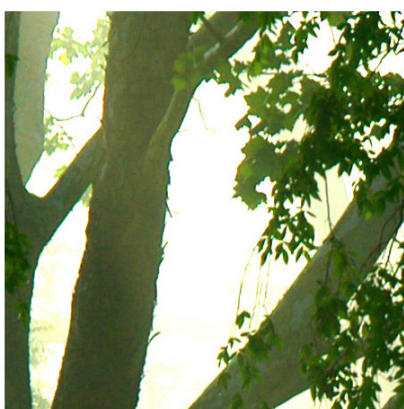




Newbridge Draft Local Area Plan Strategic Environmental Assessment

Environmental Report



Newbridge Local Area Plan (2013-2019) Strategic Environmental Assessment

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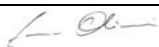
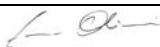
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This Environmental Report was prepared by RPS on behalf of Kildare County Council.

ACRONYMS AND ABBREVIATIONS

AA	Appropriate Assessment
CFRAM	Catchment Flood Risk Assessment and Management
DAHG	Department of Arts, Heritage and the Gaeltacht
DCENR	Department of Communications, Energy and Natural Resources
DECLG	Department of Environment, Community and Local Government
EC	European Community
EIA	Environment Impact Assessment
EPA	Environmental Protection Agency
ER	Environmental Report
EU	European Union
GHG	Greenhouse Gas
NHA	Natural Heritage Area
NIAH	National Inventory of Architectural Heritage
NPWS	National Parks and Wildlife Service
OPW	Office of Public Works
P.E.	Population Equivalent
POM	Programme of Measures
P/P	Plan or Programme
RBD	River Basin District
RBMP	River Basin Management Plan
RMP	Records of Monuments and Places
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SPA	Special Protection Area
WFD	Water Framework Directive
WWTP	Waste Water Treatment Plants

GLOSSARY

Appropriate Assessment	An assessment of the effects of a plan or project on the Natura 2000 network. The Natura 2000 network comprises Special Protection Areas under the Birds Directive, Special Areas of Conservation under the Habitats Directive and Ramsar sites designated under the Ramsar Convention (collectively referred to as European sites).
Aquifers:	A water bearing rock which readily transmits water to wells and springs.
Baseline Environment:	A description of the present state of the environment of the P/P area.
Biodiversity:	Word commonly used for biological diversity and defined as assemblage of living organisms from all habitats including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part.
Birds Directive (2009/147/EC):	Council Directive on the conservation of wild birds.
Cumulative Effects:	Effects on the environment that result from incremental changes caused by the strategic action together with other past, present, and reasonably foreseeable future actions. These effects can result from individually minor but collectively significant actions taking place over time or space.
Designated Authority:	An organisation that must be consulted in accordance with the SEA Regulations.
Diffuse Sources (of Pollution):	These are primarily associated with run-off and other discharges related to different land uses such as agriculture and forestry, from septic tanks associated with rural dwellings and from the land spreading of industrial, municipal and agricultural wastes.
Ecology:	The study of the relationship among organisms and between those organisms and their non-living environment.
Ecosystem:	A community of interdependent organisms together with the environment they inhabit and with which they interact, and which is distinct from adjacent communities and environments
Environmental Assessment:	The preparation of an environmental report, the carrying out of consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision (in accordance with Articles 4 to 9 of the SEA Directive).
Environmental Indicator:	An environmental indicator is a measure of an environmental variable over time, used to measure achievements of environmental objectives and targets.

Environmental Objective:	Environmental objectives are broad, overarching principles which should specify a desired direction of environmental change.
Environmental Receptors:	Include biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage (including architectural and archaeological) and landscape as listed in the SEA Directive. This list is not exhaustive, and can include other receptors which may arise for a particular P/P.
Environmental Report (ER):	A document required by the SEA Directive as part of a strategic environmental assessment which identifies, describes and evaluates the likely significant effects on the environment of implementing a plan or programme.
Eutrophication:	Enrichment of water by nutrients (phosphorus and nitrogen). The nutrients accelerate plant growth, which disturbs the balance of aquatic plants and animals and affects water quality.
Good Status:	Is a general term meaning the status achieved by a surface water body when both the ecological status and its chemical status are at least good or, for groundwater, and when both its quantitative status and chemical status are at least good.
Groundwater:	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil. This zone is commonly referred to as an aquifer which is a subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow a significant flow of groundwater or the abstraction of significant quantities of groundwater.
Greenhouse Gas:	Gaseous constituents of the atmosphere that absorb/trap infrared (thermal) radiation which is mainly emitted by the earth's surface and thereby influence the earth's temperature.
Habitats Directive (92/43/EEC):	Council Directive of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna.
Hierarchy of Plans:	Both higher and lower level P/P relevant to the P/P being assessed.
Interrelationships:	Associations or linkages, related to environmental impact of the proposed P/P usually on environmental receptors.
Key Environmental Issues:	Those significant environmental issues, which are of particular relevance and significance within a P/P area and/or the zone of influence of that P/P. These issues should be identified during SEA Scoping process.
Material Assets:	Critical infrastructure essential for the functioning of society such as: electricity generation and distribution, water supply, wastewater treatment, transportation etc
Mitigation Measures:	Measures to avoid/prevent, minimise/reduce, or as fully as possible, offset/compensate for any significant adverse effects on the environment, as a result of implementing a P/P.

Monitoring:	A continuing assessment of environmental conditions at, and surrounding, the plan or programme. This determines if effects occur as predicted or if operations remain within acceptable limits, and if mitigation measures are as effective as predicted. The primary purpose of monitoring is to identify significant environmental effects which arise during the implementation stage against those predicted during the plan preparation stage.
Natural Heritage Area:	An area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection.
Non-Technical Summary:	A summary of the findings of the ER, summarised under the headings listed in Annex 1 of the SEA Directive that can be readily understood by decision-makers and by the general public. It should accurately reflect the findings of the ER.
Plan or Programme:	Including those co-financed by the European Community as well as any modifications to them: <ul style="list-style-type: none">- which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and- which are required by legislative, regulatory or administrative provisions.
Programme of Measure:	Defines in detail those actions which are required to achieve the environmental objectives of the Directive within a river basin district.
Quantitative Status:	An expression of the degree to which a body of groundwater is affected by direct and indirect abstractions. If this complies with WFD requirements the status is good.
Reasonable Alternatives:	Alternatives should take into account the objectives and geographical scope of the P/P. There can be different ways of fulfilling the P/P objectives, or of dealing with environmental problems. The alternatives should be realistic, capable of implementation and should fall within the legal and geographical competence of the authority concerned.
River Basin:	Means the area of land from which all surface water run-off flows, through a sequence of streams, rivers and lakes into the sea at a single river mouth, estuary or delta.
River Basin Districts:	Administrative areas for coordinated water management and are comprised of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD.
Scoping:	The process of deciding the content and level of detail of an SEA, including the key environmental issues, likely significant environmental effects and alternatives which need to be considered, the assessment methods to be employed, and the structure and contents of the Environmental Report

Screening:	The determination of whether implementation of a P/P would be likely to have significant environmental effects on the environment. The process of deciding whether a P/P requires an SEA.
SEA Directive:	Directive 2001/42/EC 'on the assessment of the effects of certain plans and programmes on the environment'.
SEA Statement:	A statement summarising: How environmental considerations have been integrated into the P/P How the ER, the opinions of the public, and designated authorities, and the results of transboundary consultations have been taken into account The reasons for choosing the P/P as adopted in the light of other reasonable alternatives.
Significant Effects:	Effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.
Special Area of Conservation:	Prime wildlife conservation sites designated under the European Habitats Directive.
Special Protection Area:	Prime bird sites designated under the European Directive on the Conservation of Wild Birds.
Statutory Authority:	The authority by which or on whose behalf the plan or programme is prepared.
Surface Water:	Means inland waters, except groundwater, which are on the land surface (such as reservoirs, lakes, rivers, transitional waters, coastal waters and, under some circumstances, territorial waters) which occur within a river basin.
Water Body:	A discrete and significant element of surface water such as a river, lake or reservoir, or a distinct volume of groundwater within an aquifer.
Water Framework Directive:	The WFD is European legislation that promotes a new approach to water management through river basin planning. The legislation addresses inland surface waters, estuarine waters, coastal waters and groundwater.

1 NON TECHNICAL SUMMARY

INTRODUCTION (CHAPTER 2)

This Environmental Report has been prepared in accordance with national and EU legislation as part of the Strategic Environmental Assessment (SEA) of the draft Newbridge Local Area Plan 2013-2019.

SEA is a systematic method of considering the likely significant environmental effects of a Plan or Programme by integrating environmental factors into the development of the Plan and related decision-making. The purpose of this Environmental Report is to: a) inform the development of the Newbridge Local Area Plan; b) identify describe and evaluate the likely significant environmental effects of the Newbridge Local Area Plan and its reasonable alternatives; and c) provide an early opportunity for the statutory authorities and the public to offer views on this Environmental Report and draft Newbridge Local Area Plan (2013-2019), through consultation.

METHODOLOGY (CHAPTER 3)

This Environmental Report contains the findings of the assessment of the likely significant effects on the environment resulting from implementation of the Newbridge Local Area Plan 2013-2019. It reflects the requirements of the SEA Directive (2001/42/EC) on the assessment of the effects of certain plans and programmes on the environment and also the transposed regulations in Ireland (S.I. 436/2004), as amended by S.I. 201/2011.

In addition, the Habitats Directive Article 6(3) requires that “*Any plan or project not directly connected with or necessary to the conservation of a 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 recognition of this, Appropriate Assessment Screening for Natura 2000 sites of the Newbridge LAP under Article 6(3) of the Habitats Directive has been carried out in parallel with the SEA process, with the findings of the Appropriate Assessment used to guide the development of policies and objectives considered as part of the SEA. The results of the assessment are included in a separate document, known as Appropriate Assessment Screening, which is also available for public review.

Based on the requirements of the legislation and guidance, the following information is provided in the Environmental Report.

Table 1.1: Requirement of SEA Objective and Relevant Section of Environmental Report

Requirement of SEA Directive (Article 5(1), Annex 1)	Section of Environmental Report
An outline of the contents and main objectives of the plan or programme, or modification to a plan or programme, and relationship with other relevant plans or programmes.	Chapter 4: Description of the Plan
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme, or modification to a plan or programme.	Chapter 5: Baseline Environment
The environmental characteristics of areas likely to be significantly affected.	Chapter 5: Baseline Environment
Any existing environmental problems which are relevant to the plan or programme, or modification to a plan or programme, including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Habitats Directive.	Chapter 5: Baseline Environment

Requirement of SEA Directive (Article 5(1), Annex 1)	Section of Environmental Report
The environmental protection objectives, established at international, European Union or national level, which are relevant to the plan or programme, or modification to a plan or programme, and the way those objectives and any environmental considerations have been taken into account during its preparation.	Chapter 6: Review of Relevant Policies, Plans and Programmes
The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.	Chapter 9: Evaluation of Local Area Plan Policies and Objectives
The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme, or modification to a plan or programme.	Chapter 11 and 12: Mitigation and Monitoring
An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.	Chapter 3: Methodology Chapter 7: Strategic Environmental Objectives, Targets and Indicators Chapter 8: Local Area Plan Alternatives
A description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan or programme, or modification to a plan or programme.	Chapter 11 and 12: Mitigation and Monitoring
A non-technical summary of the information provided under the above headings.	Chapter 1: Non-Technical Summary

DESCRIPTION OF THE NEWBRIDGE LAP (CHAPTER 4)

The main aim of the Newbridge Local Area Plan 2013-2019 is:

“To build on the strengths of Newbridge and to provide a focused approach to planning for future development in a coherent sustainable and spatial fashion. The Plan aims to achieve a more consolidated urban form that facilitates a sustainable economic base and creates sustainable and integrated communities while balancing future development with the conservation and enhancement of the town’s natural and built environment”.

This LAP identifies specific policies and objectives applicable to Newbridge town in order to facilitate land use in a manner that will promote proper planning and sustainable development. Newbridge Local Area Plan 2013-2019 includes objectives for:

- 1) Compliance with the Core Strategy to achieve sustainable growth
- 2) Enterprise, Industry and Economic Development
- 3) Retail and Town Centre Uses
- 4) Urban Design and Town Centre Development
- 5) Design Briefs
- 6) Movement and Transport
- 7) Water, Drainage and Environmental Services
- 8) Energy and Communications
- 9) Educational, Community and Cultural
- 10) Architectural and Archaeological Heritage

- 11) Natural Heritage and Biodiversity
- 12) Recreation, Amenity and Open Space

The Strategic Vision and Strategic Policy Objectives of the LAP provide the overall strategy for Newbridge for the proper planning and sustainable development of Newbridge for the period up to 2019. The strategy for the future development of Newbridge will focus on the principles established in the Newbridge Local Area Plan 2003, the framework provided by the Regional Planning Guidelines and the Kildare County Development Plan 2011-2017.

It is envisaged that Newbridge will plan for consolidated growth rates over the short to medium term, achieving a critical mass which will support competitiveness, sustainability and create opportunities for local economic development. This growth pattern can also generate economies of scale to justify strategic investment into the town achieving sustainable levels of development through the provision of residential, employment, recreational, cultural, retail, and educational facilities appropriate for a town of its size. The long term (15-20 year) development strategy for the future development of Newbridge is comprised of the following strategic objectives;

- 1) Smart Economic Growth;
- 2) Town Centre Consolidation and Regeneration;
- 3) Planning for Residential Expansion;
- 4) Retail Development;
- 5) Transportation Provision; and
- 6) Protection of the Natural and Built Heritage.

THE BASELINE ENVIRONMENT (CHAPTER 5)

As this SEA deals with the Newbridge LAP, the baseline data is focussed at the Town level. In order to identify the potential for cumulative impacts to occur, the immediate environs of Newbridge are also considered.

According to recent EPA publications (EPA, 2012), Ireland's natural environment, although under increasing pressure, generally remains of good quality and represents one of the country's most essential national assets. The fifth EPA *State of the Environment Report (2012)* identified four priority challenges for the environment, which if addressed successfully, should benefit the present and future quality of Ireland's environment. These comprise: Value and Protecting our Natural Environment; Building a Resource-Efficient, Low Carbon Economy; Implementing Environmental Legislation; and Putting the Environment at the Centre of Our Decision Making. All of these are relevant to the draft LAP. Existing environmental pressures in Newbridge are set out below.

Table 1.2: Existing Environmental Pressures

Issue Area	Existing Environmental Pressures
Flora, Fauna and Biodiversity	The population and economic growth over the past number of years has put pressure on habitats and species within Newbridge due to urban expansion, housing and building in general, recreation and infrastructure provision. As the population of the town expands, the demands made on the habitats and waters will grow. It is important that ecological networks are managed and developed in a way that protects and enhances its natural heritage and landscape.

Issue Area	Existing Environmental Pressures
	<p>The town has high quality ecological sites both at an international, national and local level. In particular there are two water dependent habitats, Pollardstown Fen SAC and Mouds Bog SAC, which lie adjacent to the LAP area. These habitats are both Natura 2000 sites and are further outlined in the Appropriate Assessment Screening Statement in Appendix A of the Strategic Environmental Assessment document. In addition the Curragh, a pNHA, has a unique landscape and considerable natural heritage and lies to the south west of the town.</p>
Population and Land Use	<p>The 2011 Census of population recorded a total population of 21,561 people and 7,405 households within the town. The average household size within the town is 2.9 which lies above the national average of 2.7 persons per household. According to the 2011 census the town of Newbridge has a relatively young population with 35% of people in the 25 to 44 age cohort.</p> <p>There is a requirement to provide 2,609 housing units within the town in line with the core strategy for the town. This amounts to a requirement of 102ha of zoned residential lands to accommodate this growth. Core strategy requirements and associated zoning provisions have been considered in detail as part of the alternatives assessment in Section 8 of this report.</p> <p>It will be necessary to ensure sustainable levels of housing growth. New housing/neighbourhoods within the town. New housing should be connected, legible, attractive, well designed with a variety of adaptable dwelling types/sizes and densities, providing a sense of place and a high quality public realm.</p> <p>It will be necessary to provide a full range of local services and social infrastructure in tandem with growth in population, particularly in relation to schools and leisure facilities to cater for the young population cohorts of the town.</p> <p>There is a need for high quality public transport in areas where higher density development is envisaged in order to reduce traffic volumes and minimise the effects of emissions and traffic noise on quality of life.</p> <p>There is a need to maintain/ provide areas of public open space to serve the local community and provide and maintain walking and cycling facilities.</p>
Water	<p>There are a number of sensitivities with regard to the status of surface and groundwater bodies within the LAP area. The existing surface water status identifies the majority of the LAP is classified as having 'moderate status', with the River Liffey being 'at significant risk' as defined under the WFD. As the central section of the town is overlain by a regionally important aquifer there are already pressures due to the sensitivity of this aquifer.</p> <p>Changes in the occurrence of severe rainfall events as a result of climate change over the next 50 to 100 years would be likely to increase the frequency and severity of flooding events and inundation, which could result in damage and loss to houses and infrastructure. These risks could be further exacerbated by: urban development increasing the speed and volume of run-off; and changes to geomorphological processes such as sediment transport, siltation and erosion.</p>
Soils and Geology	<p>Soil erosion due mainly to surface erosion resulting from construction works has major potential to impact on water quality and fisheries resources. In addition to water quality and fisheries, these can impact on infrastructure and can have health and safety implications.</p> <p>Pressures on soils outside the administrative area include development on previously rural sites, which restricts the agricultural potential of these soils and decreases the sustainable production of food within proximity to urban areas.</p>
Climate	<p>Potential effects of climate change on Newbridge could result in an increase in the frequency and severity of flooding events. Severe rainfall events and increased flooding from the River Liffey as a result of climate change could adversely impact upon the Town's human beings, its biodiversity and its local economy. In addition the potential effects of climate change are also raising increased concern for the security of future water supplies for the Greater Dublin Water Supply Area for which Newbridge falls within.</p> <p>The DEHLG published '<i>The Planning System and Flood Risk Management Guidelines for Planning Authorities</i>' which will ensure that flood risk assessment and management is incorporated within the planning system. These guidelines have been adhered to during the preparation of the LAP Newbridge and a flood risk assessment of the draft LAP was conducted.</p>

Issue Area	Existing Environmental Pressures
Cultural Heritage	<p>In recent years, economic growth and changing population, consumption and settlement patterns have impacted on the environmental quality of the town. In light of the increased pressure that the town's heritage is under, and of the greater awareness of the value of the resource, the heritage of Newbridge must be protected and enhanced. The accommodation of further development in Newbridge has the potential to cumulatively impact upon the heritage features of the area. Development on sites adjoining protected monuments, places or structures can also impact the setting of these cultural heritage items.</p> <p>There is a concentration of architectural heritage in the centre of town with recorded monuments mainly located to the periphery of the town. Therefore sufficient protective policies to protect these features will need to be included within the LAP.</p>
Landscape	<p>A problem with regard to the environment component of landscape is the cumulative visual impact that occurs as a result of developments such as one off housing. Such developments which individually often do not have significant adverse impacts have the potential to cumulatively impact upon sensitive landscapes.</p> <p>The draft LAP falls within three landscape categories, central undulating lands, the river valley and the northern lowlands. Each of these categories has a landscape sensitivity which measures the ability of the landscape to accommodate change or intervention without the implication of unacceptable effects to its character and values. The river valley is in the high sensitivity category with the central undulating lands medium and the northern lowlands in the low sensitivity category.</p>
Material Assets	<p>The wastewater treatment plant at Osberstown is currently at capacity and the first phase of upgrades will be completed in 2015. The Newbridge Eastern Interceptor sewer will commence in mid 2015 with additional necessary work upgrades to the Liffey Valley Catchment to commence in mid 2016. These capacity constraints will hinder future development as at present development is restricted due to the lack of spare capacity in the present system. The proposed upgrade will allow for wastewater treatment capable of serving sustainable and in some instances, appropriate higher density development of the area, without any negative impact on the achievement of the objectives of the WFD. The assimilative capacity of the River Liffey is an important factor in relation to wastewater.</p>

In accordance with the SEA Directive, the interrelationship between the SEA environmental topics must be taken into account. The key interrelationships identified in this SEA are set out in **Table 1.3**. Of particular note is the primary relationship between water quality and biodiversity, flora and fauna and human health. Flora and fauna, rely directly on the aquatic environment as a habitat. The quality of this habitat has a direct relationship to the quality of foodstuffs (e.g. fish and shellfish) and its impact on human health. Water is also used for leisure and recreational purposes, providing a material asset both for local populations and as a part of the tourism economy.

