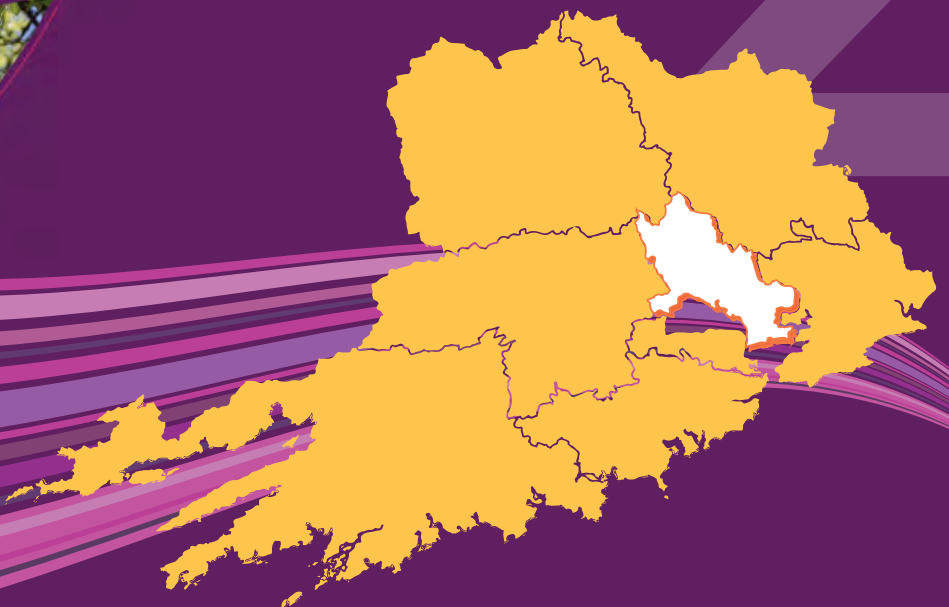




**Cork
County Council**
Comhairle Contae Chorcaí

Draft Cobh Municipal District Environmental Reports



16th November 2016

VOLUME TWO
Environmental Reports

2



How to make a Submission

The Draft Municipal District Local Area Plan is available from the Council website at www.corkcoco.ie. If required, a hard copy of the document may be inspected between the hours of **9.30 a.m. and 4.00p.m.**, from **Wednesday 16th November 2016** to **Friday 06th January 2017** at the following locations:

- Planning Department, Floor 1, County Hall, Cork.
- Planning Department, Norton House, Skibbereen, Co. Cork.
- Cork County Council Offices, Mallow
- Public Libraries - Please check libraries regarding opening times and availability.

CD copies of the documents may be requested by phone (Tel: 021-4285900) or collected from the Planning Department, Floor 1, County Hall between the hours of **9.30am** and **4.00pm** during the above period.

Submissions or observations regarding the Draft Municipal District Local Area Plan document are hereby invited from members of the public, children, or groups or associations representing the interests of children and other interested parties during the period **Wednesday 16th November 2016** to **4.00pm** on **Friday 06th January 2017**.

Submissions may be made in either of the following two ways:

- On-line via www.corkcoco.ie following the instructions provided

OR

- In written form to the Senior Planner, Planning Policy Unit, Cork County Council, Floor 13, County Hall, Cork. T12R2NC.

All such submissions lodged within the above period and prior to the close of business at **4.00pm on Friday 6th January 2017**, will be taken into consideration in the finalisation of the Municipal District Local Area Plan.



Environmental Reports

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Cobh Municipal District

1 Strategic Environmental Assessment Environmental Report

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Section 1: Introduction

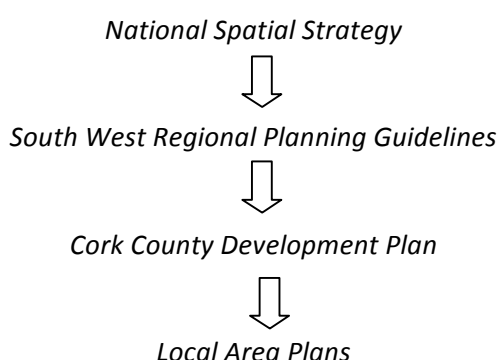
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1 Introduction

1.1 Introduction

- 1.1.1 This is the Environmental Report on the strategic environment assessment of the Draft Cobh Municipal District Local Area Plan 2016 and it describes the assessment of the likely significant effects on the environment of implementing the Draft Plan.
- 1.1.2 Cork County Council sets out its land use planning strategy for the development of the towns and villages of the county in a series of ten Electoral Area Local Area Plans.
- 1.1.3 Local Area Plans sit at the lower end of the planning policy hierarchy and must be consistent with the higher level plans like the County Development Plan and the Regional Planning Guidelines.



- 1.1.4 The most recent Local Area Plans were adopted in 2011. The Plans have a six year life and the Council is now commencing the process of preparing new plans which will be in place by August 2017. Following the re-organisation of local government in 2014, the electoral structure of the County is now based on eight Municipal Districts; see Table 1.1 and Figure 1.1. A new Local Area Plan will be prepared for each of the eight Municipal Districts in the County.
- 1.1.5 Currently the Town Development Plans adopted by the nine former Town Councils of Cobh, Clonakilty, Fermoy, Kinsale, Macroom, Mallow, Midleton, Skibbereen and Youghal remain in force pending the making of the next Cork County Development Plan in 2020. It is proposed to vary the Town Development Plans, such that the zoning provisions and associated policy objectives of the Town Development Plans are updated and incorporated into the new Local Area Plans. The Town Plans will remain in force but the relevant zonings provisions will be those of the new Local Area Plan.

Table 1.1 : Municipal Districts in County Cork				
Municipal District		Population 2011	Main Towns	No of villages
1	Ballincollig - Carrigaline	71,946	Ballincollig, Carrigaline, Passage West/ Monkstown/ Glenbrook, Cork City South Environs, Ringaskiddy	5
2	Bandon - Kinsale	42,454	Bandon, Kinsale	34
3	Blarney - Macroom	43,398	Blarney, Macroom	54
4	Cobh	53,544	Carrigtwohill, Cobh, Glanmire, Little Island, Cork City North Environs. (Monard is proposed new town and a designated Strategic Development Zone)	24
5	East Cork	42,399	Midleton, Youghal	30
6	Fermoy	42,226	Charleville, Fermoy, Mitchelstown	29
7	Kanturk - Mallow	47,305	Buttevant, Kanturk, Mallow, Millstreet, Newmarket	46
8	West Cork	56,530	Bantry, Castletownbere, Clonakilty, Dunmanway, Schull, Skibbereen	67 & 7 Inhabited Islands



Figure 1 Municipal Districts in the County

1.2 Strategic Environmental Assessment

- 1.2.1 From a legislative viewpoint, the concept of SEA was initially introduced by way of the Directive 2001/42/EC of the European Parliament and of the Council of 27th June 2001 on the assessment of the effects of certain plans and programmes on the environment (the SEA Directive) which was transposed into Irish legislation by the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations, 2004 (S.I. No. 435 of 2004) and Planning and Development (Strategic Environmental Assessment) Regulations, 2004 (S.I. No. 436 of 2004). Subsequently, these statutory instruments were amended by S.I. 200 of 2011 and S.I. No. 201 of 2011. This SEA is being undertaken under S.I. No. 436 of 2004 (as amended) in accordance with Article 8, insofar as this legislation relates to land-use planning.
- 1.2.2 Strategic Environment Assessment is a systematic process of predicting and evaluating the likely environmental effects of implementing a plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest stage of decision-making on a par with economic and social considerations. The SEA process is undertaken using a methodical iterative approach. The methodology followed in this report is derived from a number of sources including the appropriate legislation and guidance documents prepared on a national and EU level. Legally, the SEA Directive (2001/42/EC) transposed Irish regulations and associated amendments to provide the legislative framework. The main sources of guidance include the documents detailed below:
- Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment Guidelines for Regional Authorities and Planning Authorities, Department of Environment, Heritage and Local Government, 2004;
 - SEA Pack and Scoping Guidance Document, EPA.
 - SEA Process Checklist, EPA.

1.3 Stages of SEA

- 1.3.1 There are a number of stages involved in the SEA process which are listed as follows:
- (1) Screening
 - (2) Scoping
 - (3) **Collection of baseline data, assessment and compilation of the Environmental Report (current stage).**
 - (4) Consultation with designated environmental authorities on Environmental Report and Draft Plan.
 - (5) Evaluation of submissions received in response to the consultation and amendments to the plan as appropriate with designated environmental authorities.
 - (6) Issuing of the final SEA Statement identifying how environmental considerations have been integrated into the final adopted Plan.
 - (7) Monitoring of significant environmental effects following adoption and implementation of the Plan.
- 1.3.2 This report only deals with stages 1-3.

Screening

- 1.3.3 The purpose of screening is to determine definitively if there is a necessity for a strategic environmental assessment to be undertaken. There is a mandatory requirement under the Planning and Development (Strategic Environmental Assessment) Regulations, 2004 (as amended) to undertake a strategic environmental assessment in respect of Local Area Plans for areas with a population of 5,000 or more, so in this instance, screening was not required and the SEA process proceeds to the next stage.

Scoping

- 1.3.4 The process of scoping for SEA is defined as the procedure whereby the range of environmental issues and the level of detail to be included in the Environmental Report are decided upon, in consultation with the prescribed environmental authorities. Scoping is necessary in order to establish, with objectivity, the potential impacts of the implementation of the draft plan on a number of environmental elements from consultations with a range of environmental bodies and the incorporation of associated submissions into the draft plan by way of their inclusion in the Environmental Report.
- 1.3.5 Scoping for the current SEA was commenced with the circulation of a Draft Scoping Report to all the environmental authorities on the 22nd April 2016. A total of two (2) submissions were received from EPA and Irish Water respectively. The Scoping Report was finalised on the 31st May 2016 and issues raised were considered further in the preparation of this Draft Local Area Plan and SEA Environment Report.

Collection of Baseline Data, Assessment and Environmental Report.

- 1.3.6 In order to assess the likely significant impacts of the Plan, baseline data on the current state of the environment has to be collected and evaluated and the potential effects of the plan predicted and considered. In accordance with legislation and guidance, the existing environment is described with respect to biodiversity, population, human health, fauna, flora, soil, water (surface freshwater, coastal, transitional, groundwater, bathing and water services (drinking water and waste water treatment), air, climatic factors, material assets (roads, transportation, energy etc), cultural heritage (including architectural and archaeological heritage), landscape and the interrelationships between these factors as appropriate. Any existing problems relevant to the new Plan are also identified at this baseline stage.
- 1.3.7 Identification of baseline environmental status provides for the identification of key resources and sensitivities within the Plan area and the identification of potential threats to the environment, thus allowing for the inclusion of mitigation measures that may need to be incorporated into the new Plan to ensure that it does not exacerbate existing problems. Assessment of the baseline environment also enables plan-makers to consider how the environment might evolve in the absence of the proposed plan.
- 1.3.8 As the data is compiled and plan policies evolve the likely significant effects of implementing the plan are identified, described and evaluated and this is described in the Environmental Report.
- 1.3.9 The information to be contained in the environmental report is set out in Annex 1 of the SEA Directive and reproduced in Schedule 2B of the Planning and Development Regulations 2001, as inserted by Article 12 of the Planning and Development (SEA) Regulations 2004). The structure of this report is summarised as follows:

Table 1: Information to be contained in an Environmental Report

Item	Information to be contained in an Environmental Report	Relevant Section of Environmental Report
A	Outline of the contents and main objectives of the draft plan and relationship with other relevant plans or programmes	Section 2: Context of the Plan
B	Description of the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan	Section 3: Baseline Environment
C	Description of the environmental characteristics of areas likely to be significantly affected	Section 3: Baseline environment
D	Description of any existing environmental problems which are relevant to the plan including those relating to any areas of a particular environmental importance, such as Natura 2000 sites	Section 3: Baseline environment
E	Description of environmental protection objectives (EPOs), established at international, EU or national level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation	Section 4: EPOs
F	Description of the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and interrelationships between these factors	Section 6: Evaluation of Draft Plan
G	Description of the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan	Section 6: Evaluation of Draft Plan
H	Outline of the reasons for selecting the alternatives considered, with a description of how the assessment was undertaken and including any difficulties encountered in compiling the information	Section 5: Alternative Scenarios.
I	Description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan	Will be included in SEA Statement once plan finalised
J	A non-technical summary of the above information.	

Documenting the SEA process

- 1.3.10 The SEA Process produces two documents – this environmental Report which is published with the Draft Municipal District Local Area Plan and an SEA statement which will be published at the end of the process, once the plan is adopted.
- 1.3.11 This Environmental Report will be submitted to the Elected Members with the Draft Municipal District Local Area Plan. The Members must take account of the Environmental Report before the Plan is adopted. When the Plan is adopted, an SEA Statement will be published, summarising, *inter alia*, how environmental considerations have been integrated into the Plan and the reasons for choosing the Plan as adopted over other alternatives considered in the Environmental Report.
- 1.3.12 Should alterations to the Draft Plan be proposed, there will be a further submission period of not less than four weeks during which time submissions and/or observations may be made on the proposed alterations. If material alterations are proposed they will need to undergo a screening process to determine if SEA is required. The proposed alterations, the screening document and SEA Environmental report, where relevant, will be sent to the Minister, the Board and the prescribed authorities and will be made available for public inspection.

1.4 Habitats Directive Assessment

- 1.4.1 Habitats Directive Assessment is an iterative process which runs parallel to and informs both the plan making process and the Strategic Environmental Assessment Process. It involves analysis and review of draft policies as they emerge during each stage of plan making, to ensure that their implementation will not impact on sites designated for nature conservation, nor on the habitats or species for which they are designated. Within this process, regard must also be had to the potential for policies to contribute to impacts which on their own may be acceptable, but which could be significant when considered in combination with the impacts arising from the implementation of other plans or policies.
- 1.4.2 The results of this analysis and review are presented in a Habitats Directive Screening Report which is contained in Section 3 of Volume Two of the Draft Municipal District Local Area Plan. At the end of the plan making process, an Appropriate Assessment Conclusion Statement will be produced which contains a summary of how ecological considerations in relation to Natura 2000 sites have been integrated into the Plan. The final Natura Impact Report and a declaration in relation to the potential for the plan to affect the integrity of Natura 2000 sites within its potential impact zone will also be produced at this time.

1.5 Strategic Flood Risk Assessment

- 1.5.1 As part of the review of the Local Area Plan, and in order to meet the needs of the Strategic Environmental Assessment process and the requirements of the Department of the Environment, Heritage and Local Government / Office of Public Works Guidelines, “The Planning System and Flood Risk Management” (2009), Cork County Council also undertook a Strategic Flood Risk Assessment (SFRA).
- 1.5.2 The assessment provides for an improved understanding of flood risk issues within the Municipal District and the spatial distribution of flood risk. The SFRA report sets out how the Flood Risk Assessment was undertaken, as well as how its findings were addressed and integrated into the Draft Plan. A copy of the SFRA is included in Volume Two Environmental Reports of this Plan. It should be read in conjunction with the Draft Municipal District Local Area Plan.

1.6 Difficulties Encountered

1.6.1 During the preparation of the Environmental Report, habitats mapping for towns outside Metropolitan Cork was carried out and forms part of this report. No other new research was undertaken and information was gathered from existing sources of data. It should be noted that there are a number of areas where data was not readily available which include:

- No wetland inventory
- Habitat Mapping for the Non Metropolitan Towns was not finalised in time to inform preparation of report.
- Information is largely paper based with exceptions of designated areas in digitised format (GIS)
- Lack of guiding legislation in some areas e.g. soils and their conservation.
- Limited Air Quality monitoring data for the plan area. The frequency of this monitoring is also identified as an issue.
- Lack of a data on compliance records for waste water treatment systems on settlements of less than 500 p.e.
- Lack of information on the effectiveness of existing septic tank systems within the county.
- The lack of centralised data source for environmental baseline data posed a difficulty to the SEA process.

