



**PROVISION OF INFORMATION REGARDING APPROPRIATE ASSESSMENT SCREENING  
CORK CITY  
LOCAL ECONOMIC AND COMMUNITY PLAN – 2016-2021**

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## Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>3</b>
1.1	Background .....	3
1.2	Aim of this Report.....	3
<b>2</b>	<b>DESCRIPTION OF THE PROPOSED PLAN .....</b>	<b>3</b>
2.1	Overview .....	3
2.2	Relationship between proposed Plan and the County Development Plan. ....	4
<b>3</b>	<b>METHODOLOGY.....</b>	<b>5</b>
3.1	Formal Guidance.....	5
3.2	Sources of Information Used .....	6
<b>4</b>	<b>Description of European Sites .....</b>	<b>6</b>
4.1	Identification of European sites.....	6
4.2	Reasons for Designation, Site Sensitivities and Threats.....	7
<b>5</b>	<b>IDENTIFICATION OF POTENTIAL LIKELY SIGNIFICANT EFFECTS .....</b>	<b>9</b>
5.1	Identification of Likely Significant effects .....	9
5.2	Protective Policies already in place in the County Development Plan.....	9
5.3	Results of analysis.....	10
5.4	In-combination effects.....	11
<b>6</b>	<b>SCREENING CONCLUSIONS .....</b>	<b>12</b>
	References .....	13

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## 1 INTRODUCTION

### 1.1 Background

Proposed plans and projects must undergo a formal “test” or “screening” to see if they would have likely significant effects on specific sites designated for their nature conservation importance, under Section 177U (5), Part XAB of the Planning and Development (Amendment) Act 2010. These sites are those designated under the European Commission’s Natura 2000 network of sites. These sites are designated on the basis of the presence of certain habitats and species that are deemed to be of international importance.

The EC Habitats and Birds Directives are the framework for the designation of these sites. The EC Habitats Directive requires the “screening” of plans and projects under Article 6(3). If the screening process results in a judgement that likely significant effects may occur or cannot be ruled out, then a more detailed ‘appropriate assessment’ (AA) is required. Whilst the structure of this assessment process is not laid down in law, there are guidance documents that are used to provide an indication of how this assessment may be carried out.

In order to ensure that the proposed Cork City Local Economic and Community Plan 2016-2021 complies fully with the requirements of Article 6 of the Habitats Directive and all relevant Irish transposing legislation (*Planning and Development (Amendment) Act 2011*), Cork City Council appointed Scott Cawley Ltd. to carry out the screening of the proposed Plan to see if it requires an AA.

### 1.2 Aim of this Report

The aims of this report are:

- To identify any linkages between the sensitivities of the individual European sites and the implications of the proposed Plan, taking any protective policies within overarching plans such as the Cork City Development Plan 2015-2021 into account;
- To determine if the implementation of the proposed Plan could result in likely significant effects on the European sites in terms of impacts on their sensitivities.

## 2 DESCRIPTION OF THE PROPOSED PLAN

### 2.1 Overview

“Pure Cork- An Action Plan for the City” represents the Local Economic and Community Plan for Cork City. It is an action-driven plan used to guide economic and community development in the city over the next six years. This plan will seek to build on the structures, work and achievements of Cork 2012 – Imagine Our Future (Cork City Council, 2001) and the work of the Cork City Development Board.

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This plan is structured around 15 High Level Goals (HLG's) that are driven by the vision set out in the Cork City Development Plan (2015-2021):

“...to be a successful, sustainable regional capital and to achieve a high quality of life for its citizens and a robust local economy, by balancing the relationship between community, economic development and environmental quality. It will have a diverse innovative economy, will maintain its distinctive character and culture, will have a network of attractive neighbourhoods served by good quality transport and amenities and will be a place where people want to live, work, visit and invest in.”

- That Cork will have vibrant, resilient, inclusive, sustainable communities where people have a good quality of life and access to quality public services
- To ensure balanced and sustainable economic development and employment in the city
- To promote social inclusion and equality by ensuring that all residents of Cork City have equal opportunities to access, participate and engage in the social, economic and lifelong learning opportunities in the city

It is not the purpose of this Report to reproduce the contents of the proposed plan but to put the various relevant elements in the context of the potential for impacts on European sites. One of the challenges of the AA screening process is to translate high level goals into the potential for perceptible changes to the natural environment.