Another key relationship is between water and climate. Global GHG emissions associated with transport, industry and other sources have the potential to negatively impact on climate change. This in turn can result in more frequent and more intense flooding and drought conditions affecting material assets, such as private residences and infrastructure, and biodiversity through changes in water quality and the hydrologic regime.

Table 1.3: Potential Inter-Relationships between SEA Topics

Soils	√							
Water	√	√						
Noise	√	X	X					
Biodiversity, Flora, Fauna	√	√	√	√				
Climatic Factors	√	√	√	X	√			
Material Assets	√	√	√	X	√	√		
Cultural Heritage	√	√	√	X	√	√	√	
Landscape	√	√	√	√	√	√	√	√
	Population	Soils	Water	Noise	Biodiversity Flora, Fauna	Climatic Factors	Material Assets	Cultural Heritage

√ = interrelationship anticipated

X = no interrelationship anticipated

The Newbridge LAP supports orderly and controlled development in Newbridge Town. In the absence of the LAP there may be pressure to increase population densities in an unsustainable manner with potential impacts on sensitive areas such as Pollardstown Fen, Mouds Bog and the Curragh. In addition, without the provision of objectives that emphasise the consolidation of the Town and use of infill and redevelopment sites, the spread of development into the countryside may continue, eroding the agricultural land bank in the Newbridge environs.

The section of the River Liffey within the area covered by the LAP is identified as 'at significant risk' and therefore needs to have its status improved as per the objectives of the WFD. While these improvements would be expected to occur as a result of the Eastern River Basin Management Plan (ERBMP), the LAP is the vehicle for implementation of many of the actions included in the RBMP Programme of Measures.

Traffic congestion outside of normal peak times is not an issue in Newbridge town as substantial improvement works in terms of transportation infrastructure has taken place since the Whitewater Shopping Centre was built. However the draft LAP does contain short and long term traffic management policies and objectives designed to allow efficient access to the town centre, new employment areas and new neighbourhoods.

In terms of climate change, Newbridge is prone to flooding.. The River Liffey traverses the town centre and there are already a number of documented flood events. Local solutions to this international issue include reduction in unsustainable transport movements, which is encouraged under the proposed Plan and also zoning lands that are not located within the flood plain.

Without the drive for consolidation included in the LAP, it is likely that development will continue in rural areas outside of Town boundary, mainly in the form of one-off housing. This scattered development would impact on the rural landscape around Newbridge and would lead to loss of hedgerows and trees and their contribution to biodiversity. Fragmentation of habitats and field boundaries is also likely to result.

REVIEW OF RELEVANT PLANS, POLICIES AND PROGRAMMES (CHAPTER 6)

A review of plans, policies and programmes relevant to the Newbridge LAP was carried out. The review focussed primarily on National, European and International plans and programmes. In reviewing other plans, the following questions were asked:

The findings of the review helped define the objectives for the SEA and informed the assessment of alternatives. Some of the key plans, programmes and policies include:

- National Development Plan (2007-2013);
- National Spatial Strategy (2002-2020);
- Regional Planning Guidelines for the Greater Dublin Area (2010-2022);
- Kildare County Development Plan (2011-2017)
- The Water Framework Directive (2000/60/EC);
- The EU Habitats Directive (92/43/EEC);
- The Urban Wastewater Treatment Directive (91/271/EEC amended by Directive 98/15/EEC);
- The EU Floods Directive (2007/60/EC);
- Drinking Water Directive (80/778/EEC) as amended by Directive 98/83/EC);
- The Eastern River Basin Management Plan and the South Eastern RBMP; and
- The National Biodiversity Plan.

SEA OBJECTIVES, TARGETS AND INDICATORS (CHAPTER 7)

There are essentially three types of Objectives considered as part of this SEA. The first relates to the *Objectives of the Newbridge LAP* (see **Chapter 4**). The second relates to wider Environmental Objectives, i.e. environmental protection objectives at a national, European and international level (see **Chapter 6**). Finally, there are the Strategic Environmental Objectives, which were devised to test the effects of the Newbridge LAP on the wider environment.

The **Strategic Environmental Objectives** reflect the existing environmental issues relevant to the Newbridge LAP. They are focussed on protecting and enhancing the natural and human environment and on minimising negative effects. The objectives were developed to be consistent with the environmental protection objectives established by International, European and national environmental policies, objectives and standards. The selected objectives for this SEA are listed in **Table 1.4**:

Table 1.4: Selected Objectives for the SEA

Objective 1 Biodiversity Flora and Fauna (BFF)	Protect and where appropriate, enhance biodiversity, particularly protected areas and protected species.
Objective 2 Population (P)	Improve people's quality of life based on high-quality residential, working and recreational environments and on sustainable transport.

Objective 3 Water (W)	Improve water quality and the management of watercourses to comply with the standards of the Water Framework Directive and incorporate the objectives of the Floods Directive into sustainable planning and development.
Objective 4 Soil (S)	Protect and, where appropriate, enhance the function and quality of the soil resource in the lands within Newbridge LAP.
Objective 5 Climate (C)	Contribute to mitigation of, and adaptation to, climate change.
Objective 6 Cultural Heritage (CH)	Protect and, where appropriate, enhance the character, diversity and special qualities of cultural, architectural and archaeological, heritage in Newbridge LAP.
Objective 7 Landscape (L)	Protect and, where appropriate, enhance the character, diversity and special qualities of landscapes in Newbridge LAP.
Objective 8 Material Assets (MA)	Make best use of existing infrastructure and promote the sustainable development of new infrastructure.

The overall purpose of **Environmental Indicators** in the SEA process is to provide a way of measuring the environmental effect of implementing the Newbridge LAP once it is adopted. Environmental Indicators are also used to track the progress in achieving the aspirational **Targets** set in the SEA as well as the Newbridge LAP. The proposed Indicators have been selected bearing in mind the availability of data and the feasibility of making direct links between any changes in the environment and the implementation of the Newbridge LAP.

Targets were considered over the duration of the scoping phase, baseline data collection and assessment in order to ensure relevance to the Strategic Environmental Objectives as well as the objectives of the Newbridge LAP. In each case, any target that is set must be attributable to the implementation of the Newbridge LAP. The targets and indicators associated with each SEA Objective are presented in **Chapter 7** of this report.

LOCAL AREA PLAN ALTERNATIVES (CHAPTER 8)

Article 5 of the SEA Directive requires the environmental report to consider 'reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme' and the significant effects of the alternatives selected. Alternatives must be realistic and capable of implementation and should present a range of different approaches within the statutory and operational requirements of the LAP. It is noted that a "Do Nothing" option has not been explored, as this is not considered reasonable, given the legislative requirement to update the LAP.

The strategic alternatives below were considered for assessment as part of the SEA process for the Newbridge LAP 2013-2019, they include:

- Alternative 1: Consolidation of the exiting Town Centre with re-development of Brownfield sites
- Alternative 2: Limited Expansion, Environment/ Preservation Approach
- Alternative 3: Northwest Expansion, North of Railway Line
- Alternative 4: Market-Led Growth, Development at various peripheral locations

A detailed assessment was undertaken analysing each Strategic Environmental Objective against the individual Alternatives with the summary of which is provided in the following table.

Table 1.5: Assessment of Draft SEA Objectives and Alternatives

Alternative Scenarios	Likely to Improve status of SEOs	Neutral interaction with status of SEOs	Potential Conflict with status of SEOs would be mitigated	Probable Conflict with status of SEOs – unlikely to be mitigated
Alternative 1	SEO2, SEO7		SEO1, SEO3, SEO5, SEO6, SEO7, SEO 8	SEO1, SEO4
Alternative 2	SEO5, SEO8	SEO4	SEO3, SEO6, SEO8	SEO1, SEO2, SEO7
Alternative 3	SEO8, SEO2, SEO5		SEO1, SEO2, SEO3, SEO6	SEO1, SEO4, SEO7, SEO5
Alternative 4			SEO1, SEO3, SEO6, SEO7	SEO1, SEO2, SEO4, SEO5, SEO7, SEO8

Alternative 3 is generally considered to be the most positive alternative when measured against the SEOs of the Environmental Report. Under the same exercise Alternative 4 generally comes out as being negative in relation to impacts on human beings and the natural environment. The preferred Alternative as proposed under the development strategy for the Newbridge LAP is Alternative 1.

EVALUATION OF THE LAP, POLICIES AND OBJECTIVES (CHAPTER 9)

The purpose of this section of the Environmental Report is to evaluate as far as possible the environmental effects of the draft LAP policies and objectives and to set out measures envisaged to prevent, reduce and as far as possible offset any significant adverse effects on the environment. The policies and objectives of the draft LAP have been assessed against the SEA environmental objectives for Biodiversity Flora and Fauna, Population, Soil, Water, Climatic Factors, Material Assets, Cultural Heritage and Landscape (as set out in **Chapter 7**). The approach used for assessing the policies / objectives for the draft LAP was a baseline and objectives led assessment using assessment matrices in line with current best practice for SEA of land use plans in Ireland.

As part of the assessment, an initial review of draft policies and objectives was carried out. Suggestions on the language and content were made and included where possible in the development of the policies and objectives as they developed.

For the most part the policies and objectives contained within the Newbridge LAP would result in positive direct and indirect impacts in all areas. The potential for negative impacts to issues such as biodiversity, population, soils, water and climate, cultural heritage and landscape, is limited to policies which would result in provision of additional development, i.e. residential, commercial and residential related land uses, or its accompanying infrastructure. In addition, conflicts between uses, particularly with regard to Natura 2000 sites were raised as potential negative impacts for biodiversity. Key issues raised in the assessment included:

- Provision of sustainable infrastructure including wastewater and water;
- Protection against flooding;

- Protection of biodiversity, especially Natura 2000 sites, while facilitating social, recreational and commercial development;
- Consolidation of development in urban areas; and
- Protection of the built heritage resource.

CUMULATIVE EFFECTS (CHAPTER 10)

Cumulative effects are referred to in a number of SEA guidance documents and are defined in the EPA SEA Process Checklist (2011) as “*effects on the environment that result from incremental changes caused by the strategic action together with other past, present, and reasonably foreseeable future actions. These effects can result from individually minor but collectively significant actions taking place over time or space*”. Therefore the combined effect of human activity can pose a serious threat on our environment. These effects can be insignificant individually but cumulatively over time and from a number of sources can result in the degradation of sensitive environmental resources.

Cumulative effects were addresses in relation to a number of potential combined pressures and in particular the close proximity of the Newbridge LAP to the Kildare LAP 2013 which was recently adopted.

MITIGATION (CHAPTER 11) & MONITORING (CHAPTER 12)

Annex 1 (g) of the SEA Directive requires that the Environmental Report describe the measures envisaged to prevent, reduce and/or offset as fully as possible any significant adverse effects on the environment from implementation of the LAP. **Table 11.1** of the environmental report outlines the specific general environmental concerns to be included as policy within the LAP from the outset. Further recommendations arising from the SEA process are outlined in **Table 11.2** of the environmental report and it includes the mitigation measures proposed and outlines whether they have been included within the draft LAP.

Article 10 of the SEA Directive requires that monitoring be carried out in order to identify at an early stage any unforeseen adverse effects due to implementation of the draft LAP, with the view to taking remedial action where adverse effects are identified through monitoring. Monitoring will be based around the Strategic Environmental Objectives, Indicators and Targets. The Strategic Objectives, Indicators and Targets for the various environmental topics are set out in **Table 12.1**. The indicators chosen will show changes that would be attributable to the implementation of the draft LAP and are at a level, which is relevant to the draft LAP and are collated and reported on by a variety of government agencies.

Monitoring proposals must concentrate on likely significant environmental effects, which have been identified in the Environmental Report and the measures identified as necessary to prevent, reduce, or offset any significant adverse effects. The indicators/monitoring will act as an early warning sign so that appropriate remedial action is undertaken. It should be noted that the monitoring programme has been designed to be flexible for the express purpose of allowing the use of alternate indicators should more relevant data sources become available during the implementation and monitoring of the draft LAP.

2 INTRODUCTION

This Environmental Report has been prepared in accordance with national and EU legislation as part of the Strategic Environmental Assessment (SEA) of the draft Newbridge Local Area Plan 2013-2019. The purpose of this Environmental Report is to: a) inform the development of the Plan; b) identify describe and evaluate the likely significant effects of the Plan and its reasonable alternatives; and c) provide an early opportunity for the statutory authorities and the public to offer views on the draft Plan and SEA Environmental Report, through consultation.

2.1 NEWBRIDGE LOCAL AREA PLAN 2013-2019

Kildare County Council is currently preparing a draft Newbridge LAP 2013 – 2019, hereafter referred to as the LAP, to replace the existing Newbridge LAP 2003. The LAP is being prepared under the provisions of the Planning and Development Act 2000 (as amended) to develop and improve in a sustainable manner the environmental, social, economic and cultural assets of Newbridge. The boundaries of the administrative area of Newbridge are shown in **Figure 2.1**.

The LAP will also provide the means by which the specific objectives and activities of the private and public sector will be coordinated, to ensure that they are implemented in a mutually integrated, consistent, sustainable and supportive manner. It will promote and encourage development, conserve and protect the environment and make the best possible use of resources.

2.2 STRATEGIC ENVIRONMENTAL ASSESSMENT

Strategic Environmental Assessment (SEA) is a process for evaluating, at the earliest appropriate stage, the environmental quality and consequences of Policy, Plan or Programme initiatives. The objective of the SEA process is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of specified plans and programmes with a view to promoting sustainable development. The purpose of SEA is to ensure that the environmental consequences of plans and programmes are assessed both during their preparation and prior to adoption. The SEA process also gives interested parties an opportunity to comment on the environmental impacts of the proposed plan or programme and to be kept informed during the decision making process.

The European Directive (2001/42/EC) on the Assessment of the Effects of Certain Plans and Programmes on the Environment (the SEA Directive) was transposed into national legislation by the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435/2004), as amended by S.I. 200/2011 and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. 436/2004), as amended by S.I. 201/2011. The Newbridge LAP falls under the remit of S.I. 436/2004, as amended.

The SEA Directive requires that certain Plans and Programmes, prepared by statutory bodies, which are likely to have a significant impact on the environment, be subject to the SEA process. The SEA process is comprised of the following steps:

- Screening: Decision on whether or not an SEA is required;
- Scoping: Consultation with defined statutory consultees on the scope and level of detail to be considered in the assessment;

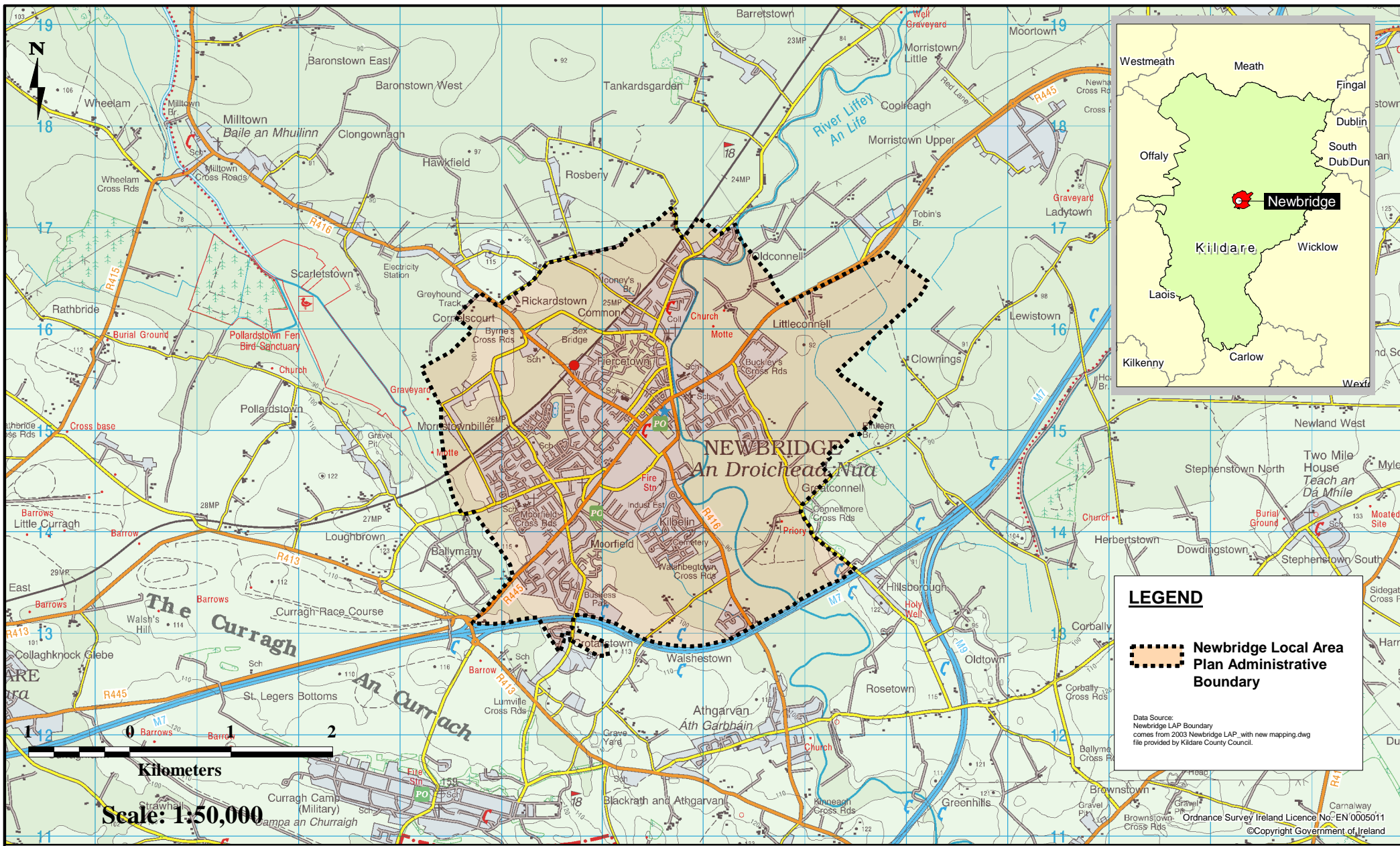


FIGURE 2.1 - NEWBRIDGE LAP (2013-2019) ADMINISTRATIVE BOUNDARY



- Environmental Assessment: An assessment of the likely significant impacts on the environment as a result of the Plan or Programme, including reasonable alternatives;
- Publication of an Environmental Report;
- Consultation on the draft Plan/Programme and associated Environmental Report;
- Evaluation of the submissions and observations made to the draft Plan/Programme and Environmental Report; and
- Adoption of the Final Plan/Programme and issuance of SEA Statement. The Statement identifies how environmental considerations and consultation have been integrated into the Final Plan/Programme.