1.6.2 In addition, the status of a number of Transitional and Coastal Water bodies was not available. Not only did this impede the preparation of the baseline assessment, it also highlights a potential problem with the implementation of the Water Framework Directive.

Section 2: The Draft Cobh Municipal District Local Area Plan

Sub-Section

- 2.1 Introduction
- 2.2 County Development Plan Strategy
- 2.3 Local Area Plan Strategy
- 2.4 Growth Strategy
- 2.5 Contents of the Draft Plan
- 2.6 Relationship with Other Relevant Plans and Programmes

2 The Draft Cobh Municipal District Local Area Plan

2.1 Introduction

- 2.1.1 In accordance with the Planning and Development Act, 2000 as amended a planning authority may at any time, and for any particular area within its functional area, prepare a local area plan in respect of that area.
- 2.1.2 The current Blarney and Midleton Electoral Area Local Area Plans were adopted in 2011 and must be replaced by end of July 2017. On the 14th December 2015 the Council commenced a review by publishing a Preliminary Consultation Document for each of the 8 Municipal Districts and placing notices in the press to advise the public of the commencement of a 6 week period of public consultation. Submissions received were considered and included in a Chief Executive's Report to the Elected Members of the Council in April 2016. This was followed up by a series of briefing sessions to allow for consultation with members on issues raised and what needed to be addressed in the Draft Plan.

2.2 County Development Plan Strategy

- 2.2.1 A new Cork County Development Plan came into force in 2014. This plan, which has also been subject to Strategic Environmental Assessment and Habitats Directive Assessment, sets out the overall strategy for the proper planning and sustainable development of the County as a whole, including population targets for each Municipal District and each of the main towns. Within each Municipal District a combined population target is also given for the villages and rural areas. The County Development Plan 2014 has also identified the amount of new housing required in each Municipal District / Town /Village to meet the needs of the target population.
- 2.2.2 The County Development Plan has been prepared so that it is consistent with national targets issued by the Department of the Environment, Community and Local Government and the Regional Planning Guidelines for the South West Region. The Plan also sets out county-wide objectives for issues such as housing, social and community facilities, economy and employment, town centres and retail, energy and digital economy, transportation and mobility, water services, heritage, green infrastructure and the environment and zoning and land use.
- 2.2.3 The new Local Area Plan must be consistent with the objectives of the Cork County Development Plan 2014 and comply with the Local Area Plan Guidelines for Planning Authorities prepared by the Department of Environment, Community and Local Government and various legislative and other policy documents issued by the Government.

2.3 Local Area Plan Strategy

Overview

- 2.3.1 In 2011 the population of the Cobh Municipal District area stood at 53,544. This population is spread across the north environs of Cork City and a network of settlements including three towns, 23 villages and the open countryside. The District also includes the proposed new town of Monard which was designated by the Government as a Strategic Development Zone (SDZ) in 2010 with the aim of

accommodating a new town of 5,000 houses. The proposal to create a new town at Monard is part of a wider planning process following on from the Cork Area Strategic Plan (CASP) which established the case for the suburban rail project, and selected the areas for urban expansion on the rail corridor. These included Midleton, Carrigtwohill and Blarney, as well as Monard. Cork County Council prepared and adopted a Planning Scheme for Monard in 2012 but this was later refused on appeal to An Bord Pleanála. A second Planning Scheme was deemed to have been made in August 2015, an oral hearing was subsequently held. An Bord Pleanála approved the making of the Monard Planning Scheme in May 2016 subject to minor modifications.

2.3.2 The Cobh District also includes Little Island which is identified as a Strategic Employment Centre. Little Island also has a small local population but it is not a centre for population growth.

Table 2.1: Distribution of population within the Cobh Municipal District 2011			
	Settlements	Population on 2011	%
Cork City North Environs & Main Towns	Cork City North Environs (6,692), Cobh (12,347), Carrigtwohill (4,551), Glanmire (8,924) and the proposed new town of Monard.	32,514	61%
Key villages	Carrignavar, Glenville, Glounthaune	4,366*	8%
Villages	Whitechurch, Kerry Pike, Upper Glanmire, Knockraha, Killeens		
Village Nuclei	Ballymore/ Walterstown, Caherlag, Rathduff.		
Other locations	Killard, Whites Cross, Bottlehill, Templemichael, Rathcooney Clogheen, Marino Point, Belvelly, Carrigaloe, Fota Island Haulbowline Island, Spike Island		
Rural areas		16,664*	31%
Total Population		53,544	

* Village and Rural Area Populations are estimated figures



Population Trends

2.3.3 Within the Cobh Municipal District the County Plan provides for growth in population of 19,036 persons. The number of households is expected to grow by 10,993 leading to a net requirement for 12,367 new houses within the Municipal District. The County Development Plan indicates that 430ha of land are required to meet this level of housing provision in the main towns, in addition to housing opportunities in the villages and rural areas.

2.3.4 The population growth target will require the provision of 12,367 new housing units, with at least 10,762 units allocated to the towns. Significant new housing is planned for a number of areas, particularly in Carrigtwohill, the northern environs of Cork city (at Ballyvolane) and Cobh. Housing growth of 1,045 units is also planned for the villages.

	Housing Requirement					Housing Supply	
	Census 2011	Population Target	Total New Households	New Units Required	Net Estimated Requirement (ha)	Est. Net Residential area zoned LAP / TCP (ha)	Estimated Housing Yield (LAPs and TCPs) (Units)
Cobh	12,347	14,543	1,625	1,778	71	72.53	1,907
Carrigtwohill	4,551	11,618	3,195	3,656	146	127.8	3,656
Glanmire	8,924	10,585	1,205	1,320	53	57.70	1,321
Monard	0	3,619	1,502	1,727	69	170.00	5,000
Cork North Environs	6,692	10,719	2,058	2,281	91	143.80	3,371
Main Towns	32,514	51,084	9,585	10,762	430	571.83	15,255
Villages	4,366	5,979	922	1,045	--	--	770
Rural	16,664	15,517	487	560	--	--	--
Total Villages and Rural	21,030	21,496	1,409	1,605	--	--	770
Total Municipal District	53,544	72,580	10,993	12,367	430	571.83	16,025
Current Estimated Strategic Land Reserve (LAPs and TCPs) for this Municipal District is 141.4 Ha Source: Cork County Development Plan 2014- Appendix B, Table B 9							

2.4 Growth Strategy

2.4.1 At present planning policy for the settlements within the Cobh Municipal District is spread across the Blarney Electoral Area Local Area Plan adopted in 2011, the Midleton Electoral Area Local Area Plan adopted in 2011, and the Cobh Town Development Plan 2013. The intention is that local planning policy for all settlements within the Municipal District will be contained within the new Cobh Municipal District Local Area Plan 2017.

2.4.2 It is anticipated than many of the provisions of the current local area plan adopted in 2011 will be continued into the new Local Area Plan unless there is a specific requirement for change arising from changes in national planning policy, legislation, government guidelines, changes in local circumstances, needs etc or to reflect the provisions of the new County Development Plan adopted in 2014.

2.4.3 Within the Cobh Municipal District the County Plan provides for growth in population of 19,036 persons. The number of households is expected to grow by 10,993 leading to a net requirement for 12,367 new houses within the Municipal District in the period 2011-2022. The County Development Plan indicates that 430ha of land are required to meet this level of housing provision in the main towns, in addition to housing opportunities in the villages and rural areas.

2.4.4 Through its County Development Plan 2014, the Council has allocated the majority of this growth to the towns with 10,762 new houses proposed, the majority of which are planned for Carrigtwohill (3,656) by 2022. It is anticipated that growth in Monard will be approximately 1727 units by 2022. Housing growth is also planned within the villages (1,045 units).

Table 3.1 below shows that the current provision of zoned lands within the main towns is sufficient to accommodate 15,255 new dwelling units providing headroom of 4,43units or 41% in excess of the net requirement within the towns of the Municipal District for 10,762 new units. Table 3.1 also shows that the greatest number of new dwellings is planned in Carrigtowhill with significant new growth also planned in Ballyvolane situated in the North Environs.

Table 2.2. Cobh Municipal District

	Housing Requirement					Housing Supply	
	Census 2011	Population Target	Total New Households	New Units Required	Net Estimated Requirement (ha)	Est. Net Residential area zoned in LAP / TCP (ha)	Estimated Housing Yield (LAPs and TCPs) (Units)
Cobh	12,347	14,543	1,625	1,778	71	72.53	1,907
Carrigtwohill	4,551	11,618	3,195	3,656	146	127.8	3,656
Glanmire	8,924	10,585	1,205	1,320	53	57.70	1,321
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Villages	4,366	5,979	922	1,045	--	--	770
Rural	16,664	15,517	487	560	--	--	--
Total Villages and Rural	21,030	21,496	1,409	1,605	--	--	770
Total Municipal District	53,544	72,580	10,993	12,367	430	571.83	16,025

Current Estimated Strategic Land Reserve (LAPs and TCPs) for this Municipal District is 141.4 Ha
Source: Cork County Development Plan 2014- Appendix B, Table B 9

2.4.5 Taking into account the need for a robust housing land supply in the Cork Metropolitan areas, there is a need to consider additional residential land of approximately 4-500ha in order to provide sufficient headroom of overall requirements. Therefore, the Ballincollig Carrigaline and Cobh Municipal District draft Local Area Plans have identified options for this strategic land reserve. A total of 1489ha in 12 sites has been identified in these two MDC LAP's. A full assessment of these potential land options will be undertaken prior to the publication of the Chief Executive Report in February 2017. Once preferred sites have been selected, they will be brought forward at the amendment stage of the plan.

2.4.6 The scale of growth for the individual main settlements of the Municipal District as provided for in this Local Area Plan is outlined in Table 2.3. For the towns, the 'Overall Scale of New Development' figure is the same target figure established by the Core Strategy of the County Development Plan and sufficient residential land has been zoned within the plan to cater for this level of growth and to provide for additional spare capacity in the form of headroom.

2.4.7 Taking into account the need for a robust housing land supply in the Cork Metropolitan areas, there is a need to consider additional residential land of approximately 4-500ha in order to provide sufficient headroom of overall requirements. Therefore, the Ballincollig Carrigaline and Cobh Municipal District draft Local Area Plans have identified options for this strategic land reserve. A total of 1489ha in 12 sites has been identified in these two MDC LAP's. A full assessment of these potential land options will be undertaken prior to the publication of the Chief Executive Report in February 2017. Once preferred sites have been selected, they will be brought forward at the amendment stage of the plan.

2.4.8 Based on estimated current and target population figures for the villages, the County Development Plan (Core Strategy) estimated the number of new houses that that may need to be accommodated within the villages of this Municipal District as 2,531 units. This local area plan has retained the scale of growth figures for the villages at the 2011 figures which is at lower level of development.

- 2.4.9 Within the village network it is suggested that the new local area plan should maintain the scale of growth established in the 2011 Local Areas Plans in order to respect the scale and character of the villages and because there are significant deficits in water services infrastructure. Ample land is available within the development boundaries of the villages to accommodate the expected level of growth and at this stage of the process it is not intended to make any significant changes to the development boundaries of any of the villages. The main factor constraining development in the villages is likely to be inadequate water services infrastructure. As outlined above, there is enough land available within the towns within the Municipal District to accommodate any development which cannot take place within the villages due to lack of infrastructure.
- 2.4.10 The Settlement network of this Municipal District includes 12 Other Locations, these are as follows; Bottlehill, Killard, Whites Cross, Templemichael, Rathcooney, Clogheen, Marino Point, Belvelly, Carrigaloe, Fota Island, Haulbowline Island and Spike Island. County Development Plan Strategy recognises other locations, as areas which may not form a significant part of the settlement network, but do perform important functions with regard to tourism, heritage, recreation and other uses. No changes are proposed to the strategy for 'Other Locations' as part of the review of the Local Area Plans.

2.5 Contents of the Draft Plan

- 2.5.1 The Draft Local Area Plan provides a blueprint for the development of Cobh Municipal District for the next 6 years. Set out below are details of the structure and broad chapter content of the Draft local Area Plan.

Section 1 Introduction

- 2.5.2 This Section sets out the review process to date, the overall plan context and the overall approach/key policies that will influence the preparation of the Draft Plan namely;

Role of the Cork County Development Plan 2014

Approach to deal with Town Council Development Plans

Special Policy Areas-Framework Masterplans x

Settlement Network

Infrastructure

Water Services

Flood Risk

Regeneration Areas

Quality in Urban Design

Green Belts around Towns

Environmental Assessment including

Strategic Environmental Assessment

Strategic Flood Risk Assessment

Habitats Directive Assessment

Section 2 Local Area Strategy

2.5.3 This section set out the overall strategy for the Cobh Municipal District. It sets out the housing requirements and zoned housing land supply for each of the 5 main towns, sets out the appropriate scale of growth within the village network and the current infrastructure position for all the main towns and smaller settlement within the settlement network. It assesses the current employment position in the Municipal District and the key Environment and Heritage assets within the area. The key message is that sufficient land has been provided to meet population targets but that infrastructure remains a key constraint to delivering on those targets.

Section 3 Main Towns

2.5.4 The purpose of this section is to set out the policies and objectives including land use zoning maps for the 5 Main Towns of Cobh, Carrigtowhill, Glanmire, Monard and Cork North Environs, in the Cobh Municipal District. Where appropriate Regeneration Areas have also been identified.

	Housing Requirement					Housing Supply	
	Census 2011	Population Target	Total New Households	New Units Required	Net Estimated Requirement (ha)	Est. Net Residential area zoned in LAP / TCP (ha)	Estimated Housing Yield (LAPs and TCPs) (Units)
Cobh	12,347	14,543	1,625	1,778	71	72.53	1,907
Carrigtowhill	4,551	11,618	3,195	3,656	146	127.8	3,656
Glanmire	8,924	10,585	1,205	1,320	53	57.70	1,321
Monard	0	3,619	1,502	1,727	69	170.00	5,000
Cork North Environs	6,692	10,719	2,058	2,281	91	143.80	3,371

2.5.5 **Cobh** is the largest settlement within the Cobh Municipal District. the aim is to provide for growth in population and employment, promote greater self sufficiency within the town in terms of the role of the town centre and retail services, and seek to optimize the potential of the waterfront and the heritage of the town as a platform for economic growth.

2.5.6 The town is located on the south of Great Island commanding spectacular views over the western harbor as well as providing impressive views from the harbor owing to its attractive architectural heritage.

2.5.7 As a Metropolitan town on the suburban rail corridor, Cobh forms part of the 'Cork Gateway'. Proposals for development have been framed to complement the City Council's own development proposals and the County Councils proposals in other Metropolitan Towns. Work has recently commenced on the €91m Cork Lower Harbour Main Drainage Project which will facilitate development within the town and significantly enhance water quality in Cork Harbour.

2.5.8 **Glanmire** is one of the key growth centres in Metropolitan Cork. The aim is to facilitate its development as the main engine of population and employment growth in the South West region. Glanmire will play a significant part in realizing the overall aims for Metropolitan Cork by delivering additional population growth in tandem with incremental retail growth, high quality social and community facilities and improved transport linkages while protecting its attractive woodland setting.

- 2.5.9 **Cork North Environs** is a suburban area that adjoins the administrative area of Cork City within the metropolitan area in the Cobh Municipal District. The vision is to re-invigorate the northern suburbs of the city, within the County area, as a significant location for future residential development. This will require a planned major mixed use development at Ballyvolane coordinated with substantial infrastructure investment, the provision of enhanced community and recreational facilities and public transport accessibility, with the aim of rebalancing the provision of services more equitably throughout the city.
- 2.5.10 **Carrigtwohill** – The overall aims for Carrigtwohill are to realise the significant population growth proposed, to maximise the value of the suburban rail project, grow the employment base of the town as a key location for the delivery of the economic targets for the whole of Metropolitan Cork, and build a vibrant and accessible town centre that provides for the needs of the expanding community, while retaining the unique character and community spirit of the town. While it is the smallest of the main towns in the Municipal District, it has experienced the most growth in percentage terms of any of the towns in the county in recent years
- 2.5.11 **Monard** – The overall aim for Monard is to develop a new rail based settlement between Blarney and Cork City which is consistent with the 2015 Planning Scheme 2015 as approved by An Bord Pleanála in May 2016. The 2015 Planning Scheme comprises a group of three interlinked villages namely Lower Monard, Upper Monard, West Village and Kilcronan with a town centre adjacent to the rail way line. It is proposed to accommodate a range of approximately 4-750 – 5,850 new housing units, with a projected population of 13,000 persons, which includes generous provision for open space.

