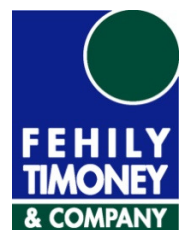


**STRATEGIC ENVIRONMENTAL
ASSESSMENT FOR THE
COLLINSTOWN LOCAL AREA PLAN
2009 - 2015
NON-TECHNICAL
ENVIRONMENTAL REPORT**

MARCH 2010



ENVIRONMENTAL BALANCE IN DESIGN AND CONSTRUCTION



STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE COLLINSTOWN LOCAL AREA PLAN 2009 - 2015 NON-TECHNICAL ENVIRONMENTAL REPORT

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Abstract: Fehily Timoney & Co. prepared an Environmental Report as part of a Strategic Environmental Assessment (SEA). The SEA is been conducted for the Collinstown Local Area Plan 2009 - 2015. This report is the non-technical summary of the Environmental report.

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Section 1

Introduction



1. INTRODUCTION

1.1 Terms of Reference

Fehily Timoney & Co (FTC) was appointed by Kildare County Council to conduct the Strategic Environmental Assessment (SEA) for the Collinstown Local Area Plan 2009 – 2015.

The purpose of this environmental report is

- to assess the likely significant environmental effects from the implementation of the Collinstown Local Area Plan (LAP),
- develop mitigation measures to reduce identified significant impacts of the LAP and
- to identify monitoring procedures to assess the impact of the LAP over its lifetime.

The SEA process was conducted in compliance with the SEA Directive (2001/42/EC) and Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No 436 of 2004).

The SEA and plan development timeline are presented in Table 1.1.

Table 1.1: SEA and Plan Timeline

Plan/SEA Stage	Dates
First consultation period	18 June 2009 – 29 July 2009
Preparation of Manager's Report post consultation period	30 July – 9 September 2009
Consideration of the Manager's Report and SEA report of proposed amendments by the elected members	10 September – 19 October 2009 (Council meeting held on 19 th October 2009)
Second consultation period	29 th October 2009 – 25 th November 2009
Preparation of Manager's Report post consultation period	18 December 2009
Consideration of the Manager's Report and SEA report of proposed amendments by the elected members	19 December 2009 – 25 January 2010
Plan adopted	25 January 2010

1.2 Collinstown

The Collinstown lands are located to the west of the town of Leixlip in north County Kildare. The site is directly south of the Intel manufacturing facility and currently accommodates a number of warehousing industries associated with 'spin off' logistical operations. The northern portion of the site is crossed by the Royal Canal and the Dublin – Sligo railway line and bounded by the R148. The western boundary is defined by open lands – typically in agricultural or low density residential use. The eastern boundary is with the Glen Easton residential housing estate while the southern boundary is with small local roads - the Kilmacredock Lower roads. Two railway stations serve Leixlip – at; Louisa Bridge some 1.3 km from the subject lands and at Confey station to the north of the Town Centre. The link road to the M4 motorway lies within the site, to the east.

Collinstown was designated in the Kildare County Development Plan 2005 as the location of a Major Town Centre to serve north east Kildare. That designation – and the associated land use zoning, is contingent on the preparation, adoption and implementation of this Local Area Plan.

Strategically, Collinstown lies some 2.5 km from the centre of Leixlip town which is located on the confluence of the Rye Water and River Liffey, 15 km from Dublin city Centre and on the border of Fingal and South Dublin County Councils. The town is bypassed by the M4 motorway and served by the Arrow Rail service on the Dublin Sligo line. The R148 (formerly the N4 National Primary Road) runs through the Main Street linking Leixlip to Maynooth.

1.3 Collinstown Local Area Plan 2009-2015

Kildare County Council prepared the Collinstown LAP covered by the area presented in Figure 1.1. This is a requirement of the Planning and Development Acts 2000 – 2007 which requires that each Plan is reviewed on a six year cycle. The draft Collinstown LAP has been prepared in response to:

- The requirements of the Planning and Development Acts as set out above
- The need to provide a framework for the future development of the town that is consistent with higher level strategic planning policies including the National Development Plan 2007-2013, National Spatial Strategy 2000-2020 and the Greater

Dublin Regional Planning Guidelines 2004-2020 and the Kildare County Development Plan 2005 – 2011.

- a specific objective of the Kildare County Development Plan 2005-2011.

1.4 Strategic Environmental Assessment

As part of the preparation of the Plan Kildare County Council is required to conduct a Strategic Environmental Assessment (SEA) prior to the Plan's adoption. An Environmental Report of this SEA must be prepared and this document forms the non-technical summary (NTS) of this Report.

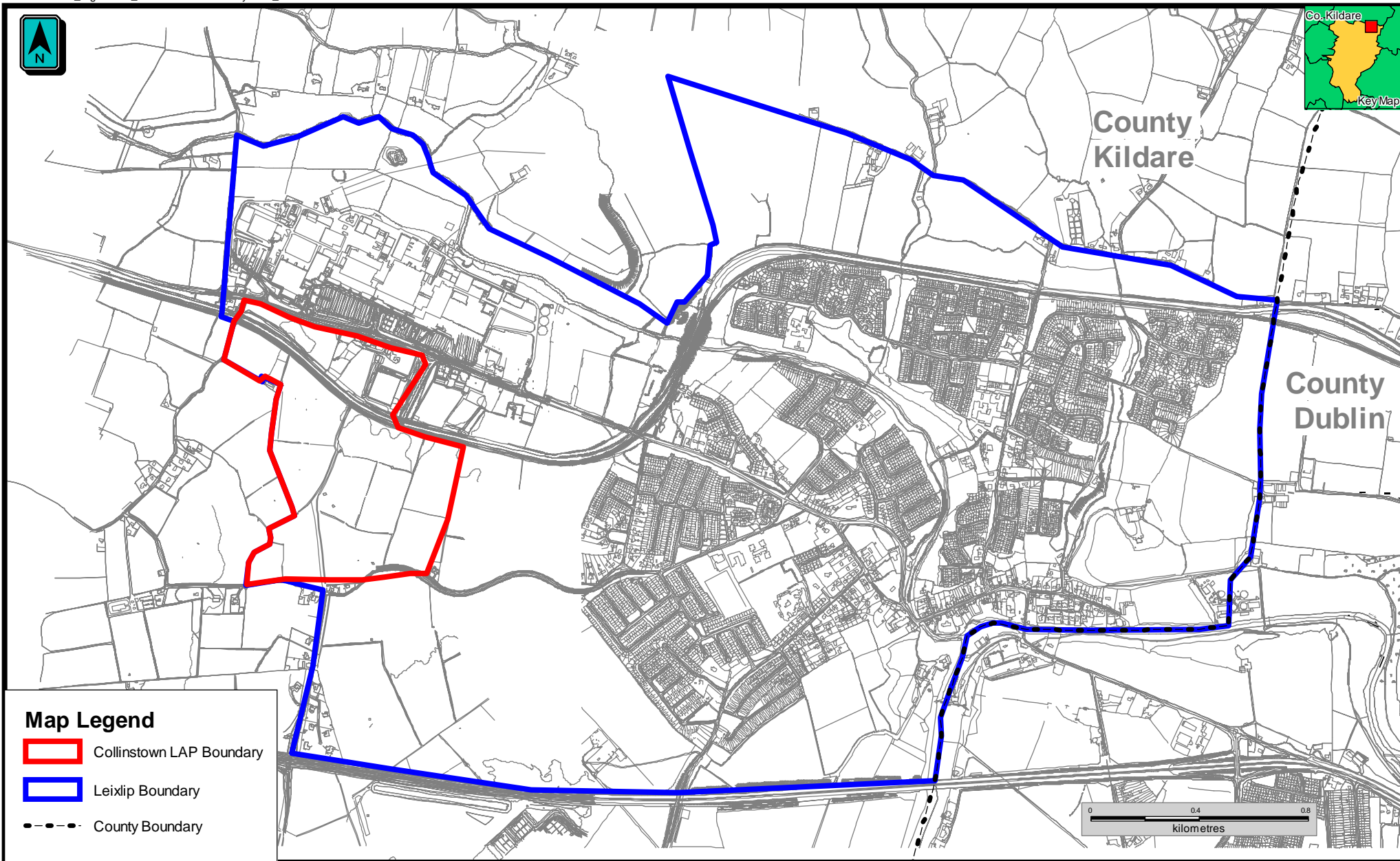
A Strategic Environmental Assessment is a systematic evaluation of the likely significant impacts of a plan or programme before the plan or programme is adopted.

The SEA process is a requirement of European law. It is governed by Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment. The Directive was transposed into Irish land use planning law by the Planning and Development (Strategic Environmental Assessment) Regulations, 2004 (S.I. No. 436 of 2004). The regulations amend the Planning and Development Regulation 2001 in order to incorporate the SEA process into land-use planning. They are termed "The SEA Regulations" in the Environmental Report and this NTS. These regulations require a SEA be conducted for LAPs.

The stages in the preparation of a SEA can be divided into:

- Scoping – the process whereby the range of detail required in the Environmental Report is decided upon. The scoping phase is conducted in consultation with prescribed statutory environmental bodies including the Environmental Protection Agency (EPA), the Department of Communications, Marine and Natural Resources (DoCMNR) and the Department of Environment, Health and Local Government (DoEHLG). A Scoping Report was prepared by Fehily Timoney & Company (FTC) acting on behalf of Kildare County Council in April 2008. The Scoping Report identified the key environmental issues that would be addressed in the Environmental Report.