Figure 2.2 shows the key steps required to complete the statutory SEA process in accordance with the relevant national legislation.

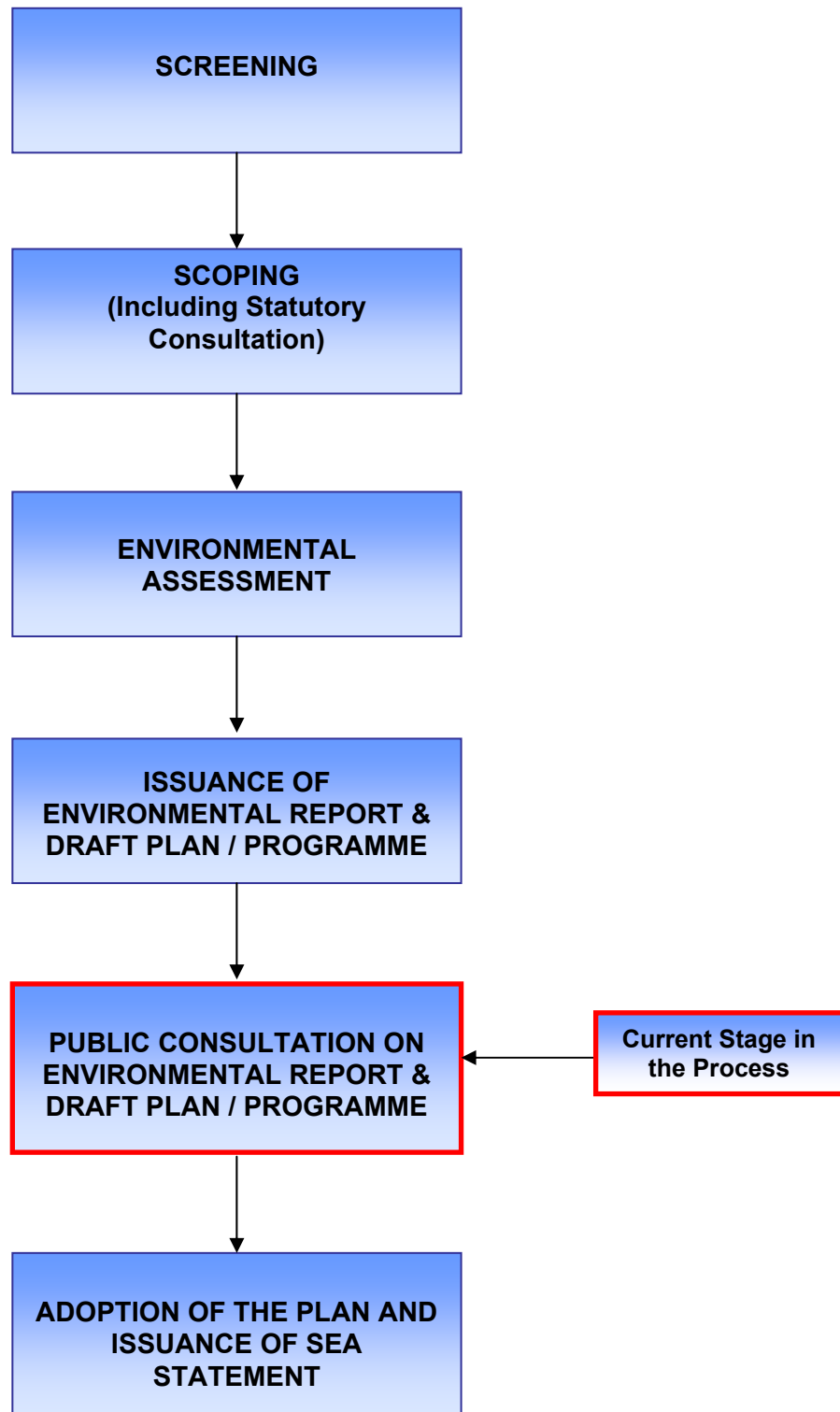


Figure 2.2: Overview of SEA Process

2.3 APPROPRIATE ASSESSMENT

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as “The Habitats Directive”, provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/ECC), which has been replaced by Council Directive 2009/147/EC.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

The *European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011)* addresses transposition failures that were identified in the Court of Justice of the European Union judgements. These 2011 Regulations consolidate the *European Communities (Natural Habitats) Regulations 1997 to 2005* and the *European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010*.

In recognition of this, an Appropriate Assessment of Natura 2000 sites potentially impacted by the LAP was carried out in parallel with the SEA process. This Appropriate Assessment Screening is included in **Appendix A** of this document.

The Screening for Appropriate Assessment of Natura 2000 sites concluded that the proposed LAP will **not have a significant effect on the Natura 2000 network** and a Stage 2 Appropriate Assessment is not required.

3 METHODOLOGY

3.1 INTRODUCTION

The SEA Directive requires that certain Plans and Programmes, which are likely to have a significant impact on the environment, be subject to the SEA process. As noted above, the SEA process is broadly comprises of the following steps listed below.

SEA Step / Stage	Purpose	Status
Screening	Decision on whether or not an SEA is required.	The requirement to carry out SEA in respect of the Newbridge LAP is mandatory in accordance with both Articles 2 and 3 of the SEA Directive as the Plan is a) subject to preparation and adoption by a local authority and b) it is prepared for land use which will set the framework for future development consent of projects listed in the EIA Directive. Furthermore, the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (as amended), requires SEA to be carried out in respect of all local area plans where the population is 5,000 persons or more (Article 14 (B) of 201/2011).
Scoping	Consultation with the defined statutory bodies on the scope and level of detail to be considered in the assessment.	Completed in September 2011.
Environmental Assessment	Assessment of the likely significant impacts on the environment as a result of the Plan or Programme culminating in the production of an Environmental Report.	Completed in April/ May 2013.
Consultation	Consultation on the draft Plan/Programme and associated Environmental Report.	Ongoing.
SEA Statement	Identification of how environmental considerations and consultation have been integrated into the final Plan/Programme culminating in the production of an SEA Statement.	To be published with final adopted Plan in 2013

3.2 GUIDANCE

The following guidance / methodology documents have been referred to during the SEA process:

Further Transposition of EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA)
Circular Letter PSSP 6/2011 Department of Environment, Community and Local Government.
Available at: <http://www.envron.ie>

Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland. Synthesis Report. 2003. Environmental Protection Agency. Available at: <http://www.epa.ie>

GISEA Manual, Current Practice And Potential On The Application Of Geographic Information Systems As A Support Tool In Strategic Environmental Assessment Of Irish Land Use Plans 2009 Environmental Protection Agency. Available at: <http://www.epa.ie>

Implementation of SEA Directive (2001/42/EC). Assessment of Certain Plans and Programmes on the Environment. Guidelines for Regional Planning Authorities. November 2004. Department of Environment, Heritage and Local Government. Available at: <http://www.environ.ie>

Strategic Environmental Assessment (SEA) Checklist - Consultation Draft. January 2008 (updated 6th September 2011). Environmental Protection Agency. Available at: <http://www.epa.ie>

3.3 KEY DELIVERABLES IN STRATEGIC ENVIRONMENTAL ASSESSMENT

3.3.1 Scoping

Process

The objective of scoping is to identify key issues of concern that should be addressed in the environmental assessment of the Plan so that they can be considered in appropriate detail. Scoping also helps determine the boundaries of the assessment in terms of geographical extent and the time horizon for the assessment. **Figure 3.1** outlines the various elements that contribute to the scope of the SEA. Consultation was undertaken with statutory consultees for SEA during the scoping process. In addition public consultation was undertaken as part of the Plan process for the draft Newbridge LAP and this feed into the scoping for the SEA.

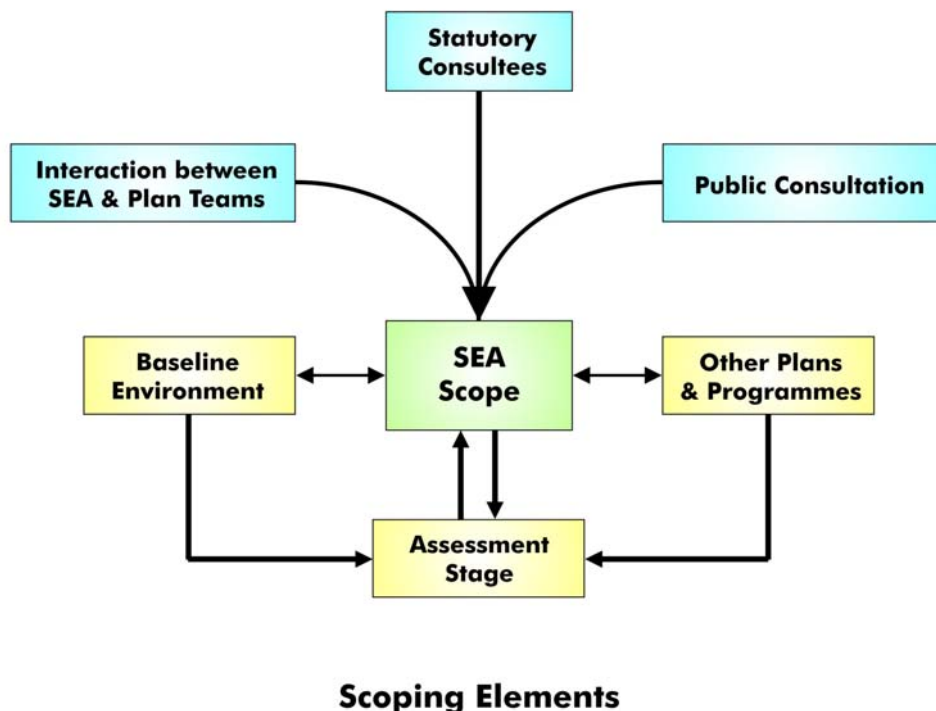


Figure 3.1: Overview of the Scoping Process

Consultation on Scope

Under Article 6 of the SEA Directive, the competent authority preparing the plan or programme is required to consult with specific “environmental authorities” (statutory consultees) on the scope and level of detail of the information to be included in the Environmental Report.

The amendment regulations (S.I. 201 of 2011) have made alterations regarding the scoping process. Previously, under S.I. 436 of 2004 three statutory consultees were identified, those being the Environmental Protection Agency, the Department of Environment, Heritage and Local Government and the Department of Communications, Energy and Natural Resources (formerly Communications, Marine and Natural Resources). The amended regulations now list five government bodies which are outlined in Article 13A (4) (a) of S.I. 201 of 2011, as follows;

- (i) *the Environmental Protection Agency*
- (ii) *the Minister for the Environment, Community and Local Government,*
- (iii) *where it appears to the planning authority that the plan or programme or modification of the plan or programme, might have significant effects on fisheries or the marine environment, the Minister for Agriculture, Marine and Food, and the Minister for Communications, Marine and Natural Resources,*
- (iv) *where it appears to the competent authority that the plan or programme or amendment to a plan or programme, might have significant effects in relation to the architectural or archaeological heritage or to nature conservation, the Minister for Arts, Heritage and Gaeltacht Affairs, and*
- (v) *any adjoining planning authority whose area is contiguous to the area of a planning authority which prepared a draft plan, proposed variation or local area plan.*

A draft Scoping Document was sent to the five environmental authorities on the 21st September 2011. Responses were received from the Environmental Protection Agency and the Department of Arts, Heritage and the Gaeltacht and these are included within **Appendix B** of this report.

Defining the Scope

The following table outlines the scope for the Environmental Report.

Table 3.1: Defining the Scope of the LAP

Geographic Scope	The geographical extent of the Local Area Plan is the administrative area of Newbridge (Figure 2.1). Therefore, the geographical scope of the SEA will, in the main, be focussed on this area though geographical areas, which are contiguous with the town boundary, may be considered depending on the impacts identified for each issue area. Chapter 10 of this report provides details on the potential cumulative impacts of key environmental receptors from a strategic planning perspective.
Temporal Scope	The LAP will cover the period from 2013 to 2019. However some reference is made in the Plan to the long term horizon of 15 to 20 years and this has also been considered for completeness.
Level of Detail of the Plan	The plan is a sub-regional planning document informing development within Newbridge and it sits under the Kildare County Development Plan.
Level of Detail of the Assessment	The assessment will be at a sub-regional level reflecting the position of Newbridge LAP in the planning hierarchy.
Assessment Parameters	Cumulative/synergistic and secondary, permanent and temporary effects will be assessed along with direct and indirect impacts. Short, medium and long-term impacts will also be assessed.
Scoping of the SEA Topics	The following environmental topics, listed in the SEA Directive and associated regulations have been scoped in for the assessment of Newbridge LAP. These are: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">Biodiversity, Flora and Fauna</div> <div style="width: 45%;">Population</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">Landscape</div> <div style="width: 45%;">Climatic Factors</div> </div>

	Material Assets (including noise) Cultural, Architectural and Archaeological Heritage	Water Soils
SEA Topics Screened Out	The following environmental topics, listed in the SEA Directive and associated regulations have been scoped out for the assessment of Newbridge LAP. These are: Air Quality Human Health The SEA Scoping Report outlined the reasons why these two disciplines have not been included within the Environmental Report.	

3.3.2 Environmental Report

Based on the legislation and guidance, the Environmental Report must include the information outlined in **Table 3.2**.

Table 3.2: Key Elements of the Environmental Report

Requirement of SEA Directive (Article 5(1), Annex 1)	Section of Environmental Report
An outline of the contents and main objectives of the plan or programme, or modification to a plan or programme, and relationship with other relevant plans or programmes.	Chapter 4: Description of the Plan
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme, or modification to a plan or programme.	Chapter 5: Baseline Environment
The environmental characteristics of areas likely to be significantly affected.	Chapter 5: Baseline Environment
Any existing environmental problems which are relevant to the plan or programme, or modification to a plan or programme, including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Birds Directive or the Habitats Directive.	Chapter 5: Baseline Environment
The environmental protection objectives, established at international, European Union or national level, which are relevant to the plan or programme, or modification to a plan or programme, and the way those objectives and any environmental considerations have been taken into account during its preparation.	Chapter 6: Review of Relevant Plans, Programmes and Policies
The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.	Chapter 9: Evaluation of Local Area Plan Policies and Objectives
An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.	Chapter 3: Methodology Chapter 7: Strategic Environmental Objectives, Targets and Indicators Chapter 8: Local Area Plan Alternatives
The likely significant cumulative effects on the environment as a result of implementing the Plan.	Chapter 11: Cumulative Effects
A description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan or programme, or modification to a plan or programme.	Chapter 12: Mitigation and Monitoring
A non-technical summary of the information provided under the above headings.	Chapter 1: Non-Technical Summary

3.3.3 SEA Statement

The SEA Statement for the Newbridge LAP will be compiled after the statutory consultation on the draft Plan and Environmental Report has been completed.

The main purpose of the SEA Statement will be to provide information on the decision-making process and to document how environmental considerations, i.e. the views of consultees and the recommendations of the Environmental Report, have been taken into account within the adopted Plan. The SEA Statement will illustrate how decisions were taken, making the process more transparent.

3.4 APPROPRIATE ASSESSMENT

The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) obliges Member States to designate Special Areas of Conservation (SACs) to protect and conserve habitats and species of importance in a European Union context. Articles 3 to 9 of this Directive provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. Under the Birds Directive more formerly known as Council Directive 2009/147/EC on the Conservation of Wild Birds, Special Protection Areas (SPAs) are designated to protect all European wild birds and habitats of listed species. These SPAs are part of this Natura 2000 network.

Article 6 is one of the most important articles of the Habitats Directive in determining the relationship between conservation and site use. Article 6(3) requires that *“Any plan or project not directly connected with or necessary to the conservation of a 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.”*

An Appropriate Assessment Screening of the draft LAP was carried out in parallel with the SEA process. As part of this process the findings of the Screening assessment were used to guide the development of the alternatives to be considered as part of the SEA.

3.5 SEA DIFFICULTIES AND DATA GAPS

- Corine landcover data for the year 2006 was the most up to date data available.
- There was no available noise mapping data for Newbridge.

4 DESCRIPTION OF THE PLAN

4.1 MAIN AIM OF THE LOCAL AREA PLAN

The main aim of the Newbridge Local Area Plan 2013-2019 is:

“To build on the strengths of Newbridge and to provide a focused approach to planning for future development in a coherent sustainable and spatial fashion. The Plan aims to achieve a more consolidated urban form that facilitates a sustainable economic base and creates sustainable and integrated communities while balancing future development with the conservation and enhancement of the town’s natural and built environment”.

This LAP identifies specific policies and objectives applicable to Newbridge town in order to facilitate land use in a manner that will promote proper planning and sustainable development. Newbridge Local Area Plan 2013-2019 includes objectives for:

1) Compliance with the Core Strategy to achieve sustainable growth

To ensure that the future development of Newbridge is in accordance with the Core Strategy of the Kildare CDP 2011-2017, the plan provides for the zoning of lands for residential and employment uses together with the implementation of a monitoring mechanism. A framework is also established for the town’s sustainable growth through the incorporation of policies in relation to density, housing mix, community development and new housing provision.

2) Enterprise, Industry and Economic Development

As a Primary Economic Growth Town, Newbridge must support and enhance enterprise and industry for a growing population. This LAP seeks to encourage and sustain a diversity of employment opportunities, identify potential for inward investment and enhance the tourism economy. To achieve this, the plan sets out policies and objectives that build on the town’s retail and heritage strengths to create a unique tourism destination while also taking maximum advantage of lands strategically located to provide for future new employment hubs.

3) Retail and Town Centre Uses

Newbridge has a healthy retail base relative to comparative centres in Kildare and the wider GDA. Notwithstanding this, it is recognised that there is a need to carefully plan and manage future retail and non-retail services in the town and local neighbourhood centres to further strengthen the retail offer, protect and enhance the town’s unique character while promoting economic vitality and viability in the sector. Reflecting this, the LAP sets out policies and objectives for the re-use and regeneration of land and buildings, encouraging high quality design and facilitating an appropriate mix of uses, the protection of built heritage and the integration and linkage of new retail developments with the existing urban form/ layout.

4) Urban Design and Town Centre Development

The importance of Newbridge’s townscape qualities which are derived from its historic urban structure are noted throughout the plan. In this regard a detailed urban design analysis of the existing townscape is set out together with policies and objectives specific to the future development of the town. The plan encourages the fragmentation and regeneration of the former barrack’s block and the conservation and enhancement of the older town centre streets, which exhibit a finer urban grain.

5) Design Briefs

The regeneration of strategic sites within the town are advocated and comprise; (1) Cutlery Road and Bord na Mona , (2) Edward Street to Military Road – Development of New Street(s), (3) Military Road and Athgarvan Road - - Perimeter Blocks and (4) Town Hall and Georges Street. These design briefs

have been prepared and to assist in the planning process by setting out broad design parameters for the future development of these sites.

6) Movement and Transport

The improvement of transportation infrastructure in Newbridge is a key element of the sustainable development of the town. Policies and objectives are outlined to promote integrated land use and transportation planning to further support and encourage more sustainable modes of travel. The plan also sets specific policies for local improvements in and around the town centre and objectives to secure routes for long term roads infrastructure.

7) Water, Drainage and Environmental Services

The adequacy of water, drainage and environmental services is necessary to facilitate the sustainable development of the town. These key issues are addressed in various policies and objectives to provide for sufficient water, waste water and water drainage infrastructure to service the predicted requirements of the town over the plan period. Relevant legislative requirements in relation to environmental requirements are also set out including policies and objectives relating to flood risk requirements.