In some cases the assessment of the high level Goal cannot be directly translated to spatial-specific changes, for example: Goals: *“To ensure Cork is a healthy city that connects to improve the health and well-being of all its people and reduce health inequalities.”* has a very broad level of application. When implemented via Objective *“Strengthen and promote Cork’s Maritime activities”* this has a more defined focus but is still challenging to link this to likely significant effects on European Sites. Once translated into Actions such as *“Investigate the feasibility of a City Maritime festival with links between river activities and on-shore river bank activities.”* then this can be directly related to the potential impacts that this action could have. But it still lacks geographic specificity which means that the precise location of any potential impact is not known.

## **2.2 Relationship between proposed Plan and the County Development Plan.**

While this plan recognises and reflects the importance of spatial development, it is not a spatial development plan and, as this AA Screening has shown, does not aim to provide support for specific actions in specific locations. The forthcoming National Planning Framework (NPF), the Southern Regional Spatial and Economic Strategy (RSES) and the existing Cork City Development Plan 2015-2021 will provide the strategic guidance for sustainable land use planning for the city.

In accordance with the Local Government Reform Act 2014, the implementation of the LECP shall however be consistent with the following:

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- The National Spatial Strategy (NSS) 2002 – 2020, to be superceded by the forthcoming National Planning Framework (NPF) 2016-2026.
  - The South West Regional Planning Guidelines 2010-2022, to be superceded by the forthcoming Southern Regional Spatial and Economic Strategy (RSES)
  - The Core Strategy and objectives of the Cork City Development Plan 2015-2021; and
  - Any other City Development Plan and Local Area Plan provisions responsible for the protection and management of the environment including environmental sensitivities.

The preparation of any lower tier plans or strategies may need to be subject to SEA and AA processes as appropriate.

The proposed Plan will sit within the other strategic plans that influence economic and community development in Cork City and therefore will be implemented alongside other policies and objectives contained therein. The current has undergone AA Screening and was not deemed to pose any likely significant effects on the European sites as a result of the protective policies that were integrated into the Plan.

The City Development Plan contains several maps that identify areas of ecological importance (national and European designated areas) and also lists of policies that protect against adverse effects on these sites. It is therefore reasonable to assess the proposed Plan in the context of the current CDP and to assume that the protective policies will also apply.

### 3 METHODOLOGY

#### 3.1 Formal Guidance

The Screening stage has taken account of guidance contained in the following documents:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision).
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities.* Circular NPW 1/10 & PSSP 2/10.
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission Environment Directorate-General, 2001); hereafter referred to as the EC Article 6 Guidance Document. The guidance within this document provides a non-mandatory methodology for carrying out assessments required under Article 6(3) and (4) of the Habitats Directive.
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (EC Environment Directorate-General, 2000); hereafter referred to as MN2000.
- *Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. Clarification of the Concepts of Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence.* Opinion of the European Commission (European Commission, January 2007).
- *Guidelines for Good Practice Appropriate Assessment of Plans Under Article 6(3) Habitats Directive* (International Workshop on Assessment of Plans under the Habitats Directive, 2011)

### 3.2 Sources of Information Used

Information relied upon included the following information sources, which included maps, ecological and water quality data:

- Ordnance Survey of Ireland mapping and aerial photography available from [www.osi.ie](http://www.osi.ie);
- Online data available on European sites as held by the National Parks and Wildlife Service (NPWS) from [www.npws.ie](http://www.npws.ie);
- Information on land-use zoning from the online mapping of the Department of the Environment, Community and Local Government <http://www.myplan.ie/en/index.html>;
- Information on water quality in the area available from [www.epa.ie](http://www.epa.ie);
- Information on the South Western River Basin District from [www.wfdireland.ie](http://www.wfdireland.ie);
- Information on soils, geology and hydrogeology in the area available from [www.gsi.ie](http://www.gsi.ie);
- Information on the status of EU protected habitats and species in Ireland (National Parks & Wildlife Service, 2013a & 2013b);
- Cork City County Development Plan 2015-2021 including the Screening for Appropriate Assessment.