- Environmental Report – this report assesses, describes and evaluates the likely significant effects on the environment in Collinstown of implementing the draft LAP. The report also assesses alternative strategies that were considered by the Council, leading to the preferred strategy. Mitigation measures to eliminate/remedy any significant impacts of implementing the Plan and monitoring procedures, to identify the effects of the Plan are also given in the Environmental Report.
- Adoption of the Collinstown Local Area Plan – when the LAP is adopted after undertaking the relevant public consultation and consultation with the elected members, a SEA Statement is made available to the public. The purpose of the Statement is to summarise how environmental considerations were integrated into the Plan. The Statement also indicates how consultations with the statutory environmental authorities were responded to, the reasons for choosing the Plan as adopted and monitoring procedures that will be put in place during the lifetime of the Plan.
- Monitoring – A programme of monitoring procedures that will be put in place to monitor the significant effects of the Plan.



Section 2

The Collinstown Local Area Plan 2009-2015



2. THE COLLINSTOWN LOCAL AREA PLAN 2009-2015

2.1 Introduction

The LAP was prepared in accordance with the requirements of Section 10 (2) of the Planning and Development Act 2000 and provides for the proper planning and sustainable development for Collinstown for the years 2009-2015. It contains the strategic framework and the proposed development strategy for the study area. Policies are established within the LAP in relation to socio-economic goals for the area which go on to define specific policies and objectives.

A Retail Strategy for the Greater Dublin area in 2008 identified Collinstown as an area that would help promote the attractiveness of North Kildare.

The Local Area Plan for Leixlip predicts a population growth of 5,308 persons during the lifetime of the Plan (2009-2015). Kildare County Council's policy will accommodate 40% of the anticipated growth in Leixlip and the remaining 60% within lands in Collinstown.

The Vision and Policy Objectives of the Collinstown Plan are framed within the socio-economic, environmental and strategic planning contexts for the future development of the lands at Collinstown. The overall vision for Collinstown is the development of a Major Town centre in line with the provisions of the Kildare County Development Plan (2005-2015) and the prevailing retail strategies for the Greater Dublin Area and County Kildare. It will further serve to meet the needs for higher order retail in North Kildare and will consolidate links between Leixlip, Celbridge, Maynooth and Kilcock.

The development of Collinstown will occur over a period of 20 years and will be subject to a site Masterplan. The Masterplan will be prepared by landowners in consultation with Kildare County Council.

The Strategic Policy Objectives of the Council are:

- To promote and facilitate the growth and sustainable development of Collinstown as a Major Town Centre
- To support and facilitate the development of Collinstown as a vibrant mixed use area which accommodates employment, services retailing, residential, and

community uses within an attractive and sustainable context and founded on the principles of sustainable mobility and development.

- To establish a plan-led context for the preparation of a detailed Masterplan for the development of the lands
- To facilitate implementation of the Local Area Plan and subsequent Masterplan.

2.2 Strategic Policies

The Collinstown LAP is situated within a hierarchy of National and Regional policies, including the National Spatial Strategy, the National Development Plan, the Regional Planning Guidelines for the Greater Dublin Region 2004-2020 and the Kildare County Development Plan 2005 - 2011. The Plan must be consistent with the objectives of these higher-level strategic documents.

2.1.1. National Spatial Strategy (NSS) 2000-2020

The National Spatial Strategy (NSS) sets out a 20 year planning framework designed to achieve a better balance of social, economic and physical development and population growth in Ireland. The NSS provides guidance for future development by identifying settlements to accommodate future growth in order to achieve balanced regional development.

2.1.2. National Development Plan 2007 - 2013

The National Development Plan 2007 - 2013 promotes a framework for the regional development with a particular focus on investment in gateways and hubs identified in the National Spatial Strategy (NSS). These locations are designated to act as development growth areas where infrastructure and investment will be promoted to act as economic drivers for the region as a whole.

2.1.3. [Regional Planning Guidelines for the Greater Dublin Area 2004 - 2016](#)

To give effect to the NSS, Regional Planning Guidelines (RPGs) have been published for the eight regions of Ireland. The RPG for the Greater Dublin area covers north Kildare including Collinstown. This document sets out a planning framework for the period 2004 – 2016 and is designed to achieve a better spatial balance for social, economic and physical development throughout the region.

These guidelines are currently being reviewed.

2.1.4. [Greater Dublin Area – Retail Strategy 2008 – 2016](#)

The Retail Strategy 2008 - 2016 proposes the expansion of Leixlip into the Collinstown area as a key objective to meet the future needs for comparison shopping in the area. It further notes that future development in Collinstown should be associated with the opening of a new train station to link Maynooth and Kilcock, and provision for the development of a new community incorporating a range of uses, developed over an extended phasing arrangement to ensure sustainable integrated planning.

2.1.5. [Draft County Retail Strategy 2005](#)

The County Retail Strategy for Kildare was prepared in 2005. The terms of this Strategy have been incorporated into chapter seven of the Kildare County Development Plan 2005-2011. A revised County Retail Strategy for Kildare must be prepared following on from the completion of the Retail Strategy for the Greater Dublin Area 2008. That Strategy is currently being prepared by Consultants on behalf of Kildare County Council.

2.3 Consultation

Under Article 13D of the SEA Regulations 2004, there is a requirement on Kildare County Council to give notice to the environmental authorities and scope the Environmental Report. Section (c) of this article allows the environmental authorities to make a submission or observation on the information to be included in the Environmental Report. Kildare County Council has used this stage to consult with the prescribed environmental authorities and other potentially interested bodies

prior to preparing this Environmental Report. A scoping report was sent to a list of consultees (statutory and interested bodies) in April 2008.

The following bodies were consulted with during the scoping process:

Statutory Consultees

- Environmental Protection Agency
- Development Applications Unit, Department of the Environment, Heritage & Local Government
- Co-ordination Unit, Department of Communications, Marine & Natural Resources

Non- Statutory Consultees

- Office of Public Works, Flood Relief Section
- Eastern Regional Fisheries Board
- Eastern River Basin District
- Meath County Council
- Fingal County Council
- Liffey Valley Strategy Steering Group
- Waterways Ireland

Section 3

Baseline Environmental Assessment



3. BASELINE ENVIRONMENTAL ASSESSMENT

3.1 Introduction

The SEA Regulations require a baseline environmental assessment to be conducted for the area that may be affected by the Plan. The regulations require that a baseline assessment for biodiversity (flora and fauna), population, geology and soils, water, air and climate, material assets, cultural heritage, landscape and interaction of the foregoing is prepared. This section of the non-technical report summarises the baseline in Collinstown.

3.2 Biodiversity (Flora and Fauna)

Plants, animals and mammals are included under the heading of biodiversity.

There are a number of pieces of European and National Legislation, which make provision for the protection of these unique habitats. These pieces of legislation categorise these habitats into European important (Natura 2000) sites, Special Areas of Conservation (SAC's), Special Protection Areas (SPA's) and nationally important sites, Natural Heritage Areas (NHA's).

In the Collinstown LAP study area, there is no candidate Special Area of Conservation (cSAC). There are no habitats in the area listed in the 2008 report from NPWS "The Status of EU Protected Habitats and Species in Ireland". The Rye Water Valley which is located north of the study area is a Special Area of Conservation (SAC).

There is one proposed Natural Heritage Area (pNHA), the Royal Canal which flows from west to east through Collinstown. The Royal Canal is home to the legally protected Opposite-leaved Pondweed (*Groenlandia densa*) under the Flora Protection Order 1987 and *Tolypella intricata*, a Red Data Book protected stonewort. Both of these species are present in the Dublin section of the canal. The main extent of the canal boundary is dominated by hedgerow, tall herbs, calcareous grassland, reed fringe, open water, scrub and woodland. The canal towpath is predominantly made up of various grass species except where the canal was built through bog. There is diverse hedgerow present along the canal. (Source: Site Synopsis Royal Canal National Parks and Wildlife Service). The Royal Canal in the Leixlip area is between 10 and 14 m wide and averages 1.6 m deep.

As per Article 6 (3) and (4) of the Habitats Directive 92/43/EEC, an Article 6 assessment for the LAP was completed using "Assessment of Plans and Projects Significantly Affecting Natura 2000 sites - Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC".

The Article 6 assessment completed for the LAP environmental report is only applicable for reviewing proposed development zoning at a strategic level.



Plate 1. Royal Canal
(Source: Kildare County Development Plan 2003, Vol. 2)

In addition to the SACs and NHAs designated in Collinstown, Kildare County Council has identified additional areas of ecological importance to protect. There are many important wildlife habitats for example hedgerows, and while they may not merit national designation are important in a local context and act as stepping-stones in a wider ecological network.

3.3 Population and Human Health

Collinstown is a greenfield area at present and as such does not have population data. Data prepared by the Central Statistics Office (CSO) for the 2006 Census Survey, shows the following trends for Kildare and Leixlip which are the closest population centre to Collinstown.

- Percentage population change in County Kildare overall between 2002 and 2006 was 13.7%
- Percentage population change in Leixlip between 2002 and 2006 was -2.3%.

The LAP for Leixlip establishes a maximum population growth of 3,460 persons for the Leixlip area. Collinstown is currently a predominately greenfield site with little or no development in place. Assuming a household size of 2.52, then 2,106 units will be required to accommodate the predicted population growth.