8) Energy and Communications

The development of a more sustainable approach to energy use, power generation and energy efficiency in all sectors is vital to reduce greenhouse gas emissions. This includes focusing on renewable energy generation and improving energy efficiency.

9) Educational, Community and Cultural

The provision of education and community facilities to support the projected population levels of Newbridge are recognised. In this regard a site has been identified for the provision of a new school while the improvement of local community facilities and sports facilities together with the need to encourage the shared use of existing facilities is advocated.

10) Architectural and Archaeological Heritage

The protection and enhancement of the built heritage and streetscape in Newbridge is one of the core objectives of this plan. Policies and objectives have been incorporated which seek to protect, preserve and enhance the town's archaeology, built heritage and townscape. Section (v) Design Briefs is also relevant in this respect.

11) Natural Heritage and Biodiversity

The importance of green infrastructure is recognised and is based on detailed habitat mapping of the area. The plan maps and describes green infrastructure in Newbridge including relevant policies for its protection and enhancement. Policies and objectives are also included to ensure the protection of Pollardstown Fen (SAC) and Mouds Bog (SAC) and the Curragh Plains (pNHA), all located on the periphery of the town.

12) Recreation, Amenity and Open Space

The plan recognises the importance of the existing River Liffey Park and outlines clear objectives to expand and enhance the provision of this key natural asset. Additional lands have also been designated for open space and amenity purposes along the river corridor to preserve this amenity for future generations and to avoid inappropriate development on the flood plains. A series of local green routes are also identified for recreation and residential use.

4.2 STRATEGIC POLICY

The Strategic Vision and Strategic Policy Objectives of the LAP provide the overall strategy for Newbridge for the proper planning and sustainable development of Newbridge for the period up to 2019. The strategy for the future development of Newbridge will focus on the principles established in the Newbridge Local Area Plan 2003, the framework provided by the Regional Planning Guidelines and the Kildare County Development Plan 2011-2017.

It is envisaged that Newbridge will plan for consolidated growth rates over the short to medium term, achieving a critical mass which will support competitiveness, sustainability and create opportunities for local economic development. This growth pattern can also generate economies of scale to justify strategic investment into the town achieving sustainable levels of development through the provision of residential, employment, recreational, cultural, retail, and educational facilities appropriate for a town of its size. The long term (15-20 year) development strategy for the future development of Newbridge is comprised of the following strategic objectives;

- 1) Smart Economic Growth;
- 2) Town Centre Consolidation;
- 3) Planning for Residential Expansion;
- 4) Retail Development;
- 5) Transportation Provision; and
- 6) Protection of the Natural and Built Heritage.

5 BASELINE ENVIRONMENT

5.1 INTRODUCTION

This section of the Environmental Report examines the relevant significant issues of the current state of the environment within Newbridge town and environs in relation to biodiversity, fauna, flora, population, soil, water, climatic factors, cultural heritage, landscape, material assets and the interrelationship between these factors. The baseline has been compiled using available datasets and indicators suggested during scoping. It has focused on mapping the relevant baseline information that relates to the policies and objectives contained within the Newbridge LAP.

5.2 CURRENT STATE OF THE ENVIRONMENT

According to recent EPA publications (EPA, 2012), the overall finding is that “*Ireland’s environment remains in a good condition although there are a number of areas of concern, and Ireland faces a number of key challenges in the coming years*”. The recent period of economic recession has lowered pressure on certain areas in the environment but the overall challenge is that the economy and key sectors recover and develop in a sustainable manner. Since the previous State of the Environment was published in 2008, there have been both policy and legislation advances specifically in the areas of air and waste.

In the EPA’s *2020 Vision – Protecting the Irish Environment* document it is noted that pressures on the environment have increased significantly. As Ireland’s economy grew in the past ten years these pressures accelerated at a rate that far exceeds that observed in other EU countries.

The fifth State of the Environment Report, *Ireland’s Environment 2012: An Assessment* has identified four priority challenges for the environment, which comprise: valuing and protecting our natural environment; building a resource-efficient low-carbon economy; implementing environmental legislation and putting the environment at the centre of our decision making. These challenges are summarised below.

Table 5.1: EPA State of the Environment Report (2012) Key Challenges

Challenges	Components	Relationship to Draft LAP
Challenge 1: Value and Protecting our Natural Environment	<p>A good environment is a critical component of high quality of life for future generations.</p> <p>Meeting the requirements of the Water Framework Directive (WFD) in protecting water resources in a changing climate.</p> <p>Maintaining clean air and healthy soil and protecting biodiversity and nature from further loss and damage.</p>	<p>The draft LAP needs to consider the objectives and precepts of other existing Policies, Plans and Programmes, such as the Habitats Directive and Water Framework Directive, to ensure that the issues addressed by these are brought forward into the overall planning process. The draft LAP needs to ensure sufficient natural environment policies are included within the Plan. In addition Newbridge LAP should consider the impacts on biodiversity when applying land use zonings to areas that are sensitive to these impacts e.g. Pollardstown Fen SAC and Mouds Bog SAC.</p>

Challenges	Components	Relationship to Draft LAP
Challenge 2: Building a Resource- Efficient, Low Carbon Economy	<p>Need to overcome recent economic downturn.</p> <p>Increasing scarcity and costs of fuels and resources.</p> <p>Opportunity to ensure future development is based on highly efficient processes and improved resource efficiency through waste prevention to efficient and renewable energy and investment to become a resource-efficient competitive economy.</p> <p>Protection from future economic shocks.</p> <p>Requirement to meet international climate change agreements targets and 2020 targets on GHG emissions.</p>	<p>The draft LAP should:</p> <p>Promote climate change reduction measures, i.e. through waste reduction, renewable energy and sustainable practices.</p> <p>Take account of potential climate change impacts when developing policies and objectives to ensure that the draft Plan does not contribute to the impact of climate change. In addition the draft Plan should consider the impacts of climate change when applying land use zonings to areas that are vulnerable to these impacts e.g. flooding.</p>
Challenge 3: Implementing Environmental Legislation	<p>Compliance with International Obligations with respect to water quality, air quality, GHG emissions and waste management.</p> <p>Role of the EPA and other regulators to ensure effective enforcement of environmental legislation at national and local levels.</p> <p>Prevent avoidable environmental damage, protect Ireland's reputation and green image, which is important to economic sectors, agri-food and tourism sectors.</p>	<p>The draft LAP should consider the requirements of national and local level legislation in developing policies and objectives as well as EU and international obligations with regards to water quality, air quality, GHG emissions and waste. Consideration with respect to enforcement should also be given in preparation of the LAP.</p>
Challenge 4: Putting the Environment at the Centre of Our Decision Making	<p>Achieving sustainable development and growth at national, regional and local levels.</p> <p>Need for clear leadership and co-ordinated efforts from Government and public bodies, business, industry and farmers and the public.</p>	<p>The draft LAP should consider sustainability to be a focal point within the development of policies and objectives. The LAP should consider carefully the land use zonings for business and industry and the potential impacts of activities in certain locations.</p>

Source: State of the Environment Report 2012, EPA, 2012.

In *2020 Vision – Protecting the Irish Environment* (EPA, 2007) the EPA outlines six environmental goals which reflect on the main challenges identified in the State of the Environment reports as well as key issues at the global and EU level as reflected in the 6th Environmental Action Plan (EAP). These goals are:

- Limiting and adapting to climate change;
- Clean air;
- Protected waters;
- Protected soils and biodiversity;
- Sustainable use of natural resources; and
- Integration and enforcement.

These goals are identified as a means of realising the vision of protecting and improving Ireland's environment. Many of these goals are relevant to the Newbridge LAP as this local level plan contains the policies and objectives to guide land use and development in the town.

5.3 POPULATION

The population of Newbridge has risen steadily since the 1970s with the fastest rate of change occurring between 1996 and 2006, reflecting the growth in residential development. The 2011 Census indicated that Newbridge (including environs area) had a total population of 21,561 persons.

The population of Newbridge has increased significantly in the past 20 years as outlined in Table 5.2 below. The population of Newbridge LAP in 2006 was 18,520. Since then there has been another significant increase of 16% in the population to 2011. The target population for Newbridge as set out in the Kildare County Development Plan is 23,245 for the year 2017 which represents a 7.2% growth rate from the 2011 population which is in line with a reduction in forecasted growth.

Table 5.2: Population and Rate of Change

Census	Population	Percentage Growth
1981	10,706	-
1996	11,503	7%
1991	12,069	5%
1996	13,363	11%
2002	15,298	14%
2006	18,520	21%
2011	21,561	16%

Source: CSO

A total of 7,405 households were recorded in Newbridge according to the 2011 census in Newbridge. The town has an average household size of 2.91 persons which is higher than the national average. According to Census 2011 households in Newbridge are largely made up of two and three person families. There was also a higher than average percentage of four person families, suggesting a young profile within the town. **Table 5.3** provides an overview of the age profile of the town relative to the national average. It is evident that Newbridge has a young population with a number of the age brackets being below the national average. The 25-44 age group is the single largest group amounting to 35% of the total population in the town.

Table 5.3: Age Profile of Newbridge

Age Bracket	Population	% of Total Population	National Average 2011 %
0-14	5,366	25%	21%
15-24	2,558	12%	12%
25-44	7,666	35%	32%
45-64	4,261	20%	23%
65+	1,710	8%	12%
Total	21,561	100%	100%

Source: CSO Preliminary Report 2011

The 2011 Census indicates that out of the 7,173 workers who reside in Newbridge, 2,393 workers are employed within the town. A further 3,913 workers travelled into Newbridge to work resulting in a daily working population of 6,306. However the figures also reveal that there is a net daily loss of 12% of the resident population who leave the town to work in the neighbouring towns and counties.

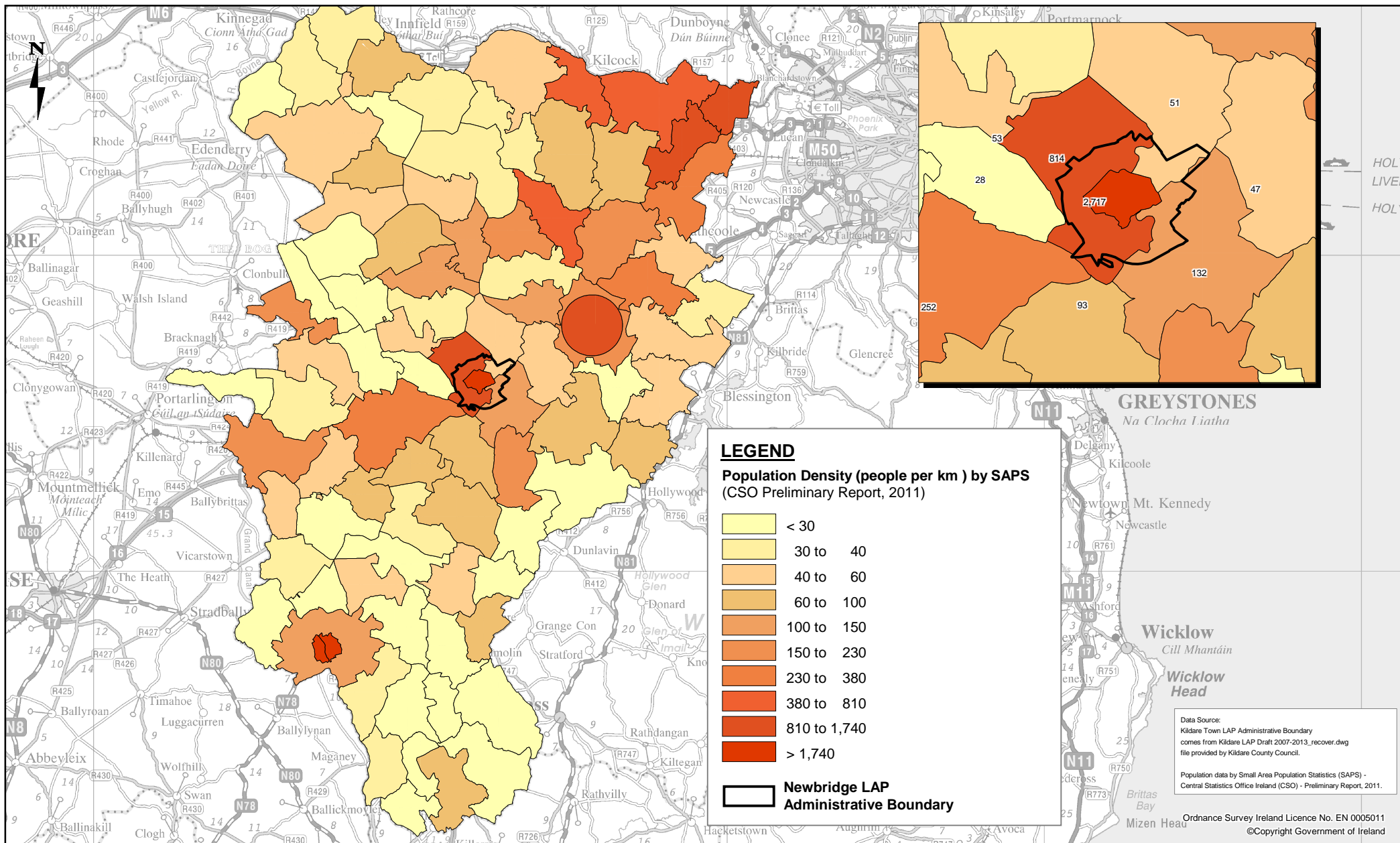


FIGURE 5.1 - POPULATION DENSITY IN COUNTY KILDARE



**Kildare
 County Council**



5.3.1 Existing Environmental Pressures / Problems

Newbridge has experienced significant growth over the past twenty years. This is likely due to the increased pressure on towns located within the greater Dublin area and increase in commuting to Dublin. Furthermore, population targets for Newbridge are set to increase which will put additional pressure on the town and its services. As was outlined in **Table 5.3** there is an above average population in the 0-14 age bracket and therefore the provision of adequate services will have to reflect this.

The town of Newbridge has a young population. There is a need to ensure that adequate services to cater for this young population is catered for i.e. schools, play areas etc.

Development within Newbridge and its environs in previous years has increased population in the area which has put pressure on the transportation network within the town. As there is only one bridge crossing through the centre of the town there is increasing pressure on this crossing.

The increasing population also has a knock on increased requirement in terms of wastewater treatment. The current plant is at capacity and is due to be upgraded.

5.4 BIODIVERSITY, FLORA AND FAUNA

5.4.1 Introduction

Urban growth on the island of Ireland has been accelerating at a greater rate over recent years as increased development expands city and town limits into the countryside. Artificial land cover throughout Ireland remains relatively low; however, the constant encroachment on natural habitats undoubtedly has an impact on natural flora, fauna and biodiversity.

5.4.2 Designated Ecological Sites

Special Areas of Conservation (SACs) have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) - referred to as the Habitats Directive. The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each Member State to designate SACs to protect habitats and species, which, together with Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC), form the Natura 2000 network. The integrity of a Natura 2000 site (referred to in Article 6.3 of the EU Habitats Directive) is determined based on the conservation status of the qualifying features of the SAC. The qualifying features for the designated sites have been obtained through a review of the Conservation Objectives available from the National Parks and Wildlife Service (NPWS).

Pollardstown Fen and Mouds Bog are two SACs in closest proximity to Newbridge. Both of these SACs are water dependent habitats and are shown in **Figure 5.2**. There are no SPAs within 15km of the draft LAP.

The Wildlife (Amendment) Act, 2000 provides the legal basis for the establishment of a national network of sites known as Natural Heritage Areas (NHAs). The aim of the NHA network is to conserve and protect nationally important plant and animal species and their habitats. They are also designated to conserve and protect nationally important landforms, geological or geomorphological features. Planning authorities are obliged by law to ensure that these sites are protected and conserved.

There are no NHAs within the draft LAP area. There are however, three proposed NHA's (pNHA) in the surrounding area as outlined in **Table 5.4**. These include the Curragh, the Grand Canal and the

Liffey Bank Above Athgarvan which all lie within 2km to the boundary of Newbridge administrative area.

The Curragh is an unusual site in an Irish and European context in that it has an extensive open plain area of lowland acid grassland, with dry heath in places. These grasslands are grazed but have been unfertilized for hundreds to thousands of years. There are also small areas of wet heath throughout the Curragh and they have been found to be associated with a perched water table. The Curragh is a unique landscape that has considerable natural heritage significance for the wide diversity of habitats, plants, fungi and animals that it supports.

The Grand Canal is a man-made waterway that links the River Liffey with the River Shannon and River Barrow. The ecological value of this canal is related to the diversity of species it supports within its habitats. The Liffey Bank Above Athgarvan is located on the River Liffey less than a kilometre south of Newbridge LAP. This site is of interest for the assemblage of plants that are typical of disturbed and unstable habitats. This type of natural habitat is rare in Co. Kildare.

Table 5.4: Designated Ecological Sites surrounding the Draft LAP

Designated Ecological Site	Site Code	Approximate Distance from the Draft LAP Boundary	Has been designated for the presence of the following
River Barrow and River Nore SAC	002162	13.5km	Estuaries; Mudflats and sandflats not covered by seawater at low tide; <i>Salicornia</i> and other annuals colonizing mud and sand; Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>); Mediterranean salt meadows (<i>Juncetalia maritimi</i>); Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation; European dry heaths; Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; Petrifying springs and tufa formation (<i>Cratoneurion</i>); Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles; Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ; Desmoulin's Whorl Snail; Freshwater Pearl Mussel; White-clawed Crayfish; Sea Lamprey; River Lamprey; Brook Lamprey; Twaite Shad; Atlantic Salmon; Otter; Killarney Fern; and Nore Freshwater Pearl Mussel.
Pollardstown Fen SAC	000396	Adjoins the boundary of the LAP	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davalliance</i> ; Petrifying springs with tufa formation (<i>Cratoneurion</i>); and Alkine fens Greyer's Whorl Snail; Narrow-mouthed Whorl Snail; and Desmoulin's Whorl Snail.
Mouds Bog SAC	002331	500m	Active raised bogs; Degraded raised bogs still capable of natural regeneration; and

Designated Ecological Site	Site Code	Approximate Distance from the Draft LAP Boundary	Has been designated for the presence of the following
			Depressions on peat substrates of the <i>Rhynchosporion</i> .
Liffey Bank Above Athgarvan pNHA	001396	1km	Interest for the assemblage of plants that are typical of disturbed and unstable habitats.
Curragh Kildare pNHA	000392	Adjoins the boundary of the LAP	Extensive open plain area of lowland acid grassland, with dry and wet heath in places.
Grand Canal pNHA	002104	2km	Range of diverse species and habitats.

5.4.3 Appropriate Assessment

An AA Screening is required for any Plan/ Programme that has potential to have significant effects on a Natura 2000 site. An Appropriate Assessment Screening Report has been prepared in respect of the draft Newbridge LAP. This AA was carried out in parallel with the preparation of the draft Newbridge LAP and SEA. This AA is included within **Appendix A** and it provides an assessment of the Natura 2000 sites within a 15km radius of the LAP. The AA identifies five SACs within this 15km radius of the LAP boundary including Mouds Bog, Pollardstown Fen, Ballynafagh Lake, Ballynafagh Bog and River Barrow and River Nore. The AA confirmed that there are no SPAs within a 15km radius of the plan area.

