

Celbridge

Draft Local Area Plan 2017-2023

Dréachtphlean Ceantair Áitiúil Cill Droichid



STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA)

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Non-Technical Summary

NTS1: Introduction

This is a non-technical summary of the Environmental Report that has been prepared as part of the Strategic Environmental Assessment of the Draft Celbridge Local Area Plan (LAP) 2017-2023. The document has been prepared in accordance with national and EU legislation. It draws attention to the most important issues and provides information on other significant topics. Any topic which causes concern can be followed in greater detail in the main Environmental Report.

The relevant planning legislation comprises the Planning and Development Act 2000, as amended and the Planning and Development Regulations 2001, as amended. Key planning documents reviewed as part of the assessment included:

- The National Spatial Strategy 2002-2020;
- The Regional Planning Guidelines for the Greater Dublin Area 2010-2022;
- Kildare County Development Plan 2011 – 2017; and
- Draft Kildare County Development Plan 2017-2023.

Cognisance was also given to a wide range of legislation, plans and programmes at international, national, regional and local level for relevance to the plan.

NTS2: Draft Celbridge Local Area Plan 2017-2023

The Draft Celbridge Local Area Plan 2017-2023 provides the main public statement of planning policies and objectives for Celbridge town and environs for the 2017 – 2023 period and beyond.

The LAP when adopted will replace the Celbridge Local Area Plan 2010. It is a policy of the Kildare County Development Plan 2011-2017 and Draft County Development Plan 2017-2023 (Policy PSO3) to extend the LAP boundary to incorporate the demesnes of Castletown, Donaghcumper and St. Wolstan's as these historic landscapes that form an integral part of the history of Celbridge, whilst also providing significant opportunities for the town.

The policies and objectives are critical in determining appropriate locations and forms of different types of development for the town and environs. The plan is also used by Kildare County Council to guide priorities for investment during the lifetime of the plan.

NTS3: SEA Methodology

The objective of the Strategic Environmental Assessment (SEA) Directive 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 plans ... with a view to promoting sustainable development' (Article 1 SEA Directive). It is a systematic, on-going process for evaluating, at the earliest possible stage, the environmental quality and consequences of implementing certain plans and programmes on the environment.

The SEA methodology is based on legislative requirements and EPA guidance and will ensure compliance with the SEA Directive and associated legislation. The EPA's SEA Pack (Version 18/04/2013) was also used as a source of information during the SEA process.

NTS4: Current State of the Environment

The assessment of the plan with respect to the current Environmental Baseline is the principal task of the SEA process. Consequently, this baseline description must be cognisant of the local level nature of the plan and the pressures and interrelationships between environmental topics.

The Environmental Baseline provides an overview of the existing conditions in the Celbridge Town and Environs area relevant to the plan and covers the following environmental topics:

- Biodiversity including Flora and Fauna.
- Population and Human Health.
- Soils and Geology.
- Water Resources.
- Air, Noise and Climate.
- Archaeological, Architectural and Cultural Heritage.
- Landscape and Visual.
- Material Assets.

Celbridge town is located in north county Kildare 20 km from Dublin. The town is located on the River Liffey at the junction of the R403 and R405 roads. The M4 Motorway is accessible from the North of the Town at the Celbridge West Interchange.

The town of Celbridge has early Christian origins but later became an Anglo Norman borough. The town developed quite rapidly during the 18th century around Castletown Estate. As with many estate towns, development occurred along the Main Street at the principal entrance to the estate.

Celbridge retains much of the character of an estate town, with the Main Street still the focus of the town and Castletown gates, the mill complex and the bridge over the Liffey remaining important visual features. Notwithstanding, Celbridge has experienced a considerable degree of urbanisation and outward growth in recent years.

In the EPA's 2020 Vision document it is noted that pressures on the Irish environment have increased significantly in recent years as a result of a decade of rapid and unprecedented

economic growth. Unfortunately, these pressures have accelerated at a rate that far exceeds that observed in other EU countries.

NTS5: SEA Objectives, Targets and Indicators

The SEA is designed to assess the potential environmental impact of the proposed Local Area Plan and its associated policies and objectives against the environmental baselines established.

The plan policies and objectives are assessed against a range of established environmental objectives and targets.

Indicators that are recommended in the SEA are utilised over the lifetime of the Local Area Plan to quantify the level of impact that the policies and objectives have on the environment. This enables us to measure whether they were successful in promoting the sustainable development of the area.

NTS6: Assessment of Likely Significant Effects

The environmental impacts of the Draft Local Area Plan policies and objectives were assessed with respect to the existing environmental baseline and the environmental objectives.

As the policies included in the proposed Local Area Plan have been designed to promote sustainability and to protect the environment, the majority of recommendations have positive impacts when assessed against the environmental objectives. A matrix was prepared to highlight these potential impacts.

NTS7: Consideration of Alternatives

Alternative development scenarios were considered in the preparation of the Proposed Local Area Plan. These options primarily related to:

Transit-oriented development based on upgrading the Hazelhatch rail line and Phoenix Park tunnel. Provision of core complete cycling and walking options to the rail station. This alternative includes development around Hazelhatch station and other zoned land around city centre and bus corridors.

Town Centre strengthening based on redevelopment of St. Raphael's Lands in the town centre. The average density of this alternative is 35 units per hectare with generally mixed-use zoning along the Dublin Road. Promotion of living over the shop and a pedestrian friendly main street.

School focused development with development land at Greenfield sites. This is due to location of schools in Celbridge clustered at the edge of the town, one in the north, one in the west. The average density of this would be 35 units per hectare.

Standard suburban expansion in the form of edge of town development. This alternative assumes 25 units per hectare development on greenfield sites.

An assessment of these alternatives was carried out.

NTS8: Mitigation Measures

This Environmental Report has highlighted some potential negative environmental impacts that may arise from the implementation of the Celbridge LAP in relation to new zonings and land use designations. A number of mitigation measures have been identified to prevent, reduce and as fully as possible offset any significant adverse impacts on the environment of implementing the LAP.

It is envisaged that all planning applications for new developments will be environmentally assessed and specific mitigation proposed where appropriate.

NTS9: SEA Monitoring

Article 10 of the SEA Directive requires that monitoring should be carried out in order to identify at an early stage any unforeseen adverse impacts associated with the implementation of the plan or programme.

A monitoring programme is developed based on the indicators selected to track progress towards achieving strategic environmental objectives and reaching targets, enabling positive and negative impacts on the environment to be measured. As previously described, the environmental indicators have been developed to show changes that would be attributable to implementation of the Proposed Local Area Plan.

The SEA carried out has ensured that any potential significant environmental impacts have been identified and given due consideration. No significant impacts have been identified as part of the SEA process.

The SEA carried out has ensured that any potential significant environmental impacts have been identified and given due consideration.

Kildare County Council is responsible for collating existing relevant monitored data, the preparation of preliminary and final monitoring evaluation reports, the publication of these reports and, if necessary, the carrying out of corrective action.

1. Introduction

Arup was appointed by Kildare County Council to carry out a Strategic Environmental Assessment (SEA) Environmental Report of the Draft Celbridge Local Area Plan (LAP) 2017-2023.

This Environmental Report presents the findings of the environmental assessment of the likely significant impacts on the environment as a result of the draft LAP. A Scoping Report was previously prepared which provided information to allow consultation with defined statutory bodies on the scope and level of detail to be considered in the environmental assessment. Any issues or concerns raised during the scoping process or during the consultation period for the LAP has been incorporated into this report. An SEA Statement accompanies this Environmental Report.

The current Celbridge Local Area Plan 2010 relates only to Celbridge town. The draft Celbridge Local Area Plan 2017-2023 boundary is extended to include the historic demenses of Castletown, Donaghcumper and St. Wolstan's.

1.1 Planning Context

The relevant planning legislation comprises the Planning and Development Act 2000, as amended and the Planning and Development Regulations 2001, as amended.

The Local Area Plan for Celbridge will sit within a hierarchy of national, regional and local plans. These include the National Spatial Strategy 2002-2020, Regional Planning Guidelines for the Greater Dublin Area 2010-2022, the Kildare County Development Plan 2011-2017 and other local area plans. At the time of undertaking this SEA the Draft Kildare County Development Plan 2017 – 2023 was published. This was taken into account in drafting the LAP and undertaking the SEA.

The National Spatial Strategy sets the national context for spatial planning from 2002-2020. The overall aim of this strategy is to achieve a better balance of social, economic and physical development. The National Spatial Strategy deals with development at regional and local level in broad terms. The Planning and Development Act 2000, as amended requires that this strategy is integrated with both regional planning guidelines and county and city development plans.

The Regional Planning Guidelines are the main means by which to implement the National Spatial Strategy, as detailed in Section 21 of the Planning and Development Act 2000, as amended. The Regional Planning Guidelines give effect to the National Spatial Strategy at regional level and provide more detailed guidance and policy. They must be consistent with the overall context of the National Spatial Strategy. The overall objective of the guidelines is to provide a long-term strategic planning framework for the development of the region.

Development Plans must have regard to national and regional strategies and guidelines to both inform and structure land use policies. Development Plans provide the key policy context for individual planning decisions within the Development Plan area. In addition,

the Guidelines for Planning Authorities outlines that good Local Area Plans will also inform policies at regional and national level.

The hierarchy of the planning process within Ireland is summarised in the flow chart depicted in **Figure 1.1**.

This flow chart (adapted from the Department of Environment, Heritage and Local Government (DoEHLG) Development Plan Guidelines for Planning Authorities) indicates where the Celbridge Local Area Plan falls within that hierarchy.

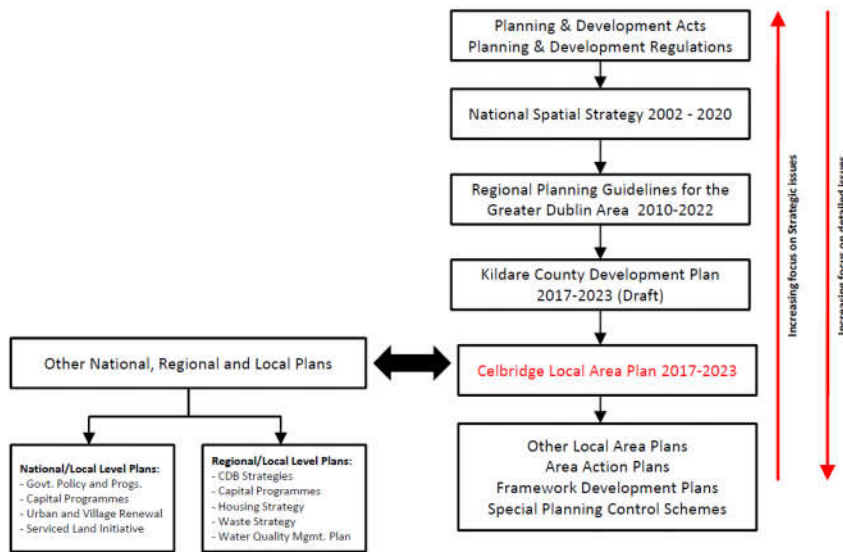


Figure 1.1:

Hierarchy of the Planning Process within Ireland

1.2 Relationship of the Plan to other Plans and Programmes

As part of the SEA process the context of the Celbridge Local Area Plan must be established with regard to other plans and programmes that have been adopted at International, National, Regional and Local level. In particular the interaction of the draft LAP with the environmental protection objectives and standards included within these other plans and programmes must be considered.

A wide range of legislation, plans and programmes are of relevance to the Draft Celbridge Local Area Plan and are outlined in **Table 1.1**.

Table 1.1 Hierarchy of Relevant Legislation, Plans and Programmes

Level	Legislation, Plans and Programmes
International/EU Level	Water Framework Directive & associated Directives SEA Directive Floods Directive

Level	Legislation, Plans and Programmes
	<p>Groundwater Directive</p> <p>Habitats Directive</p> <p>Birds Directive</p> <p>Freshwater Fish Directive</p> <p>Shell fish Directive</p> <p>Drinking Water Directive</p> <p>Bathing Water Directive</p> <p>Environmental Impact Assessment Directive</p> <p>Seveso Directive</p> <p>Sewage Sludge Directive</p> <p>Urban Waste Water Treatment Directive</p> <p>Waste Framework Directive</p> <p>Nitrates Directive</p> <p>Soils Directive</p> <p>Air Quality Directives including Framework Directive</p> <p>National Emissions Ceiling Directive</p> <p>Environmental Noise Directive</p> <p>Climate Change Programme (ECCP II)</p> <p>Industrial Emissions Directive</p> <p>EU Reach Initiative</p> <p>European Landscape Convention</p> <p>UN Convention of Biological Diversity, 1992</p> <p>Kyoto Protocol</p> <p>Stockholm Convention</p> <p>Valetta Convention</p> <p>Ramsar Convention</p> <p>OSPAR Convention</p> <p>Granada Convention</p>

Level	Legislation, Plans and Programmes
	Gothenburg Strategy
National Level	<p>A Programme for Partnership Government 2016</p> <p>Building on Recovery: Infrastructure and Capital Investment 2016-2021</p> <p>Policy Position on Climate Action and Low-Carbon Development. National Policy Position Ireland (2014)</p> <p>Delivering a Sustainable Energy Future for Ireland - The Energy Policy Framework 2007-2020</p> <p>National Energy Efficiency Action Plan 2013-2020</p> <p>National Spatial Strategy 2002-2020</p> <p>Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities (2015)</p> <p>Quality Housing for Sustainable Communities. Best Practice Guidelines for Delivering Homes Sustaining Communities (2007)</p> <p>The Planning System and Flood Risk Management. Guidelines for Planning Authorities (2009)</p> <p>Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns & Villages) (2009)</p> <p>Guidelines for Planning Authorities – Retail Planning (2012)</p> <p>Local Area Plans - Guidelines for Planning Authorities (2013)</p> <p>Guidelines for Planning Authorities – Spatial Planning and National Roads (2012)</p> <p>Our Sustainable Future – A Framework for Sustainable Development for Ireland (2012)</p> <p>Actions for Biodiversity 2011-2016 (2nd National Biodiversity Plan)</p> <p>Draft 3rd National Biodiversity Strategy and Action Plan (2016)</p> <p>Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities (revised 2010)</p> <p>Architectural Heritage Protection - Guidelines for Planning</p>

Level	Legislation, Plans and Programmes
	<p>Authorities (2004)</p> <p>Guidelines for Planning Authorities - Retail Planning (2012)</p> <p>Government Policy on Architecture 2009-2015</p> <p>National Policy on Town Defences (2008)</p> <p>Implementation of Regional Planning Guidelines Best Practice Guidance (2010)</p>
Regional Level	<p>Regional Planning Guidelines for the Greater Dublin Area 2010-2022</p> <p>Greater Dublin Area Transportation Study 2016-2035</p> <p>Retail Strategy for the Greater Dublin Area 2008-2016</p> <p>Draft Transport Strategy for the Greater Dublin Area up to 2030</p> <p>Eastern River Basin District River Basin Management Plan 2009 – 2015 (National River Basin Management Plans 2015-2021 currently in preparation)</p> <p>Eastern-Midlands Region Waste Management Plan 2015-2021</p> <p>Eastern Catchment Flood Risk Assessment Management (CFRAM) Study</p> <p>Flood Risk Management Plans</p> <p>Groundwater Protection Schemes</p>
Local Level	<p>Kildare County Development Plan 2011-2017</p> <p>Draft Kildare County Development Plan 2017-2023</p> <p>Kildare Local Economic and Community Plan 2014</p> <p>South East Draft Flood Risk Management Plans (2016)</p> <p><i>Competing in a Globalised World. An Economic Development Strategy for Kildare to 2016</i></p> <p>County Kildare Heritage Plan 2005-2011 (under review)</p> <p>County Kildare Biodiversity Action Plan 2009-2014</p> <p>The Celbridge Heritage and Tourism Strategy 2016-2020</p>

Level	Legislation, Plans and Programmes
	Celbridge Integrated Service Programme (ISP) Town Development Plans Other Local Area Plans

2. Celbridge Local Area Plan 2017-2023

The Draft Celbridge LAP provides the main public statement of planning policies and objectives for the town. The policies and objectives are critical in determining the appropriate location and form of different types of development as the LAP is the primary statutory land use policy framework against which planning applications are assessed.

The objectives of the LAP are also used by Kildare County Council to guide their activities and to indicate priority areas for action and investment by the Councils such as focusing on attracting employment into the town or enhancing the town as a centre for tourism.

The LAP is a key document for setting out a vision for how Celbridge town and environs should develop over the years 2017-2023 and beyond. The plan is consistent with the objectives set out in the following documents:

- The Regional Planning Guidelines for the Greater Dublin Area 2010-2022;
- Greater Dublin Area Transportation Study 2016-2035;
- Kildare County Development Plan 2011 – 2017
- Kildare Local Economic and Community Plan 2014;
- Celbridge Integrated Service Programme (ISP); and
- The Celbridge Heritage and Tourism Strategy 2016-2020.

The LAP has a critical role to play in ensuring that the needs of the future population are planned for. Celbridge has a number of positive assets, which will aid its development in the future. The LAP and overall vision for Celbridge is underpinned by the following strategic aims:

- To accommodate 10% of Kildare's housing growth over the period 2017-2023 in accordance with the CDP Core Strategy.
- To enhance the quality, ambience and vitality of Celbridge Town Centre through renewal and extension and to promote its role as a vibrant retail, cultural and community centre that is integrated with the wider heritage assets of the town.
- To support and facilitate the development of high quality, integrated residential neighbourhoods and deliver social and community infrastructure and facilities in tandem with new housing.
- To promote and support economic development that is consistent with the role of Celbridge as a Moderate Sustainable Growth Town. The town's location in the North Kildare Economic Cluster and its heritage and tourism assets are identified as key economic strengths.
- To enhance the existing transport network by increasing permeability and connectivity for pedestrians, cyclists and vehicles, in order to access to key land uses such as community facilities, public transport nodes and the town centre, as well as the crossing of the River Liffey.

- To enhance the infrastructural assets of Celbridge to ensure the town is well positioned to accommodate growth.
- To protect and enhance built and natural heritage as the defining character of the town and a pillar for sustainable growth, by promoting the enhancement, management and understanding of these assets.
- To protect and enhance Green Infrastructure assets and create an interconnected network of parks, open spaces, demesne lands and watercourses in Celbridge.
- To ensure that best practice urban design principles are applied to all new development, based on the principle that well planned and integrated development enhances the sustainability, attractiveness and quality of an area.
- To phase new development to ensure that it occurs in an orderly and efficient manner in accordance with proper planning and sustainable development.

The strategic direction of the LAP for the future development of Celbridge focuses on the following key areas:

Core Strategy

The plan aims to accommodate 10% of Kildare’s housing growth over the period 2017-2023 in accordance with the County Development Plan Core Strategy. The scale and form of development envisaged in Celbridge under the LAP is consistent with the settlement and economic development aims of the Core Strategy. The LAP identifies 6 no. Key Development Areas (KDAs) with capacity to accommodate significant growth over the LAP period. KDA 1 and KDA 2 are town centre extension sites that have the potential to accommodate a mix of retail, commercial, community and residential uses. KDA 3, KDA 4, KDA 5 and KDA 6 are greenfield sites at the edge of the existing built up area of the town that have the capacity to accommodate new housing and support physical and social infrastructure. Consolidation and infill development is also promoted on appropriately zoned land within the plan area. **Table 2.1** sets out the size and estimated residential capacity for each area and Figure 2.1 identifies the Key Development Areas.

Table 2.1: Key Development Areas in Celbridge LAP

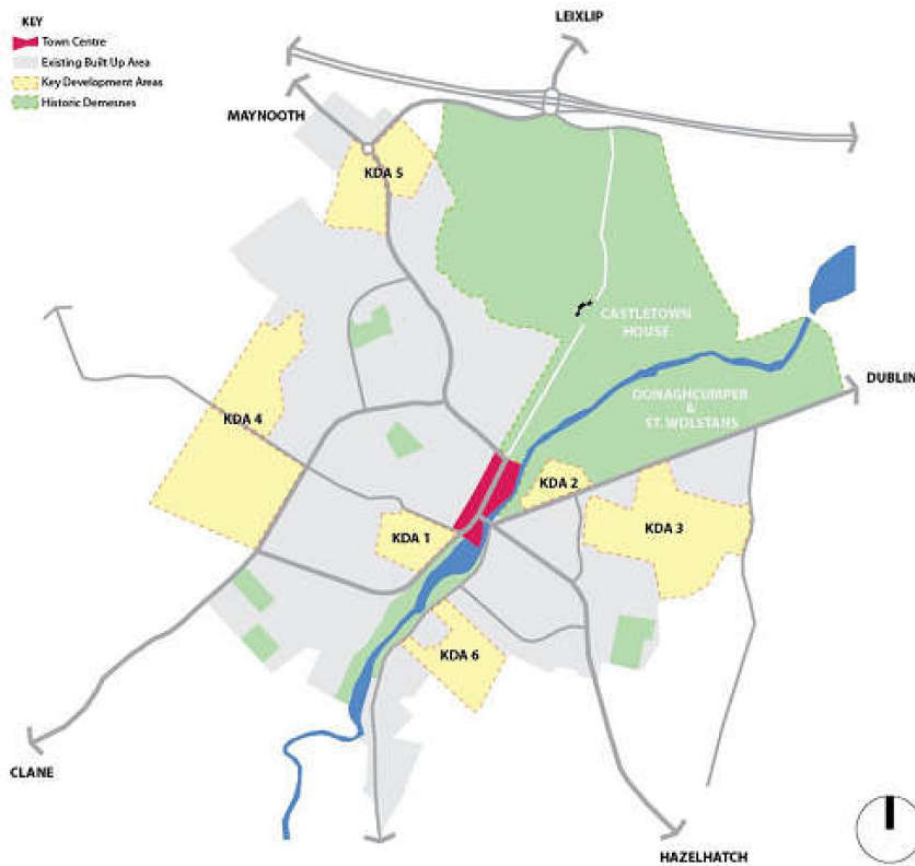
Location of Development	Quantum of Land for Housing	Estimated Residential Capacity	Density*
KDA 1 Oakley Park: Town Centre Extension	9	100**	Mixed use site
KDA 2 Donaghcumper: Town Centre Extension	6.4	150**	Mixed use site

KDA 3 Ballyoulster: New Residential Area	29.5	885	30
KDA 4 Oldtown: New Residential Area	47.5	1425	30
KDA 5 Crodaun: New Residential Area	15	450	30
KDA 6 Simmonstown: New Residential Area	13.1	393	30
Other Sites	8.5	255	30
TOTAL	129	3,658	30

* Figures stated represent an estimate only. The density of development and number of units permissible will be determined at detailed design stage based on a full assessment of site characteristics and local sensitivities.

** Town Centre extension sites – residential indicative only.

Figure 2.1 Key Development Areas



Retail Development

Celbridge is designated as a Tier 1 Level 3 Retail Centre in the Regional and County Retail Hierarchies. The policies and objectives of this LAP seek to strengthen the established retail function of Celbridge Town Centre by promoting renewal and appropriate infill development in the town centre and town centre extension to identified opportunity sites to the east and to the south. Retail provision outside of the town centre will be limited to evolutionary renewal of established neighbourhood centres and to new residential districts.

Employment

Celbridge is part of the North Kildare Economic Growth Cluster and linked to the Primary Economic Growth Towns of Maynooth and Leixlip. Celbridge will continue to benefit from its proximity to the Primary Economic Growth Towns and large employment sites in Leixlip and Maynooth. Economic development within the LAP area will focus on the potential of the town centre and the town's significant heritage and tourism offer.

Infrastructure

The realisation of the objectives contained in the LAP is dependent on supporting infrastructure. The capacity of the water supply and wastewater network will be a critical determinant for significant new development in Celbridge.

The absence of a vehicular and of a pedestrian and cycle crossing of the River Liffey; and of a western link to the north Celbridge are also significant constraints to future development. All major traffic generating development proposals will require a Traffic Impact Assessment to assess the capacity of the transport network to support the development. While the Council will seek to maximise the capacity of the existing network in the short to medium term through active traffic management, new bridge crossings and a western link will be required to accommodate growth in the longer-term.

Environment and Heritage Protection

The environmental sensitivities of the county have informed the development of the LAP Core Strategy and the role it identifies for Celbridge. The LAP responds to environmental factors including wastewater infrastructure constraints and areas at risk of flooding. The LAP acknowledges the unique character and intrinsic value of the Town Centre, Castletown House and the linked demesnes in Celbridge and incorporates objectives for the conservation and enhancement of these areas. Additionally, the LAP has objectives relating to securing strategic open space and green infrastructure, particularly improving accessibility to the River Liffey.

Future Development Priorities

There will be a need over the lifetime of this LAP to consider the longer-term growth of Celbridge and in particular the potential of lands in the vicinity of Hazelhatch / Celbridge Rail Station. Key issues that will need to be considered include flood management; the potential of the public transport network should the DART network expansion programme proceed; and the potential for integrated development on adjoining lands in South Dublin County. It is envisaged that the potential of lands in the vicinity of Hazelhatch / Celbridge rail station will be explored during the life of this LAP in conjunction with South Dublin County Council.

3. SEA Methodology

3.1 Introduction

The objective of the Strategic Environmental Assessment (SEA) Directive 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 plans ... with a view to promoting sustainable development’ (Article 1 SEA Directive). It is a systematic, on-going process for evaluating, at the earliest possible stage, the environmental quality and consequences of implementing certain plans and programmes on the environment.

The requirements for SEA in Ireland are set out in the national legislation as follows:

- European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (S.I. No. 435 of 2004) as amended by European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations (S.I. No. 200 of 2011).
- Planning and Development (Strategic Environmental Assessment) Regulations (S.I. No. 436 of 2004) as amended by the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations (S.I. No. 201 of 2011).

This section highlights how the SEA has been undertaken, for the Draft Celbridge Local Area Plan 2017-2023. The SEA methodology is based on legislative requirements and EPA guidance and will ensure compliance with the SEA Directive and associated legislation. The EPA’s SEA Pack (Version 18/04/2013) was also used as a source of information during the scoping process. The key stages outlined in

Figure 3.1 were identified and are discussed in the following sections.

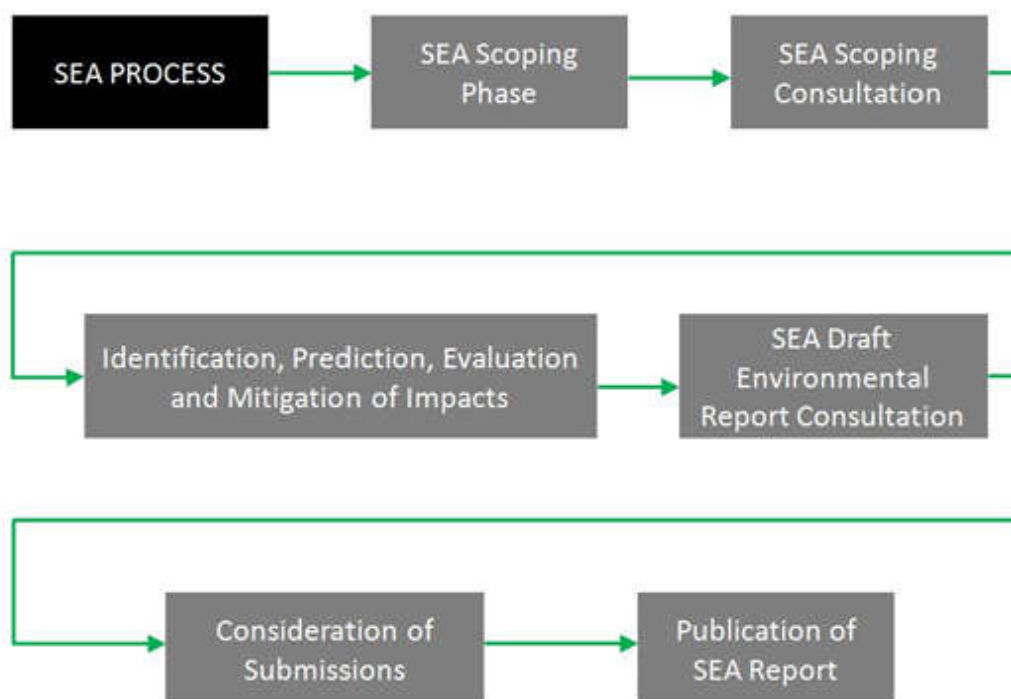


Figure 3.1: Key Stages of the SEA Process

3.2 Screening

Screening is the process for deciding whether a particular plan would warrant SEA. The SEA Regulations outlined above require the following:

- A mandatory SEA for Development Plans if the population or target population is 5,000 persons or more.
- Screening to establish the need for SEA for Development Plans where the population or target population is less than 5,000 persons, to determine whether the new plan would be likely to give rise to significant environmental effects.