3.3.1. Quality of Life

Quality of life is largely the result of social, cultural and physical environment in which we live. Factors such as the state of the environment, access to resources to meet basic needs, exposure to risks and capacity to cope with these, income and education levels, social network of relationships with friends, family and neighbours all have considerable impacts on health and well being. Leixlip was awarded runner up for best large town category in the 2006 DoEHLG "Pride of Place" completion. This completion is aimed at communities actively improving their area through community development.

3.3.2. Major Accident Prevention

Intel Ireland Ltd is located at Collinstown Industrial Park to the north of Collinstown. It is a Lower Tier Seveso site. This site is designated under the Seveso II Directive 96/82/EC and EC (Control of Major Accidents Involving Dangerous Substances) Regulations S.I. 476 of 2000.

3.4 Geology

Collinstown geology is dominated by dark grey to black limestone and shale, the majority of the study area is dark grey to black limestone and shale (Calp).

No sites of Geological Importance have been identified in the Collinstown area.

3.5 Water

This section assesses the baseline water quality in the study area for ecological and human health requirements.

Groundwater and surface water quality are critical for the protection of designated and important ecological areas. River water quality and groundwater quality are critical for potable water supply.

Currently water quality in the area is good and residents in nearby Leixlip do not experience water shortages. This water is supplied by the surface water treatment from outside the county. The Masterplan for Collinstown requires that specific service requirements for developments within the area are assessed by developers. All of the assessments will be subject to pre-application meetings and discussions with Kildare County Council's Water Services Department.

90% of Kildare's drinking water comes from outside the county (Ballymore Eustace, Dublin City Council and Leixlip, Fingal County Council). Leixlip's drinking water is supplied by the North Regional Water Supply Scheme in the Leixlip supply region.

3.5.1 Groundwater Vulnerability and Protection

The study area is underlain predominantly by a locally important aquifer which is unproductive except for local zones. This corresponds to the band of calcareous shale and limestone bedrock.

Groundwater north of the Royal Canal is highly vulnerable. In the remaining area south of the Royal Canal the groundwater is predominantly moderately vulnerable. A groundwater protection scheme for County Kildare was prepared by the GSI in 2004 in conjunction with Kildare County Council.

3.5.2. Surface Water

The study area is located adjacent to the River Liffey catchment. The Rye Water and Royal Canal are the dominant water features north of the study area. The Royal Canal flows through the study area in an easterly direction. The Rye Water is a tributary of the River Liffey which flows to the north of the study area. The Rye Water is dammed through the Carton Estate to the east of the study area. Both the Royal Canal and the Rye Water (Carton) are designated ecological areas.

3.5.3 Surface Water Quality

The EPA 2005 Water Quality Report states that widespread eutrophication is noted for the Rye Water River during 2005. One location upstream of the study area (0300) is noted as improving slightly.

The location upstream of the Ryewater/ Carton (0400) after connecting with the Lyreen River shows "more marked pollution" retaining a Q rating of 3. The other location downstream of the study area (0600) showed continued pollution; in addition to pronounced eutrophication a toxic effect was suspected due to the unusual fauna and the sterile appearance of the substratum below the weir.

3.5.4 Flooding

Flooding has not been identified as a problem in Collinstown. However, flooding has occurred in Leixlip. In 2000 and 2002 Leixlip's Main Street flooded due to flash flooding from the Rivers Rye Water and Sileachean.

3.5.5 Wastewater Treatment

Collinstown is served by the Lower Liffey Valley Regional Sewerage Scheme (LLVRSS) and discharges into the wastewater treatment plant at Leixlip. This treatment plant has a Population Equivalent (PE) capacity of 80,000 and it is understood that there is currently sufficient capacity in the plant to treat the predicted increase in wastewater generated in Collinstown. There are plans to upgrade this to a 150,000 PE by 2012. Currently Kildare County Council is experiencing problems with network pipes and pumping stations. A network upgrade was planned to start in 2009 and be completed within 18 months.

3.5.6 Drinking Water

Leixlip town is supplied with drinking water from the North Regional Water Supply Scheme. The proposed development will provide the infrastructure necessary to treat an additional 80 MI/day of raw water, providing a total volume of 225 MI/day. This development will provide the necessary standby capacity to enable Fingal County Council to meet the demands of its customers in the Greater Dublin Region, including Fingal, South Dublin, Dublin City and areas of Counties Meath and Kildare, while maintaining the required treated water quality at all times.

3.5.7 Water Framework Directive

The European Communities (Water Policy) Regulations, 2003 (S.I. No. 722 of 2003) transposed the Water Framework Directive (2000/60/EC) into Irish Law. The Water Framework Directive (WFD) sets an objective of achieving at least good status for all water bodies and aims to ensure that no further deterioration in status of any waters will occur by 2015.

The governance of water in Ireland is directed through 8 River Basin Districts (RBD's). County Kildare is in both the South Eastern River Basin District (SERBD) and the Eastern River Basin District (ERBD) under the WFD, with Collinstown being included in the ERBD. The ERBD stretches from County Wexford to the south to County Louth to the north, entirely containing County Dublin and also parts of Counties Meath, Kildare, Wicklow, Offaly, Westmeath and Cavan. Land cover is dominated by agricultural, urban and some natural areas. It is the most highly urbanised and populated basin district in Ireland.

Good status for surface water is a combination of the chemical quality, biological quality and microbiological quality that must be achieved. For groundwater, good status refers to chemical water quality and quantity.

The WFD Article 5 Characterisation Report submitted to the EU in March 2005 summarises the impacts of anthropogenic nutrient loading which indicates that the majority of nutrient loading is derived from diffuse sources. Agriculture in the region is the main source of nitrogen and discharges from wastewater treatment plants are the main sources of phosphorus loadings to waterbodies in the region.

Water in the Existing Environment

A baseline risk assessment was completed of the water bodies within each RBD. This assessment was made using water pollution indicators, point and diffuse pollution sources, water abstractions and detail on commercial activities. The risk assessment indicated whether the water body would meet the criteria for "good status" or would be considered "at risk" of not meeting the standards by 2015. As mentioned this assessment was detailed in a characterisation report submitted to the EU in March 2005. This assessment provided the baseline information to prepare the River Basin Management Plan (RBMP) and Programme of Measures (POM) necessary to comply with the WFD standards.

A draft Eastern River Basin Management Plan for the Eastern River Basin District has been prepared. This plan will be finalised in December 2009 and a Programme of Measures designed to meet the requirements of the plan will also be published. This LAP will take cognisance of the draft Eastern River Basin Management Plan.

3.5.8 Collinstown's WFD Status

Surface Water

The Rye Water flowing west to east through the LAP study area is classified by the Characterisation Reports as at risk of not achieving good status by 2015. The ERBD has identified diffuse and point source pollution as the main influences on surface waters in the region.

Groundwater

The groundwater WFD status for the study area is predominantly at risk of not achieving good status by 2015. The eastern section is classified as possibly at risk of not achieving good status by 2015. The ERBD has identified diffuse pollution sources as the main threat on groundwater.

3.6 Air Quality

Climate change has been identified as one of the most serious environmental problems facing the country at the present time. The scientific consensus is that the release of greenhouse gases such as CO₂ from the burning of fossil fuels is one of the primary causes of global warming. Avoided emissions of nitrogen oxides, sulphur dioxide and especially carbon dioxide using wind energy as a clean alternative energy use will have a neutral impact on climate and air quality.

3.6.1 Existing Air Quality Baseline

Data on ambient air quality is not available from the EPA for Collinstown or adjacent to the study area. Ambient levels of smoke and sulphur dioxide are measured by the Health Services Executive on behalf of Kildare County Council at two locations:

- Amenity Centre, across from Intel
- South Western Area Health Board Health Centre

The Health and Safety Executive conducted baseline air quality monitoring in Leixlip in 01 April 2003 to 31 March 2005. Monitoring was completed for sulphur dioxide and smoke in Leixlip Town Centre and the Leixlip Amenities Centre.

The sulphur dioxide (SO₂) concentrations quantified during the two year monitoring period identified that SO₂ levels are well within EU annual limits of 150 µg/m³. The smoke concentrations quantified are within the annual 98-percentile limit for black smoke of 250 µg/m³.

There is one Integrated Pollution Prevention and Control (IPPC) licensed facility operating in Leixlip. Intel Ireland Limited manufactures integrated circuits and printed circuit boards under IPCL reference P0207-03. Air emissions testing are conducted at point sources in the facility for nitrogen oxides and nitrogen dioxide, fluoride and acidity. Hewlett Packard (Manufacturing) Ltd is located less than 500 m south from the M4.

There are no quarries operating in the study area.

3.7 Material Assets

The study area occupies an area of 42.36 ha. The current usage of the land is predominantly urban fabric to the north of the railway line and Royal Canal and pasture land to the south of the canal (Source: Corine 2000 land use database). A 220 KV crosses some of the lands within the study area.

3.7.1 Transport Infrastructure

Collinstown is approximately 5 km from Dublin and lies 2.5 km from the centre of Leixlip Town. Leixlip is connected to Dublin by the Arrow commuter rail service, mainline railway, provincial and Dublin bus services. The Collinstown LAP has provision for a new railway station on the Maynooth to Connolly commuter line. There is also the potential for Collinstown to be serviced by a QBC and local bus interchange.