All five SACs are water dependent ecosystems, and therefore, any changes to the groundwater regime or surface water quality as a result of Newbridge LAP could have adverse effects on the habitats and species for which Pollardstown Fen SAC, Mouds Bog SAC, Ballynafagh Lake SAC, Ballynafagh Bog SAC and River Barrow and River Nore SAC are designated. The Council have specific policies relating to the protection and maintenance of both the groundwater regime and surface water quality within the draft Newbridge LAP.

The likely impacts that will arise from Newbridge LAP were examined in the context of a number of factors that could potentially affect the integrity of the Natura 2000 network.

The Screening for Appropriate Assessment of Natura 2000 sites concluded that the proposed LAP will **not have a significant effect on the Natura 2000 network** and a Stage 2 Appropriate Assessment is not required.

5.4.4 Habitat Mapping

Within Newbridge there are a variety of habitats as shown in **Figure 5.3**. The habitat mapping which was undertaken in 2007 provides detailed information on areas of local biodiversity importance.

Within the town there is a central dominance of buildings and artificial surfaces, many of the buildings are surrounded by gardens, further away from the centre of the town comprises some amenity grassland followed by improved agricultural grassland (GA1) on the outskirts of the LAP area. There is an expanse of dry humid acid grassland (GS3) to the south west of the Newbridge LAP boundary. Within the centre of Newbridge Town there are large patches of amenity grassland improved (GA2), demonstrating the urban fabric. There are some lands containing arable crops (B1) which are situated to the east and north of the LAP area.

Article 10 of the Habitats Directive recognises the importance of ecological networks as corridors and stepping-stones for the movement of wildlife. Migration, movement and the long-term genetic health of species are assisted through creating linked networks for biodiversity purposes. The Directive requires that connectivity and areas of ecological value that lie outside of designated ecological sites be maintained. The Directive recognises the need for the management of these areas through land use planning and development policies. The networks are considered imperative in connecting areas of biodiversity to each other, thus avoiding the creation of isolated islands of habitat. These corridors are particularly important for mammals, small birds and bats.

Tree lines and hedgerows are important components of Newbridge's ecological networks, allowing for linkages between and within designated ecological sites and the non-designated surrounding countryside. The habitat mapping **Figure 5.3** demonstrates the existing tree lines within Newbridge and these form important corridors for the ecological network. There is a distinctive tree line running along the River Liffey which traverses the Newbridge LAP area.

5.4.5 Aquatic Flora and Fauna

Newbridge Town lies within the Eastern River Basin District (RBD) with a very small portion of the administrative area within the South Eastern RBD. The River Liffey flows through the centre of Newbridge Town. The most recent water quality data from the EPA for three points in closest proximity to Newbridge identify the River Liffey as being of good water quality status based on 2010 EPA data. The River Liffey is also classified as 'at risk' based on current risk assessments undertaken as part of the WFD. This means that there is a risk that the River Liffey will not achieve the objectives of the WFD by 2015.

Monitoring by the Council and other agencies of all water sources is carried out for the purpose of implementing the Water Framework Directive. It is a policy of the Council to ensure that the EU Water Framework Directive is implemented. Further, it is a policy of the Council to ensure that the specific relevant objectives and measures for individual water bodies set out in the Eastern River Basin Management Plan (ERBMP) and associated Programme of Measures (POM) are implemented.

Both Pollardstown Fen SAC and Mouds Bog SAC are registered as water dependent habitats on the Register of Protected Areas (RPAs), and the Council is committed to protecting and enhancing this ecosystems. All proposed development within and adjoining the Newbridge area will be screened for Appropriate Assessment of its potential to impact on the Natura 2000 network, in accordance with Article 6 of the Habitats Directive.

5.4.1 Existing Environmental Pressures / Problems

Newbridge contains a number of high quality ecological sites both at an international, national and local level. Existing pressures in the town relate to losses of biodiversity flora and fauna through the construction of hard standing surfaces as a by product of development.

The area has experienced a lot of pressure in the recent past from development due to its proximity to the Greater Dublin Area. This has led to pressure on the River Liffey, which has been classified as 'at risk', under the Water Framework Directive (WFD). Therefore there is a risk that the River Liffey will not achieve the objectives of the WFD by 2015.

The close proximity of the town to Pollardstown Fen and Mouds Bog has the potential to put pressure on these water dependent habitats. These habitats are both Natura 2000 sites and are further outlined in the Appropriate Assessment Screening Statement in **Appendix A** of this document.

5.5 SOIL

5.5.1 Introduction

Soils are offered protection through the proposed EC Directive 2004/35/EC of the European Parliament and of the Council for establishing a framework for the protection of soil and amending Directive 2004/35/EC. This Directive provides a common strategy for the protection and sustainable use of soil based on the principles of integration of soil concerns into other policies, preservation of soil functions within the context of sustainable use, prevention of threats to soil and migration of their effects, as well as restoration of degraded soils to a level of functionality consistent with the current and approved future use.

The Newbridge administrative area is dominated by deep and shallow well drained mineral soils. These mineral soils are typically grey brown podzolic soil which is common in the lowland parts of Ireland. This soil is freely draining and very fertile due to its large amount of organic matter. It has a soil horizon of clay material with the parent material being mainly limestone. Generally it is a "medium-heavy" textured soil with a weak to moderately good structure. It has desirable physical properties and ideally suited to tillage, pasture, meadow and forestry.

There are large alluvium areas which are located alongside the River Liffey which traverses through Newbridge LAP plan boundary. Alluvium soils are a mix of silt, sand, clay and gravel and would generally have a high organic content. This soil is rich in potassium and highly suitable for agriculture.

5.5.2 Geology

The geology within the administrative area of Newbridge is represented in **Figure 5.4**. The bedrock geology is classified in the central portion of the LAP as Cloghan Sandstone Formation with Waulsortian Limestones and Rickardstown Formation on either side. There is a fault line that cuts through the LAP to the north and the fault follows a north west, south eastern direction. In addition there are two sites of geological interest that exist in close proximity to the LAP, that being the Curragh and Pollardstown Fen.

5.5.3 Existing Environmental Pressures / Problems

Soil erosion due mainly due to surface erosion resulting from construction works has major potential to impact on water quality and fisheries resources within the area. In addition to water quality and fisheries, these can impact on infrastructure and can have health and safety implications.

Development at the edge of the town has and will put pressures on soils, which restricts the agricultural potential of these soils and decreases the sustainable production of food within proximity to urban areas.

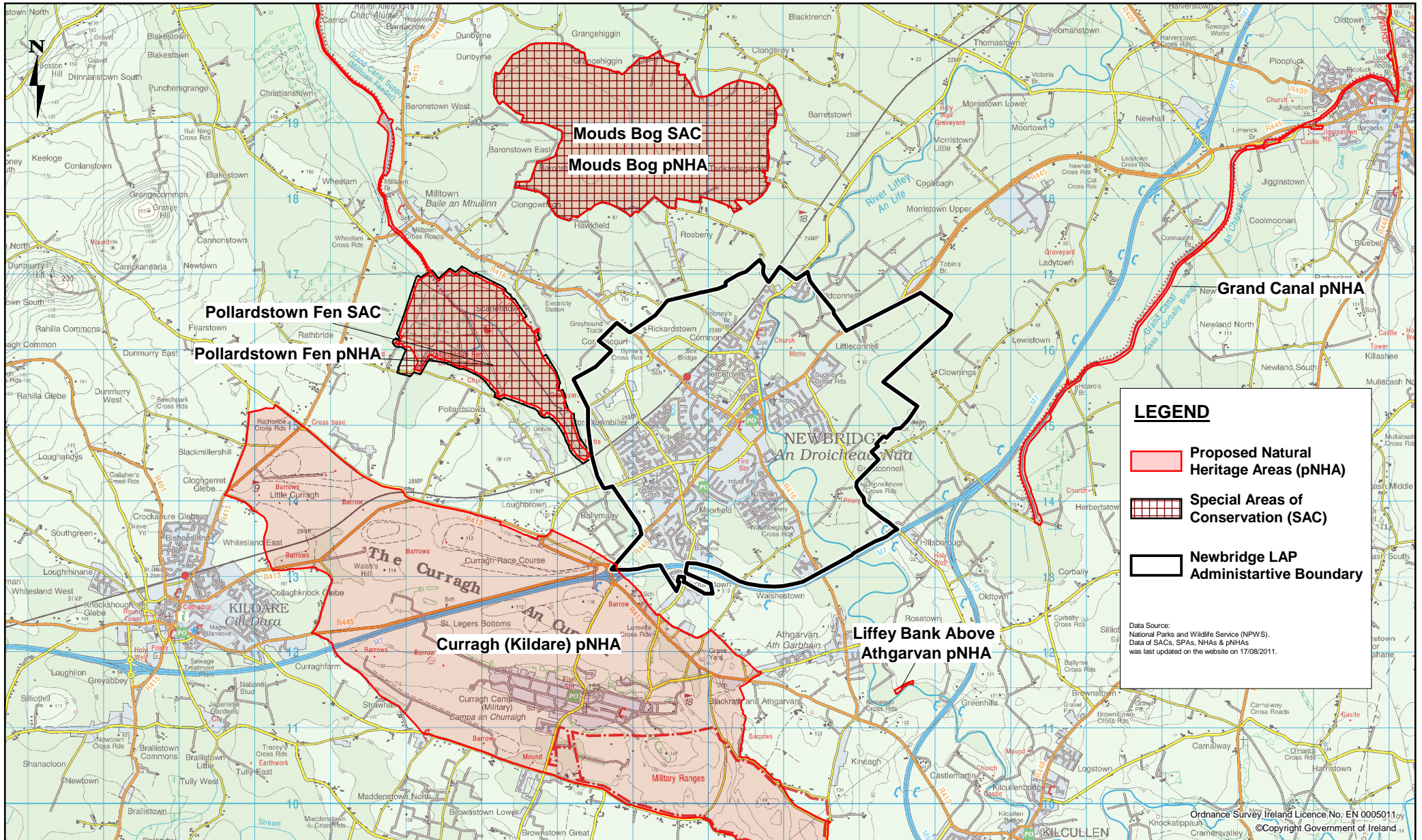


FIGURE 5.2 - DESIGNATED SITES



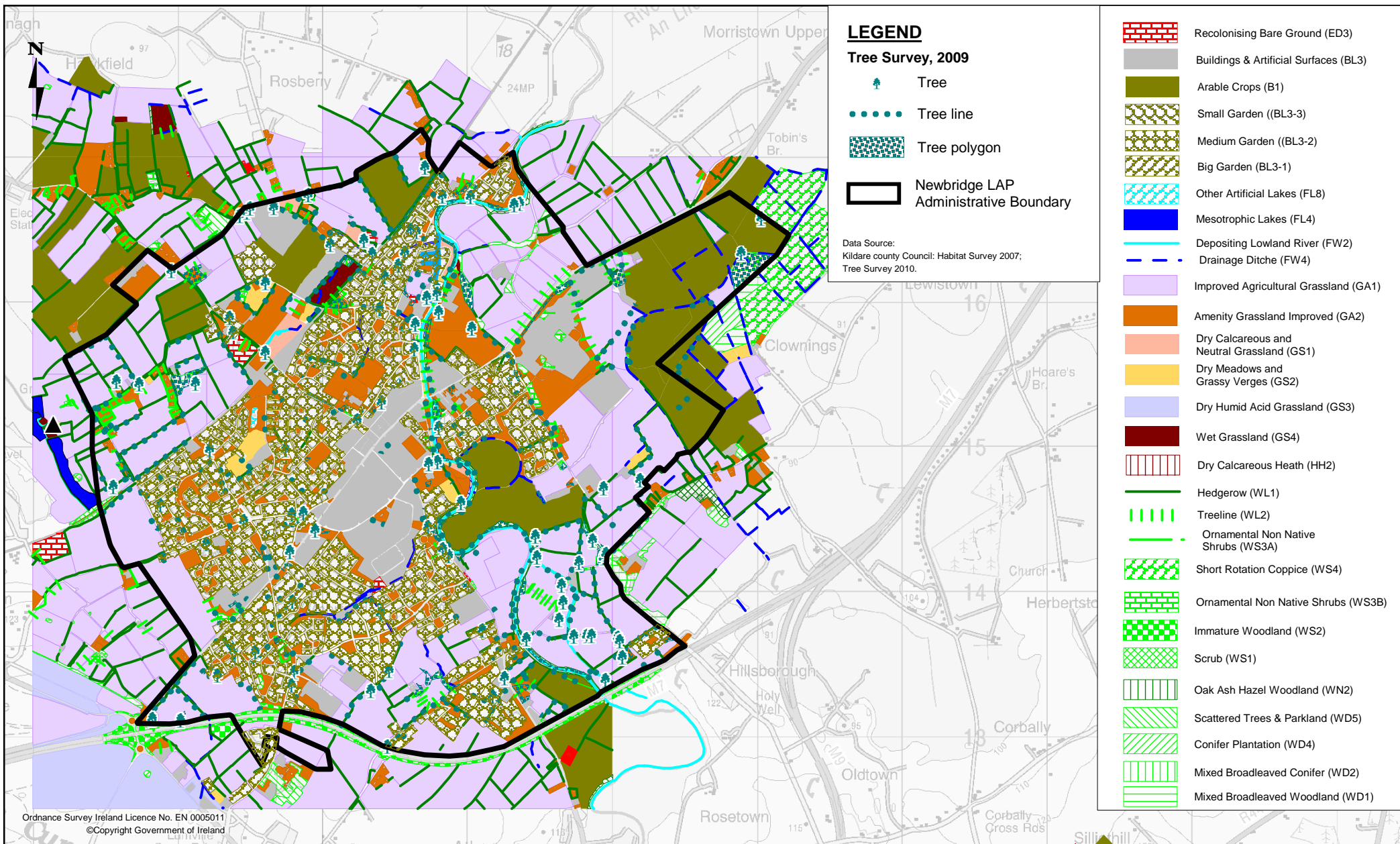


FIGURE 5.3 - HABITAT MAPPING - NEWBRIDGE



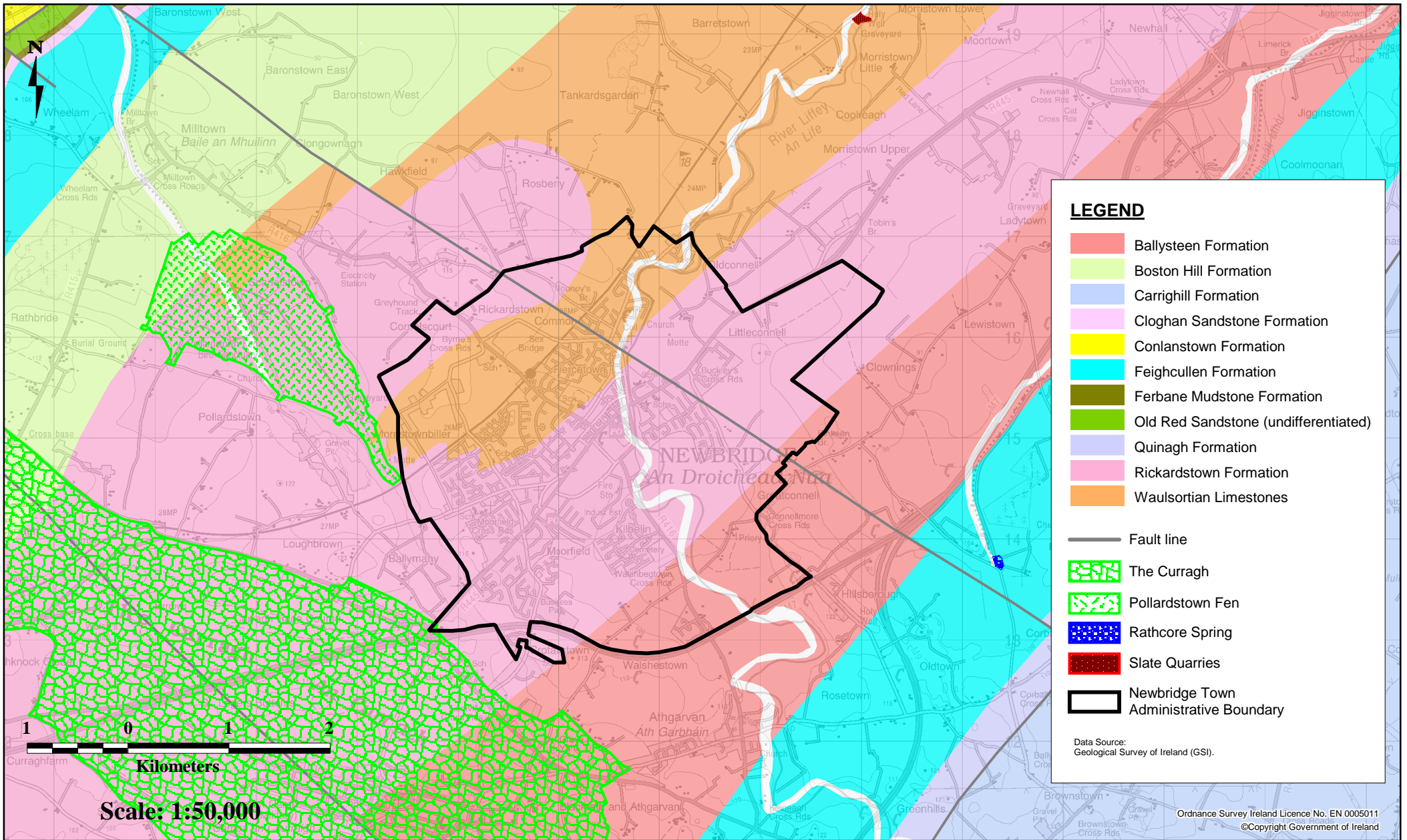


FIGURE 5.4 - BEDROCK GEOLOGY & AREAS OF GEOLOGICAL/GEOMORPHOLOGICAL INTEREST

5.6 WATER

5.6.1 River Basin Districts and Water Bodies

Since 2000, the Water Framework Directive 2000/60/EC (WFD) has directed water management in the EU. The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters (surface, ground, estuarine and coastal) and protect, enhance and restore all waters with the aim of achieving at least Good Status by 2015. All public bodies, including Kildare County Council, are also required to coordinate their policies and operations so as to achieve/ maintain Good Status of water bodies, within their jurisdiction in line with the relevant River Basin Management Plan and Programme of Measures.

For the purpose of implementing the WFD, Ireland has been divided into eight River Basin Districts and Kildare is wholly located within the Eastern River Basin District (ERBD), (Boyne and Liffey Catchments) and partly within the South Eastern River Basin District (SERBD) (Barrow Catchment). Newbridge LAP is located in both the ERBD and SERBD with the majority of the LAP in the ERBD.

5.6.2 Register of Protected Areas

The WFD requires that Registers of Protected Areas (RPAs) are compiled for water bodies or parts of water bodies that must have extra controls on their quality by virtue of how their waters are used by people and by wildlife.

The WFD requires that these RPAs contain the following areas:

- areas from which waters are taken for public or private water supply schemes;
- designated shellfish production areas;
- bathing waters;
- areas which are affected by high levels of substances most commonly found in fertilisers, animal and human wastes - these areas are considered nutrient sensitive; and
- areas designated for the protection of habitats or species, e.g. salmonid areas; Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

Both Pollardstown Fen and Mouds Bog are registered as RPA water dependent habitats.

5.6.3 Surface Water

The River Liffey flows through the centre of Newbridge as shown in **Figure 5.5**. The most recent water quality data from the EPA for three points in closest proximity to Newbridge identifies the River Liffey as having good water quality, which is taken from 2010 EPA data. The River Liffey is also classified according to the WFD as 'moderate status' and at 'significant risk' based on current risk assessments undertaken as part of the RBMP. This means that there is a risk that the River Liffey will not achieve the objectives of the WFD by 2015.