Section 4 Key Villages

- 2.5.12 There are three key villages – Carrignavar, Glenville and Glounthaune within the Cobh Municipal District.
- 2.5.13 It is a strategic aim of the Cork County Development Plan, 2014 to establish key villages as the primary focus for development in rural areas in the lower order settlement network and allow for the provision of local services, by encouraging and facilitating population growth at a scale, layout and design that reflects the character of each village, where water services and waste water infrastructure is available. Supporting the retention and improvement of key social and community facilities, and inter urban public transport.

Table 4.1: Appropriate Scale of Development for Key Villages

Name	Existing Number of Houses Q1 2015 (Geodirectory)	Growth 2010 to 2015 (Geodirectory)	Overall Scale of Development (No. of houses)	Normal Recommended Scale of any Individual scheme
Carrignavar	175	3	100	30
Glenville	166	4	100	25
Glounthaune	506	31	400	40
Total Key Villages			600	

Section 5 Villages, Village Nuclei and Other Locations

- 2.5.14 There are 5 villages in the Cobh Municipal District; Whitechurch, Kerry Pike, Upper Glanmire, Knockraha and Killeens.

2.5.15 It is a strategic aim of the Cork County Development Plan, 2014 to encourage and facilitate development at a scale, layout and design that reflects the character of each village, where water services and waste water infrastructure is available and support the retention and improvement of key social and community facilities within villages, including the improved provision of inter-urban public transport.

2.5.16 There are 3 Village Nuclei in the Cobh Municipal District; Ballymore/Walterstown, Caherlag and Rathduff.

2.5.17 It is a strategic aim of the Cork County Development Plan, 2014 to preserve the rural character of village nuclei and encourage small scale expansion at a scale, layout and design that reflects the character of each village, where water services and waste water infrastructure is available generally through low density individual housing, in tandem with the provision of services.

Table 5.2. Scale of Development in Cobh Municipal District Village Nuclei

Village Nuclei	Existing Number of Houses Q1 2015 (Geodirectory)	Growth 2005 to 2015 (Geo-directory)	Overall Scale of Development (No. of houses)	Normal Recommended Scale of any Individual scheme.
Ballymore/Walterstown	102	11	5	3
Caherlag	31	2	5	2
Rathduff	18	4	5	2

2.5.18 There are 12 Other Locations in the Cobh Municipal District, as follows; Bottlehill, Killard, Whites Cross, Templemichael, Rathcooney, Clogheen, Marino Point, Belvelly, Carrigaloe, Fota Island, Haulbowline Island and Spike Island.

2.5.19 It is a strategic aim of the Cork County Development Plan, 2014 to recognise Other Locations, as areas which may not form a significant part of the settlement network, but do perform important functions with regard to tourism, heritage, recreation and other uses.

Section 6 Putting the Plan into Practice

2.5.20 This section assigns responsibility for the implementation of the Plan's policies to various agencies including the Local Authority. It also sets out the expected timeframes for the delivery of physical and social infrastructure, including the assignment of Plan priorities and funding streams necessary to secure key development objectives. It also outlines the approach to monitoring and how the Plan will inform other Plans within its functional area.

2.6 Relationship with Other Relevant Plans and Programmes

2.6.1 The Local Area Plan is part of a hierarchy of County, Regional and National plans. The Plan should be consistent with higher-level plans such as those of a county, regional or national nature. The following National, Regional and County Plans have influenced the policies contained in this Draft Local Area Plan.

National Policy

2.6.2 **National Spatial Strategy:** The National Spatial Strategy (NSS) is a twenty year planning framework for the entire country which is designed to achieve a better balance of social, economic and physical development and population growth between regions. The main focus of the NSS is to bring people, jobs and services closer together, in order to achieve a better quality of life for people, a strong, competitive economic position for the country and to ensure environmental protection.

2.6.3 Cork is identified as a gateway, a nationally significant centre whose location, scale and service base supports the achievement of the type of critical mass necessary to sustain strong levels of growth. Cork will build on its substantial and established economic base to lever investment into the South West region, with the support of its scale of population, its third level institutions and the substantial capacity for growth identified in the Cork Area Strategic Plan (CASP). Implementation of CASP is important to secure the objectives of the NSS. Mallow is identified as a 'hub' and will perform an important role

within the national structure at regional and County level. Improvements in regional accessibility through roads, advanced communications infrastructure and public transport links are key supporting factors. The NSS also seeks to develop the potential of other towns and villages. Large towns near Cork City need to be promoted as self-sustaining towns. Medium sized towns in coastal and peripheral areas have a critical role to play as service centres and in economic development. In the more rural parts of the County “a dynamic and nationally important tourism product has been developed which will require effective management and sustainable development of the natural and cultural heritage to sustain it for the future”.

- 2.6.4 National Development Plan 2007 – 2013:** The National Development Plan (NDP) Transforming Ireland — A Better Quality of Life for All sets out our national investment priorities and has four basic objectives: to continue sustainable national economic and employment growth, to strengthen and improve Ireland’s international competitiveness, to foster balanced regional development and to promote social inclusion. In Cork, the NDP identifies the need to accelerate growth and development and identifies a number of investment priorities for Cork including motorways, integrated public transport systems, enhancement of tourism, leisure and recreational facilities, developing employment, research and development capacity etc.
- 2.6.5 Food Harvest 2020– A Vision for Irish Agri-Food and Fisheries:** The agri-food and fisheries sector is Ireland’s most important indigenous industry and is recognised as having a key role to play in Ireland’s export-led economic recovery. With €7bn in exports the sector currently accounts for over half of manufacturing exports, by Irish owned firms. The geographical distribution of the sector ensures that any future wealth and employment generated will be of direct benefit to rural and coastal communities. The 2020 vision for the sector seeks to increase the value of primary output in the agriculture, fisheries and forestry sector by €1.5 billion by 2020 (an increase of 33% on 2007-2009 levels); increase value added in the agri-food, fisheries and wood products sector by €3 billion (+40%) and achieve an export target of €12 billion for the sector (+ 42%). Meeting these targets will have significant environmental challenges including reducing the carbon intensity of Irish agriculture and ensuring the sector plays its part in reducing our overall greenhouse gas (GHG) emissions. As a County with a strong agri-food and fisheries sector already, there is obvious scope of sustainable growth in this area which should bring many benefits to the County as a whole.
- 2.6.6 National Climate Change Strategy (2007 – 2012) / Climate Change Adaption Framework 2012:** The National Climate Change Strategy 2007 – 2012 sets out a range of measures, building on those already in place under the first National Climate Change Strategy (2000) to ensure Ireland reaches its target under the Kyoto Protocol. The Strategy provides a framework for action to reduce Ireland’s greenhouse gas emissions.
- 2.6.7 The National Climate Change Adaptation Framework** introduces an integrated policy framework, involving all stakeholders on all institutional levels to ensure adaptation measures are taken across different sectors and levels of government to manage and reduce Ireland’s vulnerability to the negative impacts of climate change. Under the Framework, the relevant Government Departments, Agencies and local authorities have been asked to commence the preparation of sectoral and local adaptation plans and to publish drafts of these plans by mid-2014
- 2.6.8 National Renewable Energy Action Plan:** The National Renewable Energy Action Plan (NREAP) sets out the Government’s strategic approach and concrete measures to deliver on Ireland’s 16% target under European Renewable Energy Directive 2009/28/EC. The development of renewable energy is central to overall energy policy in Ireland. Nationally, the Government’s ambitions for renewable energy and the related national targets are fully commensurate with the European Union’s energy policy objectives and the targets addressed to Ireland under the Renewable Energy Directive. Ireland’s energy efficiency ambitions (20% of energy from renewable sources by 2020) as set out in the National Energy Efficiency Action Plan are duly reflected in the NREAP.

- 2.6.9 National Biodiversity Plan: Action for Biodiversity 2011 – 2016:** Ireland’s second National Biodiversity Plan sets out a vision for the conservation and restoration of biodiversity and ecosystems in Ireland and includes the overarching target of “reducing biodiversity loss and degradation of ecosystems in Ireland by 2016, and achieving substantial recovery by 2020”. The Plan sets out a number of strategic objectives and actions which are aimed at mainstreaming biodiversity in the decision making process across all sectors, strengthening the knowledge base and increasing awareness of biodiversity in order to support the achievement of the target.
- 2.6.10 Our Sustainable Future -A framework for Sustainable Development in Ireland (2012):** This framework recognises that the green economy and sustainable development agendas are a key element of Ireland’s economic recovery strategy and sets out the range of environmental, economic and social measures required to move these agendas forward. The framework sets out 70 measures that will ensure we improve our quality of life for current and future generations and sets out clear measures, responsibilities and timelines in an implementation plan. These include areas such as the sustainability of public finances and economic resilience, natural resources, agriculture, climate change, transport, sustainable communities and spatial planning, public health, education, innovation and research, skills and training, and global poverty. The framework recognises that some aspects of the pattern of development that emerged in Ireland over the last decade present major challenges from a sustainable development perspective and spatial planning is one of the mechanisms, along with wider public policy coordination and fiscal policy, to effect change at national, regional and local level and deliver more sustainable communities.
- 2.6.11 Smarter Travel. A new transport Policy for Ireland 2009-2020:** Smarter Travel recognises that transport and travel trends in Ireland are unsustainable. Even with the investment in Transport 21, if we continue with present policies, congestion will get worse, transport emissions will continue to grow, economic competitiveness will suffer and quality of life will decline. Smarter travel is designed to show how we can reverse current unsustainable transport and travel patterns and reduce the health and environmental impacts of current trends and improve our quality of life. Actions are aimed at influencing overall travel demand and reducing emissions in both urban and rural areas. Key actions include the following:
- Actions to reduce distance travelled by private car and encourage smarter travel, including focusing population growth in areas of employment and to encourage people to live in close proximity to places of employment and the use of pricing mechanisms or fiscal measures to encourage behavioural change,
 - Actions aimed at ensuring that alternatives to the car are more widely available, through improved public transport service and investment in cycling and walking,
 - Actions aimed at improving the fuel efficiency of motorised transport, and
 - Actions aimed at strengthening institutional arrangements to deliver the targets.
- 2.6.12 National Action Plan for Social Inclusion 2007 – 2016:** This National Action Plan for Social inclusion, complemented by the social inclusion elements of the National Development Plan 2007-2013: Transforming Ireland– A Better Quality of Life for All, sets out how the social inclusion strategy will be achieved over the period 2007-2016. The overall goal of this Plan is to reduce the number of those experiencing consistent poverty to between 2% and 0% by 2012, with the aim of eliminating consistent poverty by 2016.
- 2.6.13 National Heritage Plan 2002:** The National Heritage Plan sets out a clear and coherent strategy and framework for the protection and enhancement of Ireland’s national heritage. The core objective of the Plan is to protect the national heritage as well as promoting it as a resource to be enjoyed by all.

Regional Policy

- 2.6.14 **South Western Regional Planning Guidelines:** Prepared by the South West Regional Authority to provide a broad canvas to steer the sustainable growth and prosperity of the region in line with the key principles of national strategy. Planning Authorities are required to have regard to the guidelines in the discharge of their functions.
- 2.6.15 **South West River Basin District Management Plan** has been prepared on foot of the EU Water Framework Directive to create an integrated approach to managing water quality on a river basin basis. It requires that management plans be prepared on a river basin basis in six year cycles and specifies a structured approach to developing those plans with the first plans to cover the period 2009 to 2015. The South West River Basin Management Plan is the mechanism for protecting and improving the County's water resources and ensures that development permitted meets the requirements of the relevant River Basin Management Plan and does not contravene the objectives of the EU Water Framework Directive.
- 2.6.16 **Waste Management Plan:** A joint waste management strategy was prepared for the Cork City and county in 1995 by the both Local Authorities. Since then separate waste management plans have been prepared for each jurisdiction and the most recent plan for the County covers the period 2004-2009. Waste minimisation is a key element of the most recent Plan (2004) and includes a number of measures including waste prevention, reduction at source, reuse, recycling and recovery and is achieved through the use of bring sites, civic amenity sites, waste transfer stations, authorised transfer facilities and material recovery. All of these have a role to play in achieving national recycling targets.

Local Policy

- 2.6.17 **Cork County Development Plan 2014:** The Cork County Development Plan, 2014 adopted on the 8th December 2014 sets out the blueprint for the development of the county, underpinned by the core principles of sustainability, social inclusion, quality of design and climate change adaptation. The County Development Plan includes over 200 objectives on a range of issues including:
- Housing,
 - Rural, Coastal and Island Development;
 - Social and Community facilities;
 - Economy and Employment;
 - Town Centres and Retail Development;
 - Tourism;
 - Energy and Digital Economy;
 - Transport and Mobility;
 - Water Services, Surface Water (including Flooding) and Waste;
 - Heritage;
 - Green Infrastructure and Environment;
 - Zoning and Land use.
- 2.6.18 The objectives of the County Development Plan have not been repeated in the Local Area Plan and so the two documents must be read together when planning a development. All proposals for development, put forward in accordance with the provisions of this Local Area Plan, must demonstrate compliance with the objectives of the County Plan.

- 2.6.19 It is expected to remain in force (subject to any interim variations that the Council may make) until late 2020. It is a six year development plan for the County that attempts to set out, as concisely as possible, Cork County Council's current thinking on planning policy looking towards the horizon year of 2022. The plan also sets out the overall planning and sustainable development strategy for the county which must be consistent with the National Spatial Strategy 2002-2020 and the South West Regional Planning Guidelines 2010-2022.
- 2.6.20 The Plan is the county's principle strategic planning policy document. Detailed land-use zoning maps for the main settlements of the county are contained in the Municipal District Local Area Plans.
- 2.6.21 **Local Economic and Community Plans:** The Local Economic and Community Plan (LECP) was adopted in 2016. It is provided for in the statutory Local Government Reform Act 2014. This Act requires that a six-year plan be adopted by Cork County Council, setting out high level goals, objectives and actions required to promote and support local economic and community development within the county. The strategic aim of this Local Economic and Community Plan (LECP) is, ultimately, the "Removal of barriers to facilitate individuals and organisations in achieving their ambitions, within a long-term and sustainable framework"
- 2.6.22 This strategic aim seeks to absorb and reflect the breadth and complexity of modern life, where opportunities exist for individuals and organisations to fulfil their ambitions, whether personal, economic or social. Places and societies that best provide for those ambitions, within a sustainable framework, are the places where people want to live and work. In turn, places where people want to live are the places that become socially and economically relevant. Impediments – be they linked to issues around physical, organisational, environmental, economic, educational, equality, access, or related to any of the other aspects of our collective lives – are the barriers to our ambitions. This plan seeks to commence a process that will lead to removal of those barriers by those with the capacities to do so.
- 2.6.23 The legislation envisaged that the LECP will be consistent with its informing strategies, set at a European, National and Regional level, while also being consistent and integrated with complementary plans at its own level. In particular, the LECP must be consistent with the County Development Plan Core Strategy and the planned for Regional Spatial and Economic Strategy (RSES), currently the Regional Planning Guidelines.
- 2.6.24 This Local Area Plan will play a key role in implementing the LECP's aims and objectives as they apply to this Municipal District while at the same time the LECP will set out a pathway to address many of the social and economic issues facing the District identified in this Local Area Plan.
- 2.6.25 **County Biodiversity Action Plan 2009-2014:** This plan addressed how the wildlife resources of the County, including native plants, animals and the ecosystems that they combine to produce, will be managed and protected. Its implementation will contribute to achieving national and international targets for the conservation of biodiversity in the context of constantly accelerating rates of species extinction and habitat loss and deterioration globally.
- 2.6.26 **Cork County Heritage Plan 2005-2010:** The development of the County Heritage Plan had its origins in the National Heritage Plan published in 2002. The aim of the plan is to 'ensure the protection of our heritage and to promote its enjoyment by all'. This is underpinned by the core principle that heritage is communal and we all share a responsibility to protect it.
- 2.6.27 **Cork City Development Plan 2015-2021:** The city plan is of relevance because the city is the main economic and retail focus for the county as a whole and the focus of public transport services within the metropolitan area. The Plan includes a population target for the city of 150,000 by 2022 and re-emphasises the potential for the development of brownfield land in the City Centre, Docklands, Mahon and Blackpool to cater for the sustainable growth of the city.

