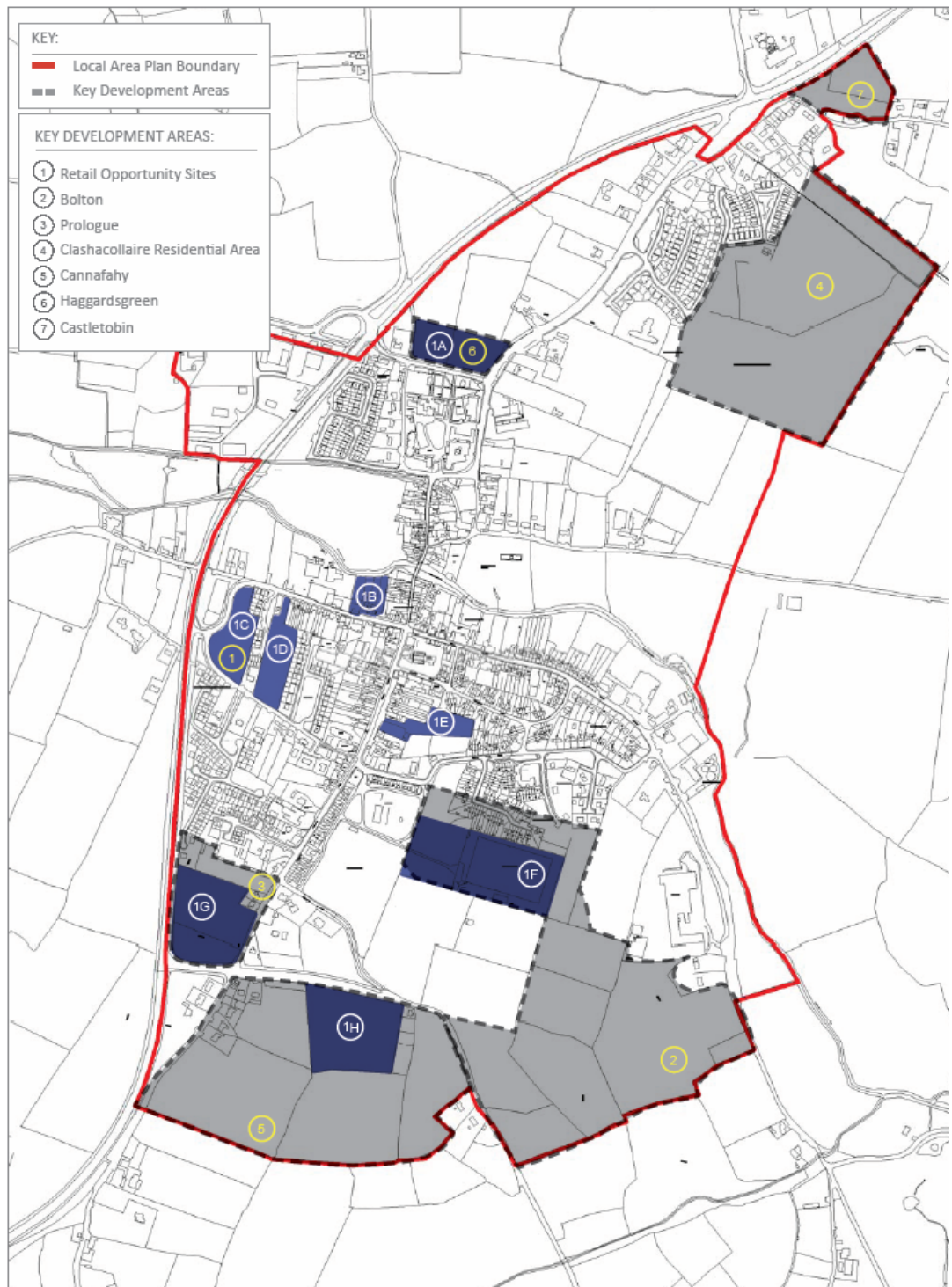
private car should also be promoted	not within the remit of the plan TC1 Town Centre T3:Transport and Connectivity
Encourage use of sustainable design and construction methods	ER1: Efficient Use of Environmental Resources