The surface water status within Newbridge LAP and surrounding it is also identified in **Figure 5.5**. It can be seen that the existing status is 'moderate' within the majority of the LAP except for

administrative lands to the west of the LAP which are of poor status. This classification is for the status of the surface water determined by the ecological and chemical status of the water body.

5.6.4 Groundwater

Groundwater monitoring is undertaken by the EPA and within the County of Kildare there are approximately eleven monitoring locations one of which is in proximity to Newbridge LAP lands at Pollardstown Fen. Groundwater is an important source and is of critical importance in many regions. Groundwater Protection Schemes are a county based initiative to provide protection to groundwater for human consumption by placing tighter controls on activities within all or part of the zone of contribution of the source. The groundwater protection zones in proximity to the LAP are shown in **Figure 5.6**.

The Geological Survey of Ireland (GSI) rates aquifers based on their hydrogeological characteristics as well as on the value of the groundwater resource. Ireland's entire land surface is divided into aquifer categories. Newbridge is divided into two main classifications, Regionally Important Aquifer and Locally Important Aquifer as shown in **Figure 5.7**. The GSI further rates aquifers according to their vulnerability to pollution. Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter underground water. The majority of the LAP is classed as having high vulnerability in terms of groundwater.

5.6.5 Flooding

Figure 5.8 shows the latest available flood data for the town. Newbridge is vulnerable to flooding from the River Liffey which flows through the centre of the town. It is also vulnerable to the adverse effects from changes in the frequency and severity of rainfall events. The majority of the flooding events recorded within the LAP area are directly related to the River Liffey. A detailed Strategic Flood Risk Assessment of the Newbridge LAP has been prepared and has informed the preparation of the draft LAP and this Environmental Report.

The SFRA provides a justification test in relation to two sites which are located within the flood zone. These include Rosconnell and the Great Connell sites located to the north east of the town. The recommendation of the justification test was to zone these sites in accordance with water compatible uses. The draft Plan has accepted these recommendations and these lands have been zoned accordingly.

The European Directive 2007/60/EC on the assessment and management of flood risks requires member states to carry out preliminary flood assessments in order to identify the areas at risk. These flood risk maps will be completed by 2013 and following this, flood risk management plans will be drawn up. Newbridge is situated within the Eastern Catchment Flood Risk Assessment and Management (CFRAM) study area.

The DEHLG published '*The Planning System and Flood Risk Management Guidelines for Planning Authorities*' which will ensure that flood risk assessment and management is incorporated within the planning system. These guidelines have been adhered to during the preparation of the LAP Newbridge and a flood risk assessment of the draft LAP was conducted.

5.6.6 Existing Water Environmental Pressures / Problems

There are a number of sensitivities with regard to the status of surface and groundwater bodies within the LAP area. The existing surface water status identify the majority of the LAP to be classified under the WFD as having 'moderate status', with the River Liffey within the LAP being 'at significant risk' as defined under the WFD. The central section of the town is overlain by a regionally important aquifer which is already under pressure as a result of the construction of the motorway.

Changes in the occurrence of severe rainfall events as a result of climate change over the next 50 to 100 years would be likely to increase the frequency and severity of flooding events and inundation, which could result in damage and loss to houses and infrastructure. These risks could be further exacerbated by: urban development increasing the speed and volume of run-off; and changes to geomorphological processes such as sediment transport, siltation and erosion. Newbridge already has existing pressures with regard to flooding from the River Liffey which flows through the centre of the town.

5.7 NOISE

Strategic noise mapping for Kildare was undertaken in 2007 by the National Roads Authority and is shown in **Figure 5.9**. The overriding noise source for Newbridge is traffic which arises from the nearby M7. The mapping does not provide details on noise sources within Newbridge, but it is likely that all of the radial routes leading into Kildare town and the railway line are likely to be a source for noise pollution.

Streets in low lying areas that have high traffic counts as well as enclosing taller buildings are likely to have harsh sensory environments with regard to noise levels in relation to this source. Traffic hotspots, such as intersections, are likely to have higher noise levels. In addition, there are localised noise sources that include air conditioning equipment, train movements and night clubs.

Figure 5.9 shows that the highest noise level of >75dB is along the main carriageway and the noise levels decrease the further away from the centre of the carriageway. Noise levels of between 55dB and 64dB would be experienced for residents in proximity to the motorway.

5.7.1 Existing Noise Environmental Pressures / Problems

The identification of quiet areas, which have low noise levels, and maintaining or reducing existing noise levels, in order to sustain quiet areas is important. Reducing high levels of noise and maintaining low levels of noise are the main noise issues facing development of the town.

5.8 CLIMATIC FACTORS

5.8.1 Greenhouse Gases

The EPA published greenhouse gas emissions projections for the period 2011 to 2020. The figures show the projected trends for greenhouse gases and give a picture of Ireland's ability to meet EU and international targets with respect to greenhouse gas emissions. With regard to emissions in Ireland, transport and agriculture are projected to account for 75% of total non-ETS emissions by 2020. This illustrates the important role that both transport and agriculture will have to play in developing mitigation options for reducing emissions in Ireland and for meeting our 2020 EU targets. Whilst agriculture is key to Ireland's economic growth, employing 150,000 people and producing annual exports of more than €7 billion, emissions from the sector are projected to increase by 7% between 2010 and 2020, under the assumption that the Food Harvest 2020 targets will be achieved in full.

5.8.2 Potential Effects of Climate Change

The EPA's Climate Change: Scenarios and Impacts for Ireland (2003) report identifies where vulnerability to climate change exists in Ireland and what adjustments are likely in the operation of environmental systems in response to such changes.

As increased temperatures will lead to greater amounts of water vapour in the atmosphere and an accelerated global water cycle, it is reasonable to expect that river catchment areas will be exposed to a greater risk of flooding. Heavier winter rain and summer storms may cause more flash flooding, causing an increase in diffuse pollution loads to waters from soil run-off or overflow from CSOs (combined sewer overflows) and raising demand for flood controls. Summer droughts are more likely as a result of climate change and there may be a reduction in drinking water supplies.