An SEA screening assessment was undertaken as part of this SEA process to determine if the Celbridge Local Area Plan required an SEA. According to the 2011 Census the population of Celbridge was 19,537. Celbridge is identified as a “moderate growth town” in the Kildare Development Plan 2011-2017. The draft Kildare Development Plan 2017-2023 identifies Celbridge as a “moderate sustainable growth town”. Therefore an SEA was a mandatory requirement.

3.3 Scoping

The scoping phase of the SEA is a key part of the assessment process as it establishes the likely extent (geographic, temporal and thematic) of the assessment, the range of environmental issues to be covered and the level of detail the assessment will investigate.

The Scoping Process allows input from the environmental authorities and relevant stakeholders to be incorporated.

Essentially any issues/comments submitted as part of the scoping process will provide greater focus on the development of aspects of the proposed Local Area Plan.

The issues addressed during the scoping process are as follows:

The key elements of the Proposed Local Area Plan to be assessed.

The key environmental issues to be assessed.

Research of relevant international, national and local plans, objectives and environmental standards that may influence or impact on the proposed Local Area Plan.

Development of draft environmental objectives, indicators and targets to allow the evaluation of impacts.

Identification of reasonable alternative means of achieving the strategic goals of the proposed Local Area Plan.

A scoping report was prepared as part of this SEA on behalf of Kildare County Council which asked key questions of statutory consultees and key stakeholders. The responses received were addressed in the preparation of the Environmental Report. An outline of the responses received is included in the SEA Statement.

3.4 Baseline Data

Gathering relevant information relating to the state of the environment for a plan area is an integral part of the SEA process. The SEA Directive requires that certain information relating to the relevant environmental baseline is presented in order to help test the performance of the plans implementation, as well as helping establish how the environment would change if the plan were not to implemented.

Baseline information has been collected from readily available sources, and a Geographical Information System (GIS) was used to graphically present relevant information. The baseline information is reported in **Section 4** of this report.

3.5 Environmental Assessment of the Local Area Plan

The environmental assessment process ran in parallel to the development and preparation of the Draft LAP. Interaction between the Celbridge LAP and SEA is depicted in **Figure 3.2** overleaf.

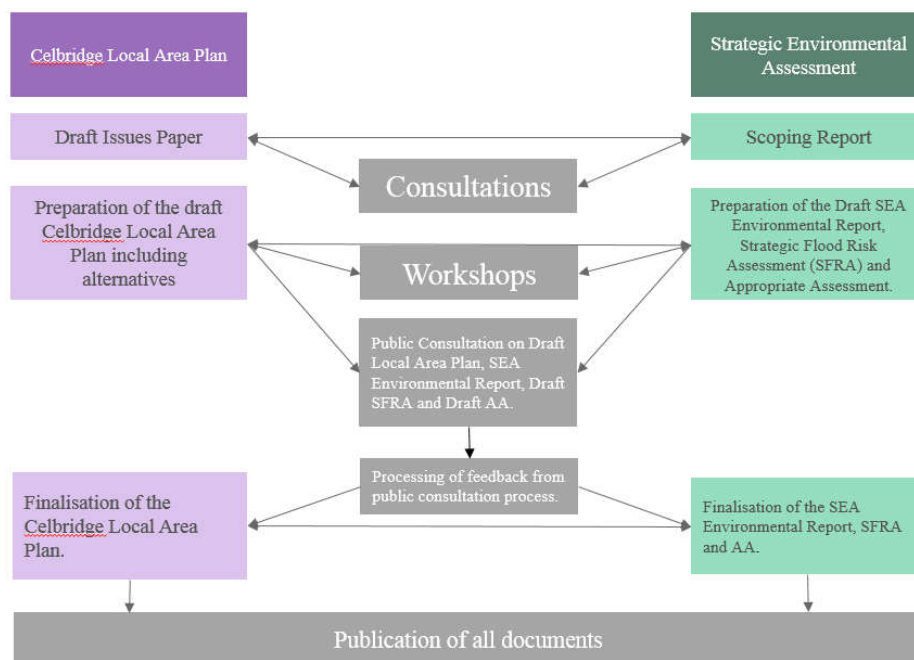


Figure 3.2 Interaction between the Celbridge LAP and SEA

The environmental assessment process was undertaken in accordance with best practice SEA principles and guidance. This included desk reviews of all of the available GIS data, specialist investigation into the likely impacts associated with the proposed Local Area Plan and recommendations for suitable mitigation measures along with monitoring.

3.6 Consultations

This SEA Environmental Report was issued to the relevant statutory stakeholders for comment. The responses received were addressed in the finalisation of the Environmental Report. An outline of the responses received is included in the SEA Statement.

Discussion and meetings with representatives of Kildare County Council also took place throughout the SEA process.

3.7 Consideration of Alternatives

The SEA Directive requires that reasonable alternatives be assessed in order to demonstrate how the preferred strategy performs against other forms of action. Alternatives must be developed, described and assessed within the SEA process, with the results presented in the Environmental Report.

Section 7 of this Environmental Report discusses the consideration of alternatives.

3.8 Technical Difficulties Encountered

No major difficulties were encountered during the preparation of this Environmental Report.

4. Current State of the Environment

Note all figures referenced from this point onwards are included in **Appendix A**.

4.1 Introduction

Celbridge town is located in north county Kildare 20 km from Dublin. The town is located on the River Liffey at the junction of the R403 and R405 roads. The M4 Motorway is accessible from the north of the town at the Celbridge West Interchange. The location of Celbridge Town is shown in **Figure 1**. The draft Celbridge Local Area Plan 2017-2023 boundary for which this SEA has been undertaken is shown in **Figure 2**.

The town of Celbridge has early Christian origins but later became an Anglo Norman borough. The town developed quite rapidly during the 18th century around Castletown Estate. As with many estate towns, development occurred along the Main Street at the principal entrance to the estate.

Celbridge retains much of the character of an estate town, with the Main Street still the focus of the town and Castletown gates, the mill complex and the bridge over the Liffey remaining important visual features. Notwithstanding, Celbridge has experienced a considerable degree of urbanisation and outward growth in recent years.

According to the EPA's State of the Environment Report, Ireland's environment remains in a good condition, although there are a number of key challenges in the coming years. The report identified four priority challenges for the environment, which comprise; valuing and protecting our natural environment; building a resource-efficient low-carbon economy; putting the environment at the centre of our decision making and implementing environmental legislation.

In the EPA's 2020 Vision document it is noted that pressures on the Irish environment increased significantly as a result of a decade of rapid and unprecedented economic growth. Unfortunately, these pressures have accelerated at a rate that far exceeds that observed in other EU countries.

In '2020 Vision' the EPA promotes six environmental goals which consider the principal environmental challenges facing our nation. These goals, which are highly relevant to the sustainable development of Celbridge town and environs, have a bearing on the assessment of the proposed Local Area Plan:

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

These goals are identified as a means of realising the vision of protecting and improving Ireland's environment.

4.2 Purpose of the Environmental Baseline

The assessment of the draft LAP with respect to the current environmental baseline is the principal task of this SEA process. Consequently, the baseline description must be cognisant of the local level nature of the plan and the pressures and interrelationships between environmental topics.

The environmental baseline provides an overview of the existing conditions in the Celbridge area relevant to the draft LAP and covers the following environmental topics:

- Biodiversity including Flora and Fauna.
- Population and Human Health.
- Soils and Geology.
- Water Resources.
- Air, Noise and Climate.
- Archaeological, Architectural and Cultural Heritage.
- Landscape and Visual.
- Material Assets.

In accordance with the SEA Directive, the inter-relationship between the SEA environmental topics must be taken into account. Of particular note is the interrelationship between water (quality and quantity) and biodiversity, flora and fauna, soils, human health and population. Flora and fauna is dependent on the hydrological environment (surface water and groundwater) as a habitat. Water quality is also of particular importance with regard to human health as it provides a source of drinking water and it influences agriculture and mariculture. Water is also used for leisure and recreational purposes, providing a material asset both for local populations and as an integral component of the tourism economy.

4.3 Biodiversity

The Convention on Biological Diversity defines biodiversity as “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part.” This includes sites, habitats, species and networks of importance at the international, national or local level, and which may occur within or outside the Plan area. The term biodiversity refers to more than individual species. It includes the genes they contain, the habitats and ecosystems of which they form part, and also highlights the interdependence and interconnectedness of all living things.

The main elements of biodiversity are:

- European (Natura 2000) sites (SACs and SPAs, and candidate SACs and SPAs),

- NHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries, Refuges for Fauna or Flora or sites proposed for designation,
- Undesignated sites such as proposed NHAs (pNHAs), local biodiversity areas,
- Sites and habitats that can be considered to be corridors or stepping stones for the purpose of Article 10 of the Habitats Directive,
- ‘Natural habitats and protected species’ for the purposes of the Environmental Liability Directive, including habitats and species listed under the Habitats Directive (Annex I habitats, Annex II and Annex IV species and their habitats) and Birds Directives (Annex I species and their habitats, and regularly occurring migratory birds) wherever they occur,
- Legally protected species including protected flora under the European Communities (Birds and Natural Habitats) Regulations 2011 and Wildlife Acts 1976-2000,
- Sites identified under the Bern, Ramsar and Bonn Conventions,
- Biodiversity in general including habitats important for birds, red listed and BoCCI listed species, natural and semi-natural habitat areas including wetlands, woodlands, waterbodies, etc.

A Biodiversity Action Plan was adopted by Kildare County Council for the 2009-2014 period. The purpose of this document was to provide a framework for the conservation of biodiversity and natural heritage at a local level by translating policies (national and international) and legislation into practical action which serves to raise awareness of and enhance the protection, conservation and management of County Kildare’s natural heritage. The plan was an action resulting from the County Kildare Heritage Plan 2005-2011 which is currently under review by Kildare County Council.

4.3.1 Designated Areas

Designated conservation sites in the vicinity of Celbridge are highlighted on **Figure 3**. These include the following which are in the vicinity of the study area and are of relevance to the draft LAP:

- Rye Water Valley/Carton Special Area of Conservation, (Site Code 002162);
- Grand Canal proposed Natural Heritage Area (Site code: 002104); and
- Royal Canal proposed Natural Heritage Area (Site code: 002103).

Significance of designations and a description of each of these designations are set out below.

The SAC and SPA designations can be defined as follows:

A Special Area of Conservation is a site designated under the Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora). The Directive obliges member states to designate SACs to protect and conserve habitats and species of importance in a European Union context. The Directive also lists priority habitats and species which must be conserved. Irish habitats include raised bogs, blanket bogs, turloughs, sand dunes, machair (flat sandy plains on the north and west coasts), heaths, lakes, rivers, woodlands, estuaries and sea inlets. Species which must be afforded protection include Salmon, Otter, Freshwater Pearl Mussel, Bottlenose Dolphin and Killarney Fern. The Habitats Directive has been transposed into Irish law by Ministerial Regulation. The European Communities (Natural Habitats) Regulations, 1997 set out how these sites are to be protected and managed. All SAC sites are afforded full legal protection.

A Special Protection Area is an area of European importance, designated under the Birds Directive (79/409/EEC) by reason of the bird species and populations that they support. Under the Birds Directive, each EU Member State is required to designate SPAs for natural areas that support populations of particular bird species that are rare or threatened in Europe and that require particular measures, including the designation of protected areas to conserve them.

The NHA (and pNHA) designations can be defined as follows:

Natural Heritage Areas are deemed to be of special interest containing important wildlife habitat and often contain rare or threatened species. They may also be selected on the basis of their geology or geomorphology. Examples of natural heritage areas across the country include sand dunes systems, blanket bogs and wetlands. First entered into European Law under the 1976 Wildlife Act, transposed into Irish law with the 1997 Natural Habitats Regulations (S.I. No. 94 of 1997), gaining full statutory backing in Ireland with the passing of the Wildlife (Amendment) Act 2000.

4.3.1.1 Rye Water Valley/Carton SAC

The Rye Water Valley/Carton Special Area of Conservation (SAC) (site Ref. 001398) is located approximately 1.66 km north of the Celbridge LAP boundary.

The River site was designated as an SAC for its Petrifying Springs, a habitat listed on Annex I of the E.U. Habitats Directive. The site is also designated because of the presence of species listed on Annex II of the same directive namely, Narrow-mouthed Whorl Snail Desmoulin's Whorl Snail, Salmon, and the rare, White-clawed Crayfish. The Kingfisher, a species listed on Annex 1 of the EU Birds Directive is also present at the site.

There is also a wide variety of other plant and animal life present at the site including species legally protected under the Flora (Protection) Order, 1999 namely, Hairy St. John's-wort (*Hypericum hirsutum*) and species listed on the Irish Red Data Book namely, Green Figwort (*Scrophularia umbrosa*) and Blue Fleabane (*Erigeron acer*).

4.3.1.2 Royal Canal pNHA

The Royal Canal pNHA occurs within 2km northeast of the Celbridge LAP boundary. The Royal Canal is a man-made waterway linking the River Liffey at Dublin to the River Shannon near Tarmonbarry. There is a branch line from Kilashee to Longford Town. The canal pNHA comprises the central channel and the banks on either side of it.

A number of different habitats are found within the canal boundaries - hedgerow, tall herbs, calcareous grassland, reed fringe, open water, scrub and woodland.

The ecological value of the canal lies more in the diversity of species it supports along its linear habitats than in the presence of rare species. It crosses through agricultural land and therefore provides a refuge for species threatened by modern farming methods.

The vegetation of the towpath is usually dominated by grass species. Where the canal was built through a bog, soil (usually calcareous) was brought in to make the banks. The contrast between the calcicolous species of the towpath and the calcifuge species of the bog is very striking.

Otter spraints are found along the towpath, particularly where the canal passes over a river or stream. The rare and legally protected Opposite-leaved Pondweed (Flora Protection Order 1987) is present at one site in Dublin, between Locks 4 and 5.

Tolypella intricata (a stonewort listed in the Red Data Book as being vulnerable) is also in the Royal Canal in Dublin, the only site in Ireland where it is now found.

4.3.2 Habitats

Kildare County Council commissioned “Habitat Survey and Mapping of Celbridge, Co. Kildare” which was published in February 2012. The purpose of the project was to survey, map and assess habitats within Celbridge, to identify Green Infrastructure and to raise awareness about the natural heritage of the area. The study area for surveys and mapping were defined by the development boundaries of the Celbridge Local Area Plan 2010.

Buildings and gardens were the most abundant group of habitats in Celbridge covering nearly half (48.36%) of the study area. Agricultural land including agricultural grassland and tillage accounted for 24.49% of the Celbridge study area. Amenity grassland occupies 11.64% of the study area. This group of habitats does not include the lawns of private houses, but does include public grassy spaces within estates, playing pitches and larger lawns in institutions such as Celbridge Abbey, St. John of Gods and the various primary and secondary schools.

The remainder of the habitat groups each occupy less than 16% of the total study area. Cover of woodland and scrub accounts for 9.55% of the study area. This habitat type is represented by the woodland habitats associated with Castletown Demense, Killadoon Demense, Donaghcumper House and those woodland areas fringing the River Liffey.

The findings of the habitat survey are set out in **Table 4.1** below.

Table 4.1 Abundance of habitat groups in Celbridge in hectares (ha) and as a percentage of the total area

Habitat Group	Area (ha)	Percentage
Buildings and Gardens	371.95	48.36
Intensive Agriculture	188.38	24.49
Amenity Grassland	89.55	11.64
Woodland and Scrub	73.43	9.55
Disturbed Ground	14.95	1.94
Semi-natural Grassland	2.48	2.48

Rivers and Watercourses	11.00	1.43
Wetlands, lakes and ponds	0.88	0.11
	796.20	100

4.3.3 Trees

The Tree Council of Ireland maintains a list of champion trees in Ireland i.e. the Tree Register of Ireland. These trees are among the largest of their species in terms of height, circumference or age. Some species found in Kildare are rare in Ireland, thus adding to their interest. Champion trees can also have added historical or cultural significance that may or may not be associated with their striking size or shape.

According to the Tree Register, there is a large Common Lime located at Castletown House, Celbridge which measures 26m in height and over 3.5m girth.

The Tree Register also lists an Oriental Plane located at Celbridge Abbey, Celbridge, Co. Kildare which measures 17m in height and 4.3m girth.

No notable native trees which are located in Celbridge are listed on the Tree Register.

4.3.3.1 Tree Protection Orders

Tree Preservation Orders (TPOs) may be made under Section 45 of the Local Government (Planning & Development) Act 1963 and subsequent acts. Part XIII of the Planning and Development Act 2000 sets out the provisions for TPOs. A TPO can be made if it appears to the planning authority to be desirable and appropriate in the interest of amenity or the environment. A TPO can apply to a tree, trees, group of trees or woodland. The principle effect of a TPO is to prohibit the cutting down, topping, lopping or wilful destruction of trees without the planning authority's consent. The order can also require the owner and occupier of the land subject to the order to enter into an agreement with the planning authority to ensure the proper management of the tree, trees or woodland.

There are a number of existing Tree Preservation Orders in County Kildare, however there are no existing Tree Preservation Orders in Celbridge. The closest Tree Preservation Order is located approximately 12km east of Celbridge at Clane (1987/1 OS 6"14).

4.3.4 Relevant Environmental Issues

4.3.4.1 Urban Expansion

Urban expansion has been accelerating over recent years as increased development expands into the countryside. The constant encroachment of the built environment on natural habitats will undoubtedly have an impact on natural flora, fauna and biodiversity.

4.3.4.2 Water Dependant Habitats

In general, water treatment and wastewater discharges, agricultural runoff, leachate from contaminated sites, urban runoff and unlicensed industrial discharges all have significant negative impacts on water quality which results in subsequent impacts to biodiversity to both aquatic ecosystems as well as neighbouring terrestrial ecosystems.

In the vicinity of Celbridge the water dependant ecosystems of the River Liffey and its tributaries (including the Crippaun (known locally as the Toni River), Shinkeen, Coolfitch, Hazlehatch, Kilwoghan, Donaghcumper, the Ballygoran, the Ballymakealy Upper Stream, Simmonstown, Castletown, Loughlinstown and the Toolestown Stream) rely on good water quality. The Liffey and several of its tributaries are exceptional in the area in supporting Atlantic salmon (*Salmo salar*, listed under Annex II and V of the EU Habitats Directive) and Sea trout (*Salmo trutta*) in addition to resident Brown trout (*Salmo trutta*) populations. The Donacomper River supports a significant population of Brown trout and provides spawning habitat for a population of Atlantic salmon. IFI data also highlights the presence of lamprey and white clawed crayfish (both Annex II species) in the Donacomper River. The Shinkeen River supports a population of resident Brown trout and migratory Sea trout.

Any impacts to these surface waters could lead to a deterioration of water quality and a consequent impact to their ecosystems.

Celbridge and its environs are within the Liffey and Dublin Bay catchment which is classified as a nutrient sensitive water body. According to the Eastern River Basin District Authority (ERBDA), the River Liffey is at risk from diffuse agricultural pollution.

Unrestrained development can have a direct impact on water dependent and rare habitats. Abstractions for potable water can result in a direct impact on rivers and lakes and their associated flora and fauna and on groundwater dependent habitats.

4.3.4.3 Invasive Species

Invasive non-native plant and animal species are one of the greatest threats to biodiversity. Invasive alien species negatively impact biodiversity through competition, herbivory, predation, habitat alteration and introduction of parasites or pathogens and poses a risk to the genetic integrity of our native species.

Terrestrial and aquatic habitats can be significantly negatively impacted, resulting in severe damage to conservation and economic interests, such as agriculture, fisheries, forestry and various recreational activities.

4.4 Population and Human Health

4.4.1 Population

According to Census 2011¹ the population of Celbridge is 19,537 persons.

¹ Central Statistics Office. Census 2011, www.cso.ie

Census data from the 2002, 2006 and 2011 Census is presented in **Table 4.2**. Data for this table was extracted from Table 5 of the respective Census' entitled "Population of towns ordered by county and size" and Volume 1, Table 6 entitled "Population of each province, county, city, urban area, rural area and electoral division."

Table 4.2 Census Population of Celbridge Town 2002-2011

Population	Electoral Division	2002	2006	2011	change 2006-2011
	ED 034 Celbridge (pt.)	14,333	14,528	14,914	+2.7%
	ED 037 Donaghcumper (pt.)	3,118	2,734	4,623	+69.1%
TOTAL (Celbridge including Castletown)		17,451	17,262	19,537	+13.2%

Between 2006 and 2011 there was a 13.2% increase in the population of Celbridge Town.

It is noted that at the time of publication (December 2016) preliminary census results from the 2016 Census were available. This data was not available for Celbridge Town and so cannot be compared with the data in **Table 4.2** above.

4.4.2 Human Health

The concept of health has been defined by the World Health Organisation as "... a state of complete physical, psychological and social well-being, and not simply the absence of disease or infirmity." Health is influenced by many factors in the social and built environment including housing, employment status, education, transport and access to fresh food and resources, as well as the impacts of air quality, water quality, flooding and access to green space.

Good planning can play an important role in reducing health inequalities. The World Health Organisation's Commission on the Social Determinants of Health (CSDH) states governments should 'Ensure urban planning promotes healthy and safe behaviours equitably, through investment in active transport, retail planning to manage access to unhealthy foods, and through good environmental design and regulatory controls, including control of the number of alcohol outlets'.

Given the strong links between income and health, it is recognised that the sustainability of current and future economic activity is an important element in protecting and promoting population health. However emphasising economic growth without due regard for social and environmental consequences of such growth can have negative impacts on health both for the population as a whole and for groups within the population.

Even within areas of economic development, job creation does not necessarily 'trickle down' to job opportunities for the long-term unemployed, and is neither a sufficient, nor necessary, condition for reducing long-term unemployment. Thus economic development needs to be targeted, geographically and within population groups to ensure that it reduces and does not exacerbate social inequalities.

Cognisance must also be paid to environmental issues and sustainability endeavours to protect human health as the local economy develops. While employment is generally good for health, there can be negative impacts, usually related to the quality of the working environment and type of work undertaken. The groups which face the highest risk of experiencing the adverse effects of unemployment appear to be middle-aged men, youths who have recently left school, the economically marginal such as women attempting re-entry to the labour force and children in families in which the primary earner is unemployed.

The level of green space and access to the natural environment is extremely important for the populace health. The health and wellbeing of individuals is greatly affected by the communities in which they live and the nature of their physical environment. A key element of sustainable communities is access to space as environments which lack public gathering places can encourage sedentary living habits. Open space provision can improve levels of exercise in a community which can impact on health and can improve social interaction and community activities which can contribute to reducing stress-related problems.

4.4.3 Relevant Environmental Issues

4.4.3.1 Population

Population change is a complex topic. High growth has occurred in some areas of the GDA while falling occupancy rates has occurred elsewhere. Major changes have taken place to the housing market given our economic circumstances and trends such as a reduction in housing completions and rising vacancy rates are evident. Predicting accurate population forecasts impacts on future housing demand and issues such as age profiles, excess in housing stock and occupancy rates and migration must all be taken into account. Future housing demand and all of the services required to sustainably meet demand (e.g. health and sanitation services including waste collection, wastewater treatment and potable water supply, electricity, gas, telecommunications, transportation, education and amenity access) needs to be addressed in a planned manner.

4.4.3.2 Human Health

There are a number of interlinking areas which are relevant to the Celbridge Local Area Plan, for example, the development of sustainable transport and sustainable communities. Policies relating to these areas will impact on human health and quality of life.

The following issues are relevant to the plan:

- Increase in demand for water supply, waste water treatment and other infrastructural and community services due to economic growth.

- Impact of population growth on sensitive habitats and landscape in terms of development and recreational pressures.
- Impacts from noise and air pollution as a result of development and transport.
- Effects on water quality due to new emissions.
- Promotion of walking and cycling via integrated land use and transport policy.
- Consideration of future SEVESO sites.
- Housing needs for all sectors of the community.
- Community infrastructure needs including community facilities.
- Educational needs for both primary and secondary level education.
- Provision of open spaces within residential areas and areas throughout the town.
- Health/medical facility requirements for the town for the future.
- Preservation of public rights of way to allow public access to amenity.
- Adequacy of public/civil space areas.
- Provision for retail and commercial services.
- Vitality and viability of the town centre.
- Ease of access to the town centre.

4.5 Soils and Geology

Geologically the area around Celbridge and its environs is dominated by carboniferous dark grey to black limestone and shale (Calp). There is one bedrock type in the study area. The subsoils in Celbridge consist mainly of limestone sands and gravels overlain by surface water gleys and grey brown podzolic soils. Developed areas are underlain by made ground.

Please refer to **Figures 4 and 5** for details of the soils and bedrock geology in the vicinity of the study area.

Please refer to **Figure 6** for Geological Heritage in the vicinity of Celbridge. Two sites of Geological Heritage Importance have been identified in the Celbridge area. St. Patrick's Well (Site Code KE020) is located approximately 5km to the South West of Celbridge. The well is located in the townland of Ardraa Lower at the base of St. Patricks Hill. It is an example of the warm spring province in the Kildare-Meath border area and is in good condition. The Liffey Oxbow (Site Code KE013) is situated 3km southwest of Celbridge. The site displays both an existing oxbow lake as well as a remnant oxbow lake, which are within 300m of one another.

4.5.1 Relevant Environmental Issues

The degradation of soil fertility and threats to conservation of high-quality soils through the loss of tree/vegetation cover and through urbanisation has consequences for the sustainable development of rural activities as well as the sequestration of carbon.

Global warming modelling for Ireland predicts a change to wetter winters and drier summers with a likely increase in the frequency of high intensity rainfall events. These rainfall events can have detrimental effects for slope stability and landslides and their resultant impacts on water management activities.

Eroded soil washed into rivers has the potential to increase nutrient content leading to alteration of surface water nutrient balances which can further lead to the eutrophication

of rivers and lakes. If contaminated soils are eroded and transported to watercourses, aquatic plants and animals can be severely damaged.

Geotechnical extraction activities, when not managed in an environmentally sustainable fashion results in further pressure on the hydrological environment.

4.6 Water Resources

This section provides a description of the existing hydrological and hydrogeological environment. This section also provides some information on the Strategic Flood Risk Assessment prepared for the Plan.

The hydrological environment relates to all surface water catchments whereas the hydrogeological environment refers to groundwater issues.

4.6.1 Hydrology

The plan area is located in the Liffey Catchment in Hydrometric Area 09. Celbridge Town is located on the main Liffey Channel in the Lower Liffey Catchment. The river rises in the Wicklow Mountains and flows through the study area at Celbridge towards Leixlip from where it flows in an easterly direction to Islandbridge and discharges to Dublin Bay.

Surface water bodies within the plan area include the River Liffey and its tributaries (including the Crippaun (known locally as the Toni River), Shinkeen, Coolfitch, Hazlehatch, Kilwoghan, Donaghcumper, the Ballygoran, the Ballymakealy Upper Stream, Simmonstown, Castletown, Loughlinstown and the Toolestown Stream).