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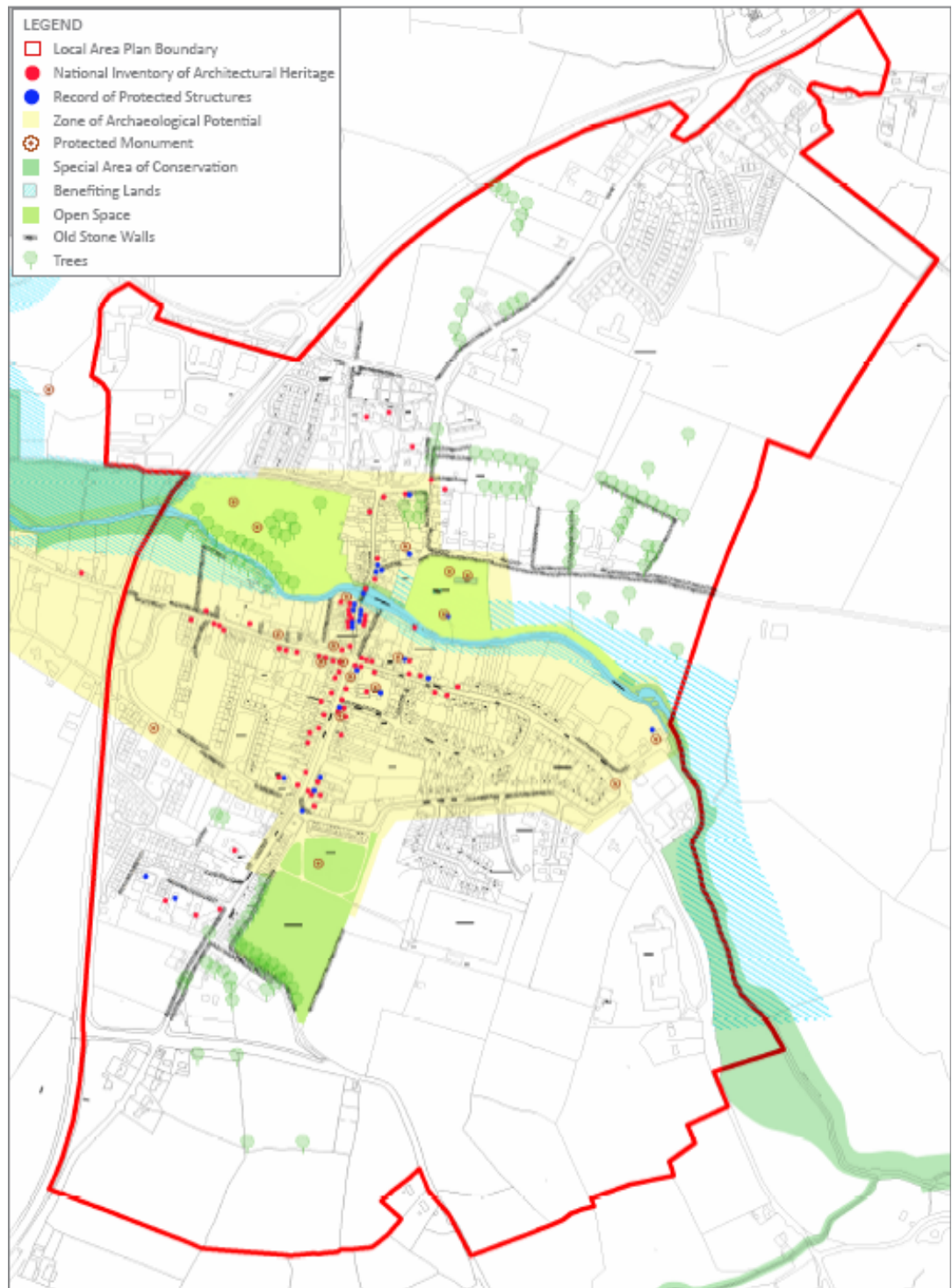
### ***Environmental Considerations incorporated into the Site Development Briefs***

- 2.2.3 Environmental sensitivities were mapped to identify which areas of the town would be most sensitive to development and would suffer the most adverse effects if growth was to be accommodated. The sensitivities were set out and consulted on in the scoping and subsequent Environmental Reports and were communicated to the plan-making team on an iterative basis. Where possible, the Plan has sought to divert growth away from areas identified as having limited carrying capacity or specific environmental issues. The objective of the Development Strategy is to consolidate development within the town centre and where possible prevent the unnecessary zoning of additional lands.
- 2.2.4 Development briefs were included within the Plan for the following areas:
1. Retail Opportunity Sites
  2. Bolton
  3. Prologue
  4. Clashacollare
  5. Cannafahy
  6. Haggardsgreen
  7. Castletobin
- 2.2.5 These sites are subject to the general policy requirements set out within the Plan in addition to the site specific requirements included within the respective development briefs. An Environmental Constraints map (**Figure 2.2**) provided information on environmental sensitivities, informed preparation of these briefs and was designed to inform the preparation of all future development proposals in the town.

**Figure 2.1: Callan Key Development Areas**



**Figure 2.2: Callan Environmental Constraints Map**



### 3 Summary of how submissions / consultations were taken into account

#### 3.1 Introduction

3.1.1 This Chapter sets how consultation throughout the Plan process influenced the outcome of the LAP with regard to environmental issues.