Legislative Context

2.6.28 The Directive 2001/42/EC of the European Parliament and of the Council on the assessment of the effects of certain plans and programmes on the environment (the SEA Directive) and its transposed Irish legislation, including amendments form the legislative framework for the SEA process, including its documentation in the form of an Environmental Report. The Planning and Development Act, 2000 (as amended) also forms an integral part of SEA and additional guidance from a European context and national context has been listed within this Section. Additional key pieces of legislation pertaining to environmental considerations include the following list which is regarded as not exhaustive:

- EU Birds Directive (79/409/EEC)
- EU Habitats Directive (92/43/EEC)
- The Wildlife Act, 1976 (as amended)
- The Flora (Protection) Order 1999
- UN Convention of Biological Diversity 1992 (ratified 1996)
- Convention on Wetlands of International Importance (Ramsar Convention 1971)
- European Communities (Birds and Natural Habitats) Regulations, 2011
- Urban Waste Water Treatment Regulations, 2001 and 2004 and Amendments (2010)
- Water Services Act, 2007
- Water Services (Amendment) Act, 2013
- European Communities Environmental Objectives (Surface Waters) Regulations, 2009
- European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations
- European Communities Environmental Objectives (Groundwater) Regulations, 2010
- EU Nitrates Directive (91/676/EEC)
- European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2010
- EU Bathing Water Directive (2006/7/EC)
- Bathing Water Quality Regulations, 2008
- Bathing Water Quality (Amendment) Regulations, 2011
- Shellfish Waters Directive (2006/113/EC)
- European Communities (Quality of Shellfish Waters) Regulations, 2006
- European Communities (Quality of Shellfish Waters) (Amendment) Regulations, 2009
- Waste Water Discharge (Authorisation) Regulations, 2007
- European Communities (Environmental Liability) Regulations, 2008
- Air Quality Standards Regulations, 2011
- Environmental Noise Regulations, 2006
- The European Landscape Convention, 2000

Section 3: Environmental Baseline

Sub-Section

- 3.1 Introduction
- 3.2 Population and Human Health
- 3.3 Biodiversity-Flora and Fauna
- 3.4 Soils
- 3.5 Water
- 3.6 Air and Climatic Factors
- 3.7 Material Assets
- 3.8 Cultural Heritage
- 3.9 Landscape

3 Environmental Baseline

3.1 Introduction

3.1.1 The environmental baseline of this Municipal District is described in this section. This baseline information outlines the environmental context within which the Draft Cobh Municipal District Local Area Plan will operate. The purpose of this section is to provide enough environmental baseline data to:

- support the identification of environmental problems;
- support the process of assessing the environmental effects;
- provide a baseline against which future monitoring data can be compared.

3.1.2 A number of key environmental issues set the context for the collection of the baseline data and each section includes an overview of the current situation, the key environmental problems and an analysis of the likely evolution in the absence of the Draft Plan. The Environmental issues are listed below:

- Population and Human Health
- Biodiversity – Flora and Fauna
- Soil
- Water
- Air and Climatic factors
- Material Assets
- Cultural Heritage
- Landscape

3.1.3 A number of maps are included to illustrate the baseline environment of the Municipal District County, the majority of which indicate the existing situation for the environmental issues identified above. However in many cases the maps and information is only available at a County Level.

3.1.4 The Department of the Environment, Heritage and Local Government (DoEHLG) circular SEA 1/8 and NPWS 1/8 requires that under the Habitats Directive an Appropriate Assessment of the ecological implications of a plan is conducted. An appropriate assessment of the Draft Plan was conducted by Cork County Council and is provided as part of this Draft Plan.

3.2 Population and Human Health

3.2.1 In 2011 the population of the Cobh MD stood at 53,544. In the period to 2022, the population target allocated by the Cork County Development Plan 2014 provides for the population to grow by 19,036 persons or 35.5% approximately. The majority of this growth is targeted at the five towns of the District; Carrigtwohill, the Northern Environs of Cork City at Ballyvolane, Cobh and Glanmire. Growth is also planned for Monard, the proposed rail based settlement. It is anticipated that development at Monard will happen at a slower rate than other areas within the district. Growth is also provided for across the network of smaller settlements within the District.

Table 2.2. Cobh Municipal District

	Housing Requirement					Housing Supply	
	Census 2011	Population Target	Total New Households	New Units Required	Net Estimated Requirement (ha)	Est. Net Residential area zoned in LAP / TCP (ha)	Estimated Housing Yield (LAPs and TCPs) (Units)
Cobh	12,347	14,543	1,625	1,778	71	72.53	1,907
Carrigtwohill	4,551	11,618	3,195	3,656	146	127.8	3,656
Glanmire	8,924	10,585	1,205	1,320	53	57.70	1,321
Monard	0	3,619	1,502	1,727	69	170.00	5,000
Cork North Environs	6,692	10,719	2,058	2,281	91	143.80	3,371
Main Towns	32,514	51,084	9,585	10,762	430	571.83	15,255
Villages	4,366	5,979	922	1,045	--	--	770
Rural	16,664	15,517	487	560	--	--	--
Total Villages and Rural	21,030	21,496	1,409	1,605	--	--	770
Total Municipal District	53,544	72,580	10,993	12,367	430	571.83	16,025

Current Estimated Strategic Land Reserve (LAPs and TCPs) for this Municipal District is 141.4 Ha
Source: Cork County Development Plan 2014- Appendix B, Table B 9

3.2.2 With regard to Human Health, impacts relevant to SEA are those which arise as a result of interactions with environmental vectors such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so they come in contact with human beings. These issues will be explored in the Environmental Report.

Existing Sensitivities in relation to Population and Human Health

3.2.3 The Draft Plan has made provision for the population of the MD to increase leading to increased demand for housing within the area and the provision of supporting social, community and employment/commercial services, facilities and opportunities. The timely delivery of such services is important to the quality of life of the population.

3.2.4 Enabling population growth and sustainable patterns of development in key settlements may be hindered by delays in the delivery of key infrastructure required to facilitate development leading to a housing shortage in some areas and development being shifted to other, potentially less sustainable locations, frustrating efforts to plan for having people, jobs and services located closer together.

3.2.5 Dispersed settlement patterns can lead to an over dependence on car based transport and long journeys to work which can have negative impacts on the health of the population and quality of life.

3.2.6 The economic decline of some settlements and/or the failure of others to realise the expected level of growth, can lead to reduced service provision, loss of job opportunities and reduced quality of life for the remaining residents of the area. A key challenge for the Draft Plan is to promote the sustainable growth of the economy of the six main towns of the Municipal District to support the balanced socio economic growth of the area.

3.2.7 Improved recreational/walking and cycling facilities are needed to support an increased uptake in physical exercise to help improve / maintain the health of the population.

3.3 Biodiversity-Flora and Fauna

3.3.1 European and National Legislation now protect the most valuable of our remaining wild places, through designation of sites as proposed Natural Heritage Area, Natural Heritage Areas, candidate Special Areas of Conservation and Special Protection Areas. The designation of these sites at a national level is the responsibility of the Department of the Environment, Heritage and local Government but it is the responsibility of all of us to protect these sites. The process of designation of such sites is ongoing, with new sites being added, redesignated and boundaries of existing sites being adjusted. The key Natura sites in the Cobh MD are illustrated in Figure 3.1.

3.3.2 There is one SPA, one SAC and seven pNHA's within the Cobh MD. Furthermore within 1 kilometre of the boundary of the Municipal District there is a further SAC and two additional SPA's. Cork Harbour has a concentration of natural heritage designations. Numerous bird species and inter tidal habitats are afforded protection under the EU Bird's Directive and EU Habitats Directive. The designations in Cork Harbour include two Natura 2000 sites namely Cork Harbour Special Protection Area (SPA) site code 004030 and the Great Island Channel Special Area of Conservation (SAC) site code 001058. It is also designated a Ramsar site for wetland protection. (Rostellan Lough, Aghada Shore and Poul nabibe Inlet)

Name	Environmental Designation	Settlement
Great Island Channel Cork Harbour	SAC 1058	Midleton
Blackwater River (Cork/Waterford)	SAC 2170	

Table 3:1 Special Areas of Conservation - Cobh Municipal District

Name	Environmental Designation	Settlement
Cork Harbour	SPA 4030	Glounthaune;
Blackwater Callows SPA	Spa 4090	
Ballycotton Bay SPA	SPA 4022	

Table 3:2 Special Protection Areas

Name	Environmental Designation	Settlement
Blarney Bog	pNHA 1857	Blarney
Dunkettle Shore	pNHA 1082	Glanmire
Glanmire Wood	pNHA 1054	Glanmire
Cuskinny Marsh	pNHA 1987	Great Island
Rockfarm Quarry	pNHA 1074	Littleisland
Great Island Channel Cork Harbour	pNHA 1058	Midleton; Glounthaune; Carrigtohill

Table 3:3 Proposed Natural Heritage Areas

Protected Species

3.3.3 The SEA has been informed by the findings of the Habitats Directive Assessment process and will include appropriate mapping highlighting important sites within the area. The SEA process has also been informed by the Ecological Baseline study commissioned by the Council.

Existing Sensitivities in relation to Biodiversity

- 3.3.4 The completion of The Lower Harbour Sewerage Scheme which will serve the town of Cobh and the urban expansion area of Ballyvolane among other harbour side settlements This will greatly improve water quality in Cork Harbour. The harbour area has a number of bird species and habitats which are afforded protection under the EU Bird's Directive and the EU Habitats Directive. Cork Harbour comprises habitats of international importance, particularly as a feeding ground for wintering waterfowl. The designations in Cork Harbour include two Natura 2000 sites. It is also designated a Ramsar site for wetland protection. The necessary drinking water and waste water infrastructure will be in place to serve the existing main towns of Carrigtwohill, Cobh and Glanmire by the time the new Local Area Plan is adopted in mid 2017 and it is anticipated that capacity will be available to accommodate planned development. Specifically, the Carrigtwohill Waste Water Treatment Plant has been expanded to take increased effluents in line with the forecast increase in population and economic growth.
- 3.3.5 New development has the potential to impact on has biodiversity, flora and fauna through the loss of some greenfield land, habitat loss or disturbance, contribution to climate change and impacts on water quality.
- 3.3.6 Habitat mapping was conducted by consultants for the Blarney electoral areas as an action of the Heritage Plan. The mapping identified the primary habitats as; semi natural grassland, scrub woodland and swamp area. This is a useful form of baseline information. These features should be incorporated into future layouts. There is a large permanently wet area located centrally in a field to the North East of the site which should be accommodated in the layout as a water feature.

3.4 Soils

3.4.1 The SEA examined soil issues within the Municipal District, looking at the most common soil types within the plan area and how they might be affected by the development proposed in the Draft Plan. The SEA considered the challenges facing soil generally together with issues such as erosion, geology and quarrying as appropriate.

3.4.2 The dominate soil type in the area are acid brown soils and gleys which provide a mix of productive and moderately productive soils enabling grassland and crop production with the main agricultural use being grassland and cereal crops. Productive soils should be retained for vegetation and construction considered on unproductive soils. Soil disturbance should be kept to a minimum and tree planting should be encouraged.

Rolling Lowland	Acid Brown Earths 60% Most occur on lime-deficient parent materials, therefore acidic in nature, relatively mature and well drained	Grey-Brown Podzolics 40% Usually formed from calcareous parent material which counteracts the effects of leaching, can be light to heavy textured	Old Red Sandstone carboniferous limestone glacial till
Mountain and Hill	Reclaimed Podzols 75% Formed by leaching of nutrients (podzolisation process), acidic and poorly drained	Gleys 25% Developed under the influence of permanent or intermittent waterlogging, impervious with poor physical structure, unsuitable for cultivation or intensive grazing	Mostly Old Red Sandstone

Table 3:4 Cobh MD Soil Types

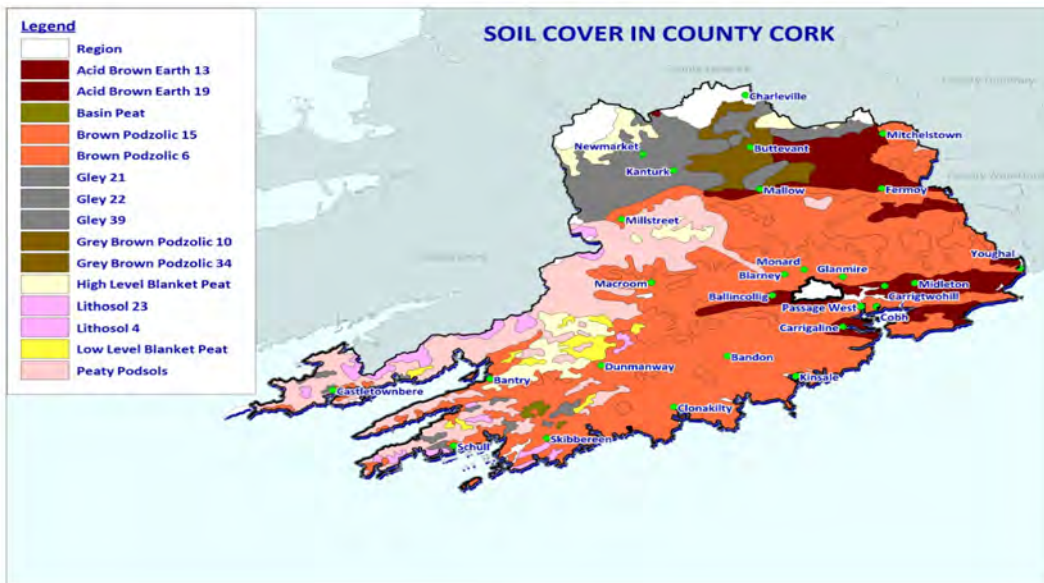


Figure 3.2 Soil Cover in County Cork

Existing Sensitivities in relation to Soil

- 4.5.3 Additional development may lead to damage to or loss of the soil resource or impact on its functions.

3.5 Water

- 3.5.1 This section of the SEA will consider issues in relation surface water (rivers and lakes, estuarine and coastal waters) and groundwater in the Municipal District as appropriate looking at the status and quality of these waters. The section will also examine water services infrastructure (drinking water supply, wastewater treatment and storm water).
- 3.5.2 Consideration was given to current and future loading within key water catchments, the potential impacts of additional development on water quality, surface water management, climate change and the need for new infrastructure to serve anticipated demands.
- 3.5.3 Water services of the all the infrastructure requirements needed to facilitate new development is the most critical, as in the absence of it, no development can take place. Since January 2014 Irish Water is responsible for the operation of public water services (drinking water and wastewater) including management and maintenance of existing water services assets. Those intending to carry out development must now obtain consent to connect to Irish Water Infrastructure for new development. Irish Water also has responsibility for planning for future infrastructure needs and for the delivery of new infrastructure and future decisions in relation to investment in new water services infrastructure will be made by Irish Water. Developers must also satisfy themselves that Irish Water will make adequate services available in order to meet the needs of any development they propose.
- 3.5.4 Irish Water have undertaken a strategic review of all settlements in the Metropolitan Area and developing an investment programme for the implementation of the water services (water and waste water) in line with the priorities identified by Cork County Councils urban expansion areas. The investment programme needs to be implemented in tandem with the investment package for roads, stormwater and recreation so that there is a co-ordinated approach to development.