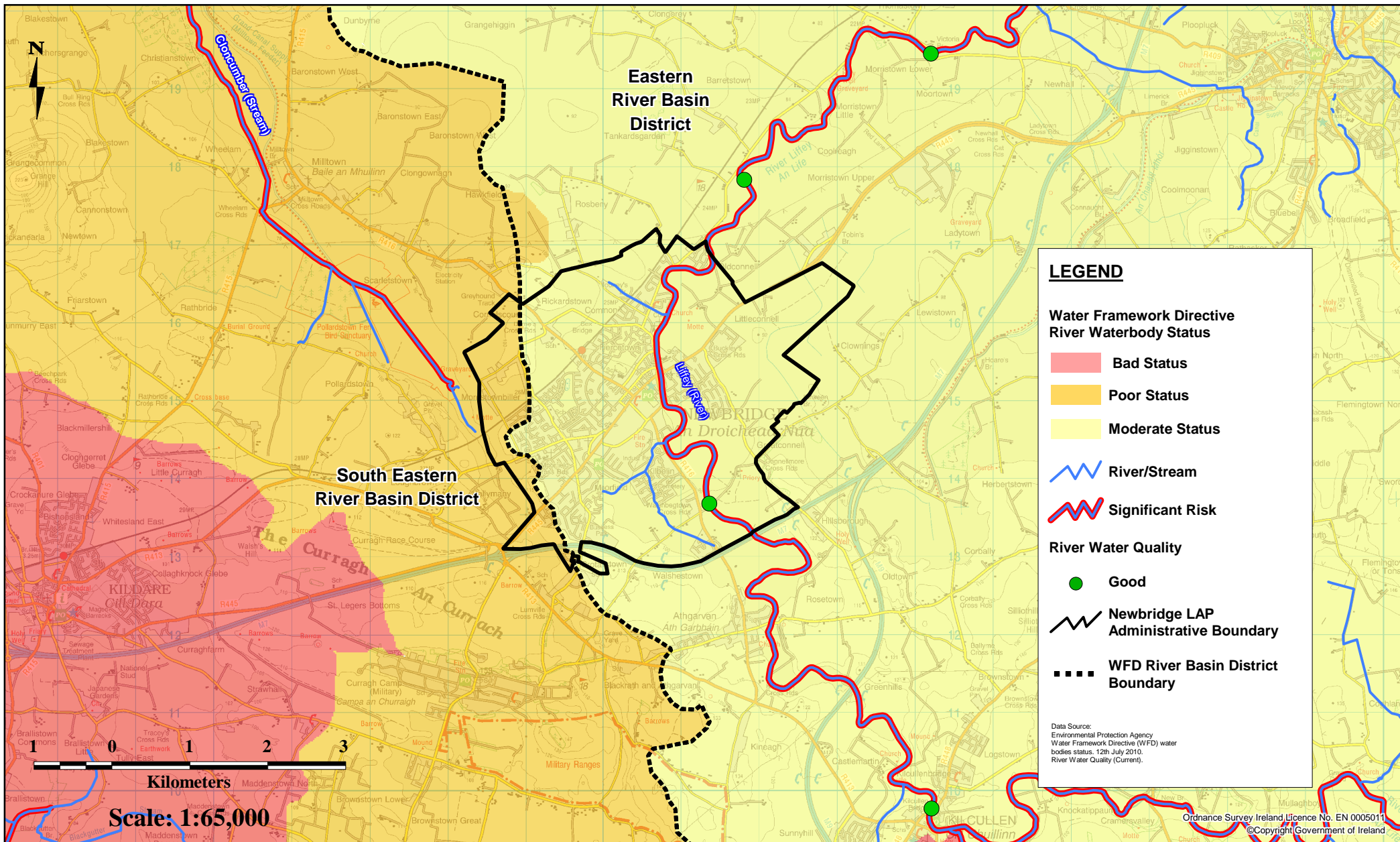


FIGURE 5.5 - WATER FRAMEWORK DIRECTIVE SURFACE WATER STATUS



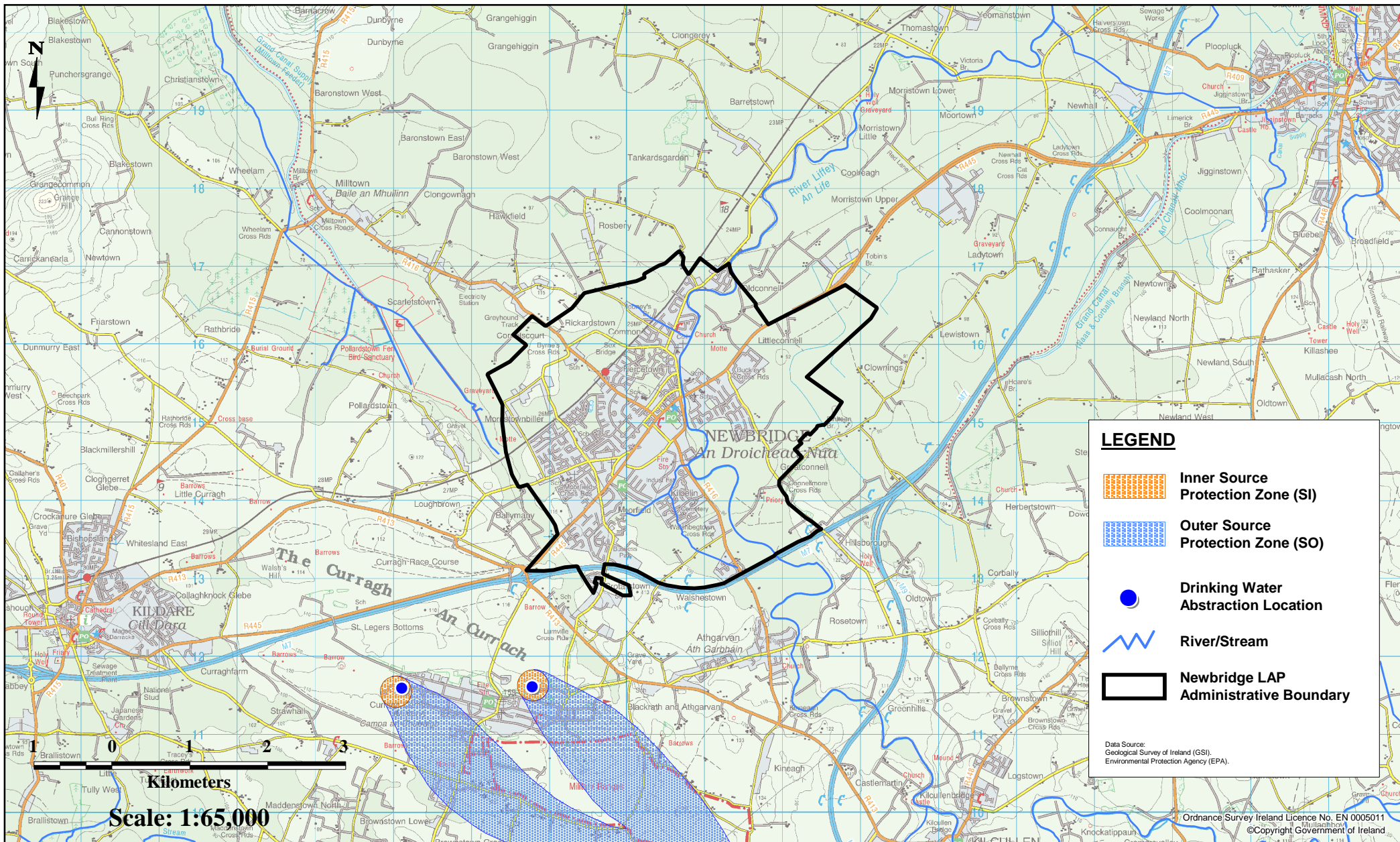


FIGURE 5.6 - GROUNDWATER SOURCE PROTECTION ZONES



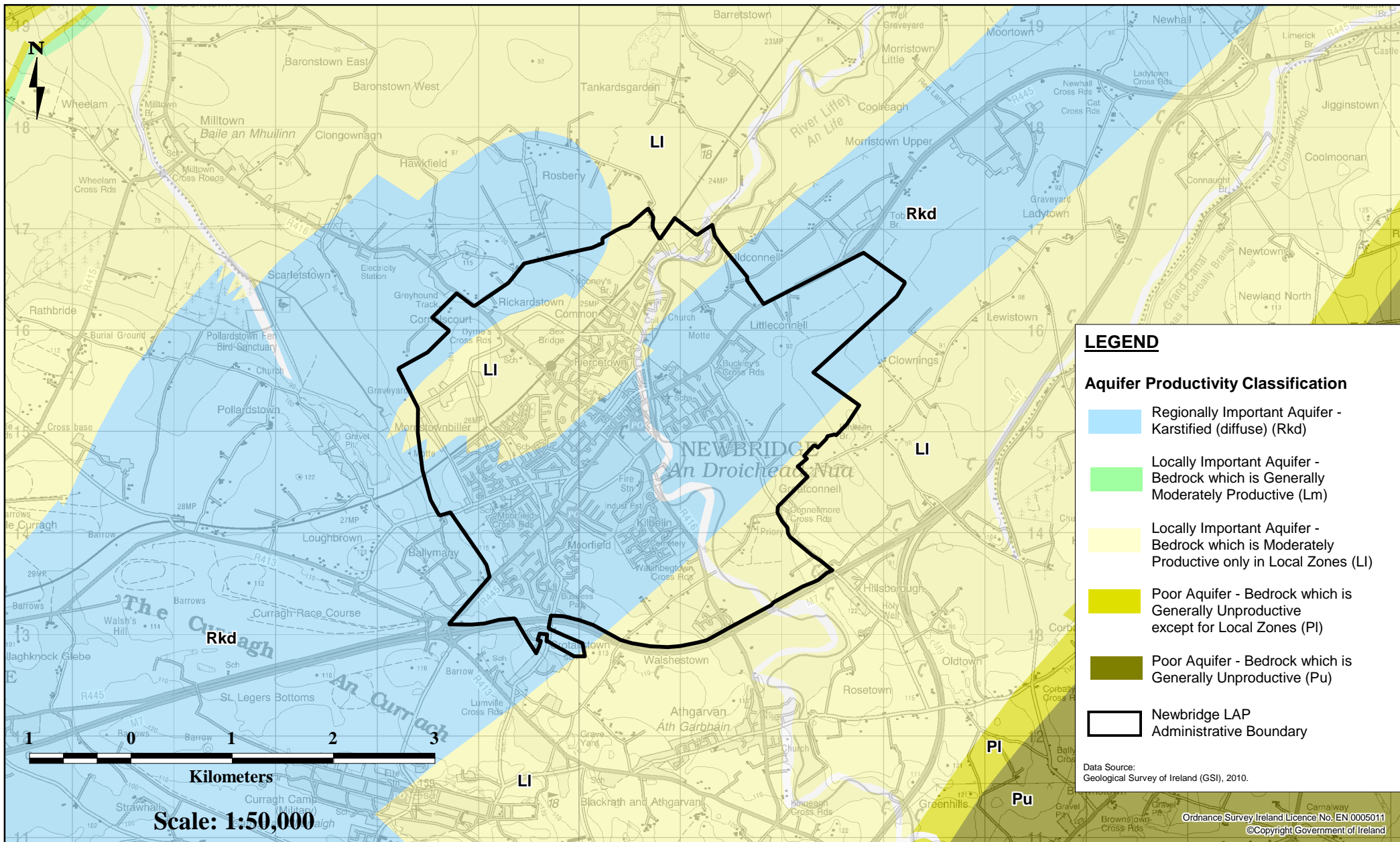


FIGURE 5.7 - AQUIFER PRODUCTIVITY CLASSIFICATION

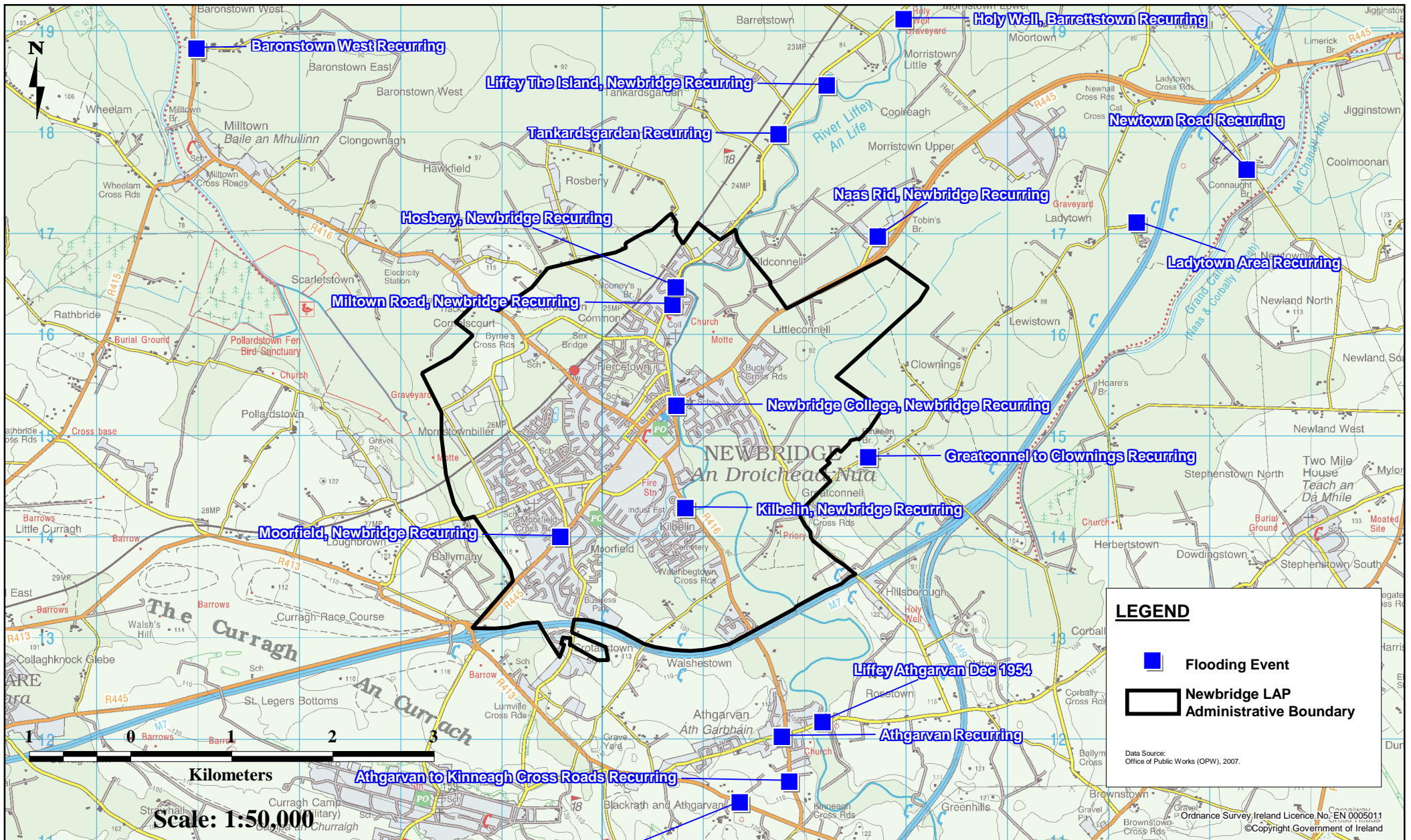


FIGURE 5.8 - FLOOD EVENTS AND EXTENTS



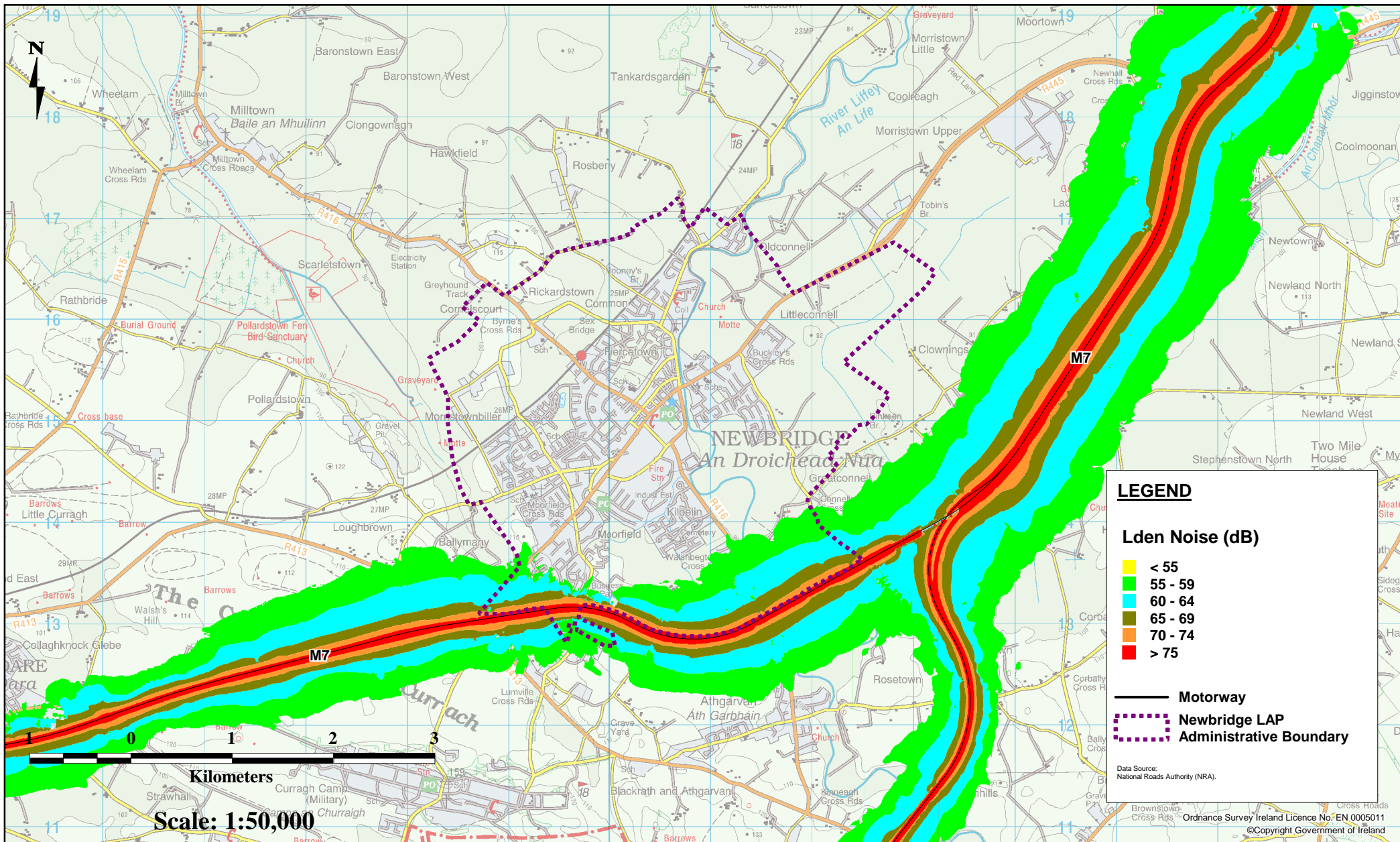


FIGURE 5.9 - NOISE MAPPING



River flooding tends to be more common during the wetter winter months when soils are near saturation. Many of the rivers draining upland areas have a rapid or 'flashy' response to rainfall enhanced by rising topography. Steep slopes and thin soils favour rapid flow pathways and water is rapidly transmitted to the channel network especially in urbanised catchments with extensive areas of impermeable surfaces. A critical impact of climate change will be the likely changes to habitats and the flow conditions in rivers and lakes.

It is now recognised that Plans will need to take account of issues arising from climate change in future land use planning. The draft LAP has undertaken a flood risk assessment in line with the requirements of "The Planning System and Flood Risk Management Guidelines for Planning Authorities" (DoEHLG, 2009).

5.9 MATERIAL ASSETS

5.9.1 Introduction

The material assets of Newbridge may be broken down into a number of relevant categories. These include; quarries and minerals, drinking water, wastewater, transport infrastructure and waste management.

5.9.2 CORINE Land Cover Mapping

A review of the CORINE land cover mapping for 2006 identified that the lands within the LAP have a large urban fabric. There is predominance of this urban fabric on the lands to the west of the River Liffey. The remaining lands within the LAP are non-irrigated arable land and pastures which makes up a high percentage of the land cover.

5.9.3 Quarries and Mineral Locations

There are two mineral locations to the north east and south west of the LAP but no quarries are identified in proximity to Newbridge LAP. These mineral locations are taken from the GSI Active quarry directory.

5.9.4 Drinking Water

The Ballymore Eustace Reservoir as part of the Mid-Regional Water Supply Scheme supplies drinking water to Newbridge. At present Newbridge is well served with water to meet present needs in the medium term and there are plans to enhance the water supply abstractions from the River Barrow as a long term measure, along with development of new groundwater sources.

Newbridge falls within the Greater Dublin Water Supply Area which currently seeking to obtain a new source of water to meet water demands within this area. Newbridge is very much dependant on the Greater Dublin Region for its water supply. The requirement for a new water supply is based on the future planned development of the Greater Dublin Area as identified in the National Spatial Strategy (2002-2020) and previous studies carried out to investigate how water demand for future development in the region can be met when existing sources have been developed to their sustainable water supply limits. The current estimate, based on a per capita consumption of 145 l/day indicates that a new source is required by 2016-2020. New water source options have been evaluated and have been subject to a separate SEA process. It is expected that this project will be completed during the lifetime of this plan accommodating adequate water supply to meet projected demands during the period of the LAP.

5.9.5 Wastewater

The Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC) aims to protect the environment from the adverse effects of wastewater discharges by ensuring that wastewater is appropriately treated before it is discharged to the environment. Such treatment is essential in order to meet the requirements of the WFD. The wastewater strategy for the Greater Dublin Region is set out in the Greater Dublin Strategic Drainage Study (GDSDS).

The Osberstown Wastewater Plant (WWTP) provides tertiary treatment and has a capacity of 80,000 population equivalent (P.E.). The plant also services the town of Naas, Kilcullen, Sallins, Kill, Clane and Prosperous. At present there is no current spare capacity or shortfall at the Wastewater treatment Osberstown Plant. It is intended that works will commence in 2014 to upgrade the treatment plant to a capacity of 130,000pe which would be referred to as a Stage III upgrade,

5.9.6 Transportation

Traffic volumes have increased in Newbridge over recent years due to development within the town and its location as a commuter base to Dublin. However, the construction of the M7 bypass has taken large volumes of traffic away from the centre of the town providing a positive impact. The transportation network for Newbridge is presented in **Figure 5.10** with the M7 bypass lying to the south of the town and the rail line to the north west.

To facilitate the increased population and associated transportation demand within the town, it will be necessary to make provision for increased public transport, walking and cycling. It is recognised that cycling and walking are cost effective, non-polluting and highly flexible transportation modes that reduce congestion, foster improved health and are accessible to young people. Newly published government policy, 'Smarter Travel – A New Transport Policy for Ireland (2009-2020)' and the 'National Cycle Policy Framework (2009-2020)' have clearly placed an emphasis on walking and cycling as alternatives to vehicular transport. The draft Plan should have regard to the cycle policy framework document produced by the Department of Transport, which seeks to ensure that the urban road infrastructure and traffic management measures are designed to be cyclist friendly.

5.9.7 Waste Management

The Waste Management Plan for Kildare (2005-2010) which was prepared in accordance with the Waste Management Act is currently under review. The updated plan will provide strategic objectives and policies with regard to waste management within the county.

The emphasis within the draft LAP will be to carry out waste management in conjunction with Kildare County Council. The draft LAP will conform to the European Union and national waste management hierarchy in the undertaking of waste prevention, waste recycling and, energy recovery and disposal. In particular, the draft LAP will encourage, enable and facilitate Kildare County Council on the implementation of the Waste Management Plan to provide recycling facilities and services in the town.

Kildare County Council is responsible for the operation of litter collection in Newbridge. The Council recognises that littering and illegal dumping are serious problems. To this accord the Council have, in cooperation with the relevant agencies, and in consultation with the public, prepared and are implementing a Litter Management Plan (2012-2015). This Litter Management Plan provides policies and initiatives to combat the problems of litter and illegal dumping. In particular, the Litter Management Plan focuses on developing initiatives in conjunction with existing initiatives such as the Green Schools Programme.

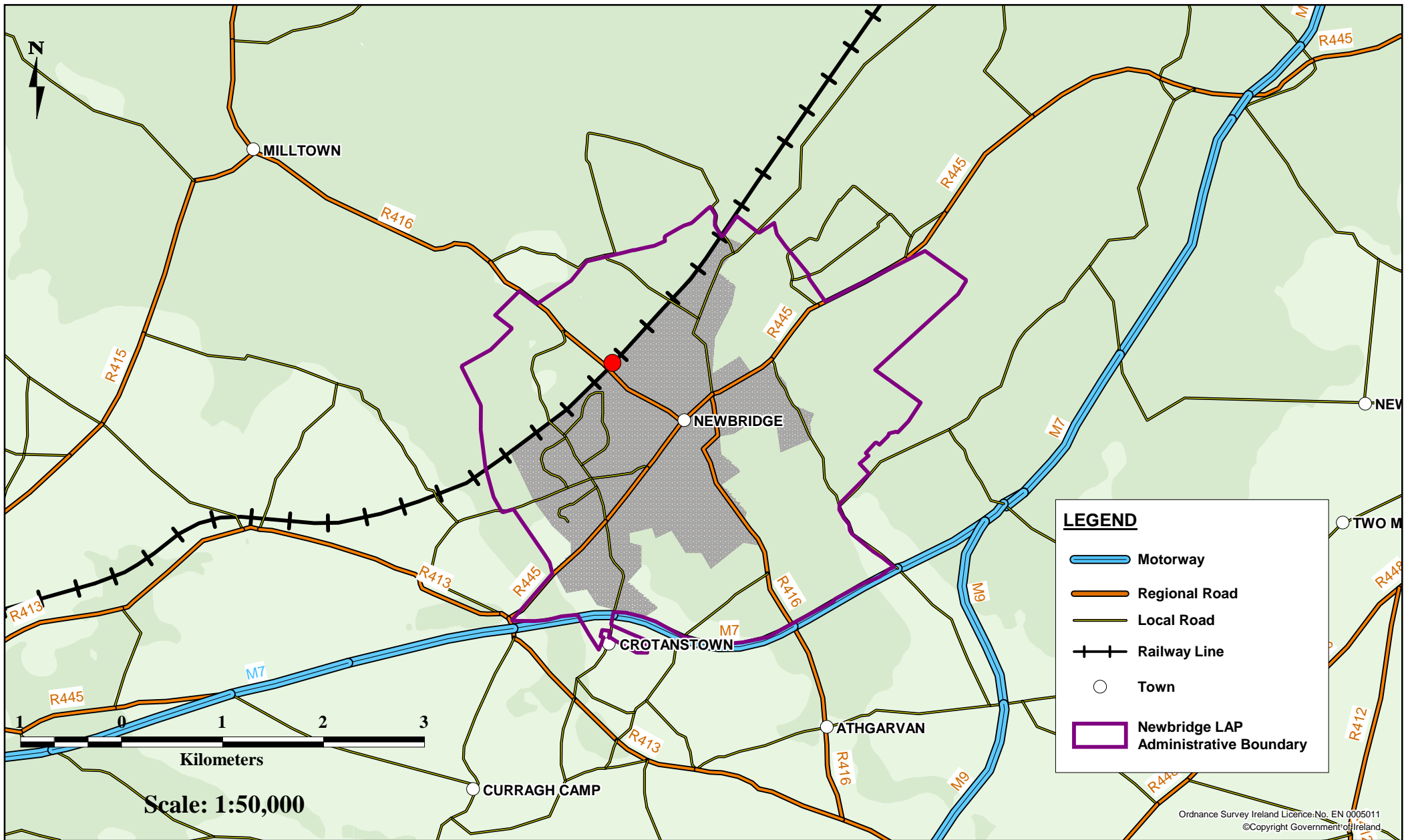


FIGURE 5.10 - TRANSPORTATION NETWORK



This Litter Management Plan was put in place for the future management of litter prevention and control and includes a number of strategies. The success of the plan will be the measure of how litter pollution is controlled, alleviated and / or prevented in Newbridge during its lifetime.

5.9.8 Existing Environmental Pressures / Problems

It is considered that the completion of projects arising out of the WSIP (Water Services Investment Programme) will resolve the majority of issues regarding wastewater treatment constraints up to 2017. This will allow for wastewater treatment capable of serving sustainable and in some instances, appropriate higher density development of the area, without any negative impact on the achievement of the objectives of the WFD. At present development will have to be restricted due to the lack of spare capacity in the present system. The assimilative capacity of the River Liffey is a critical factor in relation to wastewater.

Long-term water supplies for the town should be resolved through the Water Supply Project – Dublin Region. This project aims to supply water to the Dublin region up to 2031 and beyond. Improvements in the existing water infrastructure as well as more efficient use of the water resource are considered sufficient to accommodate development within the town for the period of the Plan. The area currently benefits from high quality drinking water. These high standards will not be affected by improvements to the network. However, there is no timetable for the Water Supply Project and it has yet to proceed through the planning process. It is expected that it will not be completed in the lifetime of this LAP.

The need to increase the use of existing public transport, and provide for additional systems to accommodate existing and future growth of the town and its environs is a pressing priority. Increasing the amount of pedestrian and cyclist movements is also a significant challenge.

5.10 CULTURAL, ARCHITECTURAL AND ARCHAEOLOGICAL HERITAGE

5.10.1 Introduction

Heritage, by definition, means inherited properties, inherited characteristics and anything transmitted by past ages and ancestors. It covers everything, from objects and buildings to the environment. Heritage features include physical buildings, structures and objects, complete or in part, which have been left on the landscape by previous and indeed current generations.

Newbridge has both a rich and diverse architectural heritage, comprising a number of structures of historical and architectural importance. This heritage provides the town with a resource of tremendous social, educational, recreational and aesthetic value. For present and future generations who will live and visit the town, the historic and cultural heritage of the town has the ability to enhance and enrich the context of everyday existence.

5.10.2 Archaeological Heritage

The archaeological heritage of Newbridge includes structures, constructions, groups of buildings, developed sites, recorded monuments as well as their contexts, and moveable objects, situated on land. Archaeological heritage is not confined to the archaeological sites within the Record of Monuments and Places. It includes any archaeological site that may not have been as yet recorded, as well as archaeology beneath the ground surface, and the context of any site.

Under the National Monuments (Amendment) Act, 2004 the archaeological heritage of Newbridge is protected. The record of monuments and places as outlined in **Figure 5.11** is an inventory of archaeological sites of significance within the plan area. It can be seen that there are some sites to the north east of the town centre and to the west just outside of the draft LAP administrative boundary.

5.10.3 Architectural Heritage

The term architectural heritage is defined in the Architectural Heritage (National Inventory) and Historic Monuments Act 1999 as meaning all: structures and buildings together with their settings and attendant grounds, fixtures and fittings; groups of structures and buildings; and sites which are of historical, archaeological, artistic, cultural, scientific, social or technical interest. These are identified in **Figure 5.11**. The NIAHs purpose is to protect and conserve the built heritage and it is the NIAH surveys that provide the basis for the recommendations to the planning authorities for the inclusion of particular structures in their Record of Protected Structures (RPS).

The RPS has been compiled to protect the structures of the town that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. In relation to a protected structure, the meaning of the term 'structure' includes the interior of the structure, the land lying within the curtilage of the structure, and any other structures lying within that curtilage and their interiors, and all fixtures and features which form part of the interior or exterior of these structures. Where indicated in the RPS, protection may relate to specified features within the attendant grounds of a structure, which would not otherwise be included.

5.10.4 Existing Environmental Pressures / Problems

The accommodation of further development in Newbridge has the potential to cumulatively impact upon the heritage features of the area. Development which involves material alterations or additions to protected structures can detract from the special character of the structure and its settings, and have the potential to result in the loss of features of architectural or historical interest. Development on sites adjoining protected monuments, places or structures can also impact the setting of these cultural heritage items. Therefore policies in order to protect these features should be included in the draft plan.