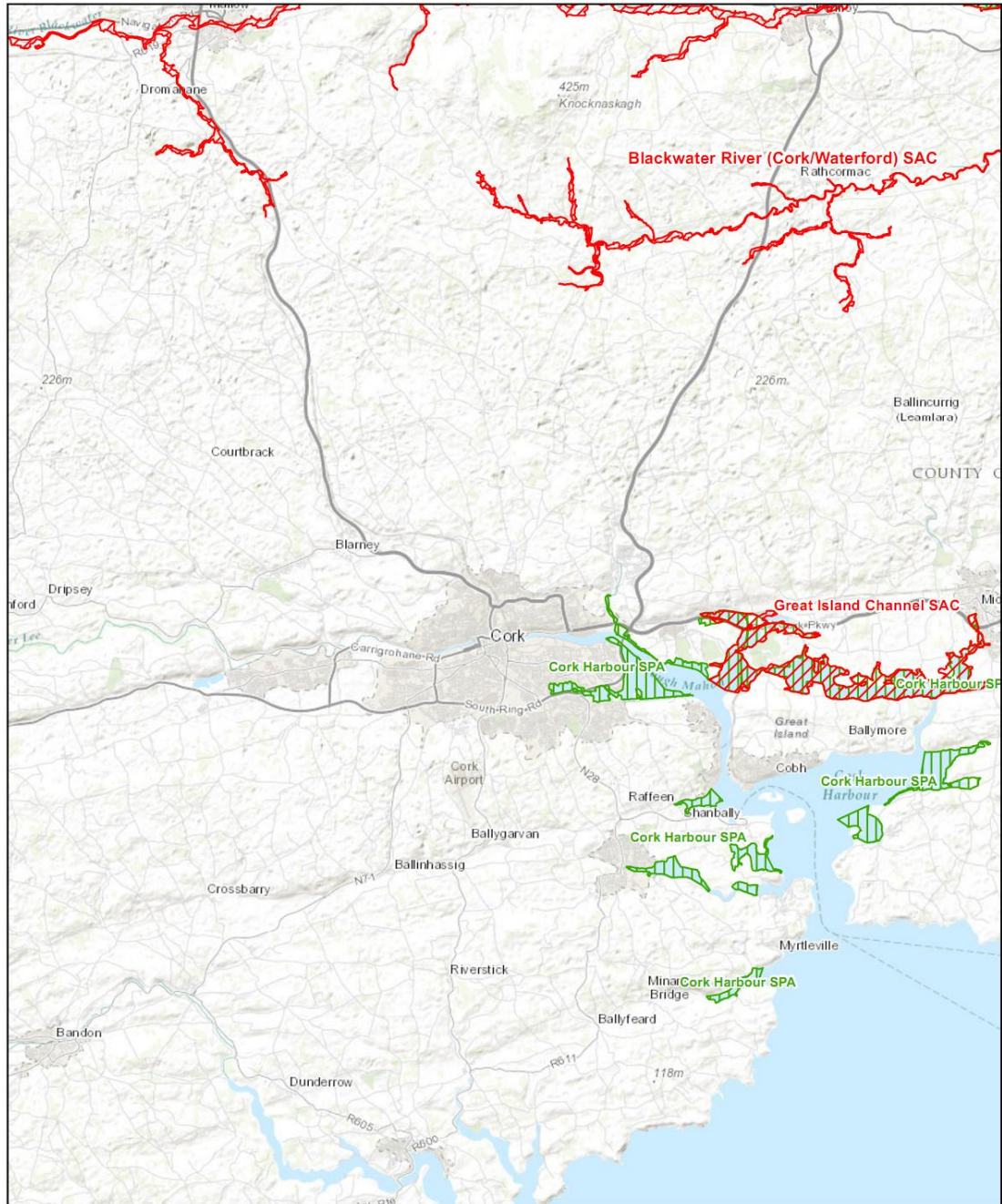
## 4 Description of European Sites

### 4.1 Identification of European sites

Table 1 below list those sites that would be regarded to be within the zone of influence of the proposed Plan. These are sites that are within, directly adjacent or linked to Cork City by reasonable physical or ecological pathways so that changes in the City area would be capable of being perceived at these sites.