Two tributaries of the Liffey, the Toolestown stream and the Ballygoran stream flow into the Local Area Plan Boundary. The Toolestown stream flows through the centre of the of Celbridge town in an east west direction. The Ballygoran stream flows through the northern portion of the Local Area Plan Boundary, in an east west direction. Surface water features are presented in **Figure 7**.

Hydrometric Area 09 falls within the Eastern River Basin District. The River Basin Districts were delineated through the progression of the Water Framework Directive (WFD) which aims to promote the sustainable use of water resources across Europe and achieve good status water quality in all water bodies ranging from rivers, lakes, groundwater, transitional and coastal marine waters.

Consequently, the Council must be cognisant of the principles and objectives of the river basin management plan² and its associated strategic environmental assessments³.

Preparation of the National River Basins Management Plans 2015-2021 is now underway. For this cycle the Eastern, South Eastern, South Western, Western and Shannon River Basin Districts will be merged to form one national River Basin District. Consultation is due to take place regarding the status of waters, proposed environmental objectives and proposed measures from December 2016- June 2017.

² Eastern River Basin District River Basin Management Plan 2009 - 2015

³ Chapter 11 of the River Basin Management Plan 2009-2015

4.6.2 Water Quality

4.6.3 Water Framework Directive

As part of the implementation of the EU Water Framework Directive 2000/60/EC (WFD) a baseline risk assessment was completed of the water bodies within each River Basin District. These assessments were made using water pollution indicators, point and diffuse pollution sources, water abstractions and detail on commercial activities. The risk assessment assigned a water quality status to each waterbody and indicated a risk status namely, whether the water body would meet the criteria for “good status” or would be considered “at risk” of not meeting the standards by 2015. However, extended timescales have been set for certain waters due to technical, economic, environmental or recovery constraints.

The River Liffey and its tributaries, which flow through the Celbridge LAP area could potentially be impacted by any proposed development. Information on quality status and WFD risk are outlined in **Table 4.3**. Please refer to **Figures 8-10** for Surface Waterbodies Risk Status, Water Quality Status and Protected Areas Drinking Water Status as assigned to water bodies within and adjacent to the plan area under the Water Framework Directive.

Table 4.3 WFD Waterbody Status, Risk and Objectives

Waterbody Code	Waterbody Name	Current Status	Current Risk	Overall Objective
IE_EA_09_1870_4	Liffey Lower 4	Moderate	1a - At Risk	Restore good status by 2027

Water Quality

As part of the monitoring of water bodies for the implementation of the WFD, the biological, physical and chemical properties of water are routinely assessed. The assessments are predominately conducted by the EPA and local authorities, and complemented by other government bodies including the Central Fisheries Board and the Marine Institute.

In Kildare, surface water quality monitoring is conducted at recorded sampling locations by local authority staff. The data is supplied to the EPA for compilation. The data gathered for the biological sampling is used to determine the EPA biotic index for the water body. The corresponding biotic index is used to describe the water quality as is shown in **Table 4.4**. EPA data for the River Liffey from 1991 to 2013 is summarised in **Table 4.5**.

Table 4.4 EPA Water Quality Indices

Water Quality	EPA Biotic Index
Unpolluted	4-5 or 5

Slightly polluted	3-4 or 4
Moderately polluted	2-3 or 3
Seriously polluted	1, 1-2 or 2

Table 4.5 Water Quality Status of the River Liffey– Q Ratings

Station No.'s	1991	1995	1998	2000	2005	2007	2010	2013
0100	4-5	4-5	4-5	5	5	4-5	4-5	4-5
0200	4-5	4-5	4	5	4	4	3-4	4
0250	5	5	5	4	4	3-4	4-5	4-5
0400	4	2-3*	3-4	3-4*	3-4	3-4	3-4	3-4
0500	4	4	3-4*	4	4	4	4	3-4
0600	4-5	4	4-5	4-5	3-4	4	4	4
0700	4-5	4	4-5	4-5	4	4	4	4
0800	4-5	-	-	-	-	-	-	-
0850	-	4	4	4-5	4	4	4	4
0900	4	-	-	-	-	-	-	-
1000	4	4	4-5	4	4	4	4	4
1050	4	4	4	4	4	4	4	-
1100	4-5	-	-	-	-	-	-	-
1200	3-4	3-4	2	4	4	3-4	3-4	3-4
1400	3-4	3-4	3	-	-	-	-	-
1500	3-4	3	3-4	4	3-4	3-4	4	4
1600	3-4	3-4	3-4	4	3-4	3-4	4	4

Station No.'s	1991	1995	1998	2000	2005	2007	2010	2013
1610	-	1	3-4	4	-	-	-	-
1700	3	3-4	3-4	4	4	3-4	4	4
1900	3-4	-	3	3-4*	3	3	3	3
2000	3	-	-	-	-	-	-	-
2100	2-3	2-3	2-3	3	3	3-4	3-4	3-4
2327	-	-	-	3	-	-	-	-
2330	-	-	-	-	3	-	-	-
2360	-	-	-	-	-	3-4	3-4	3-4
2400	3	-	-	-	-	-	-	-

Ecological conditions remain satisfactory at the majority (10) of the sixteen stations surveyed on the River Liffey in 2013. The Monitoring Station 1700 as highlighted in **Table 4.5** above ('Br in Celbridge') is located within the proposed Local Area Plan boundary. Water quality status at this location was recorded as being 'slightly polluted' in 2013.

4.6.4 Hydrogeology

The plan area is underlain by a bedrock aquifer which is classified by the GSI as a 'Locally Important' (LI) aquifer which is moderately productive only in local zones.

Groundwater vulnerability in Celbridge Town and the vicinity is predominantly high with pockets of extreme vulnerability and areas where rock is at or near the surface or is karst.

Groundwater features and source protection zones in the vicinity of the plan area are shown in **Figure 11**. Groundwater vulnerability in the vicinity of the plan area is shown in **Figure 12**. WFD Groundwater risk and status in the vicinity of the plan area is shown in **Figure 13** and **Figure 14**.

4.6.5 Flooding

The OPW is currently leading development of Catchment Flood Risk Assessment and Management (CFRAM) Studies. The aim of these studies is to assess flood risk, through the identification of flood hazard areas and the associated impacts of flooding. The draft Eastern CFRAM Flood Risk Management Plan (FRMP) was published in September 2016. Celbridge has been identified as an Area for Further Assessment (AFA) within the Eastern CFRAM Study. The Eastern CFRAM Flood Risk Review recognised the need for the Celbridge Area to be identified as an AFA based on evidence from historical flood events and the

extents of the flood risk determined during the OPW Preliminary Flood Risk Assessment (PFRA) Study.

An area specific Strategic Flood Risk Assessment (SFRA) was carried out to guide the future development of Celbridge as part of the Local Area Plan Review and has also informed the SEA process.

The main sources of flooding in the two are:

- Fluvial: Flooding which occurs when a river overtops its banks due to a blockage in the channel or the channel capacity is exceeded.
- Pluvial: Flooding which occurs when overland flow cannot infiltrate into the ground, when drainage systems exceed their capacity or are blocked and when water cannot discharge due to a high water level in the receiving watercourse.

Recurring historical flooding along the Crippaun (Toni) River resulted in flood alleviation works being undertaken in 2009.

The SFRA provided an assessment of all types of flood risk within Celbridge to identify how flood risk can be reduced as part of the LAP.

The draft Celbridge LAP incorporates flood risk management objectives from the following documents:

- Kildare County Development Plan 2017-2023;
- Existing Celbridge Local Area Plan 2010-2016;
- Draft Eastern CFRAM FRMP; and
- The SFRA of the Celbridge Local Area Plan 2017-2023.

4.6.6 Relevant Environmental Issues

There are a range of existing pressures on the water resources of the region. Many of these pressures apply to biodiversity, flora and fauna, soils and geology, land use and landscape as well as water. In general these pressures apply directly to quality, quantity and supply and demand of water resources with indirect pressure on the other environmental features.

Modification

Physical modifications have a direct impact on surface water systems through the alteration of habitats, and by indirectly affecting natural processes through the alteration of ecosystems, by reducing their diversity, distribution and population. Land use practices such as agriculture, forestry and urban expansion can have an indirect effect, manipulating the extent of water draining from the land, which can lead to an increased flood risk to properties and development.

Discharges

Inadequately treated effluents and spills or leakage from foul water sewer systems networks can lead to the pollution of the receiving waters. These pollutants can lead to a deterioration in water quality with subsequent downstream uses being impacted negatively e.g. water dependant ecosystems, potable water supplies, industrial or agricultural abstraction, fishing etc. Current estimates for the GDA indicate that the nutrient input into surface waters from direct industrial discharges produce approximately 60% of the yearly phosphorus load with the remainder arising from diffuse sources such as agriculture.

Houses and businesses not connected to public foul water collection and treatment systems rely mainly on on-site systems. If these systems fail it can lead to accidental discharges to surface water and / or groundwater systems. Provision of public sewerage systems, especially ahead of new development, can be logistically and financially challenging.

Waste disposal sites (including old or historical un-lined landfills), quarries, industrial lands etc. can produce direct discharges to both surface and groundwaters.

According to an EPA 2005 report there was evidence of significant unauthorised landfilling of commercial and industrial waste and construction and demolition waste in the GDA (predominantly Wicklow but also Kildare and Meath) in the period between 1997 and 2002. However, there is no evidence of any such illegal landfill sites in the Celbridge and Castletown area.

Extraction

The lowering of water tables through groundwater extraction whether for drinking water, industrial use or through construction practices can cause problems in the context of the hydrological regime of groundwater dependant sites. Construction activities in particular can lead to the mobilisation of contaminants and have the potential to significantly impact groundwater and subsequently surface water quality.

Climate Change

The effect of climate change on the hydrological regime of the planet is difficult to predict, even more so for a small region; however, there is the potential for heavier and prolonged rainstorms to cause more flash flooding, which can lead to an increase in diffuse pollution loads from soil runoff and increasing demand for flood alleviation, control and relief schemes. Conversely, summer droughts are also considered likely and recent research has indicated that the effects of climate change in Ireland will have serious consequences for water resources, resulting in a potential 40% reduction in drinking water supplies. Also, temperature fluctuations may give invasive alien water species a competitive advantage and alter aquatic ecosystems further.

4.7 Air, Noise and Climate

4.7.1 Air Quality

The Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011) establish the limit values in Ireland for Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂), and oxides of nitrogen (NO_x), Particulate Matter (PM₁₀ and PM_{2.5}), lead, benzene and Carbon Monoxide (CO) with alert

threshold values specified for SO₂ and NO₂. These regulations are based on EU Directive 2008/50/EC.

In order to comply with these regulations, the EPA measures the levels of a number of atmospheric pollutants throughout Ireland. For the purposes of monitoring in Ireland, four zones are defined in the Regulations, as follows:

In order to comply with these regulations, the EPA measures the levels of a number of atmospheric pollutants throughout Ireland. For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Standards Regulations (2011). The areas defined in each zone are:

Zone A: Dublin Conurbation.

The Restricted Area of Dublin, as specified in the First Schedule to the Air Pollution Act 1987 (Marketing, Sale and Distribution of Fuels) Regulations 1998 to 2003.

Zone B: Cork Conurbation.

The Restricted Area of Cork, as specified in the First Schedule to the Air Pollution Act 1987 (Marketing, Sale and Distribution of Fuels) Regulations 1998 to 2003.

Zone C: Other Cities and Large Towns. This includes Naas (comprising Naas Urban), Newbridge and environs (comprising Droichead Nua, Droichead Nua (Newbridge) Urban; Droichead Nua, Droichead Nua (Newbridge) Rural; and Morristownbiller) and Celbridge and environs (comprising Celbridge; and Donaghcumper).

Zone D: Rural Ireland.

Remainder of the State excluding Agglomeration A, and Zones B and C.

The study area forms part of Zone C. **Table 4.6** provides Zone C data published by the EPA over the previous three years where data is available. All measured concentrations are in compliance with air quality standards.

Table 4.6: EPA monitoring results for Zone C

Pollutant	Annual mean 2014 $\mu\text{g}/\text{m}^3$	Annual mean 2013 $\mu\text{g}/\text{m}^3$	Annual mean 2012 $\mu\text{g}/\text{m}^3$	Average annual mean $\mu\text{g}/\text{m}^3$ (2012-2014)	Air Quality Standard $\mu\text{g}/\text{m}^3$
NO ₂	5	5	4	4.6	40
NO _x	8	9	7	8	30
SO ₂	4	3	3	3.3	20
PM ₁₀	21	19	17.3	19.1	40
PM _{2.5}	12	12	12	12	20

Pollutant	Annual mean 2014 $\mu\text{g}/\text{m}^3$	Annual mean 2013 $\mu\text{g}/\text{m}^3$	Annual mean 2012 $\mu\text{g}/\text{m}^3$	Average annual mean $\mu\text{g}/\text{m}^3$ (2012-2014)	Air Quality Standard $\mu\text{g}/\text{m}^3$
Benzene	0.1	0.5	0.6	0.4	5

Pollution Sources

Sources of emissions to air in the region result from plant and industry and from residential home heating and solid fuel burning. Emissions from these sources would mainly influence background concentrations of NO_2 and $\text{PM}_{10}/\text{PM}_{2.5}$ in the study area.

There are no current EPA licenced facilities within the plan area. Intel Ireland Limited and Hewlett Packard (Manufacturing) Ltd operate nearby in Leixlip. There are no quarries operating in the study area.

Radon

The EPA carries out monitoring of radon gas in homes and schools in Ireland. Radon comes from the ground and may accumulate in buildings to unacceptable levels. Long-term exposure to the radioactive gas can lead to lung cancer. Based on radon maps provided by the DoELG in 2002⁴ the estimated percentage of homes above the reference level ($200 \text{ Bq}/\text{m}^3$) in Celbridge is between 1 and 5%.

4.7.2 Noise

The Environmental Noise Directive (END) (2002/49/EC) requires that action is taken by each member state, with a view to preventing and reducing environmental noise where necessary and particularly where exposure levels can induce harmful effects on human health and to preserving environmental acoustic quality where it is good. The relevant local authorities have been designated by the Environmental Noise Regulations, S.I. Regulations No. 140 of 2006, as the bodies charged with development and making of 'Noise Action Plans'.

Kildare County Council prepared the second Noise Action Plan in 2013. This Noise Action Plan primarily considers the long term environmental noise impact from road and rail traffic noise sources, and sets out an approach to review noise impact levels near to the major sources assessed during the strategic noise mapping in 2012 with a view to identifying locations where noise reduction is deemed necessary in the first instance.

Under the requirements of the legislation the Council is responsible for noise action planning relating only to the major roads and railways passing through their functional area. There are no agglomerations subject to noise mapping or action planning within their jurisdiction.

The noise action plan spans a five year time scale and will be due for review in 2018.

⁴ Department of the Environment and Local Government, 2002. Radon in Existing Buildings – Corrective Options.

Iarnród Éireann and the Railway Procurement Agency identified one section of major railway within the county on the Kildare line. This is not located within the vicinity of the proposed Local Area Plan boundary.

The current action plan addressed a number of sections of major roadway which qualified for noise mapping and, as such, were subject to consideration for action planning. The R403, which is located within the proposed Local Area Plan boundary was among the regional roads classified as major, either in total or in part. In addition, the M4 motorway which is located just outside the proposed Local Area Plan boundary to the north was classified as major and considered for action planning.

Certain locations and building uses are considered to be more sensitive to environmental noise pollution than others. Following consideration it was determined that for the purpose of the assessment of potential noise mitigation measures under the Action Plan the following were considered noise sensitive locations:

- Residential properties;
- Hospitals; and
- Schools.

There are no hospitals or schools within the proposed Local Area Plan boundary which have been identified as noise sensitive arising from road traffic.

There is likely to be minimal exposure to existing residences and sensitive receptors, due mainly to measures incorporated into the Environmental Impact Assessment and Route Selection stages of the motorway and regional road planning process.

It is noteworthy that local authorities and the EPA have the power to maintain noise limits through the control of noise emissions from industry (IPC licence limits) or through the inclusion of noise limits in planning permissions. Local Authorities can also control community noise nuisance under the power of the EPA Act (No. 7 of 1992).

4.7.3 Climate

The existing climate for Celbridge corresponds with the general climatic conditions for the whole country which is dominated by the Atlantic Ocean and its air and oceanic currents. Consequently, the region does not suffer from extremes of temperature. According to Met Éireann, average annual temperature is about 9°C. Mean annual wind speed varies between about 4 m/sec in the east midlands and 7 m/sec in the northwest. Average rainfall varies between about 800 and 2,800 mm. Rainfall accumulation tends to be highest in winter and lowest in early summer.

According to the United Nations Integrated Panel on Climate Change, in line with the global picture, Ireland's average temperature has increased by about 0.7°C over the last 100 years, and the rate of increase has been higher in the last couple of decades. The increase has not been uniform over time, with a warming period from 1910 to the 1940s, followed by a cooling period up to the 1960s. The current warming period commenced around 1980. 2006 was the warmest year on record at both Malin Head and Phoenix Park, which have observations dating back over 100 years, and also at Casement Aerodrome, Kilkenny

and Rosslare. Ten of the fifteen warmest years in the last century have occurred since 1990. In the last 100 years, 2006 was the second warmest year, 1945 being slightly warmer, and the last 10 years have been the warmest decade. Whilst we can be less categorical about wind speeds, there is some evidence of a reduction in annual average wind speeds, with a corresponding decrease in the frequency of high wind speeds and gusts. Increases in total annual rainfall in parts of the West and North have been observed, with some increase in the number of days with heavier rain but there is no clear pattern of change in other areas.

While the national scale of potential change is evident, translating the potential effects of climate change to a region is a process of inference on what will happen to Ireland at large being reduced to a regional scale. Temperatures in Ireland are predicted to increase by 1.25-1.5°C by 2040 compared to 1961 to 2000.

Rainfall is expected to increase in winter by about 15% and summer projections range from no change to a 20% decrease, potentially along the east coast of the country.

Studies have shown that extreme rainfall events associated with climate change show more marked changes with more events occurring in autumn and a 20% increase in 2-day extreme rain amounts, especially in northern areas. Taking the projected precipitation changes into account, there will be the potential for a significant increase in the number of extreme discharge events and a slight increase in their intensity, leading to an increased probability of flooding in the future.

The potential rise in global temperature might affect the intensity and frequency of storms in the North Atlantic. As a consequence of stormy weather there exists the potential for flash flooding and erosion which would affect a wide range of ecosystems and economic sectors.

Climate Change Targets

In December 2008, the EU Climate Change and Renewable Energy Package set out a number of commitments.

This package commits to reduce the EU's Greenhouse Gas (GHG) emissions from non-Emission Trading Scheme (ETS) sectors (such as transport, agriculture, residential and waste) by 20% on 2005 levels by 2020 or by a more ambitious 30% in the event of a comprehensive global agreement.

As part of the effort-sharing proposal of this package, Ireland is one of the countries facing the highest target of a 20% reduction on 2005 levels for non-ETS sectors. This will result in a limit of approximately 38 Mt CO₂ equivalent for Ireland's non-ETS emissions in 2020, together with annual binding limits for each year from 2013 to 2020.

In October 2014, EU leaders agreed a 2030 policy framework to reduce greenhouse gas emissions by at least 40% compared to a 1990 baseline. No agreement on the contribution of individual EU Member states has yet been reached.

The Climate Action and Low Carbon Development Act was published by government in January 2015. The Act sets out the national objective of transitioning to a low carbon, climate resilient and environmentally sustainable economy in the period up to 2050.

In March 2016, the EPA reported that Ireland is unlikely to meet 2020 EU greenhouse gas targets for all sectors including transport. Current projections indicate that Ireland will be 6-11% below 2005 levels by 2020 against the target of 20%.

4.7.4 Relevant Environmental Issues

Air

Currently there are no significant concerns with regard to air quality. There are likely to be slightly elevated levels of vehicle emissions within the urban area of Celbridge however, this is the same for all urban areas. Dust and PM₁₀ can be an issue locally during construction and operation.

A recent EPA report⁵ stated that emissions from cars (particulate matter and nitrogen oxides) are a major health concern and a climate change concern. However, the prospects for compliance with targets under the EU National Emissions Ceilings Directive⁶ are more positive. With the exception of NO_x emissions, emissions of acidifying gases are expected to achieve prescribed target emission levels within the next few years. NO_x emissions are too expected to decline but are likely to remain considerably above the target limit.

Noise

Potential future noise mapping must be taken into account during the development of the plan. Consideration will need to be given to the following scenarios:

Bringing people to noise through the zoning of land for new housing, schools etc. developments near to existing road noise.

Bringing noise to people through the provision of new or altered roads, industrial sites or commercial developments which would alter the noise environment in the vicinity of noise sensitive locations.

Climate

As previously mentioned in the Water Resources Section, climate change will have an impact on the region's water resources and must be taken into account in all aspects of sustainable planning.

Further, increased rainfall intensity and stormy weather increases the potential for flash flooding and erosion which would affect a wide range of ecosystems and economic sectors.

⁵ EPA, 2012. Ireland's Environment 2012.

⁶ Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants

4.8 Archaeological, Architectural and Cultural Heritage

4.8.1 Baseline

The urban and rural areas of County Kildare contain a wealth of architectural and archaeological heritage. This comprises country houses and demesnes, planned towns, vernacular structures, industrial heritage, ecclesiastical architecture and a considerable amount of features of interest including stone walls and street furniture. Within this great variety of building types and uses are structures of architectural heritage significance and distinctive character that are deemed worthy of protection.

Built Heritage for Celbridge is addressed in this report under the following headings:

- Archaeological Heritage.
- Architectural Heritage.
- Vernacular Heritage.

4.8.2 Archaeological Heritage

A number of towns in Ireland have been assigned zones of archaeological potential by the National Monuments Section of the Department of Arts, Heritage and the Gaeltacht (DAHG). These zones extend around a towns core to protect its significant archaeological heritage.

The town of Celbridge has been assigned a designated zone of archaeological potential which includes most of the town historic core namely Main Street, Church Road, part of the Dublin Road (R405) and part of Patrick Street (refer to **Figure 15** for the extent of the zone).

A database of archaeological heritage is maintained on the 'Record of Monuments and Places' which was established under Section 12 of the National Monuments (Amendment) Act, 1994 (No. 17 of 1994). Structures, features, objects or sites listed in this Record are known as Recorded Monuments.

The town of Celbridge itself is a Recorded Monument within which there are a number of archaeological sites and monuments. The recorded monuments within the Celbridge LAP boundary are set out in **Table 4.7** below. These are depicted in **Figure 15**.

Table 4.7 Recorded Monuments within and adjacent to Celbridge Development Plan boundary

Reference	Location (Townland)	Description
KD011-011---	Parsonstown (Celbridge ED)/ Coneyburrow (Donaghcumper ED)/St. Wolstans	Bridge Site
KD011-012001-	Castletown/Celbridge/Celbridge Abbey (Celbridge ED)/Oakleypark/ Donaghcumper	Town

KD011-012004	Oakleypark	Ecclesiastical enclosure
KD011-012005	Oakleypark	Church
KD011-012006	Oakleypark	Graveyard
KD011-013---	Donaghcumper	Church
KD011-013001	Donaghcumper	Graveyard
KD011-014---	Wolstans	Priory St.
KD011-016	Simmonstown	Castle
KD011-019---	Newtown (Donaghcumper ED)	Tower House Site
KD011-023	Castletown	Castle – Tower house
KD011-026---	Celbridge Abbey (Celbridge ED)	Mansion
KD011-028---	St. Wolstans	Mansion
KD011-029	Simmonstown	Enclosure
KD011-030	Simmonstown	Enclosure
KD011-037	Newtown (Donaghcumper ED)	Mill
KD011-042001	Castletown	Kiln – corn drying
KD011-057	Kilmacredock Upper	Kiln – corn drying
KD011-063	Simmonstown	Enclosure
KD011-060006-	Castletown	Pit burial

In addition, the DAHG excavations database contains a number (~31) of Irish Excavation Reports for Celbridge. This database contains summary accounts of all the excavations carried out in Ireland (North and South) from 1987 to 2008. This further illustrates the extent of archaeological heritage in the area.

Any person intending to carry out works at or in relation to a Recorded Monument, or within the zone of Archaeological potential, must give the National Monuments Section of the DAHG two months' notice in writing.

4.8.3 Architectural Heritage

Celbridge also possesses a diverse and rich architectural heritage that forms an integral part of the town. In 1999 the Government launched a package of measures aimed at protecting our built heritage.

At the heart of the system is a statutory requirement that the protection of buildings of artistic, architectural, historical, cultural, archaeological, scientific, technical or social interest be a mandatory objective of each local authority's Development Plan. These buildings and structures are compiled on a register known as the 'Record of Protected Structures' (RPS).

Protected Structures listed on the RPS for the Celbridge LAP are listed in **Table 4.8** and depicted in **Figure 16**.

Table 4.8: Protected Structures in and around Celbridge

RPS No	NIAH Ref	Structure and Location	Description
B11-02		Donaghcumper Medieval Church Ruins, Donaghcumper	Medieval Church
B11-04		St. Wolstan's Abbey, St. Wolstan's	Abbey
B11-11		St. Wolstan's House, St. Wolstan's	House
B11-13		Castletown House, Temple, Batty Langley Lodge, Entrance Gates and avenue (and interiors), Castletown	House
B11-14		Castletown Walled Garden and pedimented arch and nearby temple, Castletown	Walled Garden and pedimented arch and nearby temple
B11-22 (old ref B04-26)	11901104	Former Collegiate School (Celbridge Manor Hotel), Clane Road, Celbridge	School (former)
B11-23	11805062	Kildrought House, Main Street, Celbridge	House
B11-24	11805074	Celbridge Abbey, Clane Road, Celbridge	Monastery
B11-24(a)	11805075	Celbridge Abbey, Clane Road, Celbridge	Gates/railings/walls
B11-24(b)	11805076	Celbridge Abbey, Clane Road, Celbridge	Gates/railings/walls
B11-24(c)	11805077	Celbridge Abbey, Clane Road, Celbridge	Foot Bridge
B11-26	11805061	Francis & Margaret Finlay, Dublin Road, Donaghcumper	House
B11-27	11805035	Main Street, Celbridge	House
B11-34	11805044	Oakley Park, Celbridge	House
B11-35	11805045	Celbridge Lodge, Church Rd, Celbridge	House

RPS No	NIAH Ref	Structure and Location	Description
B11-35(a)	11805045	Celbridge Lodge, Church Road, Celbridge, Co. Kildare	Gate Lodge
B11-35(b)	11805027	Celbridge Lodge, Church Road, Celbridge, Co. Kildare	Walls/gates/railings
B11-36	11805048	150 Church Rd, Celbridge	House
B11-37	11805053	Abbey View, Church Rd, Celbridge	House
B11-38	11805055	The Forge, Primrose Hill, Celbridge	House
B11-39	11805003	Jassamine House, Main Street, Celbridge	House/Guesthouse
B11-40	11805034	Landscape House, Main Street, Celbridge	House
B11-53	11805073	Abbey National School (former), Celbridge	School (former)
B11-54		Donaghcumper House, Donaghcumper	House
B11-84	11805001	Castletown House, Celbridge, Co. Kildare	Gate Lodge
B11-85	11805002	Round House (The), Main Street, Big Lane, Celbridge	Gate Lodge
B11-86	11805004	Top of the Town Drycleaners /Murfish, Main St., Celbridge	Shop
B11-88	11805005	Michelangelo, Main Street, Celbridge, Co. Kildare	Restaurant
B11-89	11805022	Gogarty, Main Street, Celbridge, Co. Kildare	Shop
B11-90	11805028	Lady Louisa Connolly School, Celbridge, Co. Kildare	School (former)
	11805029	Castletown School of Industry, Celbridge, Co. Kildare	School (former)
B11-92	11805030	Christchurch, Celbridge, Co. Kildare	Church
B11-93	11805030	Celbridge Parochial House, Main Street, Celbridge	House
B11-94	11805033	Celbridge Town Hall (former), Main Street, Celbridge	Shop
B11-95	11805036	Blake's Pharmacy, Main Street, Celbridge, Co. Kildare	Shop
B11-96	11805037	Castletown Videos, Main Street, Celbridge, Co. Kildare	Shop
B11-97	11805038	Finey House, Main Street, Celbridge, Co. Kildare	House
B11-98	11805040	Main Street, Celbridge, Co. Kildare	House
B11-99	11805042	Saint Patrick's Catholic Church, Main Street,	Church

RPS No	NIAH Ref	Structure and Location	Description
		Celbridge	
B11-100	11805043	St. Brigid's (Holy Faith) Convent, Main Street (off), Celbridge	Convent
B11-101	11805047	Celbridge Methodist Church (former), Celbridge, Co. Kildare	Church
B11-102	11805051	Tea Lane Graveyard, Church Road, Celbridge	Cemetery
B11-103	11805054	Celbridge Bridge, Celbridge, Co. Kildare	Bridge
B11-104	11805056	The Mill Community Centre, Main Street, Celbridge	Community Centre
B11-105	11805057	The Mill Community Centre, Main Street (off), Celbridge	Community Centre
B11-106	11805058	The Mill Community Centre, Main Street (off), Celbridge	Community Centre
B11-107	11805059	The Mill Community Centre, Main Street (off), Celbridge	Community Centre
B11-108	11805063	Castletown House, Main Street, Celbridge, Co. Kildare	Walls/gates/railings
B11-109	11805064	Main Street, Celbridge, Co. Kildare	House
B11-110	11805078	Rock Bridge, Clane Road (off), Celbridge, Co. Kildare	Foot Bridge
B11-111	11805079	Celbridge Abbey, Clane Road, Celbridge, Co. Kildare	Foot Bridge
B11-112	11805080	Celbridge Abbey, Clane Road, Celbridge, Co. Kildare	Sluice/Sluice Gate
B11-119		Gardeners House, Castletown	Creche
B11-120		The Croft, Castletown	House

Owners and occupiers of protected buildings are required to ensure that buildings do not become endangered through harm, decay or damage.