Commuting times available from the CSO 2006 Census show that 28% of Leixlip commuters travel for under 15 minutes. 46% commute for between 15 minutes and an hour. 15% commute for a period of greater than one hour.

3.7.2 Economy and Employment

Leixlip's economy is based on small to medium sized service and retail industries. Leixlip's main employers are Intel Ireland Ltd and Hewlett Packard Manufacturing Ltd with approximately 5,000 and 1,500 employees respectively. Currently agriculture is the main employer in Collinstown. This LAP will promote Collinstown as a Major Town Centre to support and facilitate national and multiple retailers and shopping facilities.

The 2006 census results indicate that Leixlip has a working population of 7,885. There is an employment rate of 96% which compares favourably with 95% for County Kildare.

3.8 Landscape

Kildare County Council developed a Landscape Character Assessment (LCA) as part of the 2005 - 2011 County Development Plan.

The study area is located in a landscape character area "Northern Lowlands", characterised by "generally flat terrain and open lands with regular (medium size) field patterns." This low-lying landscape nature and low vegetation allow for extensive visibility and long distance views within the landscape. The land is predominately managed agricultural land to the south of the Royal Canal.

The Royal Canal runs along the northern boundary from west to east. The Canal provides for long distance viewing along the water body. Several viewpoints and scenic routes have been identified from the LCA.

3.9 Cultural Heritage

There are 64 no. buildings of importance in Leixlip. None of these are within the Collinstown boundary.

There is however two Protected Structures recorded in the area. These are a bridge (Decy Bridge IP61) and a building (Collinstown Stud House IP62).

Archaeological conservation is dealt with by the National Monuments Service operating under the National Monuments Acts, 1930 - 1994.

No registered sites or monuments (SMR) with the National Monuments Service were found in the Collinstown area.

3.9.1 Natural Heritage

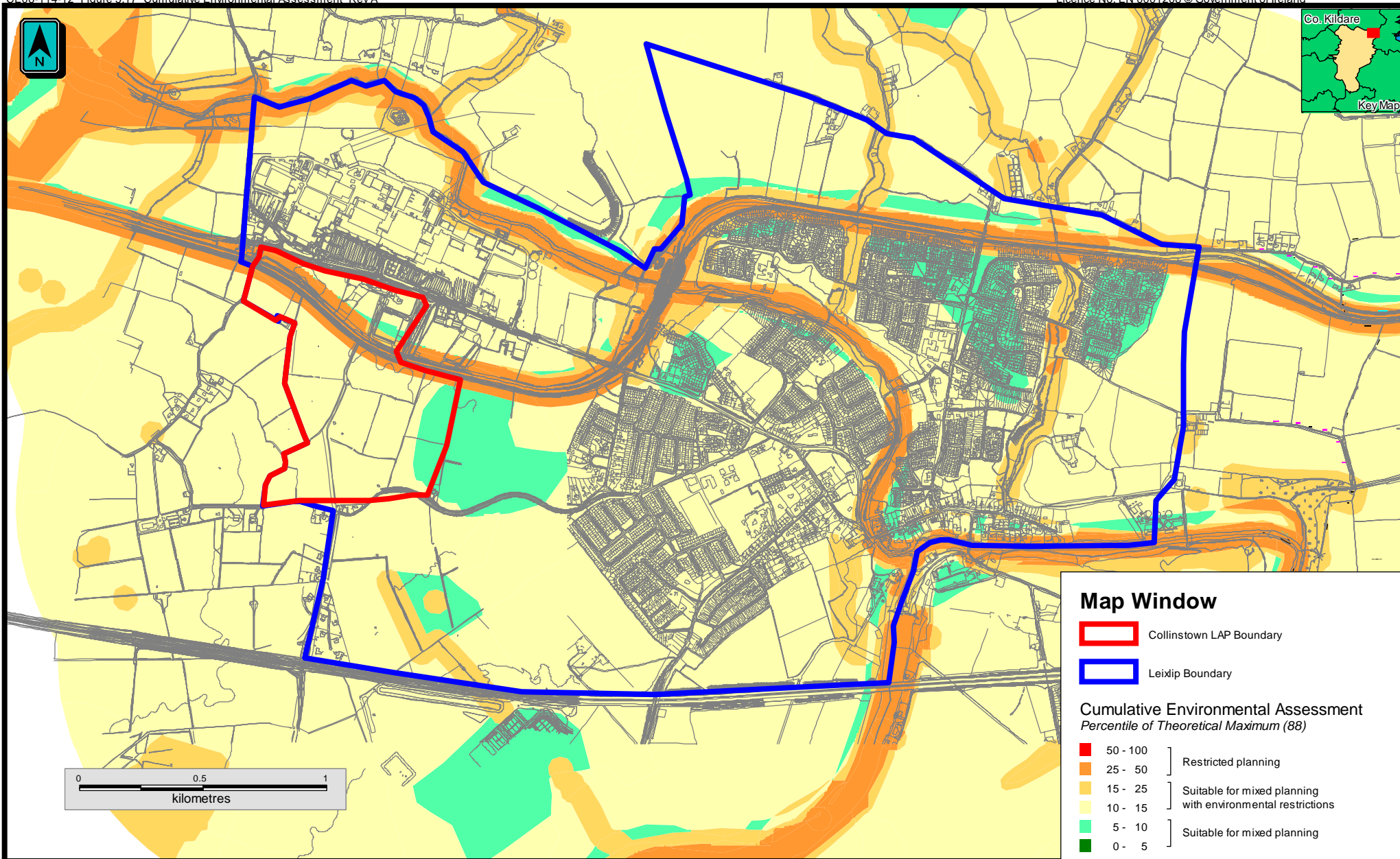
There are currently no groups of trees proposed for tree protection orders in Collinstown.

There are no identified sites of geological importance within the study area.

No zones of archaeological potential were identified in the Collinstown area.

3.10 Cumulative Environmental Assessment

In order to assess how the LAP may impact on the environment around Collinstown, FTC prepared a drawing detailing environmentally sensitive areas in the study area. The sensitivity map may be used as a spatial planning tool by the planners preparing the LAP. The cumulative impact assessment drawing is shown in Figure 3.1. The colour zoning on the drawing demonstrates areas suitable for mixed planning, mixed planning with environmental restrictions and areas that are considered to be environmentally vulnerable to development.



Section 4

Alternatives Considered



4. ALTERNATIVES CONSIDERED

4.1 Introduction

The development and assessment of alternatives (or options) is a legal requirement under the SEA Directive. Under Article 5 (O.J. 2001) plans and programme proponents should ensure that:

- Reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated (Article 5.1)
- The Environmental Report includes 'an outline of the reasons for selecting the alternatives dealt with' (Annex 1(h))
- A statement is prepared summarising 'the reasons for choosing the plan or programme as adopted, in the light of the reasonable alternatives dealt with' (Article 9.1(b)).

4.2 Identification and Development of Alternatives

Alternatives must be reasonable, capable of implementation, and should represent a range of different approaches within the statutory and operational requirements of a plan. However, the position of the draft Plan within the planning decision making hierarchy predetermines the scope of strategic alternatives available. For example, the higher the level of the plan the more strategic are the options which are likely to be available. Conversely, lower tier plans, such as Local Area Plans, will be framed in a policy context set by the level(s) above them and thus strategic options may be limited (DoEHLG, 2004). As the ODPM (2005) SEA guidelines suggest decisions made at higher levels will close off some alternatives, leaving in many instances 'option alternatives' (Noble, 2000) to be developed and assessed. In addition, the Collinstown Plan is somewhat governed by the Leixlip Plan and Kildare County Council's decision to zone land in Collinstown to cater for 60% of the projected population for Leixlip.

4.2.1 Description of planning scenarios

The range of development alternatives considered were established in an incremental manner from decisions on the extent of the study area to zoning within the study area.

For the SEA of the Collinstown LAP, three planning scenarios were developed.

The criteria for selection are as follows:

- Objectives set out in higher decision-making context (NSS, RPG for the Greater Dublin Area, Guidelines on Sustainable Rural Housing Leixlip LAP)
- Legal requirements (Planning and Development Act 2000-2006)
- Geographic Scope of the Plan (Collinstown)
- Plan objectives
- Projected population and housing horizons
- Infrastructure needs
- Existing environmental issues and resources
- Alternatives hierarchy

Based on the criteria set out in this section three planning scenarios are described which present different ways in which the vision for the County might be achieved.

These scenarios include:

- Scenario 1: Relaxed Planning
- Scenario 2: Additional Planning in Leixlip
- Scenario 3: Strict Planning

These scenarios are discussed in further detail in the following sections.

Scenario 1: Relaxed Planning

In this scenario the urban settlement strategy would allow for urban expansion and sprawl, which would result in the loss of distinction between the major Town Centre, new residential and industry and warehousing. In the main growth areas there would be no emphasis on strategic development and the infrastructure required to support development would not be available. Overall the relaxed approach to planning would not be sustainable.

Likely Plan Impacts

The potential direct impacts of relaxed planning would be an increase in poorly sited and designed housing, poorly designed Town Centre and industrial sites. The secondary impacts of relaxed housing developments would be unsustainable transport patterns, lack of alternative energy provision, lack of timely and needs driven infrastructure provision for water, sewage, waste management and inefficient use of land resources.