Spatial boundary data on the Natura 2000 network was referenced against the boundaries presented on the NPWS website on 30<sup>th</sup> April 2016. All European sites which fall within 15km of the Plan boundary are listed in Table 1 below, and presented in Figure 1.

Table 1 European Sites	
Special Areas of Conservation	Special Protection Areas
Great Island Channel SAC (001058)	Cork Harbour SPA (004030)
Blackwater River (Cork/Waterford) SAC (002170)	



Drawing No: <b>Figure 1. European Sites near Cork City.</b>			
Project Title: <b>Cork City LCEP</b>			
Client: <b>160079</b>			
Project No.:	Scale:		
<b>160042</b>	<b>1:200,000 @ A4</b>		
Drawn:	Approved:	Rev. No.:	Date:
<b>CK</b>	<b>PS</b>	<b>01</b>	<b>16/05/2016</b>
		Scott Cawley Ltd. College House, Rock Road, Blackrock, Co. Dublin, Ireland. Tel: + 353 1 676 9815 Fax: + 353 1 676 9816	
		Background Mapping from ArcGIS Online Topographic Mapping © Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBCO, IGN, Esri, Swisstopo, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong) and the GIS User Community  Ordnance Survey Ireland License No. EN 0079314 © Ordnance Survey Ireland/Government of Ireland Projection: TM 31 (Irish Grid) Transverse Mercator, S	

**Legend**

- Special Area of Conservation (SAC)
- Special Protection Area (SPA)

4.2

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### 4.3 Reasons for Designation, Site Sensitivities and Threats

In order to identify those sites that could be potentially affected, it was necessary to describe the European site in the context of why it has been designated (i.e. its “Qualifying Interests”). The Qualifying Interests were extracted from the NPWS website database ([www.npws.ie](http://www.npws.ie)) and Status of EU Protected Habitats and Species in Ireland (NPWS, 2013).

The results of this desktop exercise are presented in Appendix B. This table lists each European Site within 15km of the proposed variation boundary and the qualifying interests for European Sites.

The key output of this stage was the identification of the types of likely significant effects that could affect the European sites. These can then be related to the consequences of implementing the proposed Plan to see if there was a risk of any likely significant effects.

List of threats to European Sites relevant to the proposed Plan:

- Abstraction
- Agricultural Improvement/Restructuring agricultural land holdings,
- Aquaculture,
- Camping/Caravans,
- Disturbance from recreational activities at coast and offshore.
- Disturbance from recreational activities at coast and offshore.
- Dredging and dumping at sea.
- Erosion,
- Fertilisation.
- Golf Courses,
- Grazing,
- Hard coastal developments.
- Horse riding –
- Infilling of Intertidal mudflats,
- Invasion by a species, ,
- Invasive predatory species (Rats, birds, foxes). Offshore pollution (chemical spillages).
- Non-motorised vehicles,
- outdoor sports & motorised vehicles,
- Paths Tracks & Cycling Routes,
- Pollution from upstream urbanisation,
- Sand & Gravel extraction - Removal of Beach materials,
- Sea defences & coastal protection works.
- Stock Feeding, ,
- Trampling overuse,
- Undergrazing,
- Underwater noise and vibration, and
- Walking.



## 5 IDENTIFICATION OF POTENTIAL LIKELY SIGNIFICANT EFFECTS

### 5.1 Identification of Likely Significant effects

This section documents the final stage of the screening process. It used the information collected on the sensitivity of the qualifying interests of each European site and describes any likely significant effects of implementation of the proposed Plan.