3.5.5 The Cork County Development Plan, 2014 and the new Municipal District Local Area Plans are important documents that Irish Water should take into account in formulating its plans and programmes. As part of the review of the Local Area Plans it is proposed to prepare a companion document outlining the Water Services Infrastructural Investment needs in each Municipal District.

3.5.6 So far as the villages are concerned, in many cases (see Table 3.7) the water services infrastructure needed to deliver the 2011 housing requirements is often not in place. In general the Councils approach to this, which is summarised in Table 3.6, is that where Irish Water already have water services infrastructure in a town or village then Irish Water will need to upgrade that infrastructure as necessary to meet the demands of current and future customers in the settlement.

Table 3.6 :Strategy for Water Services Provision		
Normally Expected level of Water Services		Policy Approach
Towns	Public Drinking Water and Waste Water Treatment	Adequate water services infrastructure to be prioritised.
Key villages		
Villages	Public Drinking Water	Adequate drinking water services infrastructure to be prioritised
	Public Waste Water Treatment	Adequate waste water treatment facilities to be prioritised for villages which already have some element of public infrastructure.
		For smaller villages where services are not available or expected, development will be limited to a small number of individual houses with their own treatment plant.
Village Nuclei	Public Drinking Water	Where already present, adequate drinking water services to be maintained. In the absence of public drinking water, individual dwellings may be permitted on the basis of private wells subject to normal planning and public health criteria.
	Public Waste Water Treatment	In these smaller settlements within no public services, it is proposed to limit development to a small number of individual houses with their own treatment plant.

3.5.7 Across the County as a whole the water services infrastructure needed to deliver the scale of growth envisaged by the County Development 2014 is often not in place. In general the Councils approach to this is that where Irish Water already have water services infrastructure in a town or village then Irish Water will need to up upgrade that infrastructure as necessary to meet the demands of current and future customers in the settlement.

3.5.8 Therefore, while the current water services infrastructure may not immediately be able to deliver the overall scale of growth set out in the LAP, the proposal is to retain the target with the expectation that the infrastructure will be delivered over time by Irish Water.

Table 3.7: Cobh Municipal District – Proposed Scale of Development

Name	Existing Number of Houses Q1 2015 (Geo directory)	Outstanding Planning Permissions Q1 2015 (No. of houses)	Scale of Development (CDP 2014 and LAPs 2011)	DW Status	WW Status
Main Towns					
Carrigtwohill	1980	-	3,656		
Glanmire	3535	-	1,320		
Cobh	5509	-	1,778		
Littleisland	537		0		
Cork City - North Environs	2,443	-	2,281		
Monard	87	-	1727		
Total Main Towns	-	-	10,762		
Key Villages					
Glounthaune	506		400		
Carrignavar	175		100		
Glenville	166		100		
Total Key Villages			600		
Villages					
Kerry Pike	174		30		
Killeens	258		30		
Whitechurch	207		50		
Knockraha	119		25		
Upper Glanmire	151		20		
Total Villages			155		
Village Nuclei					
Ballymore/Walterstown	102		5	Private GWSS	None
Caherlag	31		5		None
Rathduff	18		5		None
			15		
Total Village Nuclei			30		
Overall Total			11547		
Water Services Key	Irish Water Services in place with broadly adequate existing water services capacity				
	Irish Water Services in place with limited or no spare water services capacity				
	None – No existing Irish Water Services				

Flooding

- 3.5.9 Flood maps have been prepared in association with the OPW and the intention is to make these maps available to the public for the whole of the County but, to facilitate the preparation of the draft local area plans, the areas close to recognised settlements have been prioritised.
- 3.5.10 In the course of preparing the Cobh municipal District Local Area Plan, all land under active consideration for 'zoning' for future development (including 'zonings' inherited from the 2011 local area plans and the Cobh Town Council Town Development Plan, that now conflict with the level of flood risk will be subjected to the 'Justification Test for development plans' set out in section 4 of the ministerial guidelines and, generally, 'zonings' that do not satisfy the requirements of the test will be omitted or 're-zoned' to flood compatible uses in this plan.
- 3.5.11 In line with the approach set out in the Ministerial Guidelines, areas 'zoned' for town-centre development comprise the main category of future development 'zoning' that often satisfy the requirements of the 'Justification Test for development plans' and in many cases these zonings will be retained notwithstanding the indication of significant risks of future flooding.
- 3.5.12 A detailed Strategic Flood Risk Assessment is set out in Volume Two Environmental Reports of the Draft Local Area Plan.

Existing Sensitivities in relation to Water

- 3.5.13 As this Local Area Plan (LAP) is essentially concerned with landuse in settlements in the Cobh District, it is considered that this LAP will most likely affect water quality through discharges from municipal wastewater treatment plants. Thus the likely significant impacts of population change proposed in the plan on water quality will be assessed and the foundation of this assessment will be based on wastewater treatment. Development will not be able to take place until the required infrastructure is available. New development in Ballyvolane Urban Expansion Area will require an upgrade of infrastructure in terms of water supply and waste water to facilitate development. Monard is an unserved rural area. The 2015 Planning Scheme approved by the Bord includes proposals to based on preliminary reports for the provision of potable drinking water and waste water infrastructure in tandem with the implementation of the project.
- 3.5.14 Cork County Council is working with other stakeholders in particular Irish Water and the department to secure funding and identify the best solution for waste water collection of waste water.
- 3.5.15 In this Municipal District modern, high quality drinking water and waste water infrastructure will be in place to serve the existing main towns of Carrigtwohill, Cobh and Glanmire by the time the new Local Area Plan comes into force in mid 2017 and it is anticipated that capacity will be available to accommodate planned development. Specifically, the Carrigtwohill Waste Water Treatment Plant has been expanded to take increased effluents in line with the forecast increase in population and economic growth. The Lower Harbour Treatment Work in Ringaskiddy is under construction and this will cater for waste water treatment for Cobh in addition to other settlements in the Ballincollig/Carrigaline Municipal District (Carrigaline and Passage West/Monkstown).
- 3.5.16 In terms of water services infrastructure within the Municipal District Table 3.2 in section 3 of this document details the current status of the water services infrastructure within the Cobh Municipal District. Additional investment will be required in some settlements in order to facilitate development in line with Core Strategy provisions of the County Development Plan 2014.

3.6 Air and Climatic Factors

- 3.6.1 The SEA for this Plan considered Air and Climatic Factors potentially affecting the plan area including air quality, noise, greenhouse gases etc.
- 3.6.2 Air quality is generally good in the County and Cork is located in an area with a relatively mild climate and has an almost continuous movement of clean air. Nationally, it is now evident that, due mainly to the very significant increase of vehicles on the public roads, the biggest threat now facing air quality in urban areas is emissions from road traffic. As the population grows and more development takes place emissions will rise.
- 3.6.3 Cork County and City Councils have prepared a joint Noise Action Plan which deals with the mitigation of noise within the Cork conurbation as well as along all national and some regional roads within the county. Common sources of noise within the County include road vehicles, aircraft, railways, industry, construction, commercial premises and entertainment venues, sports and recreation venues and wind farms.
- 3.6.4 Development Plans and Local Area Plans have an important role to play in the prevention and limitation of adverse noise effects and can ensure that conflicts do not occur between noise-generating and noise sensitive uses such as housing, hospitals, schools, places of worship etc., by guiding development to the right locations and where necessary, specifying design and layout solutions, planning authorities can limit the overall number of people exposed to potential noise effects.

Existing Sensitivities in relation to Air and Climate

- 3.6.5 One of the key manifestations of climate change is flooding. A Strategic Flood Risk Assessment (SFRA) has been undertaken as part of the preparation of this plan, and all zoned lands in areas at risk of flooding have been reviewed. The Strategic Flood Risk Assessment (SFRA) is included in Volume 2 of this Plan and explains in detail the overall approach to flood risk management that has been followed. It is important to read this document in conjunction with Volume 1 of the plan.
- 3.6.6 The dispersed nature of the settlement patterns throughout the county results in high levels of car based commuting which contributes to the overall transport emissions which impacts on air quality.

3.7 Material Assets

- 3.7.1 The EPA SEA Process Draft Checklist (2008) defines material assets as the critical infrastructure essential for the functioning of society such as: electricity generation and distribution, water supply, wastewater treatment, transportation, etc. Water Supplies and Waste Water Treatment infrastructure will be dealt with under Water in Section 3.5. This section of the SEA will deal with other essential infrastructure within the plan area i.e. Transport (Road, Rail, Public Transport, airports, ports/ harbours) etc as appropriate and Waste.

Existing Sensitivities in relation to Material Assets

- 3.7.2 Additional population and economic growth in the area is dependent on the provision of appropriate and sustainable water services and transport infrastructure to underpin sustainable growth. The Draft Plan has identified areas where additional investment is required in order to meet population growth targets.

3.8 Cultural Heritage

- 3.8.1 The SEA will consider Archaeological and Architectural Heritage. Cork County has a vast resource of archaeological heritage with over 19,000 monuments registered throughout the County. Figure 4.2 indicates the distribution of recorded monuments within the county. The County has the highest concentration of National Monuments (58 in total).
- 3.8.2 Within the network of settlements designated for growth, a number of towns are subject to zones of archaeological potential including Bandon, Buttevant, Clonakilty, Cobh, Fermoy, Kinsale, Macroom, Mallow, Midleton, Skibbereen and Youghal. Some of these towns are also walled towns and subject to recently released national policy and guidelines regarding “walled towns” (Youghal, Bandon, Kinsale & Buttevant).
- 3.8.3 County Cork has a wealth of industrial archaeology and this is protected through the archaeological record. Underwater Archaeology is now recognised as an important element of our cultural heritage. Given the coastal geography of County Cork and the significance role that some of the County’s coastal ports and towns played in historic events over the centuries there is very high potential for underwater cultural material in the form of shipwreck remains and associated artefacts. Some of the coastal towns may have been subject to reclamation and infrastructure may have been developed to facilitate the maritime landscape. Maritime artefacts such as quays, jetties, anchorages, access routes to the sea etc are all important cultural heritage resources

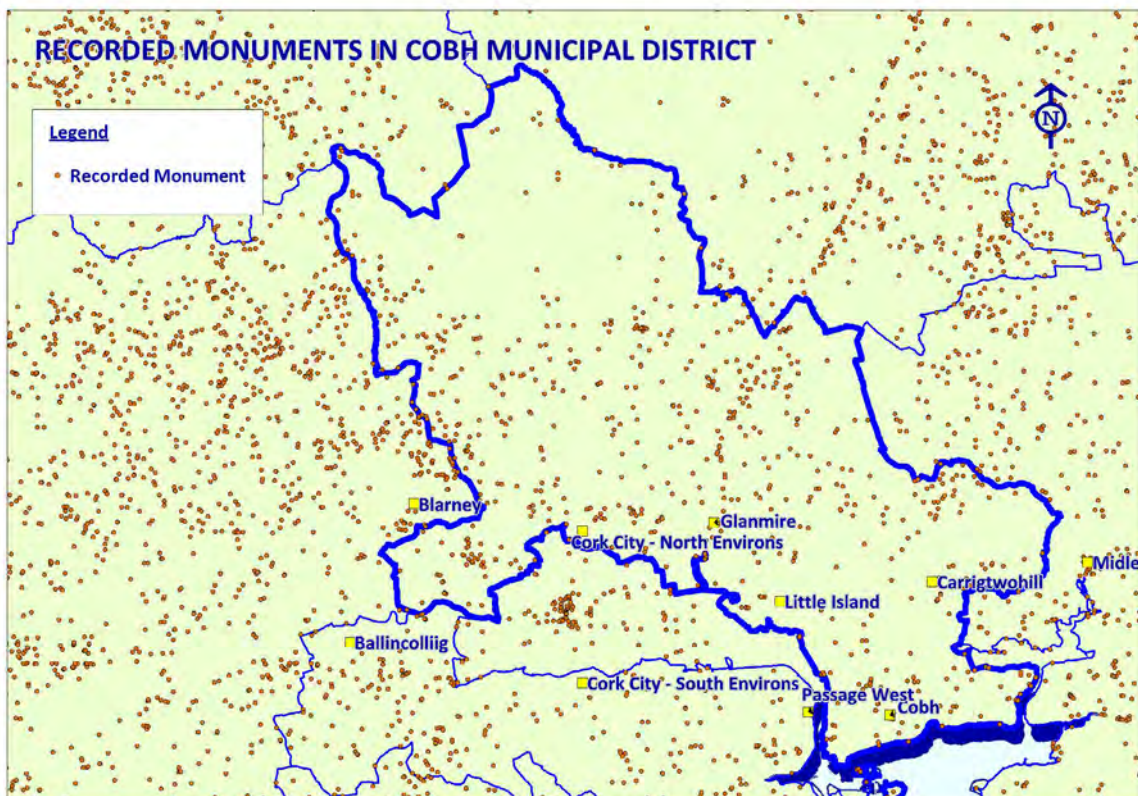


Figure 3.3: Recorded Monuments

- 3.8.4 In terms of Architectural Heritage, the Planning and Development Act sets out the requirements for County Development Plans to protect structures of “architectural, historical, archaeological, artistic, cultural, scientific and technical interest” by including a Record of Protected Structures (RPS) or the designation of Architectural Conservation Areas (ACAs) to protect areas of townscape value. There are currently in excess of 1,400 structures on the RPS as part of the County Development Plan 2014. Figure

3.4 illustrates the distribution of protected structures in the Cobh MD while Table 4.5 provides information at main town level.

3.8.5 There are 6 Architectural Conservation Areas designated within the County Development Plan 2014 and the Cobh Town Development Plan 2013. With the exception of Glenville, the remaining ACA’s are located in the historic town of Cobh. Under the Planning Act it is an objective to protect the special character of an area which generally comprises of a collection of buildings and their setting and in many cases may include a historic demense or park. Some of these are within designated growth settlements.

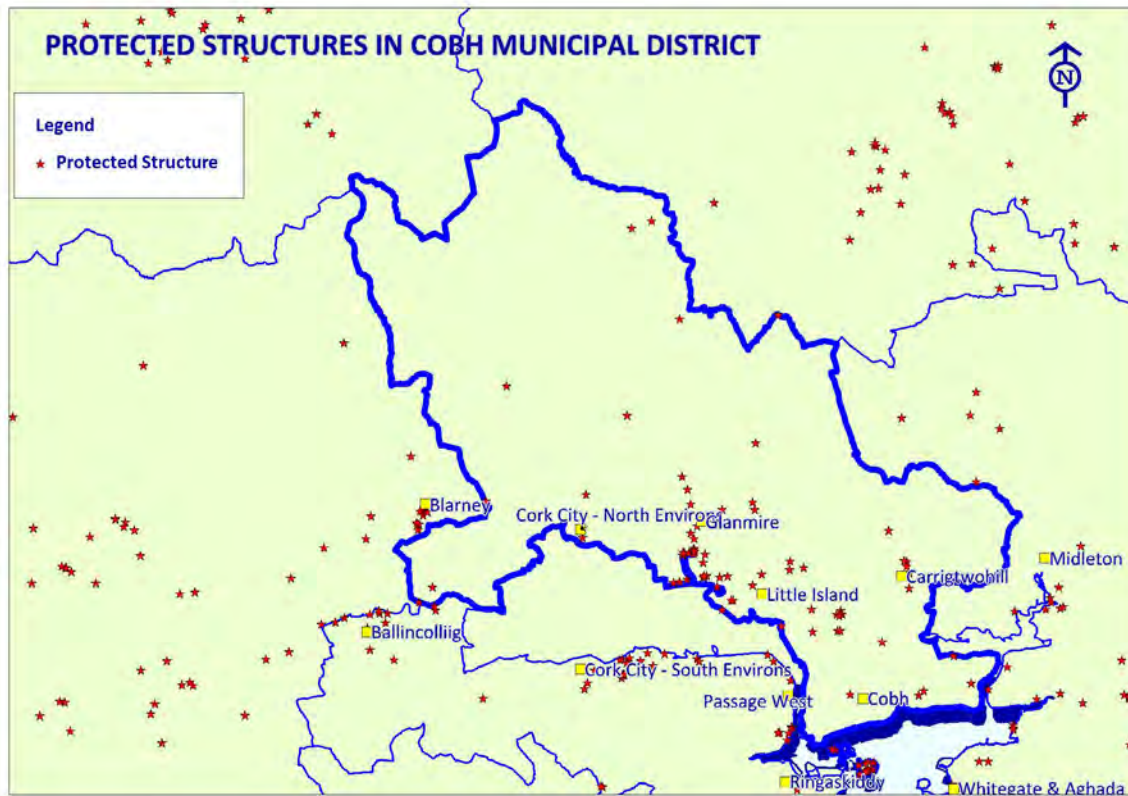


Figure 3.4 Protected Structures in Cobh MD

Settlement Name	ACA	RPS	NIAH (Buildings & Gardens)	Archaeology (*as per Urban Archaeology Survey)
Carrigtwohill		5	11	
Cobh	5	377	351	6
Glanmire		35	25	
Little Island		4	10	8
Glenville	1	2	10	5

Table 3.8 Cobh MD Built Heritage Designations

3.9 Landscape

3.9.1 The landscape sensitivity of the Cobh MD has been classified in accordance with Table 3.9. The SEA will explore landscape issue as they relate to the Local Area Plan process in accordance with the policy set out in the County Development Plan.