Architectural Conservation Areas

Celbridge is not designated as an Architectural Conservation Areas (ACAs) in the Kildare County Development Plan. However, the draft LAP proposes a candidate ACA for Celbridge.

⁷

4.8.4 Vernacular Heritage

Vernacular Architecture describes the local regional traditional building forms and types using indigenous materials, and without grand architectural pretensions', i.e. the homes and workplaces of the ordinary people built by local people using local materials. This is in

⁷ The Planning & Development Act 2000-2012 (Part II, Section 10 and Part IV, Section 81) places an obligation on Local Authorities to include an objective for the preservation of the character of Architectural Conservation Areas (ACAs).

contrast to formal architecture, such as the grand estate houses of the gentry, churches and public buildings, which were often designed by architects or engineers.

The majority of vernacular buildings are domestic dwellings. Examples of other structures that may fall into this category include shops, outbuildings, mills, limekilns, farmsteads, forges, gates and gate piers.

4.8.5 Relevant Environmental Issues

Continued development resulting from the unprecedented economic growth of the past decade and increasing population has increased pressure on sites or features of heritage interest. Individually these developments put direct pressure on architectural heritage, where it is in proximity, or increases the potential to interact with known or previously unknown archaeological sites and features. Cumulatively, this results in negative impact on the overall cultural heritage resource.

The following issues were considered during the plan preparation:

- Impacts on sites of archaeological, architectural and vernacular heritage through development.
- Impacts on historic / heritage landscapes through development.
- Loss of vernacular heritage as a result of evolution of society and building use.
- Impacts on considerable built heritage due to continued high levels of vacancy / abandonment and potential dereliction unless addressed.

4.9 Landscape and Visual

4.9.1 Landscape

The County of Kildare has a high quality landscape much of it of notable cultural and historical significance.

A Landscape Character Assessment was prepared as part of the Kildare County Development Plan 2011 – 2017. The purpose of this document was to develop landscape objectives for the County Development Plan.

The County is divided into fourteen Landscape Character Areas (LCA's) which are geographically specific and which represent areas of distinctive landscape character. Those LCA's of interest to the Celbridge LAP are Northern Lowlands –Naas & Environs, River Liffey.

Please refer to **Figure 17** for CORINE Landcover Data in the vicinity of Celbridge.

4.9.2 Visual

The historic demesnes of Castletown, St. Wolstans and Donaghcumper to the east of the town centre comprise designed landscapes made up of parklands, river walks, ruins and structures which collectively form the landscape setting of Castletown House and its

associated riverside walks. To the west of the town centre, the designed gardens and parklands of Celbridge Abbey and Oakley Park define the landscape setting of the River Liffey and the western edge of the town centre. These highly landscaped areas and their associated boundary walls define and enhance the southern approach roads to the town.

These historic landscapes are connected by the Main Street and the River Liffey, which unifies these landscape elements so that they form a single landscape of heritage value. While the houses and associated structures are protected through inclusion on the RPS, the composite landscape setting of the historic houses, the town centre and the River Liffey warrants protection in its own right.

While it is not intended to preclude development within the historic landscape areas, the LAP will seek to ensure that the features within the landscape, including views and prospects that define the character of these areas, are preserved.

A total of 4 views and prospects have been identified in the Celbridge local area as being worthy of protection: The locations of the viewpoints are depicted in **Figure 18**.

4.9.3 Relevant Environmental Issues

Existing pressures on landscape and visual resources are primarily related to impacts to sensitive views and landscapes resulting from the positioning of new development, infrastructure including road, rail, electricity and water-service infrastructure, without sensitivity to these resources.

The following issues were considered during the plan preparation:

- Maintenance of existing landscape character.
- Impacts on designated protected landscapes, heritage landscapes and protected views as a result of development.
- Impacts due to development on the ecological components of the landscape.

4.10 Material Assets

The term 'Material Assets' refers to all infrastructure and local services including, transportation, water supply, waste-water treatment and discharge, waste management services, electricity supply, telecommunications etc. A summary of all material assets in Celbridge is provided in the Environmental Report.

The current usage of the land within the development plan area is predominantly urban fabric, mixed forest and pasture land.

Of particular relevance to the plan review was the existing water supply and wastewater treatment infrastructure which is currently close to capacity. A review of available resources was considered as part of the draft Celbridge LAP.

4.10.1 Transport Infrastructure

Celbridge is approximately 19 km from Dublin. It is connected to Dublin by the Irish Rail commuter rail services, mainline railway, provincial and Dublin bus services.

Means of commuting to work for Celbridge residents are presented in **Table 4.9** Over 67% of residents commuting to work chose to drive. This data was obtained from the 2011 census.

Table 4.9 Means of Commuting to Work for Celbridge Residents

Means of Commuting to Work	Persons	%
On foot	349	4.2
Bicycle	103	1.2
Bus, minibus or coach	819	9.9
Train, DART or LUAS	346	4.2
Motorcycle or scooter	80	1.0
Motor car: Driver	5,562	67.2
Motor car: Passenger	295	3.6
Van	406	4.9
Other, incl. lorry	26	0.3
Work mainly at or from home	158	1.9
Not stated	133	1.6
Total	8,277	100%

4.10.2 Water Supply

Approximately 94% of the water supply to the County comes from outside Kildare – primarily from regional plants at Ballymore Eustace (Dublin City Council) and Leixlip (Fingal County Council). Celbridge’s water is currently supplied from Ballygoran Reservoirs by Fingal County Council.

4.10.3 Wastewater Treatment

In relation to wastewater, Celbridge is served by the Lower Liffey Valley Regional Sewerage Scheme and foul wastewater from the area discharges into the wastewater treatment plant at Leixlip.

The existing Leixlip Wastewater Treatment Plant has a design capacity of 80,000 person equivalent (P.E.). This facility outfalls to the River Liffey and is currently over capacity. The urban area population which it serves is approximately 100, 309. The Leixlip Plant provides primary and secondary treatment.

4.10.4 Waste Management Services

For the purposes of waste management planning, Ireland is now divided into three regions: Eastern-Midlands Region, Southern Region & Connacht-Ulster Region. County Kildare is part of the Eastern-Midlands Region.

The Eastern-Midlands Region Waste Management Plan 2015-2021 provides a framework for the prevention and management of waste in a sustainable manner in Kildare and the other local authority areas. Following public consultation, the final plan was launched on May 14th 2015.

A number of private waste collectors operate in County Kildare including:

- AES;
- Ballymore Bins;
- Mahons Recycling;
- Oxigen;
- Ozo;
- Ray Whelan; and
- Thorntons.

4.10.5 Electricity and Telecommunications

Electricity is supplied by the ESB transmission system, which is adequate to serve the needs of Celbridge for the period of this Plan. The telecommunications network in Celbridge is being upgraded progressively. Broadband is currently available in the Celbridge area.

Kildare County Council acknowledges the importance of the telecommunications sector to the local and regional economy. Access to advanced information and communications infrastructure is essential to development and offers a competitive advantage in attracting economic development and inward investment.

4.10.6 Relevant Environmental Issues

Increased development including residential and industrial expansion exerts pressure on all existing material assets. Availability of water supplies into the future is essential to minimise pressure on existing sources. Water shortages will result in impacts to commercial and industrial developments.

Proposals for expansion or introduction of new residential and industrial facilities may result in impacts to water quality and ecosystems.

5. SEA Objectives, Targets and Indicators

5.1 Objectives of this Environmental Report

The SEA is designed to assess the potential environmental impact of the policies of the revised LAP against the environmental baselines established.

The policies and associated recommendations are assessed against a range of established environmental objectives and targets. Indicators that are recommended in the SEA are utilised over the lifetime of the LAP to quantify the level of impact that the policies and recommendations have on the environment. This enables us to measure whether they were successful in promoting the sustainable development of the County.

5.2 Environmental Objectives

The formation of the environmental objectives required cognisance of the environmental protection objectives established at a range of levels through the legislation and guidelines outlined in **Chapter 2**. Global, EU and national level legislation, policy and associated environmental objectives were utilised to develop the environmental objectives for proposed revised LAP.

The objectives outlined below are also placed in the context of and linked into the development of the draft policies and recommendations to ensure that the objectives are appropriate for Celbridge.

The environmental objectives are also linked to appropriate targets and indicators outlined in the following sections.

The environmental objectives are as follows:

Biodiversity including Flora and Fauna

Conserve and protect the diversity of habitats and species by limiting adverse impacts on habitats and species of conservation concern.

Population and Human Health

Improve people's quality of life based on high-quality residential, working and recreational environments and on sustainable travel patterns.

Soils & Geology

Protect quality and quantity of existing soil and geology.

Water Resources

Improve/maintain and protect 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.

Air, Noise & Climate

Maintain and promote continuing environmental improvement where possible of emissions to air (including noise emissions).

Archaeological, Architectural and Cultural Heritage

Promote the protection and conservation of the archaeological, architectural and cultural heritage

Landscape & Visual

Conserve and enhance valued natural and historic landscapes and features within them.

Material Assets

Make best use of existing infrastructure, promote the sustainable development of new infrastructure and promote the sustainable efficient use of resources.

5.3 Environmental Targets

Each of the Environmental Objectives has a range of Environmental Targets which the LAP Policies and Recommendations are aimed towards. These targets need to be quantifiable to ensure that monitoring can be carried out effectively. The following targets have been established to direct the sustainable implementation of the Policies and Recommendations and to ensure that the environment is maintained and/or improved where possible.

Biodiversity including Flora and Fauna

- Consider siting of new development on non-sensitive sites.
- Improve/conserves and protect all designated sites and species within and adjacent to the Plan area.
- Deliver the requirement of the Habitats Directive (Article 4, Paragraph 4) for the maintenance or restoration of annexed habitats and species within SACs at a "favourable conservation status.
- Promote the maintenance and, as appropriate, achievement of favourable conservation status of habitats and species, in association with the NPWS and other stakeholders.

- Protect SPAs, Annex I bird species, and regularly occurring migratory bird species and their habitats, and avoid pollution or deterioration of important bird habitats outside SPAs.
- Improve the ecological coherence of Natura 2000 by encouraging the management of, maintaining, and where appropriate developing, features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems for marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species.
- Protect NHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries, Refuges for Fauna or Flora and sites proposed for designation.
- Improve/maintain protection for important wildlife sites, particularly urban wildlife corridors and linear and stepping stone features for migration, dispersal and exchange of wildlife.
- Improve access for the appreciation and promotion of wildlife.

Population and Human Health

- Minimise population exposure to high levels of noise, vibration and air pollution.
- Increase modal shift to public transport.
- Co-ordinate land use and transportation policies.
- Improve access to recreation opportunities.

Soils & Geology

- Prevent pollution of soil through adoption of appropriate environmental protection procedures during construction and maintenance works on site.
- Ensure polluting substances are appropriately stored and banded.
- Ensure appropriate management of existing contaminated soil in accordance with the requirements of current waste legislation.
- Re-use of brownfield lands, rather than developing Greenfield lands, where possible.
- Minimise the consumption of non-renewable sand, gravel and rock deposits.

Water Resources

- Support the achievement of “good” ecological and chemical status/potential of waterbodies in accordance with the Water Framework Directive.
- Minimise flood risk through appropriate management of flood vulnerable zones.
- Promote sustainable drainage practices to improve water quality and flow

Air, Noise & Climate

- Minimise air and noise emissions during construction and operation of new developments.
- Promote minimisation of greenhouse gas emissions to the atmosphere.
- Limiting climate change and adapting to climate change.

Archaeological, Architectural and Cultural Heritage

- Regeneration of derelict and underutilised heritage sites.
- Improve appearance of areas with particular townscape character.
- Improve protection for protected archaeological sites and monuments and their settings, protected structures and conservation areas and areas of archaeological potential.
- Enhance access to sites of heritage interest.

Landscape & Visual

- Improve protection for landscapes of recognised quality.
- Maintain clear urban/rural distinctions.
- Enhance provision of, and access to, green space in urban areas.
- Ensure development is sensitive to its surroundings.

Material Assets

- Improve availability and accessibility of commercially provided facilities and public services.
- Increase local employment opportunities.
- Improve efficiencies of transport, energy and communication infrastructure.
- Promotion of sustainable transport infrastructure i.e. increased public transport.
- Reduce the generation of waste and adopt a sustainable approach to waste management.

5.4 Environmental Indicators

The assessment of Policies and Recommendations with respect to the Environmental Objectives and Targets is required to be measurable. The Environmental Indicators need to be capable of the following:

- Describing trends in the baseline environment.
- Demonstrating the likely significant impact of the implementation LAP.
- Being used in a monitoring programme.
- Providing an early warning of significant unforeseen adverse effects.

- Prioritising key environmental impacts.
- Ensuring the number and range of environmental indicators are manageable in terms of time and resources.

Consequently a range of Environmental Indicators required to assess the level of impact on the environment are outlined in **Table 5.1**.

Table 5.1: SEA Indicators

Item	Draft SEA Indicator
Biodiversity	Number and extent of Protected Sites. Areas actively managed for conservation. Population and range of Protected Species. Achievement of the Objectives of Biodiversity Plans.
Population & Health	Census population data. Rates of Unemployment per area. % increase in housing (number and type).
Soils & Geology	Rates of re-use / recycling of construction waste. Rates of cement / concrete production. Rates of brownfield site and contaminated land reuse and development. Rates of greenfield development.
Water Resources	Compliance of potable water sources with water quality regulations. Compliance of surface waters with national and international standards. Potable and wastewater treatment capacities versus population. % of wastewater receiving tertiary treatment. Achievement of the Objectives of the River Basin Management Plans. Amount of new developments within flood plains. Annual costs of damage related to flood events.
Air, Noise & Climate	Traffic, Transport and Vehicular survey data. National and region specific emission data. Compliance with national standards. Reduction in greenhouse gas emissions. Number and extent of emission licensed facilities. Number of energy / renewable energy production facilities. Rates of energy / renewable energy consumption.
Heritage	Updating of inventories to include new sites / features. Achieving the objectives of development plans regarding heritage protection. Range and extent of areas of heritage potential. Range and extent of areas of special planning

Item	Draft SEA Indicator
	controls.
Landscape & Visual	Range and extent of Amenity Landscapes. Rates of development within designated landscapes. Rates of urban expansion. Rates of deforestation. Rates of agricultural land re-development. % change of land use from rural to urban.
Material Assets	Location / level of Infrastructure. Achievement of development plan objectives. Rates of deprivation. Rate of waste disposal to landfill statistics. Range and extent of recycling facilities and services. Rates of recycling.

6. Assessment of Likely Significant Effects

6.1 Introduction

The approach used for assessing likely significant impacts was objectives led. The assessment was primarily qualitative in nature, with some assessment based on expert judgement. This qualitative assessment compares the likely impacts against the Strategic Environmental Objectives to see which Policies and Recommendations meet the Strategic Environmental Objectives and which, if any, contradict these.

Particular reference was made to the potential for cumulative effects in association with other relevant plans and programmes within the Kildare/Greater Dublin Area.







Particular regard was also paid to the need for the sustainable development of ecological resources (including the conservation of fish and other species of fauna and flora, habitats and the biodiversity of water ecosystems and commercial and natural fisheries) as economic resources. In conjunction with the Habitats Directive Assessment due consideration was given to potential significant impacts of the policies and recommendations on ecological resources for the following areas:

- Surface and ground water quality.
- Surface water hydrology.
- Fish spawning and nursery areas.
- Passage of migratory fish.
- Areas of natural heritage importance.
- Designated marine protected areas.
- Biological diversity.
- Ecosystem structure and functioning.
- Seabirds and marine mammals.
- Fish and shellfish cultivation.
- Sport and commercial fishing and angling.
- Amenity and recreational areas.
- Mineral and aggregate resources.
- Sediment transport and coastal erosion.
- Navigation.
- Other legitimate use of the sea.

The assessment process categorised environmental impacts using the ratings outlined in **Table 6.1** which is based on the impact assessment criteria defined by the EPA for environmental impact assessment.

Table 6.1: Impact Ratings

Duration and Type of Impact	
S	Short-term - Impact lasting one to seven years
M	Medium-term - Impact lasting seven to fifteen years
L	Long-term - Impact lasting fifteen to sixty years
P	Permanent - Impact lasting over sixty years
T	Temporary - Impact lasting for one year or less
C	Cumulative – Impact that is ameliorated by other impacts

Significance of Impact	
	Major Positive
	Positive
	Neutral
	Negative
	Major Negative
	Uncertain

6.2 Principal Environmental Impacts

The environmental impacts of the LAP policies were assessed with respect to the existing environmental baseline in **Chapter 4** and the environmental objectives listed in **Chapter 5**.

As the policies have been designed to promote sustainability and to protect the environment, the majority of recommendations have positive impacts when assessed against the environmental objectives, with the exception of the changes to zoning where. The matrix outlined in **Table 6.2** highlights these potential impacts. It assesses all policies and objectives in the plan including the additional material amendments. The principal findings are summarised in the following sections. It should be noted that the assessment considers the predicted residual (i.e. mitigated) impact on each environmental topic.

6.2.1 Biodiversity

Most of the potential impacts for Biodiversity, Flora and Fauna are positive or neutral as it is not proposed to provide development solely on Greenfield sites. It is also largely intended that development will be consolidated within the footprint of the existing urban centre. Uncertainties exist where the precise nature and extent of development is unknown. Negative impacts exist where agricultural lands or open space have been rezoned for development which has the potential, even with the provision of mitigation, to impact on habitats and species.

6.2.2 Population and Human Health

The potential impacts for Population and Human Health are predominantly positive as it is proposed to consolidate settlements and integrate land use and transport. The focus on provision of local employment will also have a positive effect on Population and Human Health.

6.2.3 Soils and Geology

The majority of potential impacts for Soils and Geology are neutral or positive as development will primarily be consolidated within the footprint of the existing urban centre.

Uncertainties exist where the precise nature and extent of proposed new development is unknown. Negative impacts exist where agricultural lands or open space have been rezoned for development which has the potential to impact soil and geology in the area.

6.2.4 Water Resources & Flooding

In general, the potential impacts for Water Resources and Flooding are positive or neutral as it is proposed that a comprehensive risk-based planning approach to flood management to prevent or minimise future flood risk be implemented. There is the potential for negative impacts where rezoning occurs for development from agricultural and open space. However, the avoidance of development in areas where flood risk has been identified will be the primary response.

6.2.5 Air, Noise & Climate

The potential impacts on Air, Noise and Climate are predominantly positive or neutral as the Plan proposes to locate employment in close proximity to the town and along strategic corridors. The plan also promotes sustainable travel modes and reducing long distance commuting for employment while encouraging the development of Green Infrastructure. Such measures will have a positive effect on air, noise and climate.

Uncertainties exist where the precise nature and extent of proposed new development is unknown. Negative impacts exist where agricultural lands or open space have been rezoned for development which has the potential even with mitigation to impact on the air and noise environment in the area.

6.2.6 Archaeological, Architectural and Cultural Heritage

In general, the potential impacts on heritage are predominantly neutral or positive development will be consolidated within the footprint of the existing urban centre. This plan also places a significant emphasis on the retention, protection and enhancement of existing heritage features within the town. There is the potential for negative impacts where rezoning occurs for development from agricultural and open space. However, further assessment will occur at planning stage to ensure no significant negative impacts occur.

Uncertainties exist where the precise nature and extent of proposed new development is unknown and where the discovery of heritage features cannot be ruled out.

6.2.7 Landscape and Visual

The majority of potential impacts for Landscape and Visual are positive or neutral.

Uncertainties exist where the precise nature and extent of proposed new development is unknown. Negative impacts exist where agricultural lands or open space have been rezoned for development which has the potential even with mitigation to impact on the landscape and visual environment.

6.2.8 Material Assets

In general the potential impacts on Material Assets are largely considered as positive or neutral. This is because development will occur in a manner that is balanced and self-sustaining occurring in tandem with physical and social infrastructure.

Celbridge LAP Objectives and Targets		SEA Environmental Objectives							
Ref	Text	Biodiversity	Population & Human Health	Soils & Geology	Water Resources	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets
RO1.5	To encourage and facilitate the re-use and regeneration of derelict and vacant land and buildings for retail and other town centre uses, subject to the protection of architectural heritage.	P	P	P	P	P	P	P	P
RO1.6	To support and facilitate convenience retailing and services of an appropriate scale at identified neighbourhood centre locations, and ensure that new development enhances the character of the area.	P	P	P	P	P	P	P	P
Public Realm									
Policy PR1 – Public Realm	It is the policy of the Council to seek to actively encourage, support and facilitate environmental and public realm improvements in Celbridge Town Centre and at neighbourhood centres to address environmental quality, urban design, safety, identity and attractiveness.	P	P	P	P	P	P	P	P
Objectives									
PRO1.1	To ensure that all new development in the town centre and in neighbourhood centres contributes positively to and enhances the streetscape and public realm and presents a positive edge to streets and the public roadway.	P	P	P	P	P	P	P	P
Shopfronts									
Policy R2 – Shopfronts	It is the policy of the Council to support the provision of high quality shop fronts and signage that contribute positively to and enhance the streetscape and to seek to control and limit superfluous signage.	P	P	P	P	P	P	P	P
Objectives									

Celbridge LAP Objectives and Targets		SEA Environmental Objectives							
Ref	Text	Biodiversity	Population & Human Health	Soils & Geology	Water Resources	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets
R02.1	To ensure that new shopfront design contributes positively to and enhances the streetscape, and is in accordance with the guidance set out in the County Kildare Shop Front Guidelines (Kildare County Council July 2013).	P	P	P	P	P	P	P	P
R02.2	To ensure that new signage contributes positively to and enhances the streetscape in accordance with the guidance set out in the Kildare County Council Policy on Signage (April 2013).	P	P	P	P	P	P	P	P
Undesirable Uses									
Policy UU1 – Undesirable Uses	It is the policy of the Council to manage the provision of undesirable uses such as fast food outlets, take-aways, amusement arcades, bookmakers, amusement arcades and off-licences, and to manage the distribution of non-retail uses in the interest of protecting the vibrancy, residential amenity and public realm of Celbridge Town Centre.	P	P	P	P	P	P	P	P
Objectives									
UUO1.1	To prevent an excessive concentration of fast food outlets, take-aways, bookmakers/ betting offices, amusement arcades and off-licences in Celbridge Town Centre.	P	P	P	P	P	P	P	P
UUO1.2	To manage the distribution and concentration of non-retail uses in the town centre in order to support active uses and activities that promote vibrancy and vitality in the town centre.	P	P	P	P	P	P	P	P
Residential Development: Capacity and Delivery									

Celbridge LAP Objectives and Targets		SEA Environmental Objectives							
Ref	Text	Biodiversity	Population & Human Health	Soils & Geology	Water Resources	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets
RDO2.4	To apply a 10% social housing requirement, pursuant to Part V of the Planning and Development Act 2000 (as amended) to all sites that are zoned solely for residential use or for a mixture of residential and other uses (save where the development is exempt from the provisions of Part V).	P	P	P	P	P	P	P	P
Education, Childcare and Health Facilities									
Policy COM1 - Education, Childcare and Health Facilities	It is the policy of the Council to facilitate and secure the provision of social infrastructure to support existing and new communities, in a manner which provides flexibility to respond to varied and changing community needs.	P	P	P	P	P	P	P	P
Objectives									
COMO1.1	To support and facilitate improvements to existing educational, childcare and healthcare facilities within the Celbridge LAP area.	P	P	P	P	P	P	P	P
COMO1.2	To require the provision of a minimum of 0.13 childcare spaces per dwelling on a pro-rata basis in the Key Development Areas, in accordance with the phasing requirements set out in Section 13 of the LAP.	P	P	P	P	P	P	P	P
Community & Recreational Facilities									
Policy COM2 Community & Recreational Facilities	It is the policy of the Council to facilitate and support a broad range of community and recreational facilities to serve the needs of the residents of Celbridge.	P	P	P	P	P	P	P	P
Objectives									

Celbridge LAP Objectives and Targets		SEA Environmental Objectives							
Ref	Text	Biodiversity	Population & Human Health	Soils & Geology	Water Resources	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets
COMO2.1	To support and facilitate the continued provision of multi-functional community facilities to meet the needs of the population of Celbridge.	P	P	P	P	P	P	P	P
COMO2.2	To ensure that adequate and safe amenity and recreational open spaces are available for all groups of the population at a convenient distance from their homes and places of work.	P	P	P	P	P	P	P	P
Integrated Services Programme									
Policy COM3 Integrated Services Programme	It is the policy of the Council to support the vision of the Celbridge Integrated Services Programme to encourage a sustainable and socially cohesive community which meets the needs of all residents.	P	P	P	P	P	P	P	P
Objectives									
COMO3.1	To promote and facilitate, where appropriate, the realisation of the goals and objectives of the Celbridge Integrated Services Programme.	P	P	P	P	P	P	P	P
Enterprise and Economic Development									
Policy ED1 – Enterprise and Economic Development	It is the policy of the Council to support sustainable economic development in Celbridge, optimising on the town’s location in the North Kildare Economic Cluster and the Metropolitan Area of Dublin and its potential as a heritage and tourism destination.	P	P	P	P	P	P	P	P
Objectives									

Celbridge LAP Objectives and Targets		SEA Environmental Objectives							
Ref	Text	Biodiversity	Population & Human Health	Soils & Geology	Water Resources	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets
EDO2.9	To support the development of standardised signage and interpretation for tourism facilities and tourist attractions throughout Celbridge.	P	P	P	P	P	P	P	P
EDO2.10	To support the development of linkages between historical sites within and around Celbridge.	P	P	P	P	P	P	P	P
Derelict Sites and Vacant Sites									
Policy DVS1 – Derelict Sites and Vacant Sites	It is the policy of the Council to apply the provisions of the Derelict Sites Act 1990 and the Urban Regeneration and Housing Act 2015 in Celbridge.	P	P	P	P	P	P	P	P
Objectives									
DVSO1.1	To apply the provisions of the Derelict Sites Act 1990 and the Urban Regeneration and Housing Act 2015 in securing the regeneration of derelict and vacant sites which are detracting from the amenities of Celbridge.	P	P	P	P	P	P	P	P
DVSO1.2	To promote the sustainable development of vacant residential and regeneration sites in Celbridge through the application of the Urban Regeneration and Housing Act 2015, Vacant Site Levy, on lands zoned Town Centre and New Residential.	P	P	P	P	P	P	P	P
Non-Conforming Uses									