### 5.2 Protective Policies already in place in the City Development Plan

This assessment was based on the draft text of the proposed variation and took into account the effects of the existing protective policies (referred to as Impact Avoidance Measures) in the City Development Plan. Relevant protective policies are listed below:

Reference	Policy
Objective 10.7 Designated Areas and Protected Species	'To ensure that any plan/project and any associated works, individually or in combination with other plans or projects, are subject to Appropriate Assessment Screening to ensure there are no likely significant effects on the integrity (defined by the structure and function) of any Natura 2000 site(s) and that the requirements of Article 6(3) and 6(4) of the EU Habitats Directive are fully satisfied. When a plan/project is likely to have a significant effect on a Natura 2000 site or there is uncertainty with regard to effects, it shall be subject to Appropriate Assessment. The plan/project will proceed only after it has been ascertained that it will not adversely affect the integrity of the site or where, in the absence of alternative solutions, the plan/project is deemed imperative for reasons of overriding public interest, all in accordance with the provisions of Article 6(3) and 6(4) of the EU Habitats Directive.'
Objective 10.8 Non Designated Areas of Biodiversity Importance	<ul style="list-style-type: none"> <li>a. To work with local communities, groups, landowners, National Parks and Wildlife Service and other relevant parties to identify, protect, manage and where appropriate enhance and promote sites of local biodiversity value;</li> <li>b. To map the City's ecological networks/corridors of local biodiversity value outside of designated areas;</li> <li>c. To encourage the management of features which are important for wild flora and fauna. Such features are those which by virtue of their linear or continuous nature e.g. rivers, tree groups or hedgerows are essential for the migration dispersal and genetic exchange of wild species.</li> </ul>
Objective 10.9 River and Waterway Corridors	<p>To protect and maintain the integrity and maximise the potential of the natural heritage and biodiversity value of the River Lee and its associated watercourses. To promote an integrated approach to the future development of the River Lee so that it includes all aspects of use e.g. recreation, maritime history and economic factors</p> <p>Development proposals in river corridors shall:</p> <ul style="list-style-type: none"> <li>a. Dedicate a minimum of 10m from the waters edge in channelized rivers for amenity, biodiversity and walkway purposes;</li> <li>b. Dedicate a minimum of 15m from the top of the bank in non- channelized rivers for amenity, biodiversity and walkway purposes;</li> <li>c. Preserve the biodiversity value of the site subject to Ecological Assessment by a suitably qualified Ecologist;</li> <li>d. Shall not involve landfilling, diverting, culverting or realignment of river and stream corridors;</li> <li>e. Shall not have a negative effect on the distinctive character and appearance of the waterway corridor and the specific characteristics and landscape elements of the individual site and its context.</li> </ul>
Objective 10.12 Alien Species	To implement measures to control and prevent the introduction and establishment of ecologically damaging alien invasive species (e.g. Japanese Knotweed and Himalayan Balsam).
Objective 11.5 Tramore Valley Park	To pursue the delivery of the Tramore Valley Park and the proposed landbridge that will connect the areas of the park to the north and south of the N40, subject to Ecological Assessment and Appropriate Assessment Screening.
Objective 11.6 Marina	To pursue the delivery of the Marina Park subject to Ecological Assessment and