3.1.2 During the public display periods of the draft LAP and amended draft LAP (six weeks and five weeks respectively), associated Environmental Reports were also placed on display. Submissions and observations were considered in the Manager's report. Consultation with statutory bodies took place during the scoping stage of the SEA process as well as the display periods of the draft and amended draft LAP.

#### 3.2 SEA scoping consultations

3.2.1 In order to identify environmental issues in the plan area, a scoping report was completed and consultation with the following bodies was undertaken:

- Tadhg O'Mahony, Environmental Protection Agency
- The Manager, Development Applications Unit, Department of the Environment, Heritage & Local Government
- Dearbhala Ledwidge, Heritage Officer, Kilkenny County Council

3.2.2 Responses received were incorporated in the environmental assessment. Key topics highlighted for consideration in the plan and SEA process included water quality and conservation, climate change, biodiversity, flooding, landscape and cultural heritage.

#### 3.3 Submissions and observations on draft LAP and Environmental Report

3.3.1 Section 20 (3) (c) of the Planning and Development Act 2000 requires a Manager's report to be prepared on any submissions or observations received during the public display period. The Manager's report should indicate what action (if any) was taken in response to the submissions / consultations.

3.3.2 A total of 23 submissions were received during the public display period (11<sup>th</sup> July – 22<sup>nd</sup> August 2008). Issues raised during public consultation included:

- Rezoning for residential [3]
- Other rezoning [10]
- Transport / car parking issues [1]
- Environmental issues [4]
- Retail [6]
- Amenity and recreational issues [2]
- Cultural heritage [1]

##### **Consultees**

3.3.3 The following consultees were consulted at the draft stage of the plan process:

- Tadhg O'Mahony, Environmental Protection Agency



- The Manager, Development Applications Unit, Department of the Environment, Heritage & Local Government
- Dearbhala Ledwidge, Heritage Officer, Kilkenny County Council

3.3.4 Responses in relation to the Environmental Report / SEA were received from the EPA and the DoEHLG. In addition, the Department of Communications, Energy and Natural Resources made a submission with regard to the SEA:

- EPA – submission covered a number of issues including, requesting information on consultation taken place so far, descriptions of the “do nothing” scenario, clarification on full range of likely effects, clarification on mitigation measures and additional information with regard to monitoring measures.
- DoEHLG – submission notes policies in the draft LAP which are relevant to the SAC. The submission also notes the findings of the Environmental Report. The submission requests that any consultation letters and the completed appropriate assessment be forwarded to the DoEHLG.
- Department of Communications, Energy and Natural Resources - states objectives as set out in the Water Framework Directive should not be compromised, any future development proposed on foot of the LAP should be considered premature until suitable Sanitary Services infrastructure is in place.
- Spatial Policy Section, Department of the Environment, Heritage and Local Government - Submission commented on zoning proposals and phasing and the need to take account of new draft guidelines on Flood Risk Management.

### 3.4 Submissions and observations on amended draft LAP and amended Environmental Report

3.4.1 Section 9 (f) of the Planning and Development (Amendment) Act 2002 requires a Manager’s report to be prepared following public display of the amended draft LAP. The Manager’s report should again indicate what action (if any) was taken in response to the submissions / consultations.

3.4.2 A total of 2 submissions were received during the public display period (5<sup>th</sup> December - 9<sup>th</sup> January 2009). Issues raised during public consultation included:

- Retail [2]

#### **Consultees**

3.4.3 The following consultees were consulted at the amended draft stage of the plan process:

- Tadhg O'Mahony, Environmental Protection Agency
- The Manager, Development Applications Unit, Department of the, Environment, Heritage & Local Government
- Dearbhala Ledwidge, Heritage Officer, Kilkenny County Council

3.4.4 Responses in relation to the Environmental Report / SEA were received from the EPA and the DoEHLG. In addition, the Department of Communications, Energy and Natural Resources made a submission with regard to the SEA:

- EPA – response covered a number of issues, including the requirements for the preparation of the SEA Statement. In addition the response refers specifically to Amendment No. 1 following submission DCN 11 / 13 (rezoning of 3.5 acres land from unzoned (outside development boundary) to residential).
- DoEHLG – refers to extent of land use zoning in the LAP and notes and welcomes the inclusion of reference to the “*The Planning System and Flood Risk*

- 
- management – Consultation Draft Guidelines for Planning Authorities*” (September 2008).
- Department of Communications, Energy and Natural Resources – regarding the urgency of upgrade of the waste water treatment plant.