Landscape Character Types	Main Settlements located within LCT	LCT Value	LCT Sensitivity	LCT Importance
City Harbour and Estuary 1	Carrigtwohill Cobh Glanmire Cork City North Environs	Very high	Very High	National
Broad Fertile Lowland Valleys 6(a)		Medium	High	Medium
Valleyed Marginal Middleground 13(b)		Medium	Medium	Low
Fissured Fertile Middleground 10(b)		Medium	High	County

Table 3.9 Landscape Character Assessments

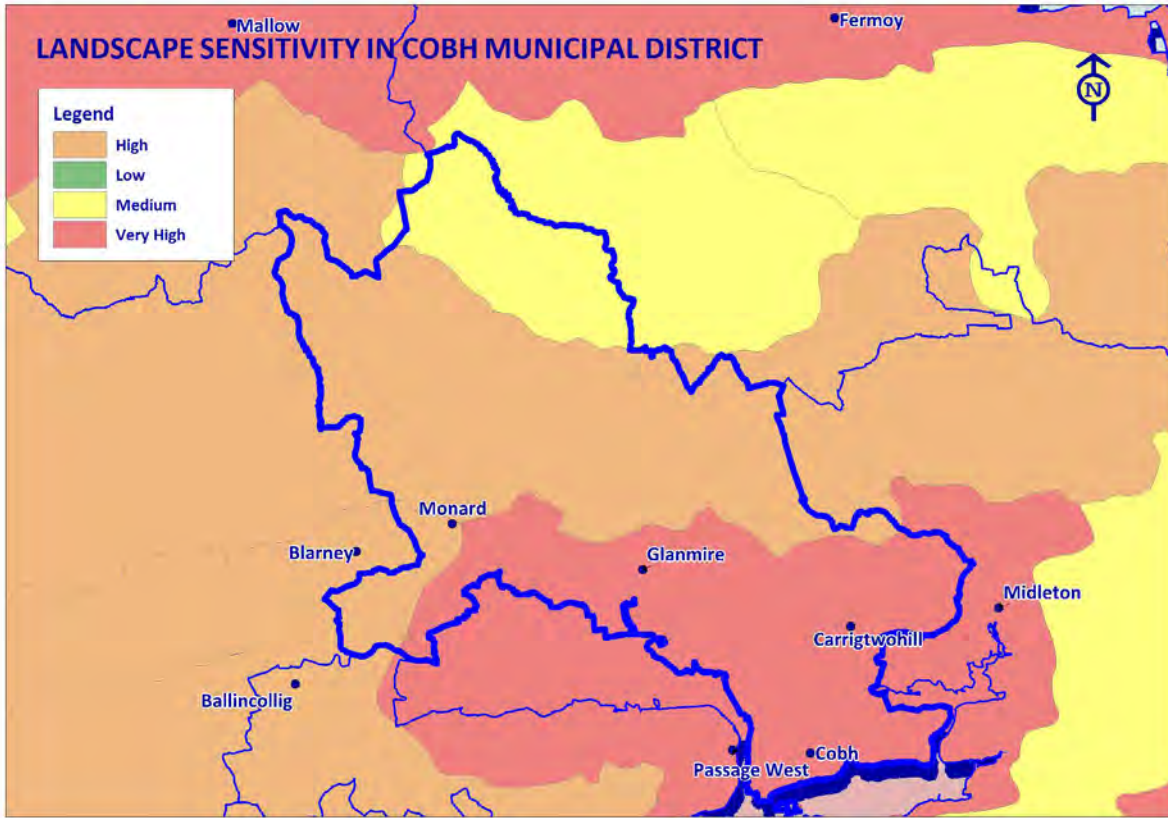


Figure 3.5: Landscape Sensitivity in Cobh

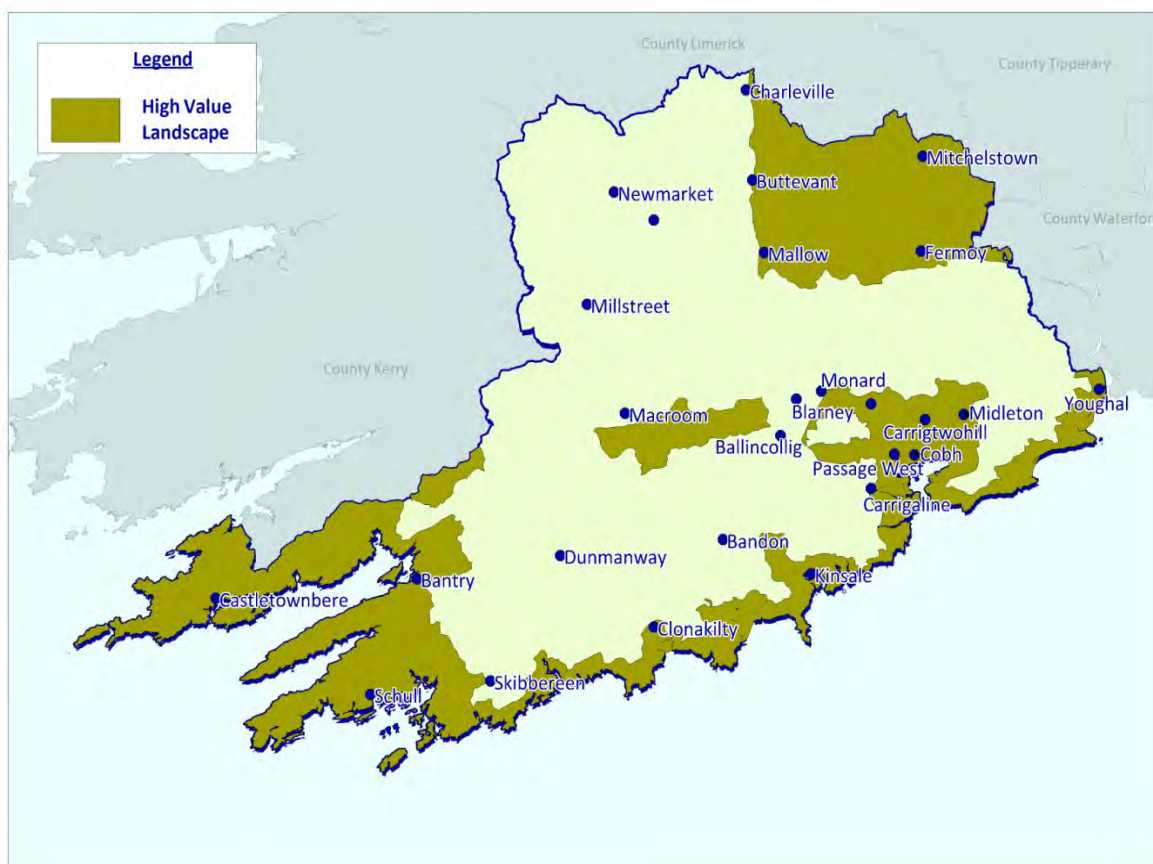


Figure 3.6: Landscape Value

3.10 Flooding

3.10.1 The assessment and management of flood risks in relation to planned future development is an important element of the local area plan. The majority of towns, villages and smaller settlements have a river or stream either running through the built-up area or close by and are inevitably exposed to some degree of flood risk when those rivers or streams overflow their normal course. Similarly, in coastal areas flooding can periodically occur following unusual weather or tidal events.

3.10.2 As part of the preparation of this Local Area Plan the Council has updated the flood zone mapping used in the 2011 Local Area Plans to take account of the information that has become available from the National CFRAM programme (Catchment Flood Risk Assessment and Management), and other Flood Schemes undertaken by the OPW. In addition, flood risk mapping for rural areas, outside of settlements boundaries, is also now available and is being published simultaneously with this Draft Local Area Plan.

3.10.3 The Council's overall approach to Flood Risk Management is set out in Chapter 11 of the County Development Plan 2014 and intending developers should familiarise themselves with its provisions. In Council's approach to flood risk is to:

- a) Avoid development in areas at risk of flooding; and
- b) Where development in floodplains cannot be avoided, to take a sequential approach to flood risk management based on avoidance, reduction and mitigation of risk.

3.10.4 A Strategic Flood Risk Assessment (SFRA) has been undertaken as part of the preparation of this plan, and all zoned lands in areas at risk of flooding have been reviewed. The Strategic Flood Risk Assessment (SFRA) is included in Volume 2 of this Plan and explains in detail the overall approach to flood

risk management that has been followed. It is important to read this document in conjunction with Volume 1 of the plan.

3.10.5 Where development is proposed within an area at risk of flooding, either on land that is subject to a specific zoning objective, lands within the “existing built up area” of a town, within a development boundary of a village, or in the open countryside, then intending applicants need to comply with the provisions of Chapter 11 of the Cork County Development Plan 2014 and Objectives WS 6-1 and WS 6-2, as appropriate, and with the provisions of the Ministerial Guidelines – ‘The Planning System and Flood Risk Management’.

3.10.6 Flood Zone Mapping for the rural parts of the Municipal District (i.e. outside of a settlement boundary) is also now available to view online, for information purposes, as part of the Local Area Plan Map Browser at www.corkcoco.ie.

Section 4: Environmental Protection Objectives

Sub-Section

- 4.1 Introduction
- 4.2 Population and Public Health
- 4.3 Biodiversity-Flora and Fauna
- 4.4 Soils
- 4.5 Water
- 4.6 Air Quality and Climatic Factors
- 4.7 Cultural Heritage
- 4.9 Landscape
- 4.8 Material Assets
- 4.9 Flooding

4 Environmental Protection Objectives

4.1 Introduction

- 4.1.1 This section identifies the Strategic Environmental Protection Objectives used in the assessment of the Draft Plan. Environmental Protection Objectives (EPOs) are methodological measures against which the environmental effects of the Plan can be tested. If complied with in full, EPOs would result in an environmentally neutral impact from the implementation of the Plan. The EPOs are set out under a range of topics and are used as standards against which the provisions of the Plan can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, unless mitigated.
- 4.1.2 The SEA Directive requires that the evaluation of plans and programmes be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected. EPOs are developed from international, national and regional policies including various European Directives which have been transposed into Irish law and which are intended to be implemented within the County. The EPOs selected have also been informed by Table 4B of the SEA Guidelines (DEHLG, 2004), those used in the preparation of the current County Development Plan and the issues arising from the baseline assessment. The use of EPOs, although not a statutory requirement, does fulfil obligations set out in Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004).
- 4.1.3 The EPOs are linked to indicators which can facilitate monitoring the environmental effects of implementing the Plan when adopted, as well as to targets which the Plan can help work towards.

4.2 Population and Human Health

- 4.2.1 The impact of the Plan on the population and human health is potentially multifaceted as the plan interacts with all the environmental receptors. The plan guides physical land use and seeks to promote sustainable development, guiding the spatial distribution of population across the county. Key directives and policy documents relevant to population have been referenced earlier in this document and include the National Spatial Strategy, Regional Planning Guidelines, National Development Plan, Our Sustainable Future – A Framework for Sustainable Development in Ireland 2011-2016, Smarter Travel, Guidelines for Sustainable Residential Development in Urban Areas, Sustainable Rural Housing, Guidelines for Planning Authorities 2005 etc.
- 4.2.2 The impact of the plan on human health will be influenced by nature, location and design of new development permitted under the plan and its impact on environmental factors like water quality, air quality, noise, landscape and in the long term on climatic factors. The EPOs, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.3 Biodiversity-Flora and Fauna

- 4.3.1 County Cork has a rich and diverse natural heritage which is described in the baseline section of this report (Chapter 3). Key directives and policy documents relevant to biodiversity, flora and fauna have been referenced earlier in this document and include the EU Habitats Directive (92/43/EEC), the EU Birds Directive (79/409/EEC), UN Convention on Biological Diversity, the National Biodiversity Plan – Action for Biodiversity 2011-2016 and the County Biodiversity Action Plan 2009-2014. The EPOs,

Indicators and Targets set out in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.4 Soils

4.4.1 There is currently no legislation specific to protecting soil resources. Successive development plans have sought to protect and sustainably manage the soil resource of the county. The EPOs, Indicators and Targets in Table 4.1 have been identified having regard to the environmental baseline described in Section 3.