Celbridge LAP Objectives and Targets		SEA Environmental Objectives							
Ref	Text	Biodiversity	Population & Human Health	Soils & Geology	Water Resources	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets
MTO1.5	To maintain the existing Slí na Sláinte routes and facilitate additional routes in and around the Celbridge area.	P	P	P	P	P	P	P	P
MTO1.6	To facilitate a new pedestrian / cycling bridge across the Liffey linking to Celbridge Town Centre, in conjunction with any new development at KDA2 – Donaghcumper and new residential areas to the south.	P	P	P	P	P	P	P	P
MTO1.7	To improve permeability for pedestrians and cyclists between existing residential areas and key destinations within the town particularly at the following locations: a. The Glade towards Willowbrook Park b. The Walk towards Willowbrook Grove c. The Walk towards Willowbrook Lawns d. Priory View and Grove to Church Road e. Ballymakealy Grove to North Kildare Educate Together School	P	P	P	P	P	P	P	P
MTO1.8	To require new housing developments to deliver filtered or full permeability to adjoining development in so far as is possible and, in the case of adjoining greenfield sites, to ensure the potential for such provision is addressed.	P	P	P	P	P	P	P	P
Public Transport									
Policy MT2 – Public Transport	It is the policy of the Council to support improvements to the public transport network serving Celbridge.	P	P	P	P	P	P	P	P
Objectives									

Celbridge LAP Objectives and Targets		SEA Environmental Objectives							
Ref	Text	Biodiversity	Population & Human Health	Soils & Geology	Water Resources	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets
INFO4.3	To seek the undergrounding of all electricity, telephone and television cables in the town.	P	P	P	P	P	P	P	P
INFO4.4	To discourage a proliferation of above ground utility boxes in the town and to seek screening measures in conjunction with the provision of such structures.	P	P	P	P	P	P	P	P
INFO4.5	To promote and encourage the use of renewable energy technologies in existing and proposed building stock within the LAP area subject to consideration of environmental, conservation and visual requirements.	P	P	P	P	P	P	P	P
Solid Waste									
Policy INF5 – Solid Waste	It is the policy of the Council to protect environmental quality in Celbridge through the implementation of European, national and regional policy and legislation relating to air quality, light pollution, noise pollution and waste management.	P	P	P	P	P	P	P	P
Objectives									
INFO4.1	To adequately maintain recycling facilities and to secure the provision of additional facilities, as required, including in conjunction with new development.	P	P	P	P	P	P	P	P
INFO4.2	To provide a civic amenity site (recycling centres) in Celbridge on lands located south of the M4 Motorway and north of the R449 Regional Route to the west of Exit 6.	P	P	P	P	P	P	P	P
Archaeological Heritage									

Celbridge LAP Objectives and Targets		SEA Environmental Objectives							
Ref	Text	Biodiversity	Population & Human Health	Soils & Geology	Water Resources	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets
Policy BH1 – Archaeological Heritage	It is the policy of the Council to safeguard the archaeological heritage of the LAP area and avoid negative impacts on sites, monuments features or objects of significant historical or archaeological interest.	P	P	P	P	P	P	P	P
Objectives									
BHO1.1	To protect and preserve those items of archaeological interest as listed in Table 10.1 and shown on the Map 10.1 from inappropriate development that would adversely affect and/or detract from the interpretation and setting of these sites.	P	P	P	P	P	P	P	P
BHO1.2	To protect the historic core of Celbridge town and retain where possible the existing street layout, historic building lines and traditional plot widths where these derive from medieval origins.	P	P	P	P	P	P	P	P
BHO1.3	To ensure proposals contribute towards the protection and preservation of the archaeological value of sites associated including underwater sites associated with the River Liffey.	P	P	P	P	P	P	P	P
BHO1.4	To provide for the protection of historic burial grounds within Celbridge in co-operation with agencies such as the Office of Public Works and the National Monuments Section of the Department of the Arts, Heritage and the Gaeltacht.	P	P	P	P	P	P	P	P
Protected Structures									

Celbridge LAP Objectives and Targets		SEA Environmental Objectives							
Ref	Text	Biodiversity	Population & Human Health	Soils & Geology	Water Resources	Air, Noise & Climate	Heritage	Landscape & Visual	Material Assets
Objectives									
HLAO1.1	To preserve the special landscape character of historic landscape areas and ensures that new development protect and enhance the special character and visual setting of the historic landscapes outlined on Map 13.1	P	P	P	P	P	P	P	P
HLAO1.2	To prevent development that would have a negative impact on the character of the lands within the Historic Landscape Areas.	P	P	P	P	P	P	P	P
HLAO1.2	To support the preparation of Woodland Conservation and Management Plans for lands within the Historic Landscape Areas.	P	P	P	P	P	P	P	P
Natural Heritage									
Policy NH1 Natural Heritage	It is the policy of the Council to support the protection of species and habitats that are designated under the Wildlife Acts 1976 and 2000, the Birds Directive 1979 and the Habitats Directive 1992 as well as areas of high local biodiversity value and to ensure development with potential to impact the integrity of the Natura 2000 network will be subject to Appropriate Assessment.	P	P	P	P	P	P	P	P
Objectives									

7. Consideration of Alternatives

7.1 Introduction

The following summarises a series of alternative plan growth scenarios which provide different visions of how the future development of Celbridge might occur. These are neither predictions nor preferences instead they offer a range of outcomes arising from different planning and development strategies.

Growth levels represented are the Local Area Plan target of 3,250 new units by 2023. Additionally, the following development scenarios were explored:

Scenario 1: Transit oriented development, Scenario 2: Town centre revitalisation, Scenario 3: School-focused strengthening, and Scenario 4: Standard suburban expansion.

In parallel three potential growth targets were examined which include:

The target set by Kildare County Council is 3,250 units by 2023 (this is the target that is considered in the various focused scenarios)

Rapid growth of Celbridge, 50% above the Local Area Plan target. At all potential densities, this amount of growth will require significant new residential land in all parts of the town.

Growth of 50% less than the targeted number. In this scenario, very little new land is required for development.

7.2 Alternatives Considered

7.2.1 Scenario 1 - Transit-oriented Development

This development scenario proposed development in keeping with the practice of transit-oriented development. Proposed density in lands near hazlethatch train station is 50 units per hectare. As such the density near the station will be higher than other nearby developments and that of the rest of the town.

While other development areas around the town will not have such high densities, they are chosen to reflect a less automobile-centric approach to development, placed generally along bus routes or in the town centre.

This scenario is based on the opening of the Phoenix Park tunnel and the electrification of the rail line to Hazelhatch and Celbridge. As a result, new development in Celbridge should be planned to take advantage of this new connection.

7.2.2 Scenario 2 - Town Centre Strengthening

This development scenario reflects the goal of strengthening the town centre of Celbridge based on redevelopment of the St. Raphael's lands on the southern end of the town centre.

Average proposed density is 35 units per hectare. Additionally, town centre zoning will be implemented to encourage living above town centre shops. Town Centre/mixed use land will also be identified along the Dublin Road.

7.2.3 Scenario 3 - School-focused Development

A development scenario was designed to allow for maximum access of new developments to the school clusters in the town. Two major clusters were identified to the west of town, including St. Wolstan's Community School, Scoil Na Mainistreach and North Kildare Educate Together, and near the M4, including Salesian College, Scoil Mochua and the temporary Celbridge Community School.

Greenfield sites in these two areas will be expected to take much of the new development of the town, to allow for easier access to the schools, particularly through cycling or walking, rather than by car. Further development would take place on the right bank of the River Liffey, near Primrose Hill School and St. Patrick's Primary School.

7.2.4 Scenario 4 - Standard Suburban Expansion

Like the school-focused scenario, the standard suburban expansion scenario will place nearly all development on the edges of the town in greenfield sites. This scenario takes into account that most development in Celbridge is slightly in excess of the minimum Kildare County Council-recommended town density of 25 units per hectare.

7.2.5 Assessment of Alternatives

A planning evaluation of the five options was carried out and is summarised in **Table 7.1**.

An environmental assessment was carried out is summarised in **Table 7.2** using criteria outlined in **Table 7.3**. The review of the final revised LAP was cognisant of this environmental assessment and incorporated the findings into the development of the revised LAP.

Table 7.1: Planning Assessment of Alternatives Considered

Scenario	Development Scenario	Critical Evaluation	Effects on Planning
1	Transit-oriented Development	<p>The opening of the Phoenix Park tunnel and the electrification of the rail line to Hazelhatch and Celbridge will allow for much more frequent, efficient service to Dublin City Centre, making journey by train much more attractive.</p> <p>While maintaining the historical character of the St. Raphael's/Oakley Park site, the redevelopment will bring more residential units to the town centre.</p> <p>The development will provide a commercial and retail anchor to compliment Castletown gate at the other end of Main Street.</p> <p>Town centre development incorporated at St. Raphael's/Oakley Park</p> <p>Development land will be on greenfield sites on the edge of town.</p>	<p>Development of lands at Simmonstown will require construction of a new bridge across the River Liffey.</p> <p>Responds to the relevant national/regional planning strategies including the National Spatial Strategy and the Regional Planning Guidelines for the Greater Dublin Area.</p>
2	Town Centre Strengthening	<p>While maintaining the historical character of the St. Raphael's/Oakley Park site, the redevelopment will bring more residential units to the town centre.</p> <p>The development will provide a commercial and retail anchor to compliment Castletown gate at the other end of Main Street.</p> <p>Town Centre/mixed use land will also be zoned along the Dublin Road, strengthening the town centre's links to the right bank of the river.</p> <p>A significant portion of the future development of Celbridge</p>	<p>Development of lands at Simmonstown will require construction of a new bridge across the River Liffey.</p> <p>Provides poor access from Town Centre to Hazelhatch Rail Station</p> <p>New residential development will be located close to the town centre, other residential areas and existing services.</p>

Scenario	Development Scenario	Critical Evaluation	Effects on Planning
		<p>will take place in the town centre.</p> <p>The redevelopment of sites in the town centre will allow for the revitalisation of the town centre in terms of commerce, accommodation and movement.</p>	
3	School-focused Development	<p>The age profile of Celbridge indicates that it is a town focused on raising children.</p> <p>Schools in Celbridge tend to cluster at the end of the town, in the north and in the west.</p> <p>Development land will be on greenfield sites on the edge of town.</p>	<p>Poor access to town centre from development areas</p> <p>Development of lands at Simmonstown will require construction of a new bridge across the River Liffey.</p> <p>Poor access to Hazelhatch Rail Station (development lands >1.5km from Rail Station)</p>
4	Standard Suburban Expansion	<p>This scenario represents the type of development that has historically dominated Celbridge for much of the 20th and 21st century. Because of these very low densities, the amount of land is much higher than any other scenario.</p> <p>Development land will be on greenfield sites on the edge of town.</p> <p>Adjacent to existing residential areas.</p> <p>As there is no focus for development, the lands will not necessarily be developed in a way that contributes to the overall success of the town.</p> <p>Under utilises the potential to consolidate the existing town centre by not prioritising the more efficient use of land on identified strategic sites closer to the centre.</p>	<p>Poor access to town centre</p> <p>Poor Access to Hazelhatch Rail Station (development lands >1.5km from Rail Station)</p> <p>Has potential to lead to an uncoordinated use of lands with disconnected neighbourhoods and isolated areas of employment.</p>

Table 7.3: Impact Ratings

Duration and Type of Impact	
S	Short-term - Impact lasting one to seven years
M	Medium-term - Impact lasting seven to fifteen years
L	Long-term - Impact lasting fifteen to sixty years
P	Permanent - Impact lasting over sixty years
T	Temporary - Impact lasting for one year or less
C	Cumulative – Impact that is ameliorated by other impacts

Significance of Impact	
	Major Positive
	Positive
	Neutral
	Negative
	Major Negative
	Uncertain

7.3 Chosen Scenario

Scenario 1 Transit-oriented Development and Scenario 2 Town Centre Strengthening were identified as the most advantageous scenarios in the above assessments. A combination of alternatives considered above, focusing on Scenarios 1 and 2, were amalgamated to arrive at the Celbridge LAP zoning strategy.

This draft LAP identifies 129 hectares of land with a residential or mixed use zoning. The housing capacity of zoned lands, including new residential zonings, mixed use zonings and of infill sites within the built up area is estimated to be 3,658 (approx.) residential units

The LAP identifies 6 Key Development Areas (KDA) to accommodate this growth during the Plan period as follows (refer to **Figure 2.1.**):

KDA 1 St. Raphael's: Town Centre Extension

KDA 2 Donaghcumper: Town Centre Extension

KDA 3 Ballyoulster: New Residential Area

KDA 4 Oldtown: New Residential Area

KDA 5 Crodaun: New Residential Area

KDA 6 Simmonstown: New Residential Area

The environmental sensitivities of the county identified through the SEA process and SFRAM have informed the development of the KDAs and the LAP Core Strategy for Celbridge.

The LAP responds to environmental factors including wastewater infrastructure constraints and areas at risk of flooding.

The LAP acknowledges the unique character and intrinsic value of the Town Centre, Castletown House and the linked demesnes in Celbridge and incorporates objectives for the conservation and enhancement of these areas. Additionally, the LAP has objectives relating to securing strategic open space and green infrastructure, particularly improving accessibility to the River Liffey.

8. Mitigation Measures

Mitigation measures are measures envisaged and designed to prevent, reduce and as fully as possible offset any significant adverse impacts on the environment of implementing the revised LAP. All mitigation measures have been developed and agreed with KCC as part of the SEA iterative process.

The primary mitigation measure is to ensure the sustainable and appropriate development of Celbridge and its environs without compromising the integrity of the natural and built environment. All new development requiring an Environmental Impact Statement will need to address the range of environmental objectives, indicators and targets and associated environmental mitigation measures and incorporate them into the project specific mitigation measures.

Table 8.1: Mitigation Measures

Environmental Receptor	Mitigation Measures
Biodiversity	<p>Ensure that appropriate measures for conservation and enhancement of the natural and built environment are incorporated into all relevant plans and programmes.</p> <p>Ensure that all new development plans are cognisant of the Biodiversity Action Plan for the County.</p> <p>Ensure the protection of ecological resources that have economic benefits e.g. ecological zones that draw tourism.</p> <p>Compliance with the zoning of the SACs, NHAs, SPAs which prohibits non-compatible developments.</p> <p>Ensure that an AA is carried out for all development proposals with potential to impact on Natura 2000 sites.</p>
Population and Human Health	<p>Ensure that access to adequate health and education facilities to meet the demand of the current and projected populace are included in development plans.</p> <p>Encourage the further development of regional public transport infrastructure including rail and bus corridors.</p>
Soils and Geology	<p>Perform a survey of obsolete urban renewal areas and facilitate and promote the reuse and regeneration of brownfield sites, derelict land and buildings in and around urban centres.</p> <p>Promote the recycling of construction and demolition waste and the reuse of aggregate and other materials in order to reduce the quantities of virgin material being extracted.</p> <p>Ensure that the 'polluter pays principle' is adhered to in full cooperation with the EPA.</p>
Water Resources and Flooding	<p>Ensure that the objectives and the programme of measures outlined the River Basin Management Plans</p>

Environmental Receptor	Mitigation Measures
	<p>are fully implemented.</p> <p>Provide adequate capacity at water and wastewater treatment and storage facilities for current and projected populace.</p> <p>Prevent the alteration of natural drainage systems and in the case of development works require the provision of acceptable mitigation measures in order to minimise the risk of flooding and negative impacts on water quality.</p> <p>Comply with the objectives and policies of the Eastern Catchment Flood Risk Assessment Management Study.</p> <p>Promote SUDS principles for all drainage including the integration of storm water attenuation facilities for new developments and existing catchment areas.</p> <p>Ensure that any new development does not present an inappropriate risk of flooding or does not cause or exacerbate such a risk at other locations.</p> <p>Preserve and protect the water quality of Kildare's river systems where these help to regulate stream flow, recharge ground water and screen pollutant.</p> <p>Comply with the DoECLG/OPW guidance on development and flood risk through the control of development in any flood plain so that new and existing developments are not exposed to increased risk of flooding and that any loss of flood storage is compensated for elsewhere in the river catchment.</p>
Air, Noise and Climate	<p>Ensure that the objectives and policies of EU Air Quality legislation are incorporated into plans and programmes upon implementation into Irish law.</p> <p>Promote the reduction of emissions of Greenhouse Gases to ensure Ireland's compliance with our Kyoto Protocol Targets.</p> <p>Facilitate sustainable transport modes and the use of walking, cycling and public transport.</p> <p>Consideration of existing noise policy in County Kildare for example noise mapping and noise action plans produced by the Local Authority.</p> <p>Consideration of likely noise impacts/effects associated with new developments.</p> <p>This includes being cognisant of proximity to sensitive receptors when siting new developments and consideration of existing noise sources when zoning lands for residential development.</p>
Archaeological, Architectural and	<p>Ensure the protection of all features of architectural and archaeological merit.</p>

Environmental Receptor	Mitigation Measures
Cultural Heritage	<p>Promote the designation of areas of architectural merit throughout the County.</p> <p>Promote the integration of suitably designed developments into existing urban and rural landscapes.</p> <p>Prevent inappropriately designed developments in designated areas of architectural merit.</p>
Landscape & Visual	<p>Ensure that all new plans and programmes incorporate the findings of the landscape Character Assessment for County Kildare.</p>
Material Assets	<p>Protect the hydrological environment from adverse effects of the wastewater discharges by ensuring that there is suitable wastewater treatment to meet demands before discharge to the environment.</p> <p>Promote the development of sustainable transportation infrastructure where considered feasible.</p> <p>Promote the implementation of the Waste Management Plan together with any future National or Regional Waste Management Plans.</p> <p>Encourage waste prevention, minimisation, reuse, recycling and recovery as methods of managing waste.</p> <p>Ensuring specific national policies and regulations regarding waste Management are adhered to.</p> <p>Promote and facilitate community awareness and involvement in community-based recycling initiatives or environmental management initiatives that will lead to local Sustainable waste management practices.</p> <p>Promote the development of sufficient energy resources to meet the needs of the GDA and promote the use of renewable energies to meet those needs.</p>

9. SEA Monitoring

Article 10 of the SEA Directive requires that monitoring should be carried out in order to identify at an early stage any unforeseen adverse impacts associated with the implementation of the plan or programme.

A monitoring programme is developed based on the indicators selected to track progress towards achieving strategic environmental objectives and reaching targets, enabling positive and negative impacts on the environment to be measured. As previously described, the environmental indicators have been developed to show changes that would be attributable to implementation of the revised LAP.

The SEA carried out has ensured that any potential significant environmental impacts have been identified and given due consideration.

Kildare County Council is responsible for collating existing relevant monitored data, the preparation of preliminary and final monitoring evaluation reports, the publication of these reports and, if necessary, the carrying out of corrective action.

Table 9.1: Monitoring Programme

Environmental Category	Target	Indicators	Data Sources, Responsibility, and Frequency
Biodiversity including Flora and Fauna	<p>Improve protection for protected sites and species.</p> <p>Improve protection for important wildlife sites, particularly protection of ecological linkages through the provision of green infrastructure.</p> <p>Improve access for the appreciation and promotion of wildlife.</p> <p>Preferably site new development in non-sensitive locations</p>	<p>Number and extent of Protected Sites.</p> <p>Areas actively managed for conservation.</p> <p>Population and range of Protected Species.</p> <p>Achievement of the Objectives of Biodiversity Plans</p>	<p>Sources: Kildare County Council, National Parks and Wildlife Services, Fisheries Board and EPA.</p> <p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.</p>
Population and Human Health	<p>Reduce population exposure to high levels of noise,</p>	<p>Census population data.</p>	<p>Sources: Kildare County Council and Central</p>

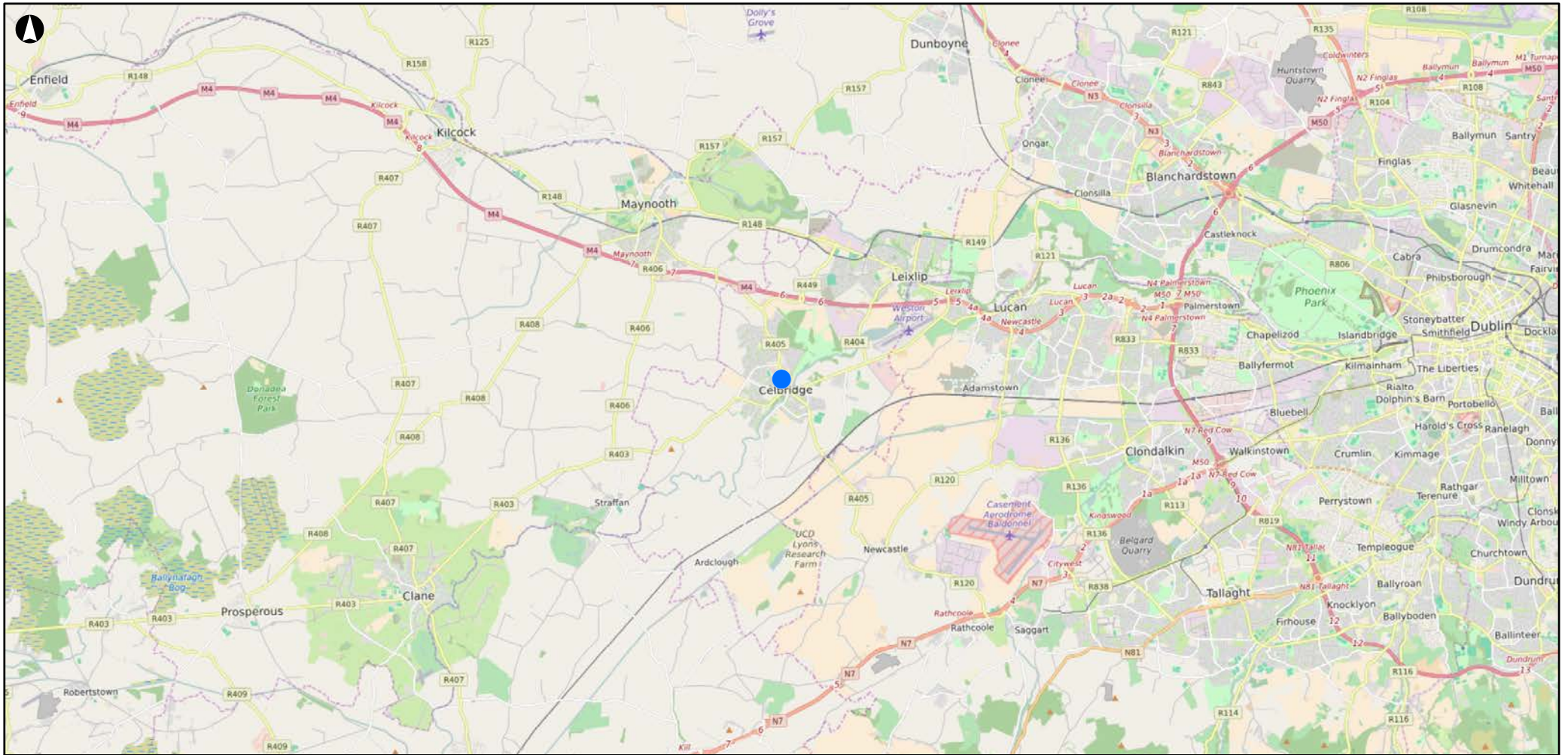
	<p>vibration and air pollution.</p> <p>Increase modal shift to public transport.</p> <p>Co-ordination of land use and transportation policies.</p> <p>Reduction in journey to work (time/distance).</p> <p>Improve access to recreation opportunities</p>	<p>Rates of Unemployment per area.</p> <p>% increase in housing (number and type).</p> <p>% change of commuter transport distances / times / range of public transport utilised.</p> <p>% of commuters using public transport.</p> <p>% change in education levels.</p>	<p>Statistics Office.</p> <p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.</p>
Soils and Geology	<p>Maintain the quality of soils.</p> <p>Safeguard strategic mineral reserves.</p> <p>Re-use of brownfield lands, rather than developing Greenfield lands.</p> <p>Minimise the consumption of non-renewable sand, gravel and rock deposits</p>	<p>Rates of re-use / recycling of construction waste.</p> <p>Rates of quarrying.</p> <p>Rates of brownfield site and contaminated land reuse and development.</p> <p>Rates of greenfield development.</p>	<p>Sources: Kildare County Council and Environmental Protection Agency.</p> <p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.</p>
Water Resources	<p>Improve water quality in rivers, lakes and groundwater.</p> <p>Protection of catchments/basins.</p> <p>Management of</p>	<p>Compliance of potable water sources to water quality regulations.</p> <p>Compliance of surface waters</p>	<p>Sources: Kildare County Council, Environmental Protection Agency and Fisheries Board.</p>

	<p>zones vulnerable to flooding.</p> <p>Promote sustainable drainage practices to improve water quality and flow</p>	<p>with national and international standards.</p> <p>Potable and wastewater treatment capacities versus population.</p> <p>% of wastewater requiring treatment.</p> <p>Achievement of the Objectives of the River Basin Management Plans.</p> <p>Amount of new developments within flood plains.</p> <p>Annual costs of damage related to flood events.</p>	<p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.</p>
Air, Noise and Climate	<p>Reduce levels of air pollution including air and noise emissions.</p> <p>Consideration of noise exposure when zoning land for new developments.</p> <p>Minimise emissions of greenhouse gases.</p> <p>Reduce waste of energy, and maximise use of renewable energy sources</p>	<p>Traffic, Transport and Vehicular survey data.</p> <p>National and region specific emission data.</p> <p>Compliance with national standards.</p> <p>Reduction in greenhouse gas emissions.</p> <p>Compliance of emission licensed facilities.</p> <p>Number of energy / renewable</p>	<p>Sources: Kildare County Council, Environmental protection Agency and Central Statistics Office.</p> <p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development.</p>

		<p>energy production facilities.</p> <p>% of dwellings / businesses using renewable energies.</p> <p>Rates of energy / renewable energy consumption.</p>	
Archaeological, Architectural and Cultural Heritage	<p>Enhance access to sites of heritage interest</p> <p>Regeneration of derelict and underutilised heritage sites.</p> <p>Improve appearance of areas with particular townscape character.</p> <p>Improve protection for protected archaeological sites and monuments and their settings, protected structures and conservation areas and areas of archaeological potential.</p>	<p>Updating of inventories to include new sites / features.</p> <p>Achieving the objectives of development plans regarding heritage protection.</p> <p>Range and extent of areas of heritage potential.</p> <p>Range and extent of areas of special planning controls.</p>	<p>Sources: Kildare County Council and Department of Environment Community and Local Government.</p> <p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development.</p>
Landscape and Visual	<p>Improve protection for landscapes of recognised quality.</p> <p>Maintain clear urban/rural distinctions.</p> <p>Enhance provision of, and access to, green space in</p>	<p>Range and extent of Amenity Landscapes.</p> <p>Rates of development within designated landscapes.</p> <p>Rates of urban expansion.</p>	<p>Sources: Kildare County Council and Department of Environment, Community and Local Government.</p> <p>Responsibility: Kildare County Council</p>

	urban areas	<p>Rates of deforestation.</p> <p>Rates of agricultural land re-development likely to impact landscape.</p> <p>% change of land use from rural to urban.</p>	<p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.</p>
Material Assets	<p>Improve availability and accessibility of commercially provided facilities and public services.</p> <p>Increase local employment opportunities.</p> <p>Improve efficiencies of transport, energy and communication infrastructure.</p> <p>Improve waste water treatment infrastructure.</p> <p>Reduce the generation of waste and adopt a sustainable approach to waste management.</p>	<p>Location / level of infrastructure.</p> <p>Achievement of development plan objectives.</p> <p>Rates of deprivation.</p> <p>Rate of waste disposal to landfill statistics.</p> <p>Range and extent of recycling facilities and services.</p> <p>Rates of recycling.</p>	<p>Sources: Kildare County Council, Central Statistics Office, National Roads Authority and Environmental Protection Agency.</p> <p>Responsibility: Kildare County Council</p> <p>Frequency: Align with monitoring evaluation report on the effects of implementing Kildare County Development Plan.</p>