The relaxed planning would contravene proper planning and would not meet the strategic planning objectives of the Collinstown LAP.

Likely Environmental Impacts

The potential environmental and social impacts of relaxed/unsustainable planning policy would be most likely felt in relation to potential environmental and social issues and resources, particularly in relation to water, biodiversity, cultural assets and landscape. This in turn would have negative impacts on the value of the area and nearby Leixlip. If a relaxed attitude is taken to the provision and development of infrastructure needs in relation to wastewater, and waste management in settlement centres, environmental degradation will be a likely consequence particularly in relation to water quality and biodiversity.

A relaxed planning policy in the area would mean that a dispersed settlement pattern would be least sustainable for meeting housing demand and external costs would be high. The economic cost of providing infrastructure, water, wastewater treatment and amenities would be high. In addition the overall impact of individual housing and developments in the landscape would be difficult to assess and control.

Scenario 2: Additional Development in Leixlip

This scenario would allow for additional zoning of land in Leixlip to cater for the population increases predicted during the lifetime of the Plan. The draft Leixlip Plan calculated a maximum population growth of 3,460 persons over the lifetime of the Plan. This growth would be accommodated within an additional 1,373 units. The Leixlip Town boundaries are governed by the railway line and Royal Canal to the north and the M4 Motorway to the south. Additional land zoning to cater for the expected population increase would result in higher housing densities in Leixlip, increased traffic movements and congestion in the town.

Likely Plan Impacts

The Kildare County Development Plan has as one of its objections to develop Collinstown and create a Metropolitan Major Town Centre. This will have economic benefits to North Kildare. The provision of large areas of industrial zoned land will help to attract inward investment projects to the area. The expansion of the Leixlip Town boundary would not accommodate such expansion or create an attractive environment to attract inward investment.

Likely Environmental Impacts

This scenario would involve expanding the Leixlip Town boundary and putting infrastructure in place to cater for the expected increase in population numbers. The increased populations would mean increased traffic congestion in the town.

Scenario 3: Strict Planning

In this scenario emphasis is placed on assisting the promotion and development of Collinstown as a Major Town Centre. As a result policies in relation to the Kildare County Development Plan would be strictly enforced through close adherence to the requirement for a Masterplan for the Major Town Centre that will incorporate a design brief and concept plan. There would be strict adherence to EU environmental directives, resulting in strict delineations between natural and material assets with no trade off between these assets.

Residential development policies will channel all growth into the zoned residential lands. However, such development would have to be fully supported by the provision of education and employment centres and infrastructure to serve the needs of residential development. Infrastructural development in relation to transport, energy and waste management would be driven by principles of sustainability.

In this scenario the vision strategy for Collinstown would be met and would fulfil the requirements for a Major Town Centre in North Kildare. Infrastructural development would be orientated towards these areas. The sustainability emphasis on infrastructure would place a stronger emphasis on public transport such as rail and bus; waste would be reduced at source leading to a reduction in landfilling and renewable energy would lead to a decline of reliance on electricity generated energy.

Land use planning will facilitate different zoning to cater for the Major Town Centre, residential and industrial.

Likely Environmental Impacts

In this scenario environmental impacts would be minimized and the implementation of the Masterplan will ensure a high quality environment and protection of the natural resources in the area.

This scenario would afford full protection of the environment and promote economic development in the county.

4.2.2 Assessment of scenarios

In this section the three scenarios outlined are evaluated to determine their overall individual impact on the environment. Based on this, it should be possible to compare the alternatives with each other in order to determine a preferred strategy for Collinstown. In the methodology applied here each of the scenarios are broadly assessed against the main environmental objectives set out in Section 5. The likely significant impacts are rated according to the scale of impact on the environmental objectives.

Table 4.1: Assessment of Planning Scenarios

Environmental objective	Scenario 1	Scenario 2	Scenario 3
Water	-	√/-	√
Biodiversity	-	√/-	√
Cultural heritage	?	√/-	√
Landscape	?	√/-	√

Key

Positive Impact	Negative Impact	No Impact	Positive or Negative	Uncertain - Need Info
√	-	0	√/-	?

4.3 Preferred Strategy

Based on the environmental assessment of the three alternative policy scenarios, it was found that Scenario 3, which represents a mixed planning approach, with development under the control of a Masterplan, should be the preferred strategy for Collinstown. This scenario performs best from an environmental and economic perspective. Scenario 1 displays the worst environmental performance, while it also performs poorly from a social and economic perspective.

Overall Scenario 3 recognises that a balance must be struck between the environment and development and as such most resembles a sustainable alternative.

A full assessment of this scenario is presented in Section 6. In this section the plan objectives are fully assessed against the environmental objectives to determine likely significant environmental impacts.

Section 5

Strategic Environmental Objectives



5. STRATEGIC ENVIRONMENTAL OBJECTIVES

5.1 Introduction

In SEA the level of detail used to describe the baseline is much less refined than in EIA. SEA uses a combination of objectives, targets and indicators to describe and monitor change and predict impacts of proposed plans and programmes on the environment (Therivel, 2004).

Objectives and targets set aims and thresholds that should be taken into account when assessing the impact of proposed plans on the environment. Indicators are used to illustrate and communicate impact in a simple and effective manner. Indicators can also be used to form the basis of a monitoring programme for the Plan, the results of which will inform the next review.

This Environmental Report examined the compatibility of the SEA objectives and the Plan Policies and Objectives to identify potential areas of conflict between them.

5.2 Development of SEA objectives

The environmental objectives are derived from International, European and national policies on various aspects of the environment. Many of these policies have been transposed into Irish law and are now mandatory and need to be integrated and implemented in Development Plans at county and lower levels.

The list of environmental objectives used in this report is based on the environmental topics set out in Paragraph F of Schedule 2B which is contained in the SEA Regulations which might be significantly impacted upon by the Plan. These include:

- biodiversity (flora & fauna)
- population/human health
- geology/soil
- water
- air/climatic factors
- material assets
- cultural heritage
- landscape
- and the interrelationships between these factors.

The SEA objectives are listed in Table 5.1.

5.3 Environmental Protection Objectives

In addition to the settlement objectives set out in the Plan, it also contains an array of international, European and national environmental protection policies and attendant objectives, for example Ireland is signatory to the Kyoto protocol and the Habitats Directive. The legislation governing the production of a Local Area Plan requires that the Plan be consistent with these objectives.

Table 5.1: SEA Objectives

- **Objective B1** Conserve protected habitats and species
 - **Objective B2** To conserve the diversity of non-designated habitats and species
 - **Objective B3** Protect aquatic and terrestrial habitats from invasive species.
- **Objective P1** To improve people's quality of life based on high quality living environments, working and recreational facilities
 - **Objective P2** Adhere to the County Emergency Plan and other objectives of relevance to human health.
- **Objective SG1** To maximise the sustainable re-use of brownfield sites and maximise the use of the existing built environment.
- **Objective W1** Maintain or improve the quality of surface water to status objectives as set out in the draft Eastern River Basin Management Plan.
 - **Objective W2** Maintain or improve the Biotic Quality Rating (Q Value) of surface waters
 - **Objective W3** Implement SUDS
 - **Objective W4** Prevent pollution of groundwater by adhering to aquifer protection plans
 - **Objective W5** Maintain and improve drinking water quality supplies
 - **Objective W6** Upgrade infrastructure to meet future water supply needs
 - **Objective W7** Mitigate the effect of flooding through avoidance of development in flood plains
 - **Objective W8** Provision of flood relief through management of flood risk and living with floods rather than engineered flood solutions
- **Objective AC1** Minimise greenhouse gas emissions to meet National and International standards
 - **Objective AC2** Building energy Regulation
 - **Objective AC3** Improve ambient air quality
- **Objective MA1** Development of a sustainable transportation infrastructure which reduces the need for travel and journey length
 - **Objective MA2** Minimise waste production and introduce sustainable waste management practices
 - **Objective MA3** Upgrading of existing wastewater treatment plants.
 - **Objective MA4** Promote sustainable water use based on long term protection of resources
- **Objective L1** To protect views and prospects within the study area as identified in the Masterplan.
 - **Objective L2** Identify suitable locations and building design that will enhance the character of the area
- **Objective CH1** To promote best practice in heritage conservation and management
 - **Objective CH2** Protection of the Royal Canal and its structures
 - **Objective CH3** To identify and protect archaeological features

Section 6

Evaluation of Policies and Amendments



6. EVALUATION OF POLICIES AND AMENDMENTS

6.1 Introduction

The objective of this section is to determine the 'likely significant' effects of the LAP on the environment. The assessment methodology adopted here is based on assessing the impacts of the Plan objectives, if any, on the environmental objectives given in Table 5.1.

The assessment criteria used here is based on the determination of the 'likely significant' impacts of the Plan's policies and objectives on the environmental objectives. The likelihood of an impact occurring on any of the environmental objectives are determined (based on expert judgment of the SEA team) and the significance and duration of the likely impact is then determined. The SEA assessment tables are presented in Appendix 3 of the main Environmental Report and the findings are summarised in the following sections. In the following text the term "supports the environmental objective" infers a positive impact on the environment. The term "conflicts with an environmental objective" infers a negative impact on the environment.

6.2 Draft Collinstown Local Area Plan Assessment

Part B of the LAP for Collinstown sets out the planning policies for the area.