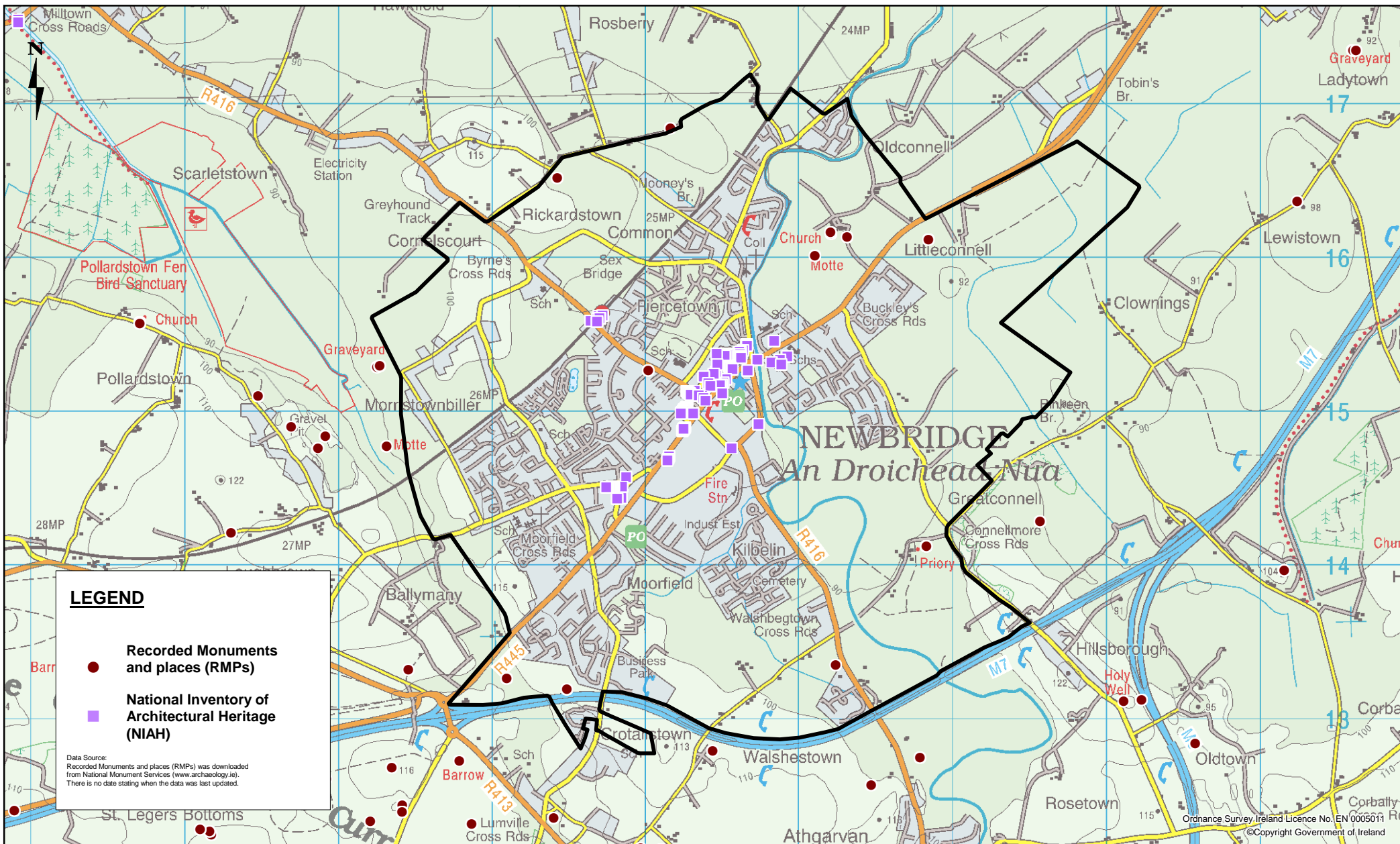


FIGURE 5.11 - ARCHAEOLOGY, ARCHITECTURE AND CULTURAL HERITAGE



5.11 LANDSCAPE

5.11.1 Introduction

Landscapes are areas that are perceived by people and are made up of a number of layers:

- Landform, which results from geological and geomorphological history;
- Land cover, which includes vegetation, water and human settlements; and
- Human values, which are a result of historical, cultural, religious and other understandings and interactions with landform and land cover.

Figures 5.12 and **5.13** provide an overview of the landscape character and sensitivities within and surrounding the LAP.

5.11.2 Landscape Character

Figure 5.12 outlines the indicative landscape characters for the lands within and surrounding the LAP. This classification was undertaken in 2004 as part of a Landscape Character Assessment for the County of Kildare. The assessment looked at the character of the landscape based on land cover and landform and also addresses landscape values relating to historical, cultural, religious and other understandings of the landscape.

The findings of the Landscape Character Assessment were used to generate a landscape sensitivity rating, as shown in **Table 5.5**, for areas within and surrounding Newbridge. This landscape sensitivity is a measure of the ability of the landscape to accommodate change or intervention without the implication of unacceptable effects to its character and values. The following classifications apply to the lands within and surrounding the LAP.

Table 5.5: Landscape Sensitivity

Landscape Character Areas	Landscape Sensitivity
Central Undulating Lands	Medium
River Valley	High
Northern Lowlands	Low
Chair of Kildare	High
Pollardstown Fen	High
The Curragh	High
Allen Bog	Medium
Western Boglands	Medium
Grand Canal	High
Eastern Transition	Medium

5.11.3 Areas of High Amenity

These areas of high amenity are classified as such due to their outstanding natural beauty and/ or unique interest value. There are a number of Areas of High Amenity adjacent to Newbridge and these areas are in general sensitive to development. The areas include, Pollardstown Fen and the Curragh which are both located to the east and south east of the LAP. The Liffey River Valley and the Grand Canal are located within and to the east of the LAP area .

5.11.4 Scenic Routes

Figure 5.13 provide the location of the scenic routes which are important and valued routes and views within proximity to the LAP.

A protected view is a view which seeks to preserve a view of a specific place or historic building from another location. Within the LAP, a number of views are protected. These are identified in **Figure 5.13** and are listed in **Table 5.6**.

Table 5.6: Scenic Routes

No.	Description of Scenic Route
3	Views of the Curragh Plains, from the M7 Interchange to St. Ledgers Bottoms
4	Views of the Curragh Plains including Little Curragh; county Road from Kildare Town Boundary to Military Ranges, R413 from Kildare Town Boundary to Motorway Interchange
36	Views of Gibbet Rath and the Curragh from the N7 at Ledgers Bottoms
37	Views of Pollardstown Fen

Source: draft Newbridge LAP

5.11.5 Habitats and Landscape Features of Importance for Biodiversity

Most of our biodiversity occurs outside sites that are subject to legal protection under national or EU law. There are habitats and features that are of particular importance for biodiversity throughout the landscape. These include, but are not limited to, woodlands, hedgerows and other field boundary types, such as stone walls, earthen embankments and ditches, rivers, streams and associated riparian zones. These elements should be protected and enhanced. It is also important to recognise that habitats and landscape features cannot be sustained in the long-term in isolation from one another. It is important to maintain a network of protected areas, ecological 'corridors' and ecological 'stepping stones' available to support the movement of species and to sustain the habitats, ecological processes to maintain biodiversity within the town.

5.11.6 Existing Landscape Environmental Pressures / Problems

Newbridge has a number of sensitive landscapes adjacent to the LAP administrative boundary, including the Curragh, Pollardstown Fen, River Valley and the Grand Canal which are all classified as having high sensitivity. Therefore these areas of land to the east, west and centre of the LAP are sensitive to the effects of development.

A proliferation of one off housing can have a cumulative visual impact on the landscape surrounding the town. Such developments which individually often do not have significant adverse impacts have the potential to cumulatively impact upon sensitive landscapes. In the context of Newbridge this type of development has the potential to occur on the outskirts of the town boundary.

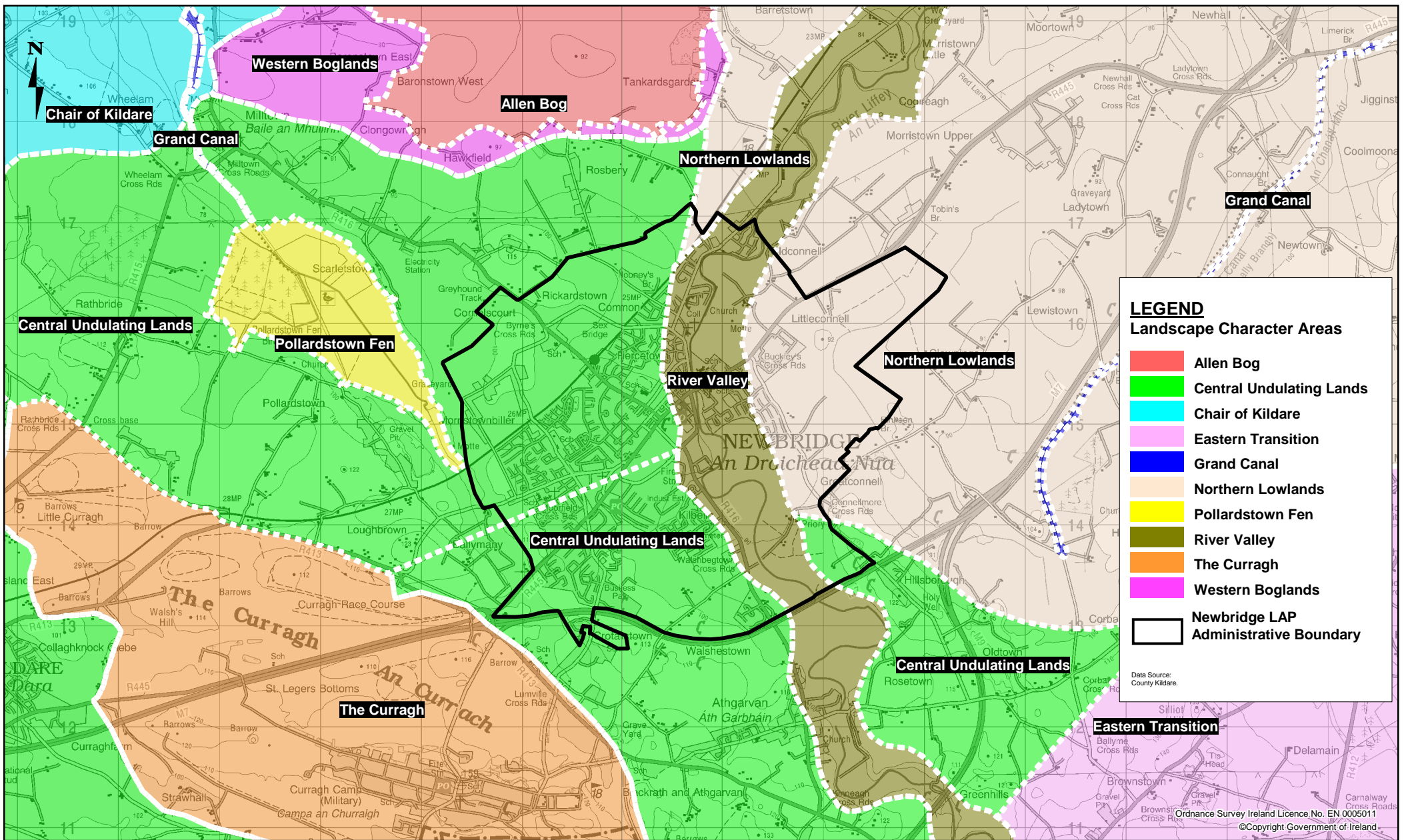


FIGURE 5.12 - LANDSCAPE CHARACTER AREAS



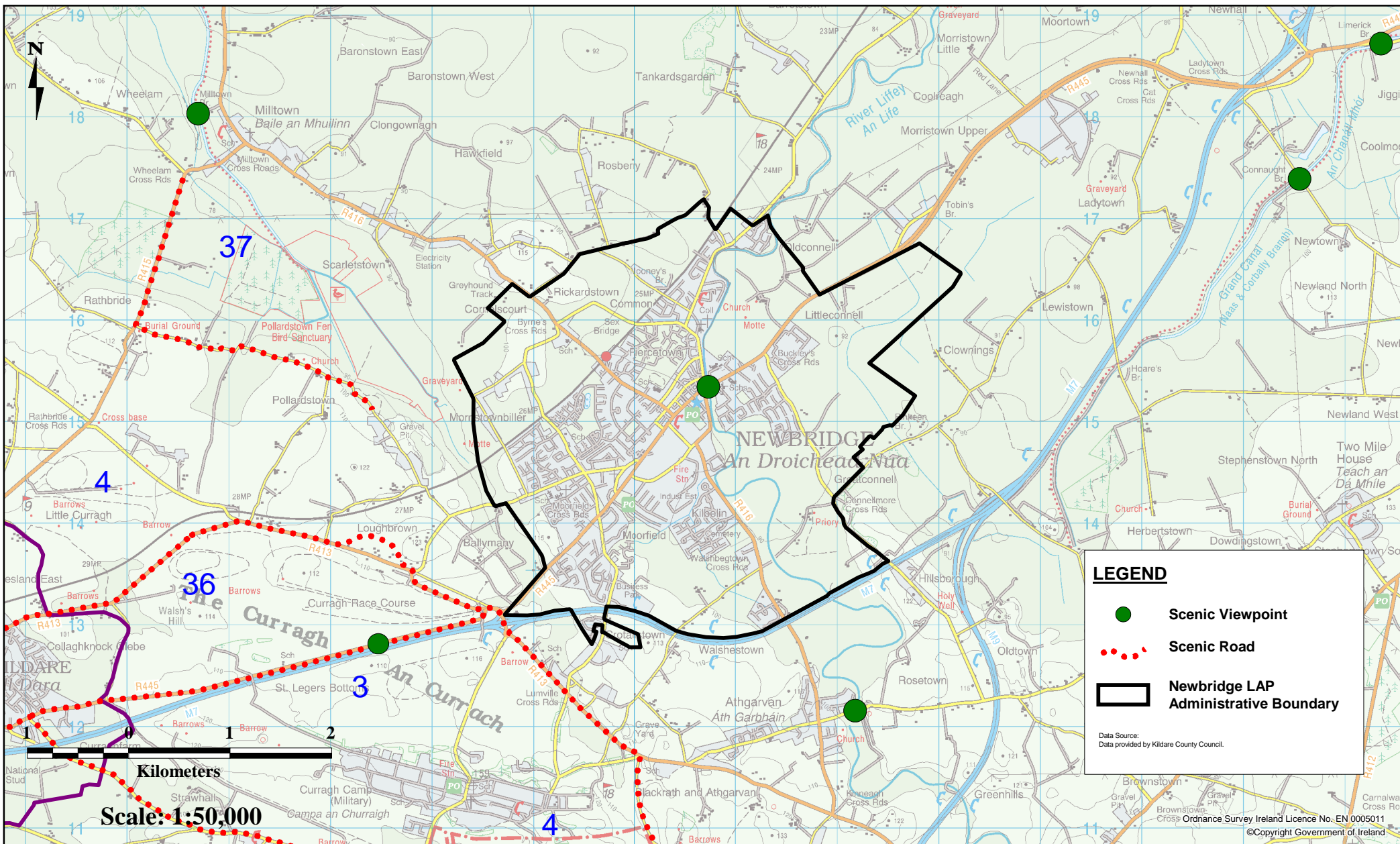


FIGURE 5.13 - SCENIC VIEWS & ROADS



5.12 INTER-RELATIONSHIPS

The interrelationship between the SEA environmental topics is an important consideration for environmental assessment. **Table 5.7** highlights the key interrelationships identified in this SEA. These potential interrelationships will be taken into account in the assessment of the different alternatives.

Of particular note are the primary relationships between water quality and biodiversity, flora and fauna. Flora and fauna, including protected species and habitats, rely directly on the aquatic environment as a habitat. Water and climate also have a key relationship. Global GHG emissions associated with transport, industry and other sources have the potential to negatively impact on climate change. This in turn can result in more frequent and more intense flooding and drought conditions affecting material assets, such as private residences and infrastructure, and biodiversity through changes in water quality and the hydrologic regime. In carrying out the assessment, these important direct and indirect relationships have been taken into account fully, to ensure a robust and complete assessment.

Table 5.7: Key Interrelationships between SEA Environmental Topics

Soils	√							
Water	√	√						
Noise	√	X	X					
Biodiversity, Flora, Fauna	√	√	√	√				
Climatic Factors	√	√	√	X	√			
Material Assets	√	√	√	X	√	√		
Cultural Heritage	√	√	√	X	√	√	√	
Landscape	√	√	√	√	√	√	√	√
	Population	Soils	Water	Noise	Biodiversity Flora, Fauna	Climatic Factors	Material Assets	Cultural Heritage

√ = interrelationship anticipated

X = no interrelationship anticipated

5.13 EVOLUTION OF THE ENVIRONMENT IN THE ABSENCE OF THE LAP

Population: In the absence of the LAP there may be pressure to increase population densities in an unsustainable manner with potential impacts on sensitive areas such as the Curragh, the River Valley and Pollardstown Fen. Without the provision of objectives that emphasise the consolidation of the town and use of infill and redevelopment sites, the spread of development into the countryside may continue, eroding the agricultural land bank in the Newbridge environs.

Biodiversity, Flora and Fauna: There is potential for conflict between recreation/ tourism and biodiversity. The Curragh lies to south west of the town and is of great biodiversity value. Without the draft LAP strict controls on such development may not be in place there is potential for impacts to this area. Also, without the LAP development will not be restricted or phased to mirror delivery of the appropriate infrastructure, such as drainage and wastewater, and this would also have negative impacts on biodiversity and water quality.

Soils: There could be increased pressure on greenfield lands as opposed to re-development of brownfield lands in the absence of the LAP. Focus should always be towards the redevelopment of existing brownfield sites.

Water: The River Liffey flows through the LAP administrative boundary. The river water quality monitoring points identify that the water quality is good but the river is classified as being at significant risk of not meeting good ecological status under the WFD. Improvements are expected to occur for the River Liffey as a result of the RBMP. However the LAP is the vehicle for implementation of many of the actions included in the RBMP Programme of Measures. Therefore, it is expected that the attainment of good ecological status or retention of existing good or high ecological status in the water bodies (including ground waters) of the LAP area.

Noise: Increased amounts of private vehicle movements are always a concern. Large amounts of travel takes place within, through and adjacent to the town, due to its close proximity to Dublin and its position as a commuter town. The proposed LAP includes provision for many sustainable transport options, which will improve conditions within the town. Without the provision of protection of these transport corridors in the LAP, it is anticipated that development of sustainable travel options would be more difficult in the long term. This could result in increased numbers of private vehicles using the roads; development of new roads to service a more dispersed population; and resulting noise impacts on residential and recreational amenity.

Climate: There are areas susceptible to flooding within the plan area. The River Liffey flows is the source of much of this flooding, along with high incidence rainfall events. The draft plan provides a number of protective measures to alleviate impacts of flooding including strict policies and zoning outside of areas susceptible to flooding. Without the draft plan these provisions would not be in place and impacts on the town in relation to flooding could be exacerbated. Local solutions to this international issue include reduction in unsustainable transport movements, which is encouraged under the proposed LAP.

Material Assets: With an increased population within the town there will be increased generation of waste and litter. The policies within the LAP will facilitate on a local level the county waste management plan and the strategies to deal with collection, recycling and disposal of waste from householders and industrial/ commercial businesses. Without the draft Plan waste and litter could become a serious issue. Other material assets are included under the water section.

Cultural Heritage and Landscape: Without the protective policies of the plan development in Newbridge has the potential to cumulatively impact upon heritage features in and surrounding the town. Development without the LAP has the potential to affect its landscapes as well as changing the context of existing architectural assets. There are scenic routes to the west of the LAP which travel along the Curragh and provide view points over Pollardstown Fen. The LAP provides protection to these features and without it these views could be impacted upon long-term through development. Without the drive for consolidation as proposed in the draft LAP, it is likely that development would sprawl into peripheral parts of the town and would have negative effects in terms of visual impact. This scattered development, or sprawl, would impact on the rural landscape around Newbridge and would lead to loss of hedgerows and trees and their contribution to biodiversity. Fragmentation of habitats and field boundaries is also likely to result.