4.5 Water

4.5.1 Water Quality is governed by a large body of legislation and is subject to regular monitoring. As discussed in Chapter 3, the Water Framework Directive has introduced a new approach to water protection. The current baseline status of waters in Cork is varied (see Chapter 3) and the improvement of less than good water quality status is a priority for the future. Key directives and policy documents relevant to water have been referenced earlier in this document and include the Water Framework Directive (2000/60/EC) and Groundwater Quality Directive 2006/118/EC. The EPO, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.6 Air Quality and Climate Factors

4.6.1 The main impacts on air quality are likely to arise from traffic emissions and noise from traffic and other sources. The land use policies of the plan affect the journeys people make every day to work, school, shopping or for leisure purposes etc. At present approximately 90% of journeys to work within the county are made by the private car. The transport sector is also a significant contributor to greenhouse gas emissions. Key directives and policy documents relevant to Air/ Climate change include Directive 96/62/EC – Air Quality Framework Directive, the Kyoto Protocol and the National Climate Change Strategy (2007-2012) and Climate Change Adaption Framework 2012. The EPO, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.7 Cultural Heritage

4.7.1 Cork has a rich architectural, archaeological and cultural heritage. Key directives, legislation and policy documents relevant to cultural heritage include the Planning and Development Acts 2000 – 2013, National Monuments Acts, National Heritage Plan 2000 and the Framework & Principles for the Protection of Archaeological Heritage (DAHGI 1999). The EPO, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.8 Landscape

- 4.8.1 The European Landscape Convention was signed in 2000 and came into force in Ireland in 2004. The European Landscape Convention aims to promote the protection, management and planning of European landscapes and to organise European co-operation on landscape issues. The Convention highlights the importance and need for public involvement in the development of landscapes. It encourages a joined up approach through policy and planning in all areas of land-use, development and management, including the recognition of landscape in law and is the first international treaty to be exclusively concerned with the protection, management and enhancement of the European landscape. The Convention covers natural, rural, urban and peri-urban areas. It deals with ordinary and degraded landscapes as well as those of outstanding beauty.
- 4.8.2 The preparation of a National Landscape Strategy is underway since 2011 but has yet to be completed. A Draft Landscape Strategy for County Cork was prepared in 2008 and identifies landscapes in the county in terms of their Character, Value, Sensitivity and Importance and includes recommendations on balancing development and change with landscape protection. Once the National Landscape Strategy is finalised the County Strategy will need to be reviewed and completed.
- 4.8.3 The EPOs, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.9 Material Assets

- 4.9.1 Material Assets, for the purposes of SEA, comprises the infrastructure the population needs for the functioning of society and includes roads, transport, water services, energy and telecommunications infrastructure, the building stock of the county, production facilities (factories etc), green infrastructure (parks open spaces, recreational facilities etc.). Large infrastructural installations have the potential to have significant effects on the environment, both during its construction/ development stage and during its use and operation. Such projects will generally require EIA as part of the planning process which would evaluate such impacts and introduce mitigation measures where necessary to minimise any negative environmental effects. The EPO, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.10 Flooding

- 4.10.1 For the purposes of SEA all land under active consideration for 'zoning' for future development (including 'zonings' inherited from the 2011 local area plans and the Clonakilty and Skibbereen Town Council Town Development Plans, that now conflict with the level of flood risk will be subjected to the 'Justification Test for development plans' set out in Section 4 of the ministerial guidelines and, generally, 'zonings' that do not satisfy the requirements of the test will be omitted or 're-zoned' to flood compatible uses in this plan. The EPO, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

Table 4.1; List of Environmental Protection Objectives, Targets and Indicators

Environmental Protection Objective	Targets	Indicators
<p>Population (P)</p> <p>EPO 1: To ensure the sustainable development of area so people have the opportunity to live in communities with high quality residential, working and recreational environments with sustainable travel patterns.</p>	<p>Deliver on the population target for the Municipal District, especially in the main towns.</p> <p>Promote the economic development of the area.</p> <p>Co-ordinate new housing development and the delivery of social and community infrastructure</p> <p>Decrease journey time and distance travelled to work during the lifetime of the plan.</p> <p>All large scale housing development to be accompanied by a Design Statement.</p>	<p>Significant increase in the population of the main towns.</p> <p>Distance and mode of transport to work/ school.</p>
<p>Human Health (HH)</p> <p>EPO 2: To protect and enhance human health and manage hazards or nuisances arising from traffic & incompatible land uses.</p>	<p>Avoid incompatible development nears SEVESO sites or IPPC licensed sites</p> <p>Ensure new development is well served with community facilities and facilitates including walking and cycling routes.</p>	<p>No of planning permissions granted within the consultation distance of Seveso sites/IPPC facilities.</p> <p>No of new primary health care/schools/creches/ community facilities provided.</p> <p>Amount of (Km) new cycleways provided.</p>
<p>Biodiversity, Flora and Fauna (BFF)</p> <p>EPO 3: Throughout the county, conserve and restore ecosystems, habitats and species in their natural surroundings, and ensure their sustainable management, including the ecological corridors between them.</p>	<ul style="list-style-type: none"> • Maintain the favourable conservation status of all habitats and species, especially those protected under national and international legislation. • Implement the actions of the Cork County Biodiversity Action Plan. • Establishment of a Green Infrastructure Strategy for the County • Protect habitats from 	<ul style="list-style-type: none"> • Number of developments receiving planning permission within designated sites or within the consultation distance of designated sites where the HDA process identified potential for impacts. • Reduction in the quantum of greenfield land in the county as measured by the increase in the amount of brownfield land associated

Table 4.1; List of Environmental Protection Objectives, Targets and Indicators		
Environmental Protection Objective	Targets	Indicators
	invasive species	with each settlement and the no. of one off houses being built in the countryside. <ul style="list-style-type: none"> • Number of actions achieved in Biodiversity Action Plan • Progress on Green Infrastructure strategy
Soil (S) EPO 4: Protect the function and quality of the soil resource in the Cobh Municipal District	Reduce the use of greenfield land by encouraging the reuse of brownfield sites. Encourage sustainable extraction of non-renewable sand, gravel and rock deposits and the reuse and recycling of construction and demolition waste.	No of brownfield sites that have been redeveloped. Volume of construction and demolition waste recycled. Reduction in number of vacant and derelict buildings.
Water (W) EPO 5: Maintain and improve the quality of water resources and improve the management and sustainable use of these resources to comply with the requirements of the WFD.	To achieve 'good' status in all bodies of surface waters (lakes rivers, transitional and coastal waters). Achieve compliance with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC (protection of groundwater). Not to permit development where it would result in a WWTP exceeding the terms of its discharge license. Encourage future population growth in areas served by urban waste water treatment plants and public water supplies.	Trends in classification of overall status of surface water under Surface Water Regulations 2009 (SI No 272 of 2009) Trends in Classification of Bathing Waters as set by Directive 2006/7/EC. Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC. No of households served by urban waste water treatment plants/ septic tanks/ individual WWTP or other systems. No of households served by public water supplies. % of water unaccounted for.
Air Quality and Climate Factors (AQ/C) EPO 6: Protect and improve air quality.	Ensure air quality monitoring results are maintained within appropriate emission limits. Increase modal shift in favour of public transport, walking and cycling.	Trends in Air Quality monitoring data. Percentage of population travelling to work by public transport, walking or cycling.

Table 4.1; List of Environmental Protection Objectives, Targets and Indicators

Environmental Protection Objective	Targets	Indicators
<p>EPO 7: Contribute to mitigation of, and adaptation to, climate change.</p>	<p>Encourage production and use of renewal energy. Encourage energy efficiency in building design and construction. Provide flood protection measures where appropriate. Avoid inappropriate development in areas of flood risk.</p>	<p>No of wind turbines permitted. No of developments permitted within areas at risk of flooding.</p>
<p>Cultural Heritage (CH)</p> <p>EPO 8: Protect and, where appropriate, enhance the character, diversity and special qualities of architectural, archaeological and cultural heritage (including Gaeltachtaí) in County Cork.</p>	<p>No loss of or adverse impact on the fabric or setting of monuments on the Record of Monuments (RMP). No loss of or adverse impact on the architectural heritage value or setting of protected structures. No loss of or adverse impact on structures recorded on the National Inventory of Architectural Heritage. Implement the Cork County Heritage Plan</p>	<p>Loss of or adverse impact on monuments on the Record of Monuments (RMP). Loss of or adverse impact on protected structures included on the RPS or structures included on the NIAH.</p>
<p>Landscape (L)</p> <p>EPO 9: Protect and, where appropriate, enhance the character, diversity and special qualities of landscapes in County Cork.</p>	<p>No large scale development permitted in areas of high landscape value.</p>	<p>Number of large scale developments permitted in areas of high landscape value.</p>
<p>Material Assets (MA)</p> <p>EPO 10: Make best use of the material assets of the area and promote the sustainable development of new infrastructure to provide for the current and future needs of the population.</p>	<p>Develop the road, rail and public transport infrastructure of the county to facilitate sustainable growth and travel patterns. Ensure appropriate water services infrastructure is delivered in areas targeted for population growth. Protect and optimise the use</p>	<p>New critical infrastructural projects completed (projects identified by the CDP).</p>

Environmental Protection Objective	Targets	Indicators
	<p>of the existing building stock.</p> <p>Facilitate the sustainable expansion of production facilities to enable economic growth and create new employment opportunities.</p> <p>Protect and enhance green infrastructure.</p> <p>Protect existing recreational facilities and green infrastructure.</p>	
<p>Flooding (F)</p> <p>EPO 11: Protect flood plains and areas at risk of flooding from inappropriate development.</p>	<p>No inappropriate development permitted in areas at risk of flooding.</p> <p>All applications in areas at risk to be accompanied by detailed a flood risk assessment.</p>	<p>Number and nature of developments permitted in areas at risk</p>

Section 5: Alternatives

Sub-Section

- 5.1 Introduction
- 5.2 SEMPre
- 5.3 Description of Alternative Plan Scenarios
- 5.4 Evaluation of Alternative Scenarios
- 5.5 The Preferred Scenario

5 Alternatives

5.1 Introduction

5.1.1 The SEA Directive and Regulations require the Environmental Report to consider 'reasonable alternatives taking into account the objectives and geographical scope of the plan or programme' and the significant environmental effects of the alternatives selected. The alternatives must be reasonable and capable of implementation within the statutory and operational requirements of the Plan.

5.1.2 Three alternative scenarios have been considered during the drafting process for the preparation of the Draft Municipal District Local Area Plan. Each scenario was prepared having regard to Ministerial Guidelines, the National Spatial Strategy and the Regional Planning Guidelines for the South West Region, including its population targets, and the key aims of the County Development Plan 2014. Any scenario that runs counter to these higher level plans would not be reasonable and has not been considered as part of the Environmental Assessment process.

5.2 SEMPRe

5.2.1 The SEMPRe Settlement Sustainability project for Cork was completed in 2013. The study involved a detailed analysis of the sustainability of the 26 main towns in County Cork using Sustainability Evaluation Metric for Policy Evaluation (SEMPRe) which is an indicator based method of sustainability measurement. The study identified the relative sustainability of the 26 main towns using a series of 25 sustainable indicators, (Table 5-2) of which 5 were identified as key performance indicators (measure significant aspects of sustainability). Each settlement was assessed and awarded a score out of 100, enabling settlements to be ranked in terms of relative sustainability. The Sustainable Development Index (SDI) scores for the 26 main settlements in Cork are detailed in Table 5-1 and are organised into 3 categories. It can be observed that in general, larger settlements are more sustainable and as distance from Cork city increases, settlement sustainability decreases:

- Category 1 settlements have the highest SDI results,
- Category 2 have intermediate SDI results, and
- Category 3 has the lowest SDI results.

Table 5.1: Settlement Sustainable Development Indicators

Infrastructure and location
Infrastructural capacity for settlement expansion**
Connected to gas distribution network
Index of recycling facilities
Proportion of households with broadband internet
Presence of farmers markets
Water and wastewater
Water quality of water bodies
Wastewater treatment spare capacity
Unaccounted for water
Populated area at risk of flooding**
Urban wastewater treatment status
Population and urban form
Planned population density **
Proportion of population unemployed
Proportion of population with 3 rd level education
Housing vacancy rate
Distance to nearest largest retail centre
Transport and energy
Average transport CO ₂
Settlement walkability
Number of public transport services/1000 population**
Average household heating CO ₂
Proportion of population travelling to work by private car
Livability
Distance to nearest acute hospital**
Tidy Towns points score
SAC, SPA, HA within 5km of settlement
Distance to nearest park, nature reserve or wildlife park
Presence of 24 hour Garda station
** key performance indicators

Table 5.2: Main Towns Sustainable Settlement Ranking

Settlement	SDI Score 2013	Category	Population 2011
Ballincollig	62.8	1	17,368
Blarney	61.5	1	2,437
Carrigaline	57.2	1	14,775
Carrigtwohill	56.8	1	4,551
Midleton	54.9	1	12,001
Cobh	54.8	1	12,347
Bandon	54.5	1	6,640
Mallow	53.6	1	11,605
Glanmire	53.5	1	8,924
Bantry	53.1	1	3,348
Clonakilty	50.3	2	4,721
Kinsale	50.3	2	4,893
Fermoy	49.6	2	6,489
Passage West	48.6	2	5,709
Macroom	46.7	2	3,879
Buttevant	46.1	2	945
Schull	43.8	2	658
Mitchelstown	42.8	2	3,677
Charleville	41.1	3	3,646
Newmarket	41.0	3	988
Skibbereen	39.2	3	2,670
Youghal	38.2	3	7,794
Dunmanaway	37.8	3	1,585
Castletownbere	37.7	3	912
Millstreet	36.7	3	1,574
Kanturk	35.3	3	2,263

5.2.2 In general Category 1 settlements are relatively large in terms of population size and are located in relatively close proximity to Cork city. Category 1 settlements benefit from economies of scale in terms of infrastructure and services. All settlements in the County Metropolitan Strategic Planning Area are Category 1 settlements with the exception of Passage West which falls into Category 2. Category 1 settlements outside of the Metropolitan SPA are: Mallow, Bandon and Bantry.

5.2.3 Category 2 settlements generally have smaller population sizes and are more peripheral relative to Cork City. Certain settlements such as Schull and Buttevant have population sizes of less than 1,000 persons and peripheral locations yet fall into the intermediate sustainability category.

- 5.2.4 Category 3 settlements are the least sustainable (with an average SDI of 38.4) and range in population size from Castletownbere (912 persons) to Youghal (7,794 persons) with an average of 2,682 persons. In general category 3 settlements are smaller settlements sited in more peripheral locations relative to Cork city, and are mainly located in the North and West Strategic Planning areas.
- 5.2.5 The score each town receives is determined by how the town measures up in relation to the indicators used in the study which were arrived at following consultation with a range of stakeholders. Indicators chosen were limited by data availability and applicability at the spatial scale of individual towns and it is acknowledged that the use of different indicators may yield different results. The lack of public transport provision and the high reliance on the private car as a means of travelling to work means that most settlements score poorly in terms of transportation while those with an older housing stock score poorly in terms of energy due to higher household heating CO2 emissions. Proximity to the city influenced two indicators (proximity to large retail centre and an acute hospital) so for some towns their sustainability automatically decreases with distance from the city. A sample of potential measures for enhancing the sustainability of these settlements is set out in Appendix A. The study has informed the consideration of alternative scenarios for development in the formulation of the Draft Plan.

5.3 Description of Alternative Plan Scenarios

- 5.3.1 Cobh MD has an extensive urban structure comprising towns and villages. The Draft Cobh Municipal District Local Area Plan provide for the development of 6 main towns 3 key villages, 5 villages, 3 village nuclei and 11 other locations with specific industrial/tourism functions, eg. Marino Point and Fota Island. Table 3.7 show the network of settlements provided for within the current Draft Cobh Municipal District Local Area Plan.
- 5.3.2 Successive County Development Plan strategies have sought to encourage balanced growth across the county to sustain the economies and service levels of the main towns and villages and the key aims of the Draft Plan support the continuation of this approach, seeking sustainable patterns of growth in urban and rural areas.
- 5.3.3 The Regional Planning Guidelines support this balanced approach to development in order to maintain vibrant rural communities with an equal level of urban and rural growth. The population targets set out in Regional Planning Guidelines distribute the population growth target for the SW Region to the Cork Gateway (including Metropolitan Cork), the Greater Cork Area, equivalent to the CASP Ring, the Northern Area which includes North Cork and parts of North and East Kerry, and the Western Area which includes West Cork and South and West Kerry. Targets for the North and West Areas have been allocated between Cork and Kerry in their respective County Development Plan strategies.
- 5.3.4 The scenarios considered in preparing this Draft Plan have therefore been prepared in this context. The overall level of growth allocated to each Municipal District is the same for each scenario, in line with targets of the Core Strategy in the County Development Plan and the Regional Planning Guidelines. The scenarios look at options for development within each MD. Scenarios which would be inconsistent with this approach, by focusing more growth on one MD over another for example, have not been considered.

Scenario 1: Public Transport

- 5.3.5 This scenario seeks to focus a greater proportion of development in a smaller number of settlements to enhance the viability of bus based inter-urban public transport services. Under this scenario the potential for growth is still dispersed over the entire settlement network but a greater proportion of the growth is focused on a smaller number of locations.
- 5.3.6 Very little growth has been allocated to the rural area under this scenario. It is anticipated that the reduced growth targets for the rural areas combined with a revised approach to managing rural housing, would serve to further consolidate growth in those areas along the preferred public transport corridors.
- 5.3.7 In the Cobh Municipal District, this scenario concentrates growth in in the main settlements in Metropolitan Cork, with most of the growth directed towards Glanmire, Cobh, Carrigtwohill, North Environs and Monard with the aim of delivering a sufficient critical mass of population in these towns so as to justify further investments in bus based public transport and suburban rail around the county and growth in rural areas is curtailed.