Housing

The LAP has zoned 10.46 ha residential to the south east of the study area. This will accommodate residential units within the lifetime of this Plan. A further 21.84 ha is zoned for Major Town Centre development and will accommodate additional residential units. Objectives H1 to H4 of the LAP detail the areas of land available for new residential and Major Town Centre development. Housing density will range from 45 units/ha to 60 units/ha. This section outlines Plan objectives for housing layout, design and landscaping objectives. In general the policies outlined in the housing section will have long term/permanent positive impacts on the environmental objective P1 "Improve people's quality of life based on high quality living environments, working and recreational facilities".

Objective H5 in the Plan encourages the proactive planning of links and routes through the site. The objective aims to prioritise the safe movement of pedestrians by providing footpaths and walkways linking areas of open space. This objective also requires variety in the layout of the development scheme integrating the local environment and creating a strong sense of place. This Plan objective will support a number of environmental objectives namely P1 (Improve people's quality of life based on high quality living environments), AC1 (Minimise greenhouse gas emissions), L1 (Protect views and prospects) and L2 (Identify suitable locations and building design that will enhance the character of the area). The construction of the roads, pathways, etc. will however conflict with environmental objective B2 (Conserve the diversity of non-designated habitats and species). Notwithstanding this, ecological diversity in Collinstown is low because of the managed agricultural habitats within the study area. In the short-term, particularly during construction, a potential impact will occur on waterbodies in the area. This will conflict with environmental objectives W1 (Maintain or improve surface water quality) and W4 (Prevention of groundwater pollution). However conditions on a grant of planning by Kildare County Council will be sufficient to remedy these potential impacts.

All developments will incorporate the principles of energy conservation, use high quality materials and deliver high quality design, cater for the elderly and people with mobility requirements and the use of solar panels will be encouraged. This will support the environmental objectives addressing global warming and energy conservation (Environmental objectives AC1 and AC3).

Other Plan objectives contained in this part of the LAP encourages landscaping and the protection of the Royal Canal. These Plan objectives will support a number of the environmental objectives such as protection of ecological habitats (environmental objectives B1 and B2), protection of water quality in the area (environmental objective W1) and providing amenities to residents in the area. Plan Objective H11 requires developers to submit a Social Infrastructure Assessment (SIA) for developments of greater than 50 units. The objective details the implementation required for the SIA. This objective supports environmental objective P1 (Improve quality of life).

Industry and Employment

Plan objectives E1 and E2 facilitate commercial, office, light industrial and warehousing development to the west of the site and the proposed link road as illustrated in Map 1. The objectives provide for carefully designed, landscape development to screen from residential areas which supports a number of the environmental objectives dealing with quality of life (P1) and landscaping (L1).

Community, Educational, Childcare and Cultural Facilities

Plan objectives C1 to C7 deals with the provision of community, education, childcare and cultural facilities to promote community and cultural facilities in Collinstown. The objectives also encourage safer school pedestrian routes and the improvement in health centres/local clinics in the area. These Plan objectives support quality of life for residents in the area (P1) and will provide safe pedestrian access within the area.

Public Utilities

These objectives supports environmental objectives P1 (Improve people's quality of life) and W5 (Maintain or improve drinking water quality). However the objectives fail to mention that protection of water sources and in particular meeting the requirements of the Eastern River Basin Management Plan is necessary during the lifetime of the Plan. Similarly it is recommended that an objective demonstrating Kildare County Councils commitment to implementing the relevant recommendations set out in "The Provision and Quality of Drinking Water in Ireland – A Report for the Years 2006 – 2007" (EPA, 2007) is included in this section of the Plan.

Surface Water

Plan objectives SU1 and SU2 require developers to incorporate mechanisms for the sustainable management of surface water as set out in the SUDS lifetime and provide for surface water attenuation measures if required. These Plan objectives are somewhat related to Plan objective FL1 (Flooding). Objectives SU1 and SU2 aim to prevent flooding but it is recommended that reference should be made to the new draft planning guidelines "The Planning System and Flood risk Management – Consultation Draft Guidelines for Planning Authorities" – OPW, 2008.

Wastewater

The Local Area Plan documents that the Leixlip Wastewater Treatment Plant has capacity to serve a PE of 80,000. An expansion which is due to completion in 2012 will increase its capacity to 150,000 PE. Objectives WW1 to WW6 will support environmental objectives W1 (Improve water quality), W2 (Maintain or improve Biotic Quality Rating of surface waters and W3 (Prevent pollution of groundwater). It is recommended that an objective is included in this part of the Plan to implement the relevant recommendations set out in "Urban Wastewater Discharges in Ireland for Population Equivalents Greater than 500 Persons" – EPA, 2007.

Solid Waste

Plan objectives SW1 to SW2 have a requirement for suitable locations for the provision of recycling facilities and underground recycling banks.

These Plan objectives will support environmental objectives MA2 (Minimise waste production and introduce sustainable waste management practices) and P1 (Improve quality of life). It is recommended that a reference to the Kildare County Waste Management Plan is included in this part of the Plan. An objective should encourage waste minimisation where possible.

Flooding

Plan objective FL1 covers flooding. The objective recommends a 15 m minimum buffer zone between the Royal Canal and any proposed development. The buffer zone will form an integral part of the development and may include a footpath or bicycle path or landscaping. This Plan objective supports a number of the environmental objectives dealing with flooding and the provision of cycle paths.

Roads, Streets and Car Parking

Plan objectives TR1 to TR8 addresses, roads, streets, and car parking in Collinstown. These objectives wish to maintain and improve the local road network and improve public transport facilities between Intel, Louisa's Bridge, and Confey Railway Stations and Leixlip Town Centre. The objective also makes provision for a Park-and Ride facility for West Leixlip and Celbridge.

Plan objective TR6 encourages cycling and TR7 encourages the provision of cycle paths and walking tracks. These objectives support a number of the environmental objectives including AC1 (Reduce greenhouse gas emissions) by providing bus services to main facilities, AC3 (Improve ambient air quality) by encouraging walking and cycling.

Public Transport

The objectives included in this section of the plan relating to public transport are compatible with environmental objective MA1 "Development of a sustainable transportation infrastructure which reduces the need for travel and journey length". All the objectives listed will have a positive impact on Collinstown by promoting the use of public transport and improving the travel times for commuters going to Dublin. Promotion of public transport will also positively impact ambient air quality (environmental objective AC1) by reducing private vehicle numbers on the road.

Plan objectives PT1 and PT2, and Plan objectives PC1 and PC2 address public transport and pedestrian and cycle networks respectively. Plan objective PT1 provides for the development of a new train station and Park-and-Ride facility in Collinstown. All development under this LAP will be contingent on delivery of these improvements. PC1 and PC2 ensures secure development.

Amenity and Recreation

Amenity and Recreation Plan objectives AR1 to AR5 promotes open spaces for recreation use. These objectives will maintain or improve the quality of life for citizens living in Collinstown (Environmental objective P1).

Town Centre

Plan objectives MTC1 to MTC10 facilitate the main objectives for the town centre. The objectives plan to facilitate the development of Collinstown up to 2031, and sets out some guidelines to potential developers. The objective aims to have phased development in Collinstown that will support retail development in Leixlip, support integrated leisure facilities and ensure that commercial buildings are of a high standard. These Plan objectives support the environmental objectives that address the public's quality of life by providing, amongst other things, a good living and working environment

(P1). These objectives strengthen the requirements of the Masterplan.

Heritage

General Heritage

Plan objectives HE1, HE2 and NH1 to NH9 contain objectives to protect heritage and natural heritage respectively.

The objectives provide for the conservation and enhancement of the natural, built and archaeological heritage in the area. They also require potential developers to consult with the relevant agencies to ensure that heritage concerns are considered in the early stages of planning.

The Plan objectives relating to natural heritage provide for the protection of the Royal Canal and its banks, the protection of trees by way of Tree Protection Orders, protection of non-designated sites and species, protection of views and ecological corridors.

These objectives support environmental objectives CH1 and CH2 (Protection of archaeological features and heritage), B1 (Designated sites) and B2 (Non-designated sites), L1 (Protection of the landscape), W1 (Protection of surface water quality) and P1 (Improve quality of life).

Natural Heritage and Built Heritage

Plan objectives BM1 and AH1 promote protection of the built heritage and archaeological heritage respectively. These objectives support environmental objective CH1 (Promotion of best practice in heritage conservation and management).

Environment

Plan objectives ENV1 to ENV5 refer to the protection of the Royal Canal from illegal dumping, encouragement of renewable energy and a requirement from developers to demonstrate a "green agenda" in building design, construction and operation. All new developments must comply with the EU Directive 2002/91/EC on Energy Performance of Buildings. These Plan objectives will help to protect the environment particularly the Royal Canal.

Plan objective ENV1 sets out the requirement for developers to demonstrate a “green agenda” in building design, construction and operation and will support environmental objective AC1 (reduce greenhouse gases), AC2 (Building Energy Regulations) and AC3 (Improve ambient air quality). Plan objective ENV2 (Encourage the development of renewable energy), promotes the development of renewable energy in Collinstown but this is the first mention of it in the Plan. It is recommended that renewable energy is mentioned in the Masterplan for the area.

The LAP for Collinstown places an emphasis on assisting the promotion and development of the area as a Major Town Centre. The requirement of a Masterplan for the Major Town Centre will ensure that there will be strict adherence to EU and National environmental legislation. This will ensure strict delineations between natural and material assets with no trade off between these assets.