Maps



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Job Title
**Celbridge (including Castletown)
 LAP 2016-2022 SEA**

Location of Celbridge

Scale at A4

1:150,000

Job No
250695-00

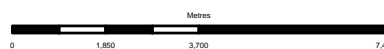
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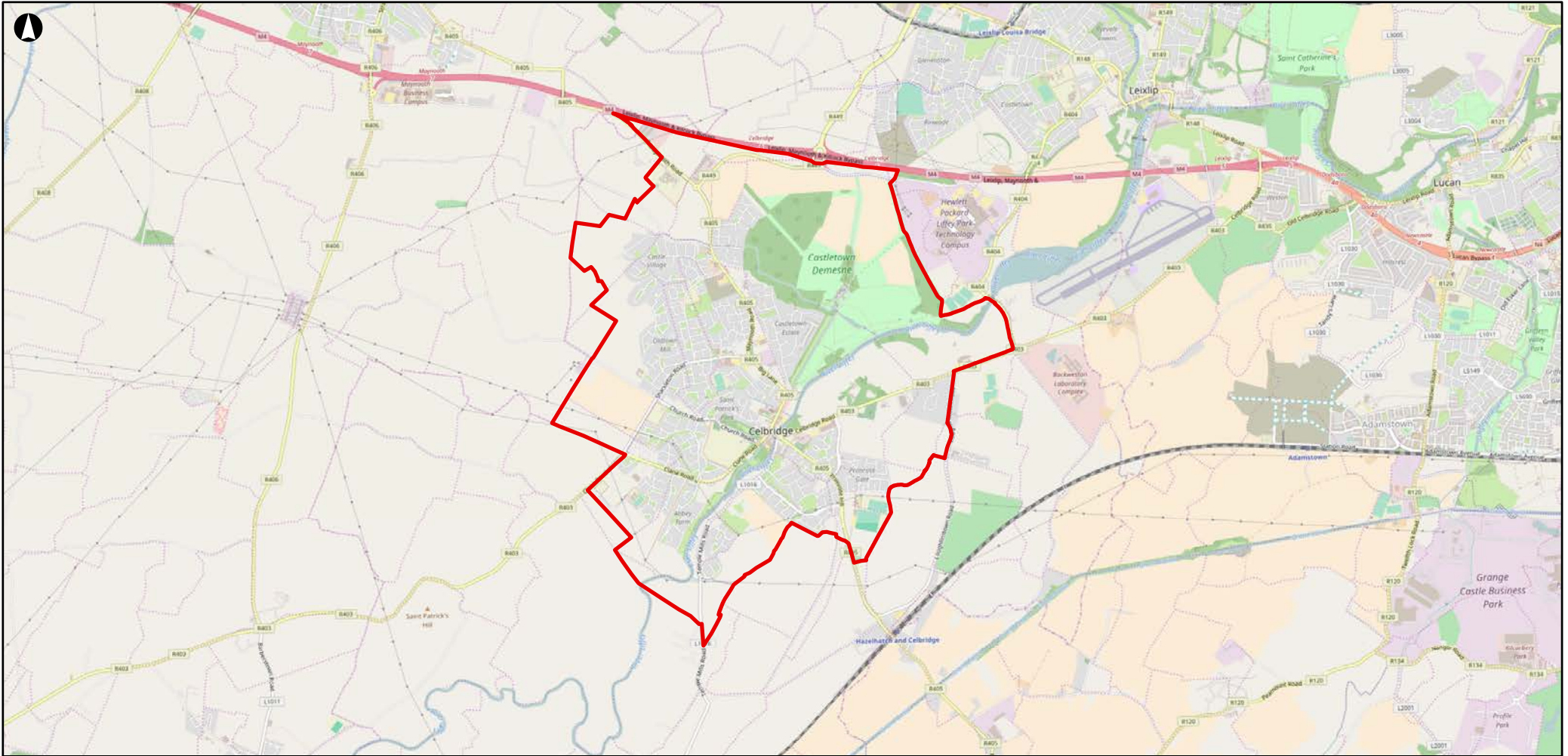
Drawing No
Figure 1

Issue
P1

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Issue	Date	By	Chkd	Appd



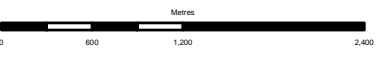


Legend

 LAP Boundary

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Issue	Date	By	Chkd	Appd

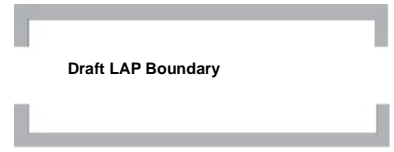


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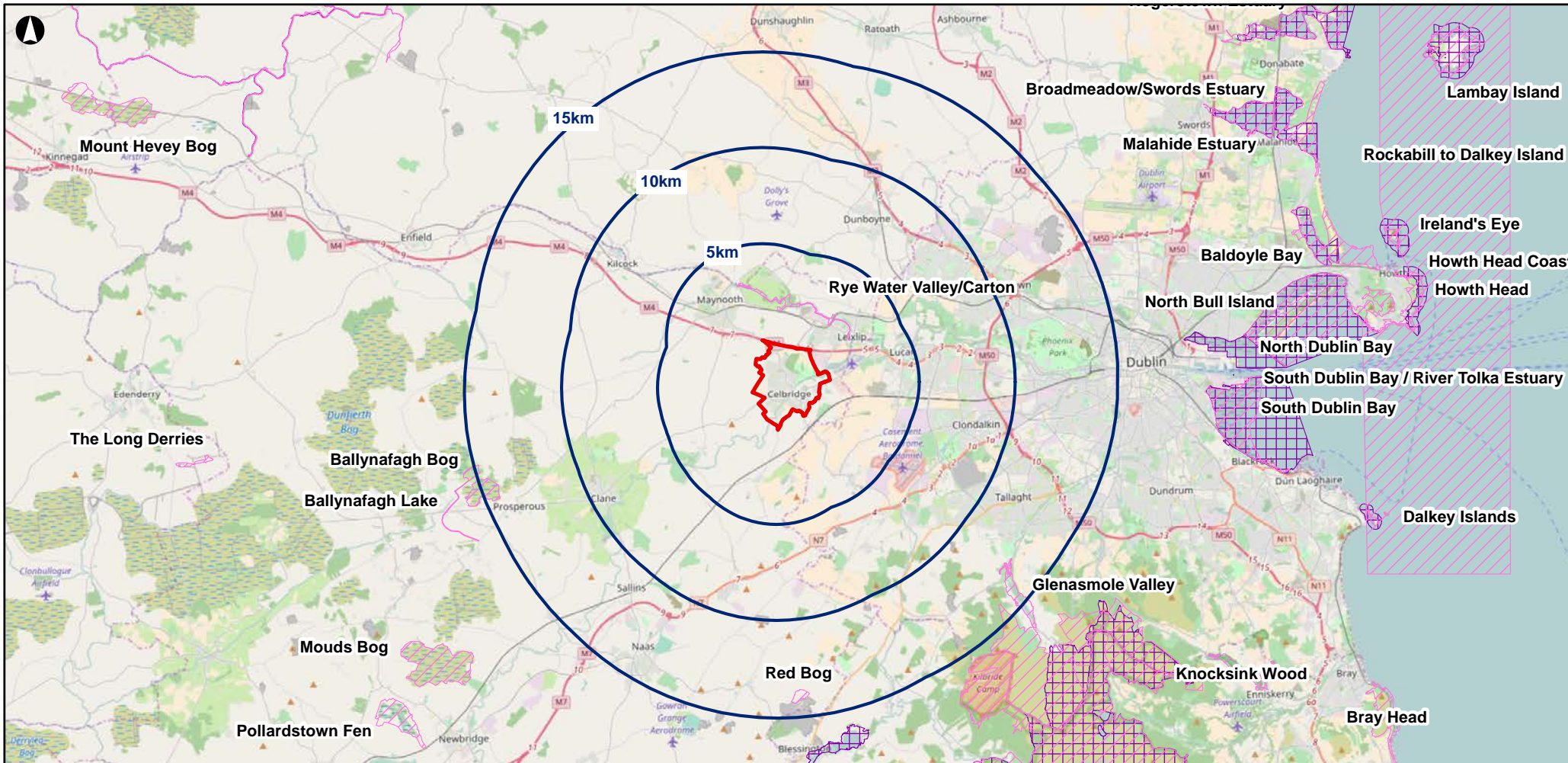
Draft LAP Boundary

Scale at A4

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Drawing No Figure 2	Issue P1
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Legend

- LAP Boundary
- LAP Boundary Buffer
- Special Area of Conservation
- Special Protection Areas

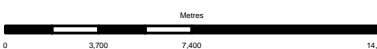
The following ecological designated sites within 5km of Celbridge are labelled on the map:
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 001398 Rye Water Valley/Cartron
 002103 Royal Canal
 002104 Grand Canal

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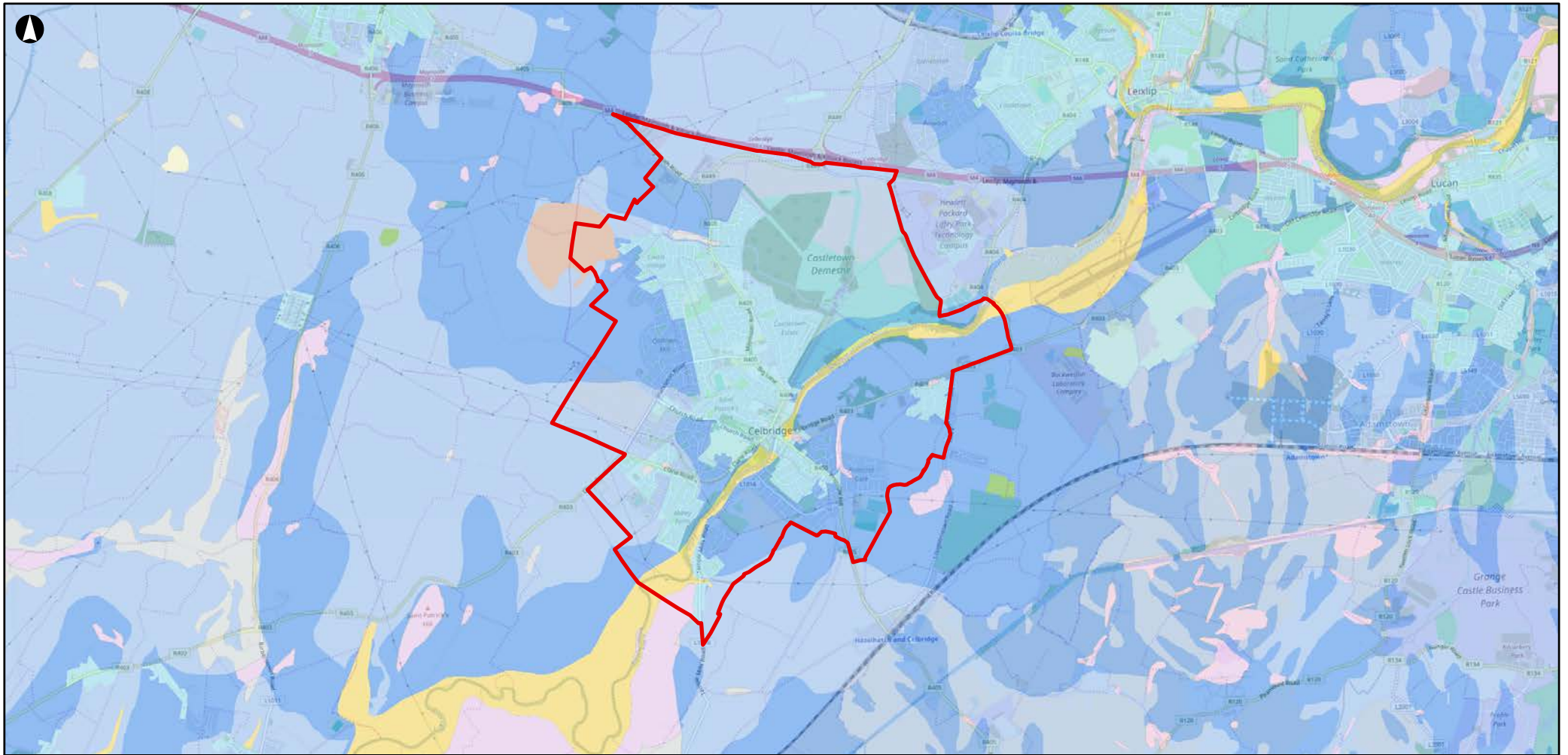


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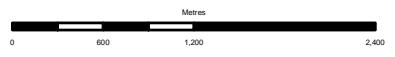
- AlluvMIN - Mineral alluvium
- BminDW - Grey Brown Podzolics / Brown Earths Basic
- BminPD - Surface water Gleys / Ground water Gleys Basic
- BminPDPT - Peaty Gleys Basic Parent Materials Basic
- BminSP - Surface water Gleys / Gorund water Gleys Shallow
- BminSW- Renzinas / Lithosols
- Cut - Raised Bog cutaway/ cutover
- Lac
- Made
- Water
- LAP Boundary

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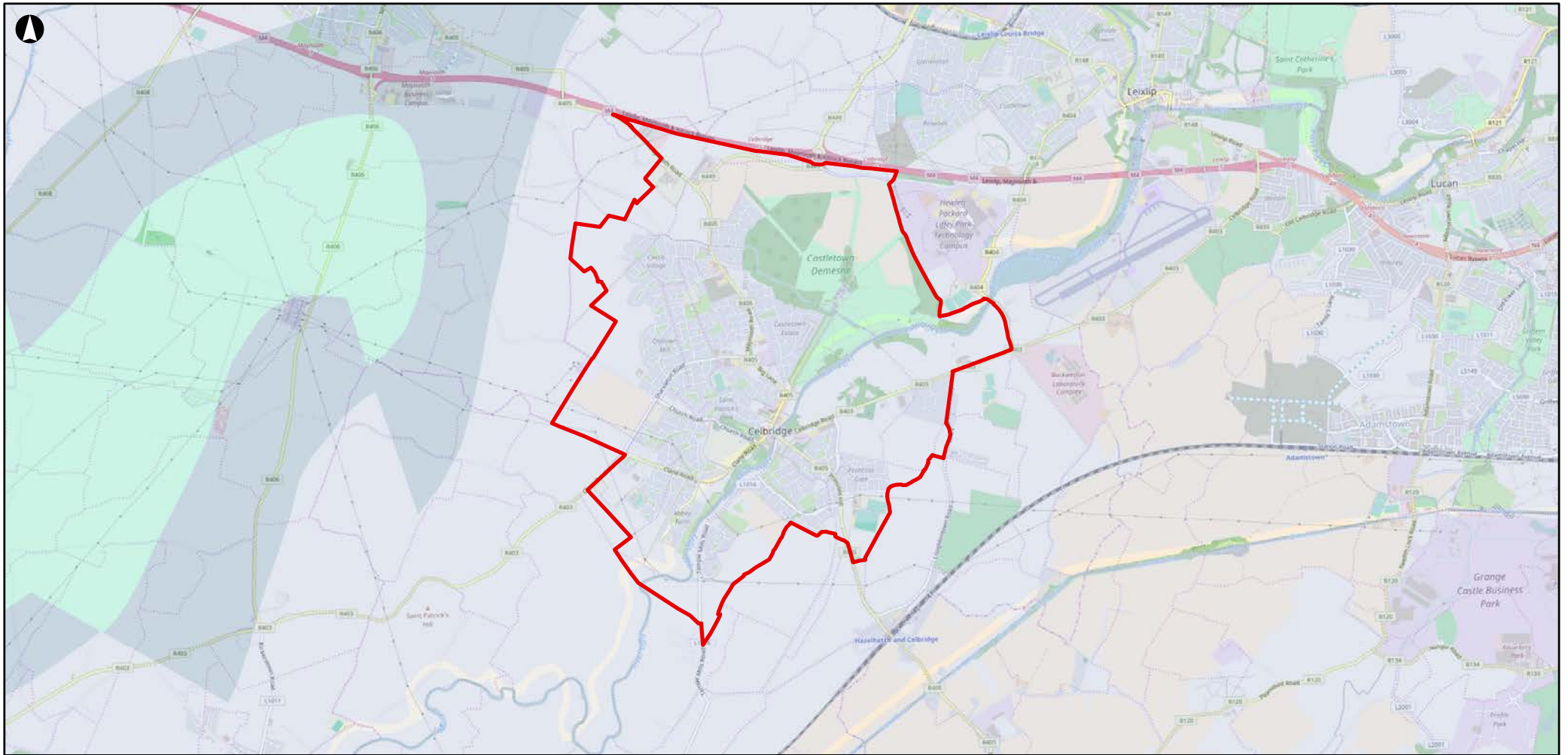
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


Drawing No Figure 4	Issue P1
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Legend

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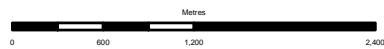
Generalised Bedrock

-  DLIL - Dinantian Lower Impure Limestones
-  DPUL - Dinantian Pure Unbedded Limestones
-  DUIL - Dinantian Upper Impure Limestones

Associated datasets and digital information objects connected to this resource are available at the GSI Groundwater Data Viewer managed by the Geological Survey of Ireland. <http://spatial.dcenr.gov.ie/GeologicalSurvey/Groundwater/index.html>

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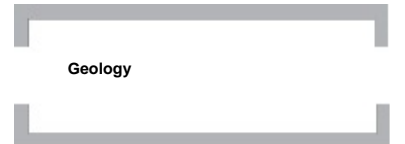


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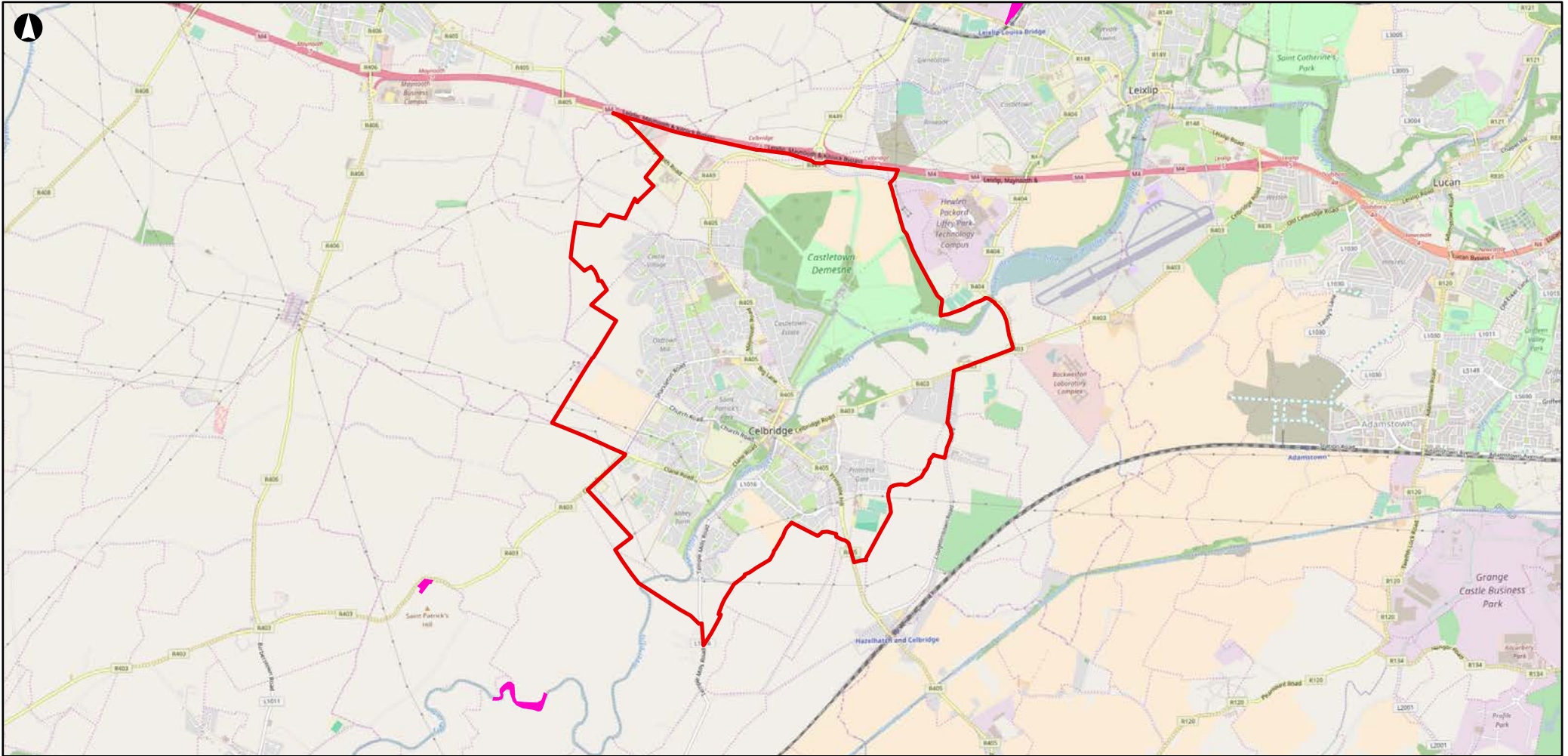
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Drawing No Figure 5	Issue P1



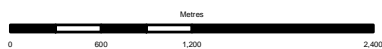
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- LAP Boundary
- Geological Heritage Sites

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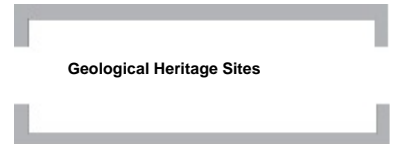


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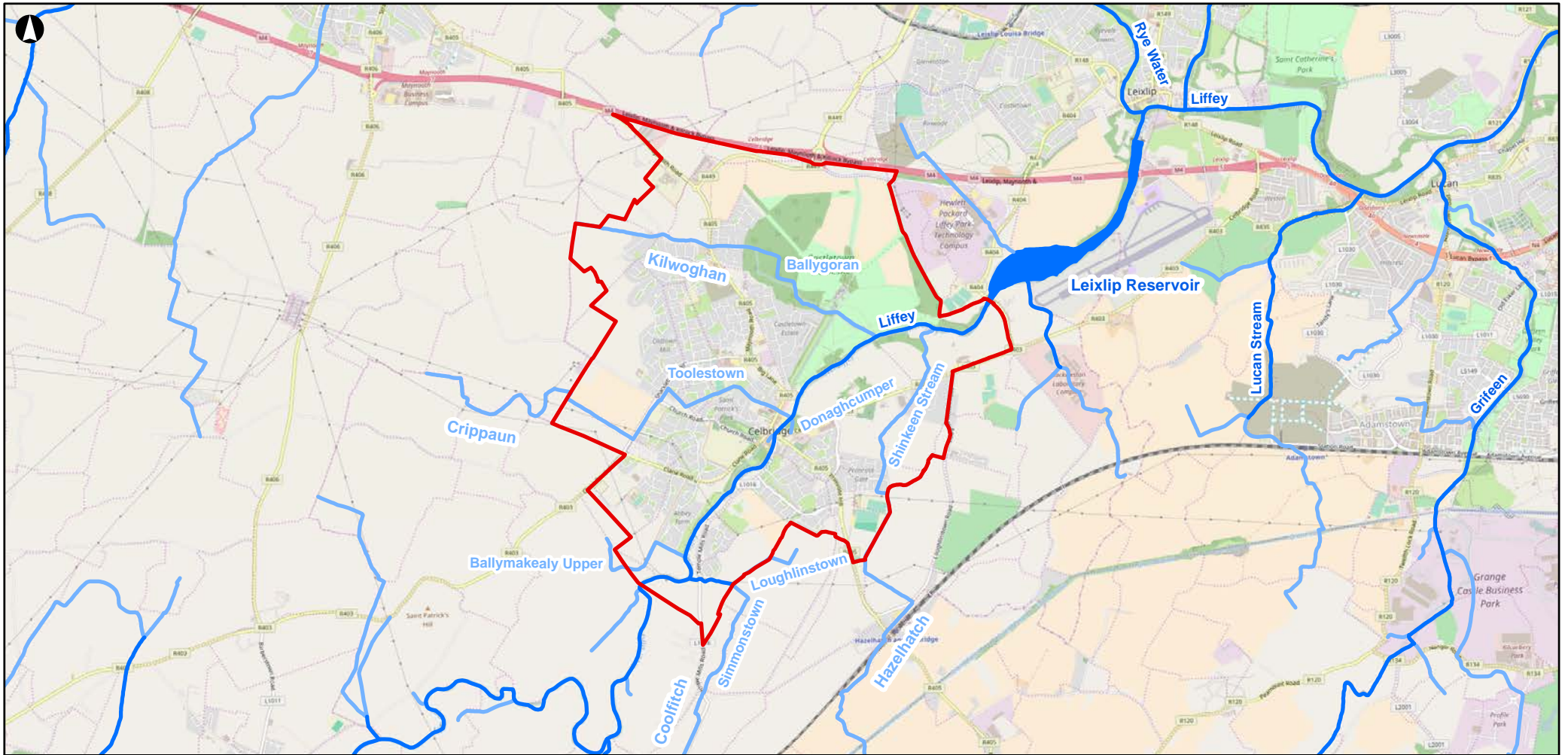
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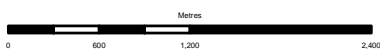
Legend

- LAP Boundary
- River Network
- Streams
- Lake

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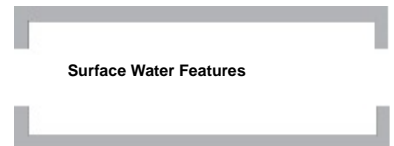