## 4 Reasons for choosing the plan as adopted, in the light of other reasonable alternatives considered

### 4.1 Introduction

4.1.1 The SEA considered three alternative options for the development of Callan for the next six year plan period. The three options considered were:

- **Alternative 1:** Development within the existing town boundary and continuation of existing policies with no new strategies or measures. Consideration of this option (do nothing) satisfies the SEA Directive (Annex I (b) of the Directive);
- **Alternative 2:** Development outside the town boundary to the west of the town representing a high level of growth for the town with no demand restraint as to the level or location of new zoning; and
- **Alternative 3:** Changes to some zoning designations within the town centre and expansion of the town boundary to the south of the town.

### 4.2 Assessment of alternatives

4.2.1 The alternatives outlined above were mapped using GIS (Geographical Information Systems) and assessed against the SEA Objectives developed through the scoping process and set out in the Environmental Report.

4.2.2 It was considered that the environmental effects associated with Alternative 1 would reinforce the existing trends with environment issues facing the environment likely to worsen. Without consideration of more detailed policies and controls that would potentially be associated with all development scenarios, the significance of the environmental effects concerning these issues is more likely as quantum of development increases. Alternative 2 which proposed the highest quantity of new development was considered to be the least favourable. Alternative 1 which provides for the least amount of additional zoning was seen as the least damaging outcome however does not provide for the needs with respect to the growing population. Alternative 3 proposed some additional zoning that reflects the reasonable development requirements of the town during the Plan period.

### 4.3 Preferred option

4.3.1 Alternative 3 was considered to be the most appropriate alternative for the plan and is the preferred strategy. Whilst this strategy proposes some additional zoning, it is based on the needs generated by population growth within the town over the next six years.

## 5 Monitoring measures

### 5.1 Introduction

5.1.1 Article 10 of the SEA Directive requires significant environmental effects of the implementation of plans to be monitored in order to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action.

5.1.2 The Environmental Report which will have been made available for public consultation will have included proposals in relation to monitoring of the plan.

5.1.3 In order to avoid additional and continued work where unnecessary, it was recommended that monitoring proposals mirror, where possible, those outlined in the SEA for the Kilkenny County Development Plan 2008 – 2014.

5.1.4 Monitoring measures have been based on indicators which measure changes in the environment. These indicators include:

- Loss of habitats and species (CDP)
- Deprivation Index
- Compliance with Directive 76/160/EEC (groundwater quality) (CDP)
- New developments granted permission which cannot be adequately served by the current wastewater treatment plant (CDP)
- Biotic Quality Rating (Q value) (CDP)
- Levels of E-Coli present in drinking water
- Developments granted permission which cannot be adequately service by current water supply
- Developments granted permission on flood plain / unauthorised development on floodplain
- Recorded flooding episodes
- Number of unauthorised developments resulting in full or partial loss of cultural heritage (CDP)
- Number of developments granted / unauthorised conspicuous developments located within sensitive landscapes (CDP)
- Area of brownfield land available (CDP)

**Table 5.1: Monitoring Proposals**

<b>Environmental Objective</b>	<b>Indicator</b>	<b>SEA Topic Areas</b>	<b>Responsibility</b>
Conserve and enhance the diversity of habitats and species, including designated sites which may be sensitive to development	Loss of habitats and species (CDP)	Biodiversity, flora and fauna	Kilkenny County Council
Improve the socio-economic profile of Callan	Deprivation index	Population and Human Health	SAHRU Ltd
Prevent pollution and contamination of groundwater	New developments granted permission which cannot be adequately served by the current wastewater treatment plant  Estimate levels of water supply and wastewater infrastructure required to serve new development	Water	Kilkenny County Council
Protect and improve river water quality in Callan	Biotic Quality Rating (Q value) (CDP)	Water	Kilkenny County Council
Protect and improve water supply	Levels of E-Coli and total Coliform bacteria present in drinking water  Developments granted permission which cannot be adequately service by current water supply	Water and Human Health	Kilkenny County Council / EPA
Reduce vulnerability to effects of climate change, including flood risk	Developments granted permission on flood plain / unauthorised development on floodplain  Recorded flooding episodes	Climatic factors / Material Assets	Kilkenny County Council
Protect and conserve Callan's cultural heritage, including areas of archaeological interest, protected structures, important monuments and sites and hedgerows	Number of unauthorised developments resulting in full or partial loss of cultural heritage (CDP)  Known loss of such sites or structures	Cultural Heritage	Kilkenny County Council
Protect and enhance valued natural and historic landscapes and features within them, including scenic views	Loss of landscape  Number of developments granted / unauthorised which results in avoidable impacts on the landscape – especially with regard to sensitive landscape features and designated scenic views (CDP)	Landscape	Kilkenny County Council
Protect and enhance soil and / or air quality	Area of brownfield land available	Soil, Air, Human Health	Kilkenny County Council