Residential development in the area will be fully supported by the provision of education and employment centres and infrastructure to serve the needs to residential populations. Infrastructural development in relation to transport, building materials, energy and waste management will be driven by the principles of sustainability.

The Masterplan for Collinstown will ensure that the vision strategy for Collinstown will be met. The sustainability emphasis on infrastructure and public transport, energy efficient homes and businesses will ensure protection of the environment and economic development for the area and county.

6.3 Amendments Assessment

6.3.1 Post First Public Consultation

The draft Plan and the SEA report was released for public consultation from the 18 June to 29 July 2009. Of the twenty submissions received, twenty four amendments were proposed to the draft plan. These were assessed by FTC in a report titled “Second Consultation Phase Strategic Environmental Assessment Report of the Draft Collinstown Local Area Plan 2009-2015” dated 27 October 2009.

It was determined that most of the amendments to the objectives would have no impact on the environment since they re-worded the existing objective. The amendments were seen to generate a “Possibly Significant” assessment related to the change of zoning from C (Residential) to A (Major Town Centre). Areas previously zoned C1 and C2 (Residential) were proposed to be amended to zoning sites A7 and A6 (Major Town Centre) respectively. Both new sites include for appropriate residential zoning (Change Number 17) therefore there is no loss of residential zoning and no impact on the population.

6.3.2 Post Second Public Consultation

The proposed amendments to the Plan (twenty four amendments) and the SEA report were released for the second consultation period from the 29 October to the 25 November 2009.

The Final Managers Report “Manager’s Report on Submissions / Observations received during the public display period (29/10/2009 to 25/11/2009) of the proposed amendments to the draft Collinstown Local Area Plan” was prepared following the review of the two submissions received during the second consultation period. There were no further amendments resulting from the two submissions. FTC prepared a SEA report assessing the two submissions and Kildare County Council’s recommendations dated 18 December 2009 for consideration alongside the Final Managers report by the elected members prior to adoption.

Section 7

Mitigation Measures



7. MITIGATION MEASURES

7.1 Introduction

The SEA Regulations require that mitigation measures are required to reduce/eliminate any significant negative environmental impacts as a result of implementing a Plan. The mitigation measures can follow the hierarchy of:

- Avoidance
- Reduction
- Compensation

7.2 Mitigation Measures

A number of the International and National environmental policies, for example, the Habitats Directive, the Water Framework Directive, the EPA's Code of Practice for Unregulated Landfill Sites, and the DoEHLG Guidelines for Wind Energy for Planning Authorities and the EPA's Guidance Note for Wastewater Treatment Systems for Once-off Housing, have listed appropriate mitigation measures to minimise the impacts on the environment. Many of the mitigation measures, particularly for water will be driven by the Water Framework Directive and the requirement to meet good quality status by 2015.

The Council has considered these policies and directives and has formulated a number of policies in the draft Plan to implement their requirements. The following sections lists policies contained in the draft Plan aimed at protecting environmental resources and to providing improved quality of life for residents of the area. Where it is considered that additional mitigation measures are warranted, these are also listed.

7.2.1 Water

Developments at Collinstown both residential and industrial/commercial will put pressures on both the existing drinking water and wastewater supplies. As discussed in previous sections of the Environmental Report, protection of ecology and water in the Royal Canal is important.

The review of the Collinstown LAP found that developments in Collinstown may conflict with the following environmental objectives because of the time lag between completion of the upgrade to Leixlip WWTP (2012) and operation of this Plan (2009).

- W1 Improve the quality of surface water
- W2 Maintain or improve the Biotic Rating (Q value) of surface waters
- W4 Prevent pollution of groundwater
- W6 Prevent flooding

However, these potential impacts can be avoided by amending Plan objective WW5 to read:

WW5 To ensure that all new developments on the site utilise and connect to existing water and wastewater infrastructure *where capacity exists. Otherwise planning applications must demonstrate that on-site treatment will be in compliance with the EPA's (2000) Wastewater Treatment Manuals Treatment Systems for Single houses, and certified by an appropriate assessor. A copy of the Installation Certificate must be supplied to Kildare County Council.*

FTC's review of the Plan objectives for wastewater (WW1-WW4) found that the objectives failed to mention compliance with the Eastern River Basin Management Plan. It is recommended that Plan objective WW6 is amended thus:

WW6 To ensure that all licencable operators dislodging wastewater are operating within permitted limits *and the requirements of the Eastern River Basin Management Plan*

FTC's review of the draft Development Plan also found that there are no specific Plan objectives for the protection of groundwater in the area. Development on lands in Collinstown may conflict with environmental objective W4 (Prevention of pollution to groundwater). Groundwater vulnerability in the area is moderate and it is recommended that a Plan objective to protect the groundwater is included. Suggested wording for this Plan objective is:

SU3 *It shall be the objective of the Council to ensure that development on these lands incorporate appropriate mechanisms for the sustainable management of groundwater. Proposed development on these lands will also need to comply with groundwater management plans for Leixlip and the requirements of the draft Eastern Regional River Basin Management Plan and adopted Plan in December 2009.*

It is recommended that Plan objective SU1 is expanded to include:

SU1 *Development on the lands must take cognisance of "The Planning System and Flood Risk Management – Consultation Draft Guidelines for Planning Authorities"– OPW, 2008*

7.2.2 Biodiversity

The land-use Plan for Collinstown may potentially conflict with environmental objective B1 (Protection of designated sites) as residential development is allowed close to the Royal Canal. However this will be mitigated by Plan objective FL1 – A buffer zone (minimum 15 m wide on each bank) between the Canal and any proposed new development.

7.2.3 Soils and Geology

The LAP and land-use planning map (Map 1) has designated lands to the north of the Royal Canal as 'Major Town Centre.' This may potentially conflict with environmental objective SG1 (Maximise the use of brownfield sites) and it is included to encourage the use of brownfield/derelict sites:

ENV6 *Encourage the re-use of brownfield sites within the study area provided that their re-use is in accordance with the objectives of this Plan and relevant legislation.*

Section 8

Monitoring Programme



8. MONITORING PROGRAMME

8.1 Introduction

Under Article 10 and Section (i) of Schedule 2B of the SEA Regulations, monitoring is required in order to identify at an early stage any unforeseen adverse effects caused by the Plan. This allows remedial action to be taken. Monitoring prevents the actual impacts of the Plan to be measured against those that were predicted. It allows major problems to be identified and dealt with in a timely fashion, and environmental baseline information to be gathered for future Plan reviews. It also ensures that proposed mitigation measures are carried out and that no unforeseen impacts occur (Therivel, 2004).

The methodology used in the development of the monitoring programme for the Collinstown Local Area Plan is based on the use of indicators and targets, the assignment of responsibilities and the setting of appropriate time lines. It also includes intervention in the event of an unforeseen occurrence.

Monitoring is carried out by reporting on the set of indicators and targets drawn up for the various environmental aspects and used to describe future trends in the baseline, which enable positive and negative impacts on the environment to be measured. The indicators that are used show changes that would be attributable to implementation of the Plan. In particular, the indicators can also in certain circumstances act as an early warning system should unforeseen impacts occur or conditions deteriorate further or faster than anticipated. For example, water quality indicators describe trends in both improvements and deterioration in water quality. If quality targets are not being reached and water is seen to be unexpectedly deteriorating immediate intervention will be required.

8.2 Monitoring Programme

Monitoring will focus on aspects of the environment that are likely to be significantly impacted by the Plan. Indicators and targets have been identified for the main environmental issues in the study area, namely water, biodiversity, cultural heritage and landscape.

Much of the indicator information required is already being actively collected and reported at a level sufficient to meet the needs of this Plan.

The frequency of monitoring is set by relevant legislation.

8.3 Responsibilities

Kildare County Council will be responsible for the implementation of the monitoring programme in relation to the Plan.

8.4 Sources of Information

Monitoring will focus on aspects of the environment that are likely to be significantly impacted by the Plan. Indicators and targets have been identified for the main environmental issues in the study area, namely water, biodiversity, cultural heritage and landscape. The indicators chosen are at a level, which is relevant to the Plan, and are collated and reported on by a variety of Government Agencies, such as EPA, OPW, National Parks and Wildlife Services and different sections within Kildare County Council.

In Tables 8.1 to 8.8 illustrates the monitoring programme for this Plan in relation to relevant indicators, targets and frequency of monitoring. Based on the information above it can be seen that all of the indicator information required is already being actively collected and reported at a level sufficient to meet the needs of this Local Area Plan.

8.5 Frequency of Reporting

It is recommended that the Kildare County Council carries out a mid-term review of performance against SEA Objectives. This would occur in 2013 and would use information in the most recent information from the EPA State of the Environment Report. It is further recommended that reporting on the overall monitoring of the Plan is made to the EPA SEA Section.