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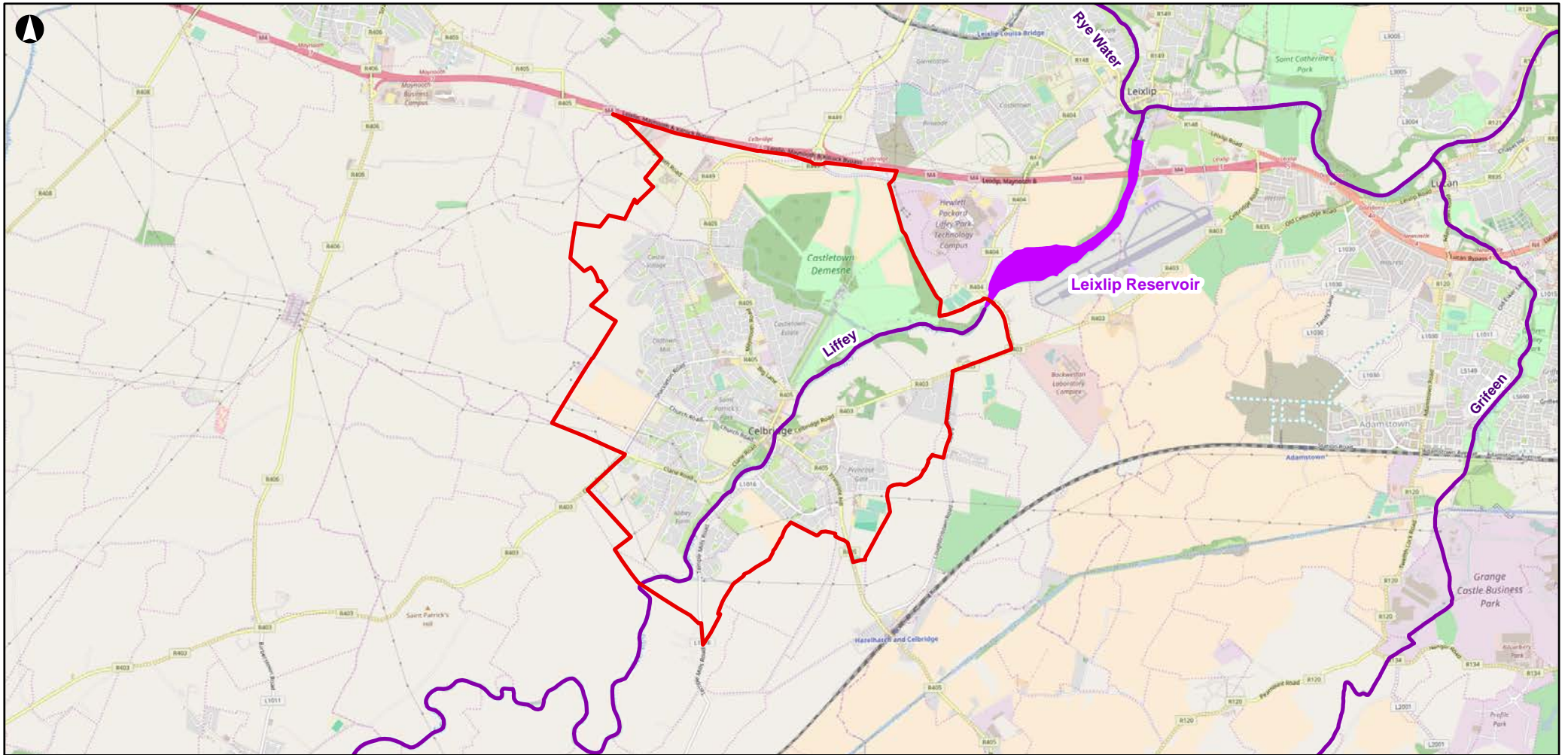
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Job No 250698-00	Drawing Status For Information
Drawing No Figure 7	Issue P1



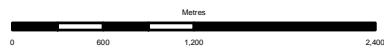
Legend

- LAP Boundary
- At risk of not achieving good status
- Possibly at risk of not achieving good status

Associated datasets and digital information objects connected to this resource: WFD River Waterbodies Risk Score
 Sourced from Environmental Protection Agency Ireland Map Viewer
<http://gis.epa.ie/Envision>

Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA

P1	01-12-16	LD	JL	SW
Issue	Date	By	Chkd	Appd



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WFD Surface Waterbodies Risk

Scale at A4

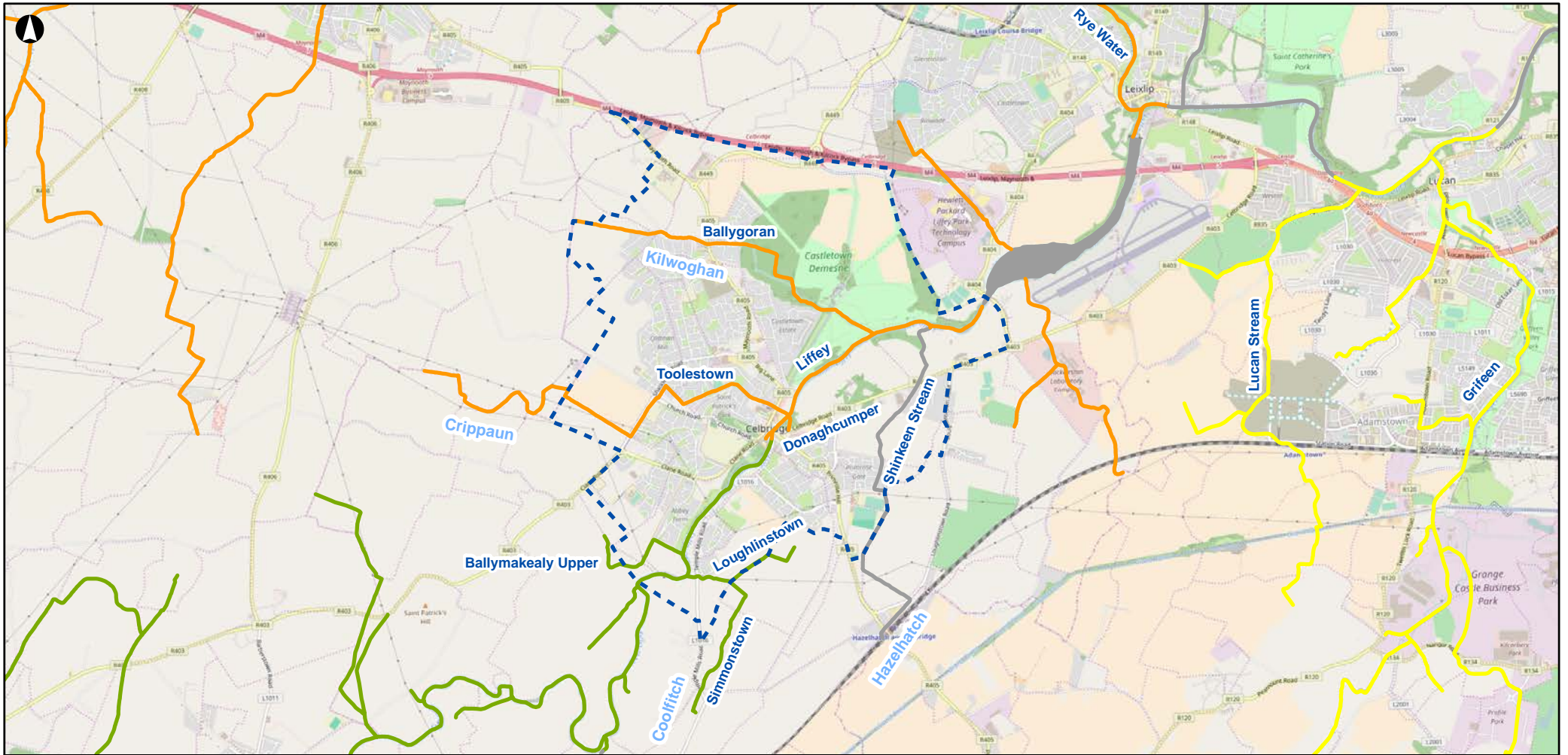
1:50,000

Job No
250695-00

Drawing Status
For Information

Drawing No
Figure 8

Issue
P1



Legend

WFD Status

- High
- Good
- Moderate
- Poor
- Bad
- Unassigned

 LAP Boundary

Associated datasets and digital information objects connected to this resource available at: EPA Map Viewer managed by Environmental <http://gis.epa.ie/Envision>

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P1	01-12-16	LD	JL	SW
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**River and Lake Waterbodies
WFD Status 2010-2012**

Scale at A4

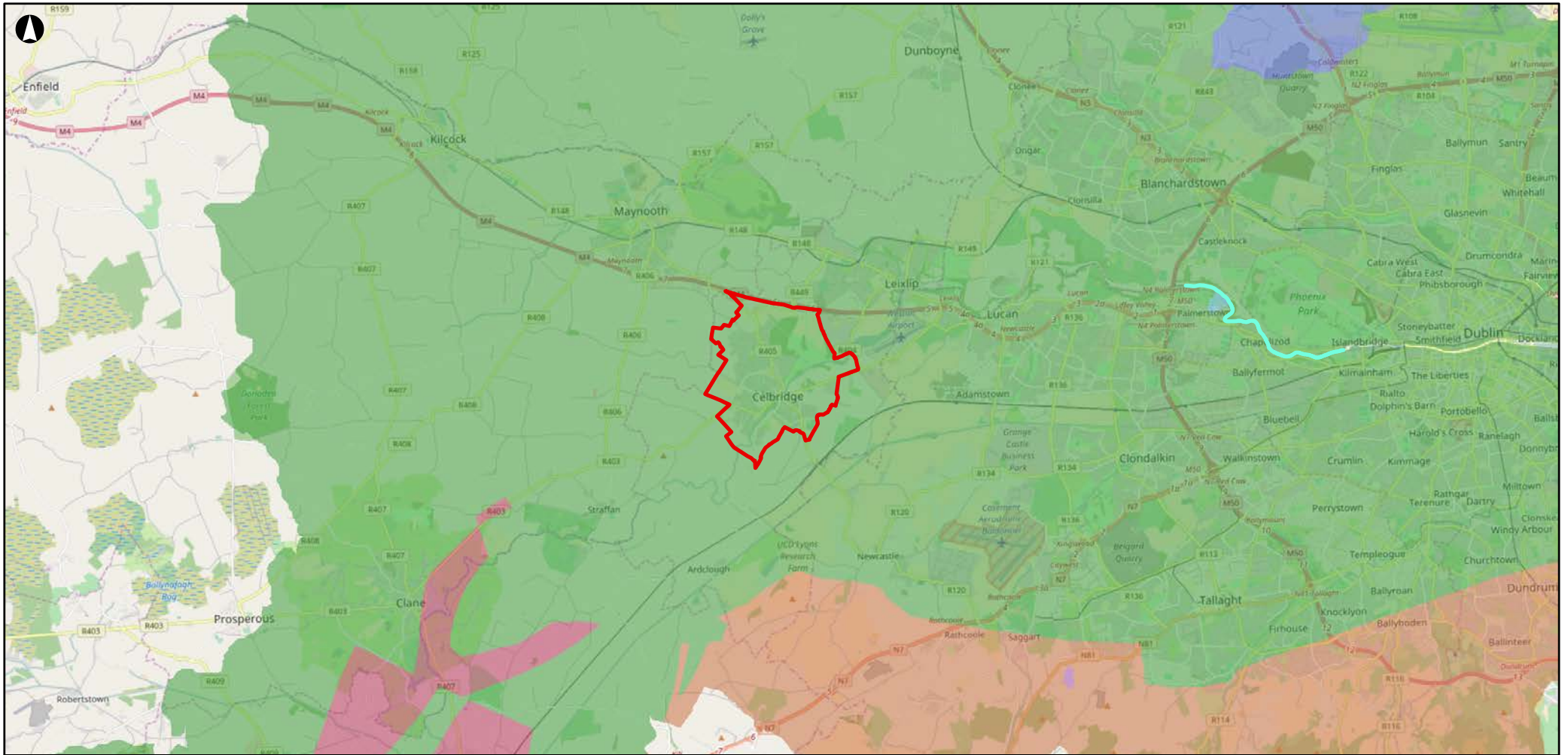
1:50,000

Job No
250695-00

Drawing Status
For Information

Drawing No
Figure 9

Issue
P1



Legend

LAP Boundary

Rivers for Drinking Water

Liffey

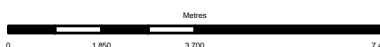
Groundwater for Drinking Water

- Corbally
- Mill Lane
- Dublin
- Naas
- Kilcullen
- Swords

Associated datasets and digital information objects connected to this resource are available at the EPA Map Viewer managed by Environmental Protection Agency Ireland <http://gis.epa.ie/Envision>

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**WFD Protected Areas
Drinking Water**

Scale at A4

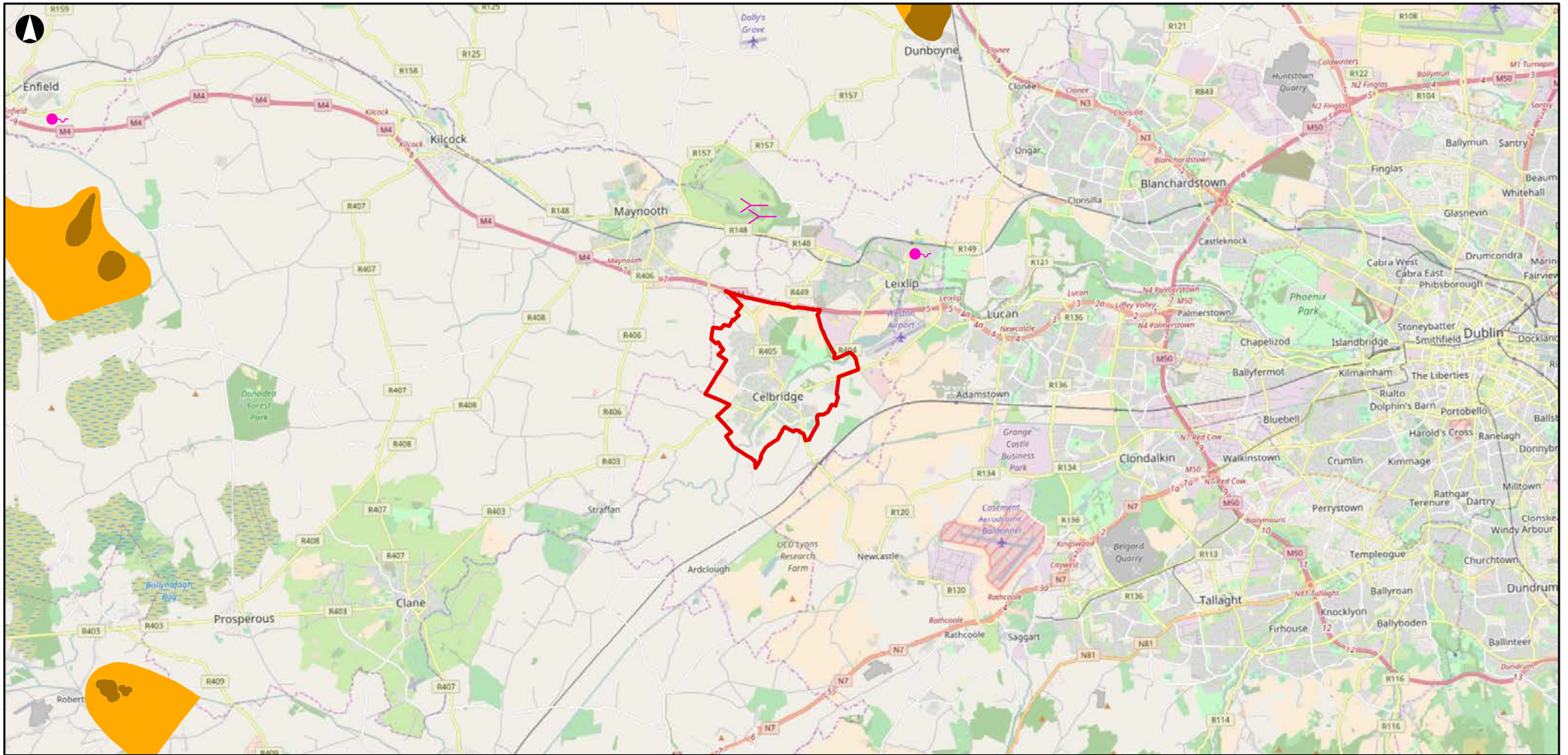
1:150,000

Job No
250695-00

Drawing Status
For Information

Drawing No
Figure 10

Issue
P1



Legend

LAP Boundary

Karst Features

- Cave
- Spring

Source Protection Areas

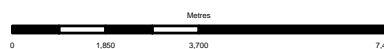
- SI - Inner Protection Area
- SO - Outer Protection Area

Associated datasets and digital information objects connected to this resource:
 GSI Karst Features available at: [GSI Groundwater Data Viewer](http://spatial.dcenr.gov.ie/GeologicalSurvey/Groundwater/index.html)
<http://spatial.dcenr.gov.ie/GeologicalSurvey/Groundwater/index.html>

GSI Groundwater Source Protection Areas available at:
<http://www.dccae.gov.ie/natural-resources/en-ie/Geological-Survey-of-Ireland/Pages/Data-Downloads.aspx#>

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Groundwater Features and Source Protection Areas

Scale at A4

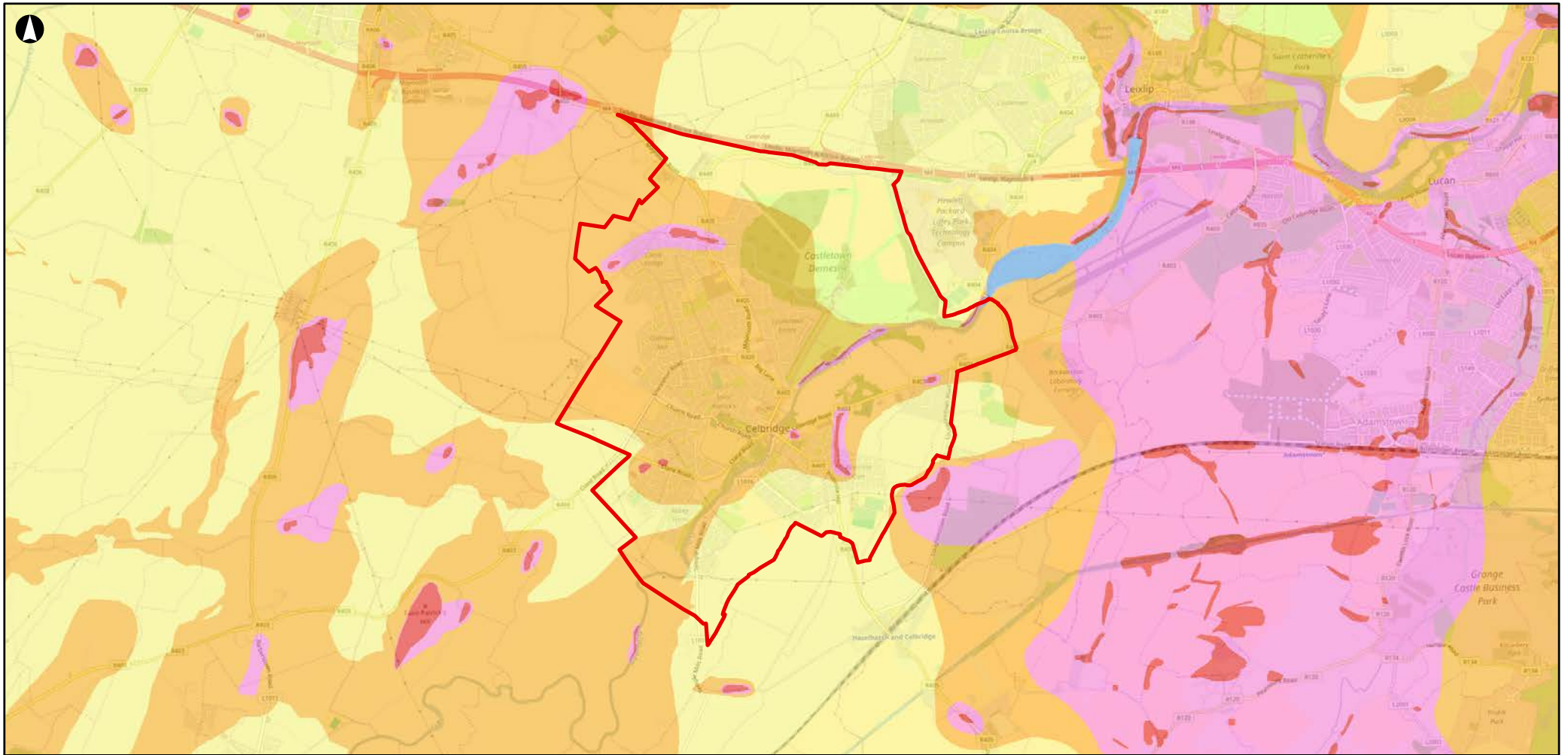
1:150,000

Job No
250695-00

Drawing Status
For Information

Drawing No
Figure 11

Issue
P1



Legend

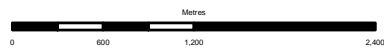
- LAP Boundary
- X - Rock at or near Surface or Karst
- E - Extreme
- H - High
- M - Moderate
- L - Low
- Water

Associated datasets and digital information objects connected to this resource are available at the GSI Groundwater Data Viewer managed by the Geological Survey of Ireland. <http://spatial.dcenr.gov.ie/GeologicalSurvey/Groundwater/index.html>

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P1	01-12-16	LD	JL	SW
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Issue	Date	By	Chkd	Appd
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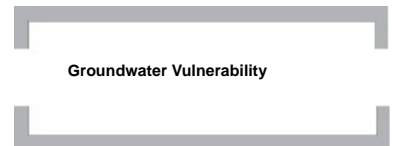


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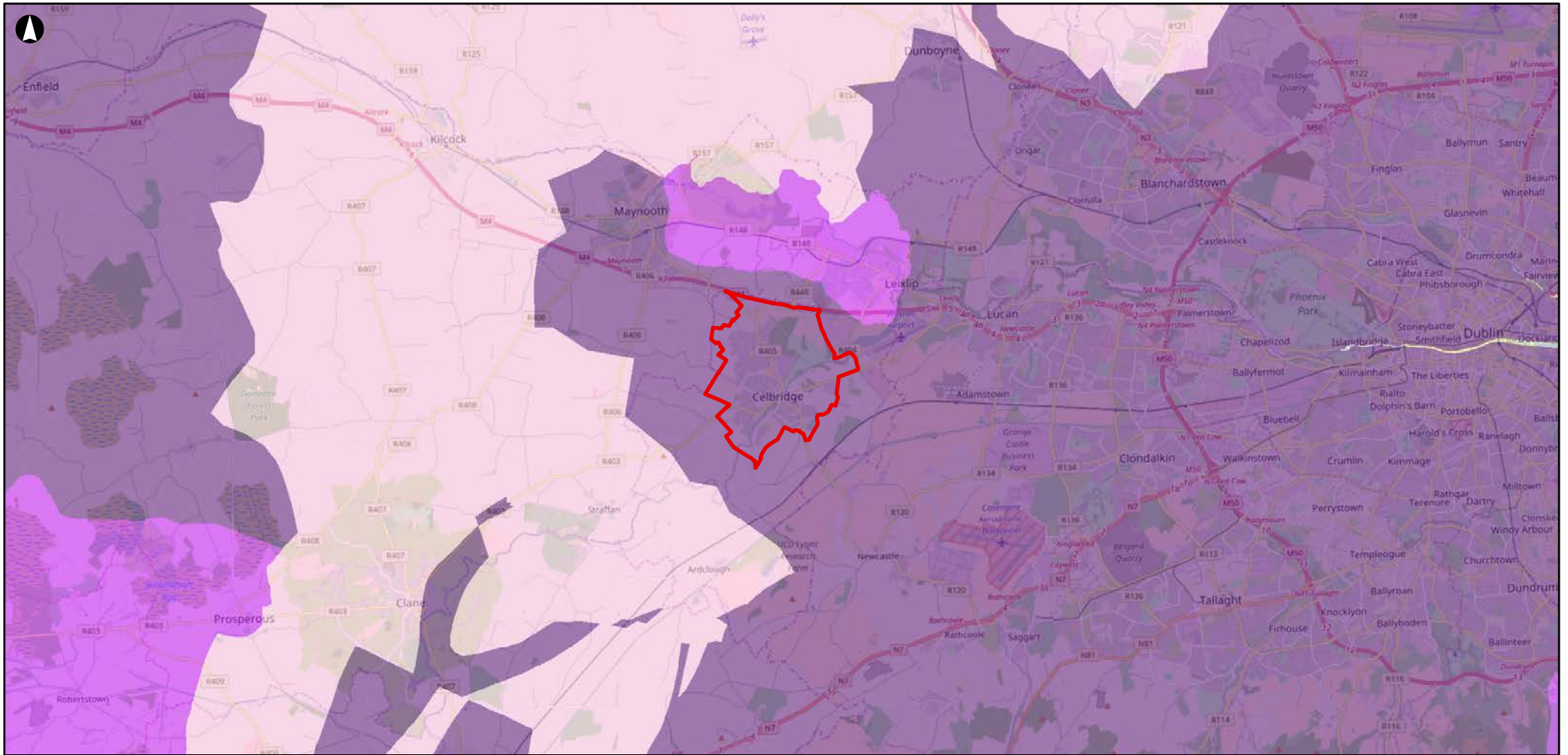


Scale at A4

1:50,000

Job No 250695-00	Drawing Status For Information
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
Drawing No Figure 12	Issue P1
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Legend

 LAP Boundary

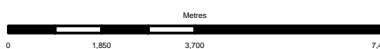
Groundwater Waterbody Risk Scores

-  1a - At risk of not achieving good status
-  1b - Possibly at risk of not achieving good status
-  2a - Expected to achieve good status
-  2b - Strongly expected to achieve good status

Associated datasets and digital information objects connected to this resource: WFD Risk Data Geodatabase (2008)
 Available at: EPA GeoPortal managed by Environmental Protection Agency Ireland <http://gis.epa.ie/GetData/Download>

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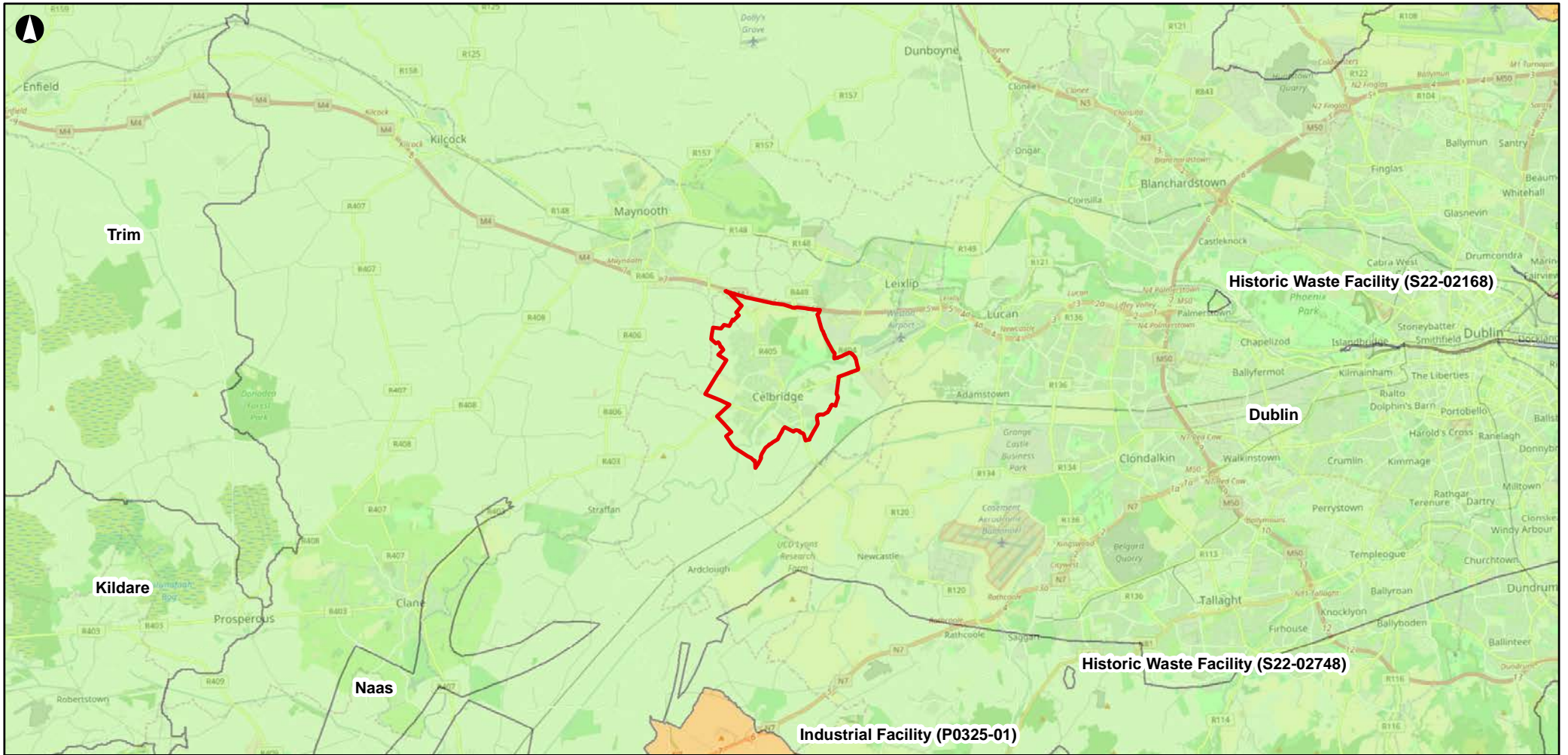
WFD Groundwater Waterbody Risk