Park	Appropriate Assessment Screening.
Objective 11.12 River Use and Management Plan	a. To pursue the development of a River Use and Management Plan to define how the recreational use of the city's waterways can be optimised subject to Ecological Assessment and Appropriate Assessment Screening; b. To explore the potential for a new public water slipway in Cork City in partnership with stakeholders.
Objective 11.13 Amenity Routes	To pursue the development of a network of high quality amenity routes, particularly along waterways, and linking existing and proposed parks and public open spaces, and to work with Cork County Council and other stakeholders to achieve and improve external linkages subject to Ecological Assessment and Appropriate Assessment Screening.
Objective 12.1	e. To ensure an adequate, sustainable and economic supply of good quality water for domestic, commercial and industrial needs for the lifetime of the Plan (subject to compliance with Article 6 of the Habitats Directive) f. To provide adequate wastewater treatment facilities to serve the existing and future population of the city and to ensure that adequate and appropriate wastewater infrastructure is in place prior to the occupations of new development. 21 g. To ensure that development would not have an unacceptable impact on water quality and quantity including surface water, ground water, designated source protection areas, river corridors and associated wetlands, estuarine waters, coastal and transitional waters.
Objective 12.2:	Cork City Council will prepare a Storm Water Management Plan for the City.
Objective 12.3 Sustainable Urban Drainage Systems	Planning applications shall include proposals for managing stormwater in accordance with details set out at <a href="http://www.irishsuds.com">www.irishsuds.com</a> (unless superseded by policies and standards set out in the adopted "Storm Water Management Plan per Objective 12.2) and shall minimise and limit the extent of hard surfacing and paving.
Objective 12.4 Surface Water Discharges from Roads	To ensure that all significant road projects/upgrades with surface water discharges to the watercourses flowing through the City's administrative area and Cork Harbour, have petrol/oil interceptors installed to prevent hydrocarbon pollution of the receiving waters.
Objective 12.13 Lee Catchment Management Plan / Lower Lee Flood Relief Scheme	Cork City Council shall have regard to the recommendations of the Draft Lee Catchment Flood Risk Assessment and Management Plan and shall incorporate the updated hydraulic modelling, mapping data and recommendations of South West CFRMP / Lee CRFMP (River Catchment Framework Management Plan) and the Lower Lee Flood Relief Scheme as each plan progresses.
Objective 12.14 Flood Risk Management in Development Proposals	Cork City Council will implement The Planning System and Flood Risk Management: Guidelines for Planning Authorities, 2009 in the preparation of land-use plans and determining planning applications.
Objective 12.16 Floodplains	To protect, enhance and manage the City's floodplains, wetlands and coastal habitat areas that are subject to flooding as vital 'green infrastructure' which provides space for storage and conveyance of floodwater, enabling flood risk to be more effectively managed and reduce the need to provide flood defence infrastructures.
Objective 12.18 Air Quality	To protect and improve air quality in Cork City in accordance with the Air Quality Standards Regulations 2011 and Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC).
Objective 12.19 External Lighting	To require that the design of external lighting minimises the incidence of light spillage or pollution on the surrounding environment and results in no adverse impact on residential amenities or distraction to road users. Development proposals that require lighting of outdoor areas shall be required to include details of external lighting scheme and proposed mitigation measures.
Objective 12.21 Noise Levels in Developments	To require all developments to be designed and operated in a manner that will minimize and contain noise levels, Where appropriate, the City Council shall apply conditions on new developments / uses that restrict noise emissions and hours of operation, in particular, night time uses such as public houses, private members clubs, casinos, fast food take-aways, restaurants and nightclubs; or conditions on noise sensitive developments / uses to mitigate the effects of existing noise levels.

### 5.3 Results of analysis

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Appendix A presents the results of the screening of the Actions proposed via the Objectives and Goals. In the Cork City LCEP 2016-2021. The protective policies identified from the list provided above and the existing legislation requiring project-level AA screening are deemed to provide enough of a safeguard to prevent any implementation scenario having likely significant effects on the European Sites. They effectively provide opportunities whereby the impacts are captured at other levels of consent. Some of the goals also provide opportunities for positive impacts through increasing awareness of the natural environment in the area around Cork City.

#### 5.4 In-combination effects

Since all elements of the proposed Plan have individually been screened out either because they will have no effect at all on a European site or because the element is too general in nature, they do not require an in-combination assessment, since clearly they will also have no cumulative effect. This is also the case for those elements of the proposed Plan that have been screened out because they are general policy statements, or because they quote activities referred to in, but not proposed by the plan.

According to the Cork City Development Plan 2015-2021 AA Screening Statement, the following plans have the potential to interact with the City Development Plan:

- Western River Basin Management Plan 2009-2015;
- Cork City Biodiversity Plan 2009-2014;
- Draft Cork County Development Plan 2015-2021;
- Cork Area Strategic Plan Update 2008;
- Draft Mahon Local Area Plan 2014-2020
- South Docks Local Area Plan 2008-2018;
- Blackpool Local Area Plan 2011-2017;
- Farranferris Local Area Plan 2009-2015;
- North-West Regeneration Masterplan 2011;
- Water Services Investment Programme;
- IPPC Programme;
- Local Authority Discharge;
- Groundwater Pollution Reduction Programmes;
- Surface Water Pollution Reduction Programmes;
- Draft Lee Catchment Flood Risk Assessment and Management Study;

The AA Screening Statement also states:

*“The Regional Planning Guidelines for the South-West Region 2010-2022 provides the framework within which regional development plans are to be prepared. Chapter 6 of this document (Environment and Amenities Strategy) sets a policy (REAS-03) to “state that all projects likely to have a significant effect on Natura 2000/European sites will be subject to Habitats Directive assessment, and projects will only be approved if they comply with the Habitats Directive”. There is also a policy (REAS-04) “ It is an objective to achieve regional water quality targets by implementing the River Basin Management Plans and ensure that development undertaken or permitted by local authorities; other public agencies or private operators, shall not contravene the objectives of the Water Framework Directive, the European Communities Environmental Objectives (Surface Waters) Regulations 2009 SI 272 of*

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*2009 and the European Communities Environmental Objectives) Groundwaters) Regulations 2010, SI 9 of 2010.*

*The County Development Plans and Local Area Plan identified all include numerous policies and objectives aimed at protecting the natural environment, including Natura 2000 sites. Explicit reference to Appropriate Assessment Screening for plans and projects are made in these plans, and the plans themselves have been subject to Appropriate Assessment, with findings of no significant adverse effects.*

*No other pathway has been identified by which any of the Plans and Programmes identified could have a significant 'in combination' effect on any of the Natura 2000 sites identified. In fact, the in combination effect of the water related Plans and Programmes would have positive effects on water quality resulting in positive indirect impacts on Cork Harbour SPA and Great Island Channel SAC." p22.*

## **6 SCREENING CONCLUSIONS**

Following an analysis of the proposed LCEP and potential relationships with European sites, it was concluded that there would be no likelihood of significant effects on any European sites, either alone or in combination with other plans or projects. This was informed by the collection of data in the European sites and identification of the condition, sensitivities and threats to the integrity of the site.

It was concluded that none of the aspects of the proposed LCEP would give rise (directly or indirectly) to any of the threats listed in Section 4.2 after the impact avoidance policies provided for in the existing City Development Plan have been taken into account. There are no geographic-specific proposals that are contained within the proposed LCEP and therefore no direct linkages between the proposal and any specific receptor. Generic impacts of such developments are addressed by the generic protective policies within the existing City Development Plan and are deemed to be adequate.

Therefore it is our professional opinion that there is no requirement to carry out further stages of Appropriate Assessment on the proposed Plan.

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## References

- DoEHLG** (2010) *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities* (Department of Environment, Heritage and Local Government, Rev Feb 2010)
- Eastern River Basin District** (2009) *South-eastern River Basin District Management Plan 2009*, Available online at <http://www.wfdireland.ie/docs/> [Accessed 26 July 2011]
- European Commission** (2000). *Communication from the Commission on the precautionary principle*
- European Commission** (2001) *Assessment of Plans and Projects Significantly Affecting European sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission Environment Directorate-General,);
- European Commission** (2000) *Managing European sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (EC Environment Directorate-General, 2000); hereinafter referred to as "MN2000"
- Environmental Protection Agency** (2011). EPA ENVision Service (internet-based environmental information portal). Available online at: <http://maps.epa.ie/internetmapviewer/mapviewer.aspx> [Accessed 26 July 2011]
- Geological Survey of Ireland** (2011). *GSI Datasets Public Viewer*. Available online at <http://www.gsi.ie/Mapping.htm> [Accessed 28 March 2011]
- Institute of Ecology and Environmental Management** (2006). *Guidelines for Ecological Impact Assessment*. Institute of Ecology and Environmental Management
- NPWS** Circular NPW 1/10 & PSSP 2/10 *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. (Department of Environment, Heritage and Local Government, March 2010);
- NPWS (2013a)** The Status of EU Protected Habitats and Species in Ireland. Habitat Assessments Volume 2. Version 1.0. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.
- NPWS (2013b)** The Status of EU Protected Habitats and Species in Ireland. Species Assessments Volume 3. Version 1.0. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.
- National Roads Authority** (NRA) 2009. *Guidelines for Assessment of Ecological Impacts of National Road Schemes*.
- NRA** 2005-2009. *Environmental Construction Guidelines Series*, available online at <http://www.nra.ie/Publications/Environment/#d.en.3463> [Accessed December 2010]