Table 8.1: Environmental Objectives, Targets and Indicators for Environmental Aspects Biodiversity

BIODIVERSITY ASPECT (B)	OBJECTIVE (BO)	TARGETS	INDICATORS (BI)	INDICATORS INFORMATION SOURCE
Designated habitat and species	B1 Conserve protected habitats and species	No loss of protected habitats and species during the lifetime of the LAP. Protection of Natura 2000 (SAC) sites in study area from significant effects of proposed developments	Percentage of unique habitats and species lost in designated sites through trending of annual/ bi-annual habitat surveys. Provision of Article 6 assessments with developments proposed for sites overlying or potentially impacting Natura 2000 sites in study area.	KCC DoEHLG
Non-designated Species and habitats	B2 Conserve the diversity of non-designated habitats and species	No loss of significant hedgerows such as Townland Boundary Hedges or roadside hedgerows. Operators who conduct mechanical hedge cutting should have achieved the Teagasc proficiency standard MT 1302-Mechanical Hedge Trimming. Identification and inclusion of important non-designated sites in study area in proposed KCC biodiversity study. Inclusion of bio-diversity assessment with planning applications	Percentage of unique habitats and species lost in non-designated sites through trending of annual/ bi-annual habitat surveys. Inclusion of bio-diversity assessment with planning applications	KCC DoEHLG
Invasive Species	B3 Protect aquatic and terrestrial habitats from invasive species.	Involve KCC in National and Regional initiatives to monitor and control invasive species. Support initiatives which reduce the likelihood of invasions such as consultation with neighbouring counties for protection of the Liffey and the Royal Canal Raise public awareness of invasive species and address international applications.	Number and types of invasive species identified during the lifetime of the LAP in the study area.	KCC in consultation with adjoining local authorities and ERBD

Table 8.2: Environmental Objectives, Targets and Indicators for Environmental Aspects Population and Human Health

POPULATION AND HUMAN HEALTH ASPECTS (P)	OBJECTIVES (PO)	TARGETS	INDICATORS (PI)	INDICATORS INFORMATION SOURCE
Population	P1 Improve people's quality of life based on high quality living environments, working and recreational facilities	Increase in the number of green spaces and recreational areas available to the public.	Increase in the number of green spaces and recreational areas available to the public.	KCC
Human health	P2 Adhere to the County Emergency Plan and other objectives of relevance to human health.	No 'boil water' notices Maintain or improve levels of ambient SO ₂ , NO _x , and particulate matter as conducted by EPA monitoring. Increase public amenities Number of new civic amenity sites provided during the lifetime of the LAP	Drinking water quality Maintaining or improving air quality in the study area Availability of public transport Provision of new civic amenity sites	KCC

Table 8.3: Environmental Objectives, Targets and Indicators for Environmental Aspects Soil and Geology

SOILS AND GEOLOGY ASPECTS (SG)	OBJECTIVES (SGO)	TARGETS	INDICATORS (SGI)	INDICATOR STATUS
Soils	SG1 Maximise the sustainable re-use of brownfield sites and maximise the use of the existing built environment.	Specified percentage of new applications granted to be on brownfield sites.	Percentage of new developments on brownfield sites	KCC

Table 8.4: Environmental Objective, targets and Indicators for Environmental Aspect Water

WATER ASPECT (W)	OBJECTIVE (WO)	TARGETS	INDICATORS (WI)	INDICATOR INFORMATION SOURCE
Surface Water	W1 Maintain or improve the quality of surface water to status objectives as set out in the draft Eastern River Basin Management Plan	Improvement or at least no deterioration in surface water quality by 2015	Changes in receiving water quality as identified during water quality monitoring for the WFD conducted by KCC and the EPA	EPA KCC
	W2 Maintain or improve the Biotic Quality Rating (Q Value) of surface waters	To achieve a Q Rating of 4 as per the WFD 'good' quality status by 2015.	Biotic quality rating of river waters at EPA monitoring locations	EPA KCC
	W3 Implement SUDS and to consider the OPW's publication 'The Planning System and Flood Management Risks'	Drainage systems to be compliant with SUDS	Provision of SUDS compliant drainage plans for proposed developments in study area	KCC
Groundwater	W4 Prevent pollution of groundwater by adhering to aquifer protection plans	Improvement or at least no deterioration in groundwater quality as per the WFD 'good' quality status by 2015	Changes in groundwater quality as identified in monitoring programmes conducted by KCC and the EPA under the Eastern river Basin Management Plan	EPA KCC
Drinking water	W5 Maintain and improve the quality of drinking water supplies	Decrease in the number of 'boil water' notices issued over lifetime of LAP	Drinking water quality and bacterial counts and frequency of 'boil water' notices. Number of remedial Action List (RAL) notices issued by the EPA	EPA KCC

WATER ASPECT (W)	OBJECTIVE (WO)	TARGETS	INDICATORS (WI)	INDICATOR INFORMATION SOURCE
Flooding	W6 Provision of flood relief through management of flood risk and living with floods rather than engineered flood solutions	Prevention of flood damage to land and properties Adherence to The Planning System and Flood Risk Management – Consultation Draft Guidelines for Planning Authorities (September 2008)	No. and type of developments in the recognised flooding area Provision of flood risk evaluations with proposed developments/ changes to land zoning with emphasis on flood risk management	KCC OPW
Surface Water Morphology	W7 Prevention of interference with inland water morphology by developments/ land use changes in the study area	No surface water diversions or alterations allowed without prior assessments by qualified hydrologists	Number of proposed surface water diversions supplied with hydrological assessments	KCC

Table 8.5: Environmental Objectives, Targets and Indicators for Air and Climate

AIR AND CLIMATE ASPECTS (AC)	OBJECTIVES (ACO)	TARGETS	INDICATORS (ACI)	INDICATOR INFORMATION SOURCE
Climate	AC1 Minimise greenhouse gas emissions to meet National and International standards	Increased use of public transport Increase numbers of cycle lanes and pedestrian routes in the study area Increase number of permissions granted for renewable energy projects	Use of public transport Provision of cycle lanes and walking routes Number of permissions granted for renewable energy projects	KCC
Energy Regulations	AC2 Building energy Regulation	Increase in number of energy audits conducted on existing facilities and new homes	Number of energy audits conduct	KCC
Air Quality	AC3 Improve ambient air quality	Maintain or improve ambient air quality through reduction of vehicle usage	Air quality indicators	KCC EPA

Table 8.6: Environmental Objectives, Targets and Indicators for Environmental Aspects Material Assets

MATERIAL ASSETS ASPECTS (MA)	OBJECTIVES (MAO)	TARGETS	INDICATORS (MAI)	INDICATOR INFORMATION SOURCE
Transportation	MA1 Development of a sustainable transportation infrastructure which reduces the need for travel and journey length	Reduce the number of private vehicles on the road. Increase use of public transport.	Number of private cars on road as a percentage of AADT.	KCC NRA
Waste Management	MA2 Minimise waste production and introduce sustainable waste management practices. Meet the requirement of the County Kildare Waste Management Plan.	Reduction in the quantities of waste sent to landfill Increase in the quantities of waste sent for recycling	Quantity of household waste sent to landfill Quantity of household waste sent for recycling	KCC EPA
Wastewater Infrastructure	MA3 Wastewater infrastructure to provide for new developments.	Provision and upgrade to provide adequate wastewater infrastructure based on existing and forecasted population demands	Completion of Leixlip WWTP upgrade from 80,000 PE to 150,000 PE capacity.	KCC
Water Supply	WA4 Promote sustainable water use based on long term protection of resources	Decrease in the number of 'water shortage' notices issued	Frequency of 'water shortage' notices	KCC Services Dept.

Table 8.7: Environmental Objectives, Targets and Indicators for Environmental Aspects Landscape

LANDSCAPE ASPECT (L)	OBJECTIVE (LO)	TARGETS	INDICATORS (LI)	INDICATOR INFORMATION SOURCE
Natural Landscape	L1 Protect views and prospects within the study area as identified in the Masterplan	No significant disruption of designated views and prospects	Number of developments located within the designated views and prospects as identified in the Masterplan for Collinstown	KCC

Table 8.8: Environmental Objectives, Targets and Indicators for Environmental Aspects Cultural Heritage

CULTURAL HERITAGE ASPECT (CH)	OBJECTIVES (CHO)	TARGETS	INDICATORS (CHI)	INDICATOR INFORMATION SOURCE
Heritage	CH1 Promote best practice in heritage conservation and management	No unauthorised developments permitted over the lifetime of the LAP which will result in the loss or partial loss of protected structures or sites of archaeological importance Ensure that all planning applications that might have an impact on heritage are referred to the DoEHLG for comment and that their recommendations are adhered to. Use of National Heritage Plan (2002) in setting archaeological policies and principles	Number of unauthorised developments permitted over the lifetime of the Plan which resulted in the loss or partial loss of protected structures or sites of archaeological status.	KCC Heritage Section DoEHLG
	CH2 Protection of Royal Canal (incl. associated structures)	No unauthorised developments in these areas	Number of unauthorised developments close to or affecting the Royal Canal and associated structures	KCC
Architectural Features	CH3 Protection of individual sites and complexes	No unauthorised developments in protected sites and complexes.	Number of unauthorised developments in protected sites and complexes	KCC Heritage Section DoEHLG

CULTURAL HERITAGE ASPECT (CH)	OBJECTIVES (CHO)	TARGETS	INDICATORS (CHI)	INDICATOR INFORMATION SOURCE
Archaeology	CH4 Identification and protection of archaeological features	No unauthorised developments permitted during the lifetime of the Plan which could result in damage to archaeological features Review of the annual Excavations Bulletin for archaeological potential in study area. Use of "Framework and Principles for the Protection of Archaeological Heritage" Department of Arts Heritage Gaeltacht and the Islands	Number of unauthorised developments permitted which result in the loss or damage to archaeological features	KCC Heritage Section DoEHLG