Scale at A4

1:150,000

Job No 250695-00	Drawing Status For Information
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Drawing No Figure 13	Issue P1
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Legend

 LAP Boundary

WFD Status

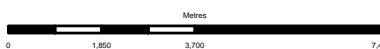
 Good

 Poor

Associated datasets and digital information objects connected to this resource available at: EPA Map Viewer managed by Environmental <http://gis.epa.ie/Envision>

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P1	01-12-16	LD	JL	SW
Issue	Date	By	Chkd	Appd

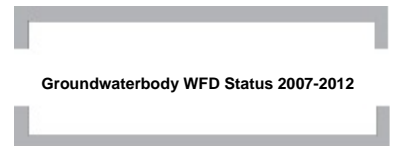


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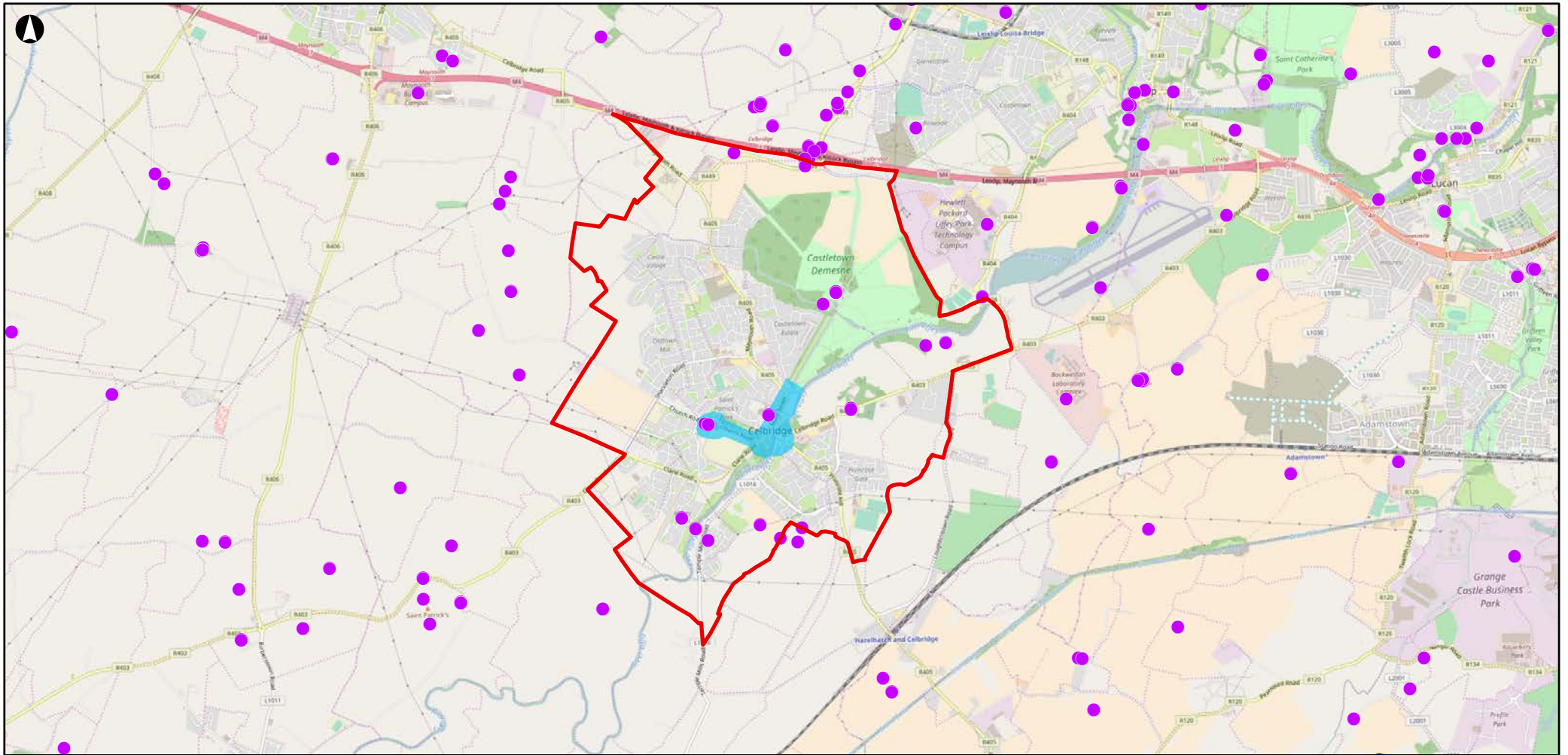


Groundwaterbody WFD Status 2007-2012

Scale at A4

1:150,000

Job No 250695-00	Drawing Status For Information
Drawing No Figure 14	Issue P1



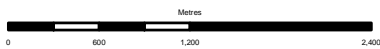
Legend

- LAP Boundary
- National Monuments
- Zone of Archaeological Potential

Associated datasets and digital information objects connected to this resource are available at: Historic Environment Viewer Managed by Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs <http://webgis.archaeology.ie/historicenvironment/>

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P1	01-12-16	LD	JL	SW
Issue	Date	By	Chkd	Appd

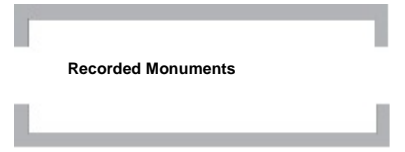


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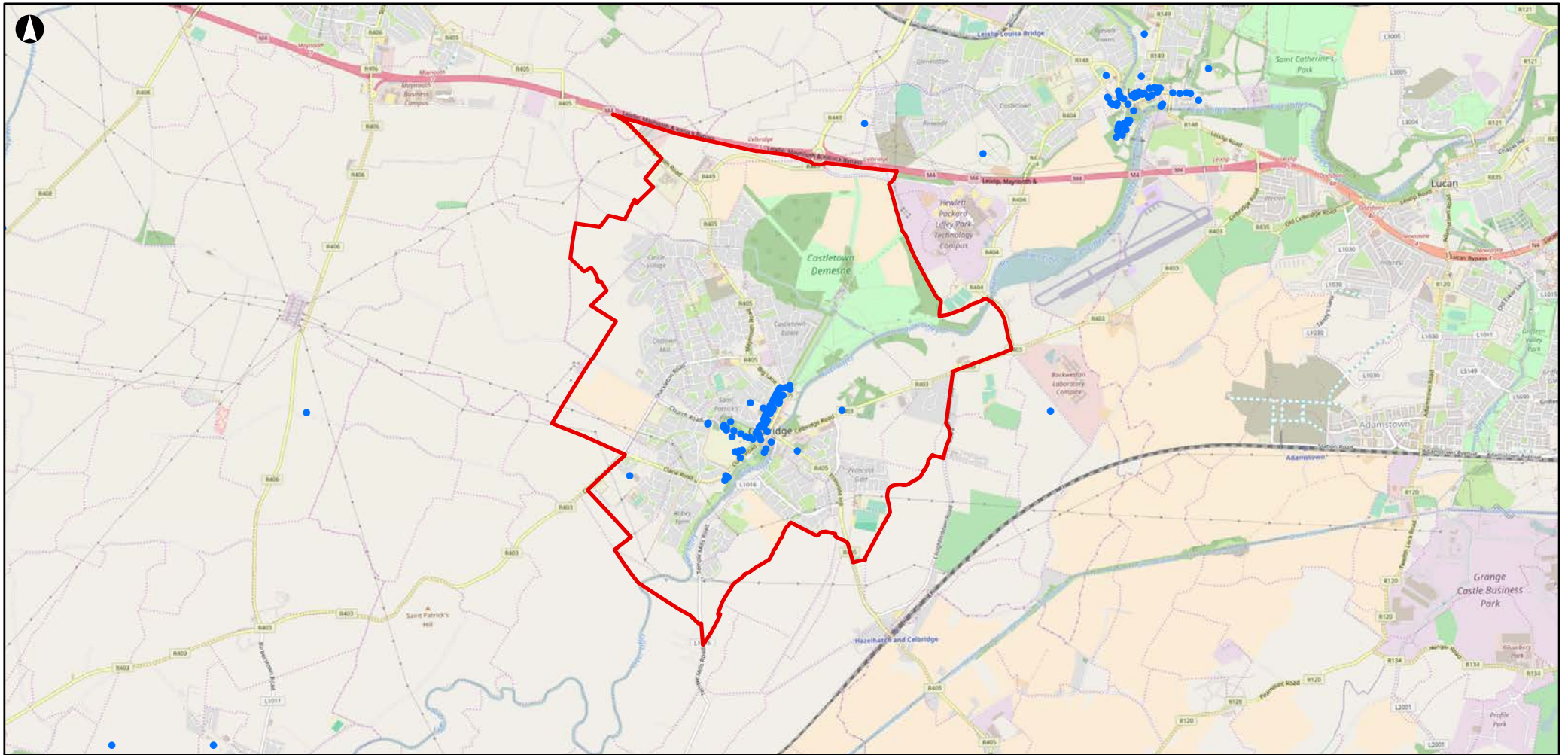
Job Title
**Celbridge (including Castletown)
LAP 2016-2022 SEA**



Scale at A4

1:50,000

Job No 250695-00	Drawing Status For Information
Drawing No Figure 15	Issue P1



Legend

- LAP Boundary
- Protected Structures

Associated datasets and digital information objects connected to this resource are available at: Historic Environment Viewer Managed by Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs <http://webgis.archaeology.ie/historicenvironment/>

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Issue	Date	By	Chkd	Appd

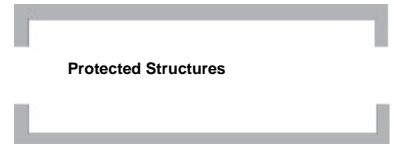


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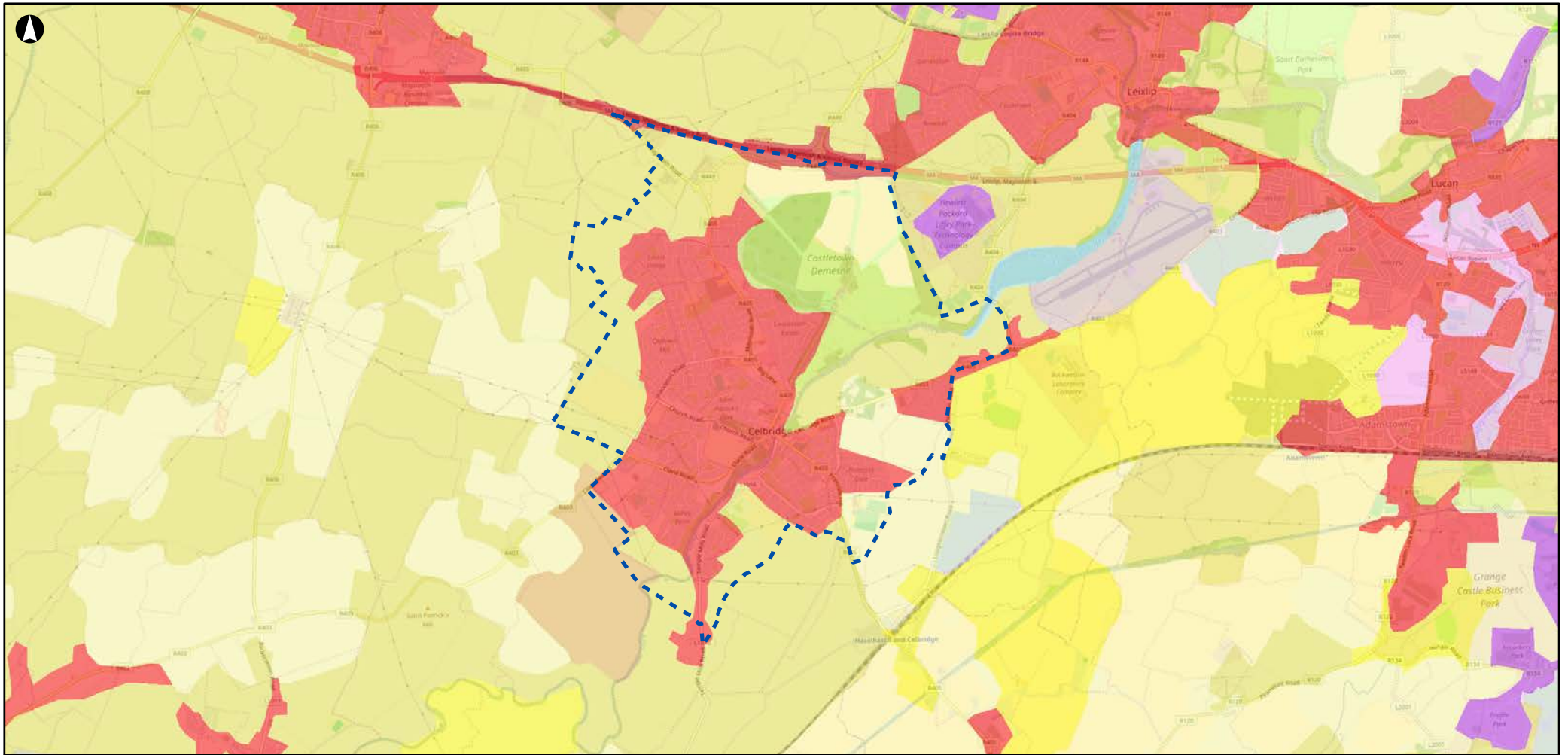


Protected Structures

Scale at A4

1:50,000

Job No 250695-00	Drawing Status For Information	Issue P1
Drawing No Figure 16		



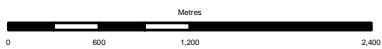
Legend

- 112 Discontinuous urban fabric
- 121 Industrial or commercial units
- 122 Road and rail networks
- 124 Airports
- 141 Green urban sites
- 142 Sport and leisure facilities
- 211 Non-irrigated land
- 231 Pastures
- 242 Complex cultivation patterns
- 243 Land principally occupied by agriculture with areas of natural vegetation
- 311 Broad-leaved forest
- 313 Mixed forest
- 512 Water bodies
- LAP Boundary

Associated datasets and digital information objects connected to this resource are available at: EPA GeoPortal managed by Environmental Protection Agency Ireland <http://gis.epa.ie/GetData/Download>

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Issue	Date	By	Chkd	Appd



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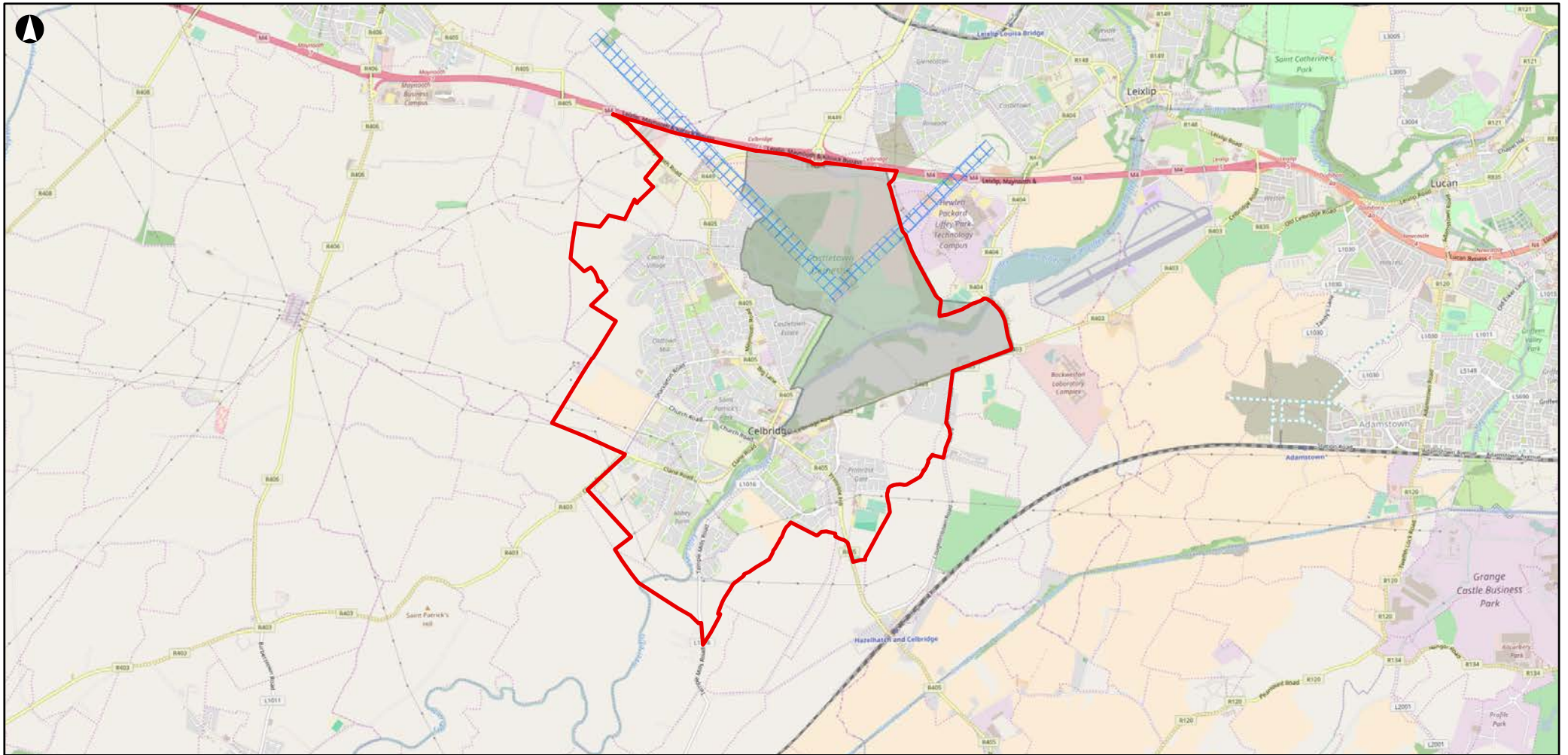


Scale at A4

1:50,000

Job No 250695-00	Drawing Status For Information
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Drawing No Figure 17	Issue P1
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Legend

 LAP Boundary

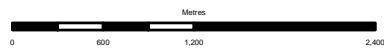
Castle townhouse Views

 Border

 Protected Views

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Issue	Date	By	Chkd	Appd

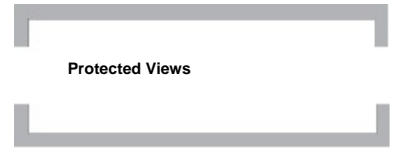


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Protected Views

Scale at A4

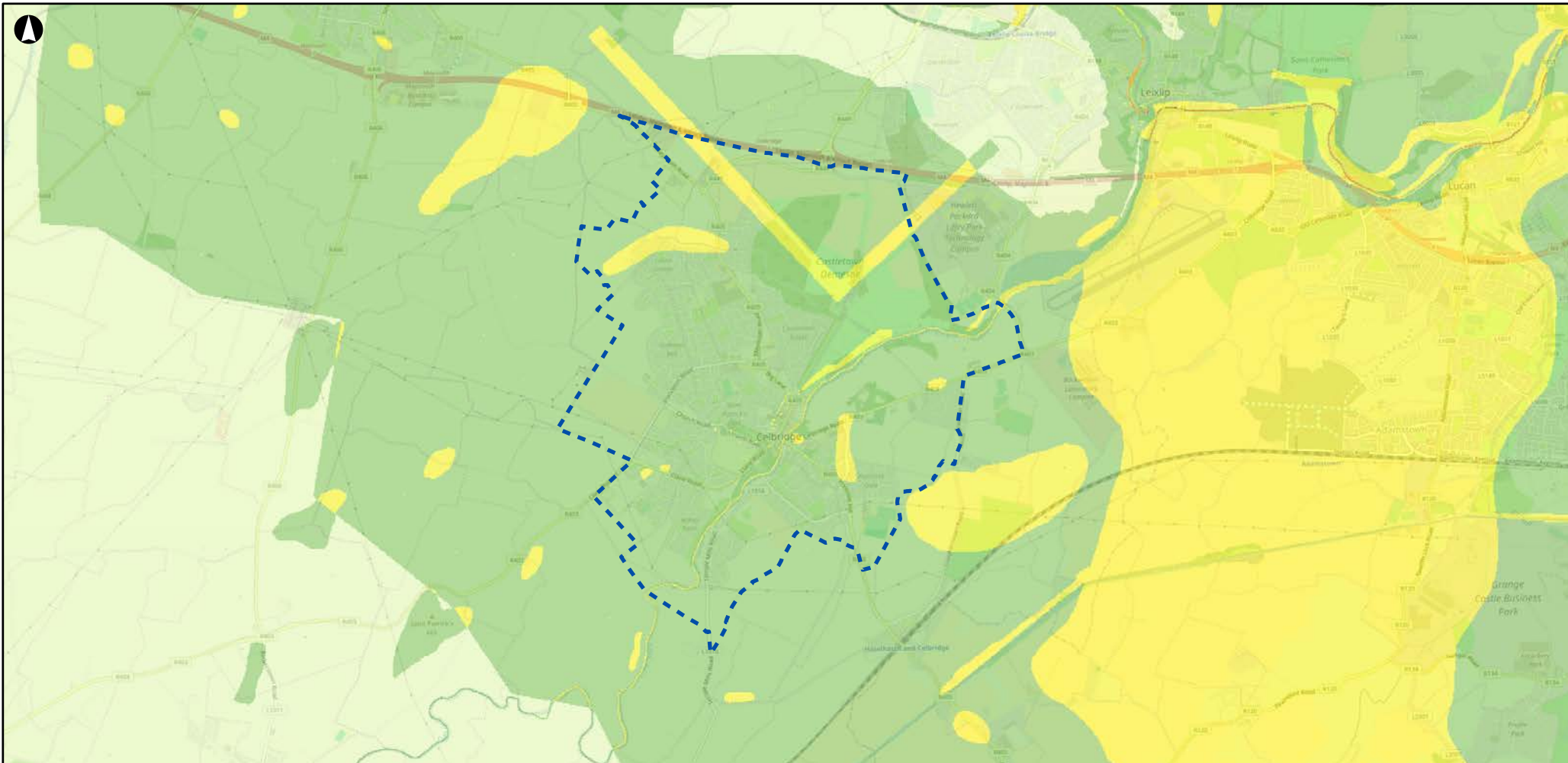
1:50,000

Job No
250695-00

Drawing Status
For Information

Drawing No
Figure 18






Issue
P1



Legend

 LAP Boundary

Sensitivity Overlay Classes

-  0-5 No sensitivity
-  10-15 Low-sensitivity areas
-  20-25 Moderate-sensitivity areas
-  30-35 Elevated-sensitivity areas
-  40-45 High-sensitivity areas

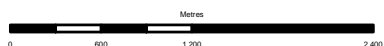
The following datasets are included in the Sensitivity Map:

- Special Areas of Conservation
- Potential National Heritage Areas
- Surface Water WFD Risk
- Groundwater WFD Risk
- Recorded Monuments
- Protected Structures
- Protected Views
- Groundwater Vulnerability

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P1	01-12-16	LD	JL	SW
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Issue	Date	By	Chkd	Appd
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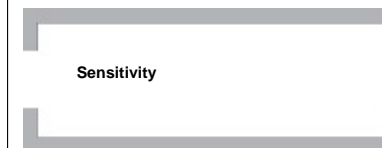


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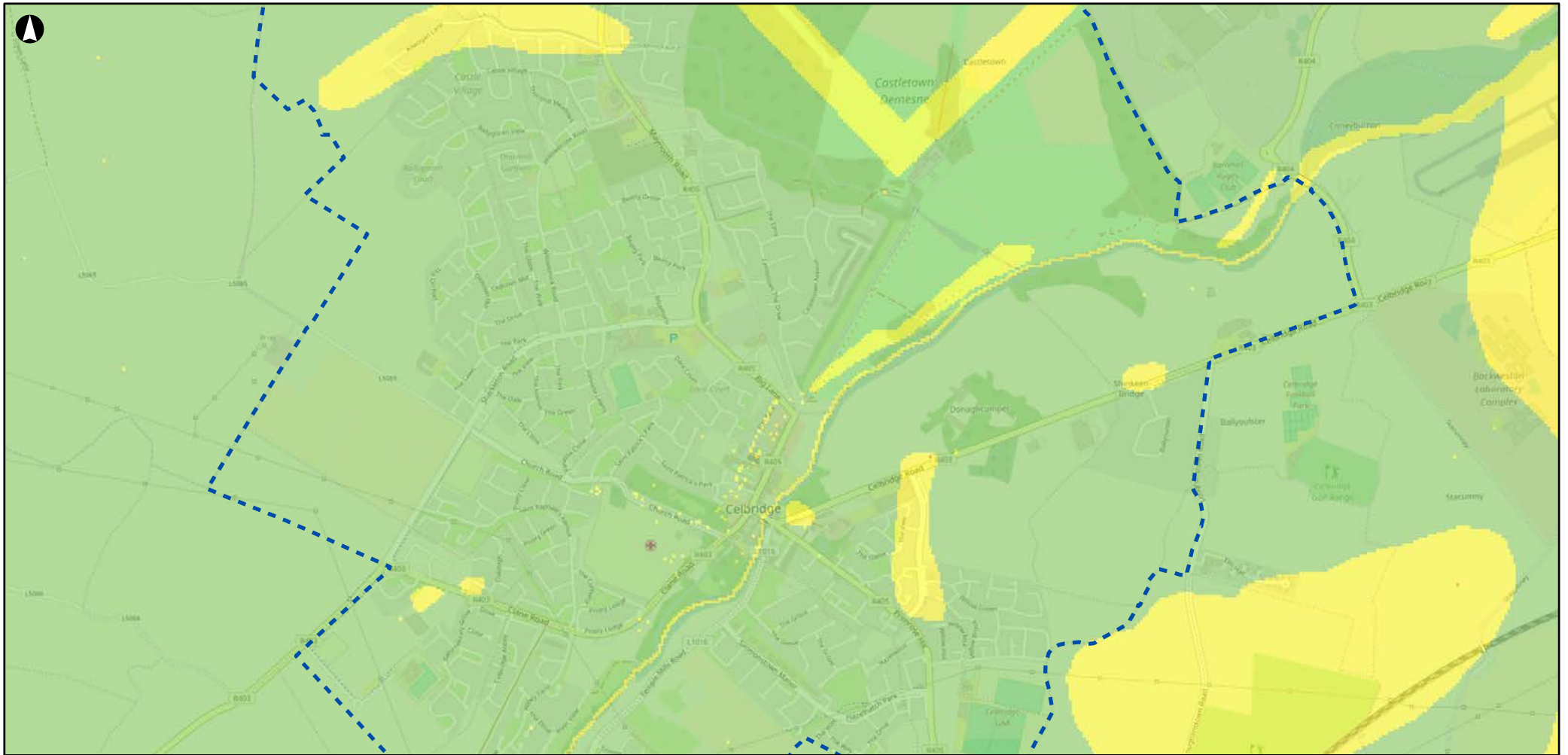


Scale at A4

1:50,000

Job No 250695-00	Drawing Status For Information
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Drawing No Figure 19	Issue P1
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Legend

LAP Boundary

Sensitivity Overlay Classes

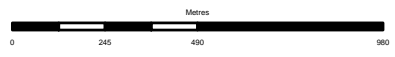
- 0-5 No sensitivity
- 10-15 Low-sensitivity areas
- 20-25 Moderate-sensitivity areas
- 30-35 Elevated-sensitivity areas
- 40-45 High-sensitivity areas

The following datasets are included in the Sensitivity Map:

- Special Areas of Conservation
- Potential National Heritage Areas
- Surface Water WFD Risk
- Groundwater WFD Risk
- Recorded Monuments
- Protected Structures
- Protected Views
- Groundwater Vulnerability

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Scale at A4

1:20,000

Job No 250695-00	Drawing Status For Information
Drawing No Figure 19	Issue P1