Environmental Impacts of Scenario 1

- 5.3.8 Scenario One allocates some growth to every settlement in the network and to villages and rural areas, while seeking to concentrate a greater proportion of the growth in a smaller number of settlements. Many of these settlements have inadequate drinking water supply and/or waste water treatment infrastructure, and significant public investment in infrastructure will be required to enable such development to take place. Such investment is essential to accommodate the growth and mitigate impacts on water quality, human health etc. This dispersed pattern of growth will generally give rise to some cumulative impacts on ground and surface water quality, heritage, landscape and biodiversity and will lead to increased levels of environmental effects associated with additional commuting such as increased energy consumption, emissions to air, road traffic noise etc.
- 5.3.9 In those areas where more intense levels of growth are promoted, there is greater potential for negative environmental impacts on soil, air quality, biodiversity and landscape. Such impacts can however be managed by adherence to good practice guidance and procedures in development management. Intense development in some areas would also be balanced with lower development pressures in other areas, particularly the villages and rural areas which will lead to less pressure on biodiversity, groundwater resources, flora and fauna etc. and the general rural amenities of the county.
- 5.3.10 Investment in infrastructure in the main growth centres can be more targeted, potentially leading to better quality provision/ design solutions/ economies of scale.
- 5.3.11 Within the main growth areas, the correlation between population growth and public transport infrastructure will have a neutral to positive environmental impact particularly on air quality, climatic factors and human health due to the reduction in the need to travel and road traffic emissions. The concentration of population within the built up area of the city and its environs might also encourage a greater proportion of people to consider a move to other modes of transport such as walking and cycling with positive benefits on human health, air quality etc.

Planning Effects of Scenario One

- 5.3.12 While the settlement pattern for the county remains dispersed, overall commuting should decrease as a greater proportion of population growth is accommodated in the main settlements where public transport is available, reducing commuting distances and car dependency with associated positive benefits for the population.
- 5.3.13 The concentration of growth in the manner proposed by this strategy may lead to reduced levels of investment in the other areas which may have negative impacts on quality of life and the quality of the

urban environment if there are higher levels of vacancy. The reduced population targets for towns outside the corridor may also hinder their ability to secure investment in waste water infrastructure in the future if there are lower levels of population and employment growth.

5.3.14 Dispersed settlement pattern means limited resources for infrastructural investment have to be spread over a large number of settlements, leading to deficiencies in the level of service provided with potential for negative impacts on the environment (most likely in the area of waste water treatment and water quality). The reduced population targets for towns outside the corridor may also hinder their ability to secure investment in waste water infrastructure in the future if there are lower levels of population and employment growth.

Table 5.3: Scenario 1 Population Targets

	Census Population 2011	CDP 2014 2022 Target Population	Scenario 1 Population Target 2022	Scenario 1 Population Growth 2011 - 2022
Cobh MD				
Cobh	12,347	14,543	14,543	2,196
Carrigtwohill	4,551	11,618	11,618	7,067
Glanmire	8,924	10,585	10,585	1,661
Monard	0	3,619	3,619	3,619
Cork North Environs	6,692	10,719	10,719	4,027
Main Towns	32,514	51,084	51,084	18,570
Total Villages and Rural	21,030	21,496	21,496	466
Total Municipal Distri	53,544	72,580	72,580	19,036

Scenario 2: Employment Towns.

5.3.15 This Scenario looks at employment-led growth which focuses development in key locations where employment growth is more likely to be delivered and differs from previous Plan strategies which spread growth more evenly across all the Main Settlements.

Environmental Impacts Scenario Two

5.3.16 Scenario Two allocates growth across the full settlement network, while seeking to concentrate a greater proportion of the growth in a smaller number of settlements where economic/employment growth may be more easily achieved. Many of these settlements have inadequate drinking water supply and/or waste water treatment infrastructure, and significant public investment in infrastructure will be required to enable such development to take place. Such investment is essential to accommodate the growth and mitigate impacts on water quality, human health etc. This dispersed pattern of growth will generally give rise to some cumulative impacts on ground and surface water quality, heritage, landscape and biodiversity and will lead to increased levels of environmental effects associated with additional commuting such as increased energy consumption, emissions to air, road traffic noise etc.

5.3.17 This scenario concentrates economic growth and employment growth in a smaller number of settlements, making them more self sufficient. This could potentially have negative impacts on soil, air quality, biodiversity and landscape but these impacts can be mitigated by implementing good proactive in development management and would be balanced with lower development pressures in other areas, particularly the villages and rural areas with less pressure on the water quality, biodiversity, landscape

etc. in these areas. In addition more people will have the opportunity to work locally and possible switch to walking or cycling modes, thus reducing travel distances, traffic volumes and traffic emissions within positive benefits to air quality, climatic factors and human health.

5.3.18 The concentration of growth in the manner proposed by this strategy may lead to reduced levels of investment in the other areas which may have negative impacts on quality of life and the quality of the urban environment if there are higher levels of vacancy and reduced employment opportunities at these locations. The reduced population targets for towns outside the designated employment nodes may also hinder their ability to secure investment in waste water infrastructure in the future if there are lower levels of population and employment growth.

Planning Impacts

5.3.19 The concentration of growth in the manner proposed by this strategy will strengthen the economic position of these towns chosen as the main growth centres, underpinning further investment and making them more attractive places to live. The strategy may also lead to reduced levels of investment in the other areas which may have negative impacts on quality of life and the quality of the urban environment of those areas if there are higher levels of vacancy and reduced employment opportunities at these locations. The reduced population targets for some towns may also hinder their ability to secure investment in waste water infrastructure in the future if there are lower levels of population and employment growth.

5.3.20 Lower levels of development in the rural areas will help conserve the landscape and amenity of those areas, potentially making it more attractive for visitors.

Table.5.4: Scenario 2 Population Targets				
	Census Population 2011	CDP 2014 2022 Target Population	Scenario 2 Population Target 2022	Scenario 2 Population Growth 2011 - 2022
Cobh MD				
Cobh	12,347	14,543	14,743	2,396
Carrigtwohill	4,551	11,618	12,618	8,067
Glanmire	8,924	10,585	9,885	961
Monard	0	3,619	2,919	2,919
Cork North Environs	6,692	10,719	10,919	4,227
Main Towns	32,514	51,084	51,084	18,570
Total Villages and Rural	21,030	21,496	21,496	466
Total Municipal Distri	53,544	72,580	72,580	19,036

Scenario 3: Balanced Growth

5.3.21 In this scenario, significant growth is allocated across the main settlements with lower levels of growth in the villages and rural areas. The principle strength of this scenario lies in the balanced approach allowing for the majority of growth to take place in the main settlements but at the same time allowing for continued, more modest growth in the villages and rural areas, continuing to support the economies of these areas to underpin local services and quality of life. The pattern of population distribution in this scenario is more dispersed than in the other scenarios as it seeks to support all the

main towns. However this is balanced with an employment strategy which seeks to bring people and jobs closer together either in the same settlement or by high quality transport links connecting settlements together.

5.3.22 In the Cobh MD, the majority of the growth is assigned to Monard and the North Environs, followed by Glanmire, Carrigtwohill and Cobh with more modest growth in the other towns, villages and rural areas.

Environmental Impacts

5.3.23 The concentration of both population and employment growth in the main urban areas of the County would serve to reduce commuting patterns as more people would be afforded greater opportunities to live closer to their places of employment and/or travel using high quality public transport links. Such an approach would have a positive environmental effect by serving to reduce CO₂ emissions and would enhance people's quality of life.

5.3.24 Focusing population growth across the settlement network will necessitate significant investment in water services infrastructure.

5.3.25 While allowing for growth in rural areas, this scenario will result in some negative impacts on the environment. It is unlikely that developments in rural area will be connected to public wastewater treatment networks. While not as significant on their own, the cumulative impact of rural development could have significant negative impacts both on biodiversity and particularly on water quality.

5.3.26 This scenario would still give rise to the growth of rural housing outside the settlement network which would contribute to further unsustainable commuting patterns and increased car dependency.

Planning Impacts

5.3.27 In common with the other scenarios, this scenario has a strong urban influence. It sets out population targets for the main settlements that, while ambitious, will ultimately help them perform their function as the primary growth centres in the county.

5.3.28 The scenario also recognises that there is a demand for growth in rural areas and provides for some additional growth in the key villages and lower order settlements in rural areas. Facilitating population growth in these areas would in turn encourage the retention of services in these locations. The scale of growth envisaged however is not of a scale that would serve to undermine the growth of the main urban centres in the county.

Table 5.5: Scenario 3 Population Targets

	Census Population 2011	CDP 2014 2022 Target Population	Scenario 3 Population Target 2022	Scenario 3 Population Growth 2011 - 2022
Cobh MD				
Cobh	12,347	14,543	14,543	2,196
Carrigtwohill	4,551	11,618	11,718	7,167
Glanmire	8,924	10,585	10,685	1,761
Monard	0	3,619	3,619	3,619
Cork North Environs	6,692	10,719	10,719	4,027
Main Towns	32,514	51,084	51,284	18,770
Total Villages and Rural	21,030	21,496	21,296	266
Total Municipal Distri	53,544	72,580	72,580	19,036

5.4 Evaluation of Alternative Scenarios

5.4.1 The evaluation of the three proposed alternative scenarios for their respective impacts on the environment was undertaken utilising the Environmental Protection Objectives (EPOs) specifically developed to protect, maintain, conserve or restore environmental elements within the Municipal District. Each scenario was assessed as to whether it was likely to have a positive, negative, uncertain or neutral impact on the EPO's. The EPO's against which the three scenarios were assessed are set out in Section 4, Table 4.1 and are outlined below together with a matrix assessment of each scenario.

5.4.2 All scenarios are assessed on the basis **that appropriate water services infrastructure will be available to cater for growth and development will not be permitted in the absence of this critical infrastructure.**

EPO Reference number	Table 5.6: Environmental Objectives
EPO 1	To ensure the sustainable development of Cork County so the people of Cork have the opportunity to live in communities with high quality residential, working and recreational environments with sustainable travel patterns.
EPO 2	To protect and enhance human health and manage hazards or nuisances arising from traffic and incompatible land uses.
EPO 3	Throughout the county, conserve and restore ecosystems, habitats and species in their natural surroundings, and ensure their sustainable management, including the ecological corridors between them.
EPO 4	Protect the function and quality of the soil resource in County Cork
EPO 5	Maintain and improve the quality of water resources and improve the management and sustainable use of these resources to comply with the requirements of the WFD.
EPO 6	Protect and improve air quality.
EPO 7	Contribute to mitigation of, and adaptation to, climate change
EPO 8	Protect and, where appropriate, enhance the character, diversity and special qualities of architectural, archaeological and cultural heritage (including Gaeltachtaí) in County Cork.
EPO 9	Protect and, where appropriate, enhance the character, diversity and special qualities of landscapes in County Cork.
EPO 10	Make best use of the material assets of the county and promote the sustainable development of new infrastructure to provide for the current and future needs of the population.
EPO 11	Protect flood plains and areas at risk of flooding from inappropriate development.

5.5 The Preferred Scenario

- 5.5.1 The Planning Acts require that a Local Area Plan must be consistent with the objectives of the development plan, its core strategy and any regional spatial and economic strategy that applies to the area. This makes the consideration of alternative scenarios more difficult and the key parameters have already been determined. The provisions of the core strategy imply that higher level plans are the ones where the strategic alternative scenarios need to be considered and subjected to rigorous environmental assessment.
- 5.5.2 Given the parameters established by the Regional Planning Guidelines and the extensive nature of the designated settlement network within the county, the alternatives considered in preparing the draft plan are all rather similar in promoting balanced development across the county and have relatively similar impacts.
- 5.5.3 Scenario 3 is the one that places the most emphasis on building on what has already been achieved within the county in terms of supporting the network of settlements, the established employment areas while continuing to support the development of villages and rural areas and it is therefore the preferred scenario, giving the most positive interaction for most of the population with EPO 1. Scenarios 1 and 2 in promoting a more focused development pattern would inevitably lead to the decline and contraction of some of the other towns, villages and rural areas resulting in the loss of economic opportunities in those areas, reduced investment and an overall reduction in the quality of life for the people living in those areas.

Table 5.7: Alternative Scenarios interaction with Environmental Protection Objectives

	Positive Interaction with status of EPOs	Negative Interaction with status of EPOs	Uncertain Interaction with status of EPOs	Neutral Interaction with status of EPOs
Scenario 1	EPO 2, 6, 7, 10	EPO1 3, 5		EPO 4, 8, 9
Scenario 2	EPO 2, 6, 7, 10	EPO 1, 3, 5		EPO 4, 8, 9
Scenario 3	EPO 1, 2, 6, 7, 10			EPO 3,4,5 8, 9

Section 6: Evaluation of the Draft Local Area Plan

Sub-Section

- 6.1 Introduction
- 6.2 Evaluation
- 6.3 Mitigation/Recommended Changes

6 Evaluation of the Draft Local Area Plan

6.1 Introduction

6.1.1 SEA legislation requires the Environmental Report to include the likely significant effects on the environment of implementing the Plan. This includes secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative effects. The effects should be shown on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above.

6.2 Evaluation

6.2.1 The following section identifies the effects on the environment of implementing the Draft Cobh Municipal District Local Area Plan. The assessment is done on a Section by Section basis, looking at the key provisions and individual objectives of each Section the expected outcome of implementing the Section and the implications for the environment. The Section is then assessed for its likely interaction with the Environmental Protection Objectives and the assessment concludes with recommendations for changes to the Draft Plan. Interactions are assessed on the basis of being:

- Positive (+)
- Negative (-)
- Uncertain (?), or
- Neutral (Ne)

6.2.2 This exercise will set out any environmental problems that are likely to arise from the implementation of the Draft Local Area Plan. Arising from this analysis, the Environmental Report provides recommendations on what mitigation measures will be taken. Mitigation measures can take the form of:

- Amend the wording of an existing objective
- Delete the objective
- Addition of a new objective

6.2.3 A column has been provided to show the Environmental Report's recommendations and another has been provided to display the resulting Local Area Plan's action or response to these recommendations. The Local Area Plan's action could be to reject, accept or to partly accept the Environmental Reports recommendation.

6.2.4 In the event that a recommendation is rejected or partly accepted, the onus was on the Local Area Plan to provide reasons for this course of action. A 'tick' was entered in the Local Area Plan's action column when the Environmental Report's recommendation was accepted in full and changes made appropriately in the Local Area Plan document. A 'dash' was entered where the Environmental Report's recommendation was partly accepted. A 'cross' was entered where the Environmental Report's recommendation was rejected and not entered into the Local Area Plan document.

6.2.5 The Draft Cobh Municipal District Local Area Plan 2016 document has been prepared by undertaking a review of the existing statutory plans for the area including the Midleton and Blarney Electoral Area Local Area Plan 2011 (as amended), the Cobh Town Development Plan 2013 and updating the provisions those plans as necessary to take account of any changes in national planning policy,

legislation, government guidelines etc which has taken place in the interim and by changes in local circumstances, needs etc. It is important to recognise that the current statutory plans for the area were themselves subject to Strategic Environmental Assessment and Habitats Directive Assessment prior to adoption, and many of the provisions of these plans have been carried forward, unchanged, into the new Draft Plan 2016. Therefore there are few issues arising that need to be assessed *de novo*.

- 6.2.6 In addition, given the current body of planning knowledge gathered from previous planning work for the area, policy and objectives likely to give rise to significant environmental effect are simply not put forward in the first instance. In this way many of the possible environmental impacts of objectives were avoided or had previously been anticipated and mitigated for through the inclusion of objectives in the current statutory plans.
- 6.2.7 The County Development Plan 2014 includes many protective objectives in relation to issues such as Development Management and Protection of Amenities, Sustainable Residential Development, Natural, Built and Cultural Heritage, Biodiversity, Landscape, Water Quality, Pollution Control, protecting Air Quality, managing Noise and Light emissions, flood risk management, sustainable energy, etc. All proposals for development under the Local Area Plan, must comply in the first instance, with the all the provisions of the County Development Plan.
- 6.2.8 All of the objectives of the Draft Plan were assessed for possible impacts within the context of these existing mitigation measures. As these mitigation measures negate or mitigate any significant negative impacts that could otherwise have been expected, there were few recommendations arising from the SEA process in relation to the Draft Local Area Plan.
- 6.2.9 Key mitigation measures included in previous plans, and carried forward in the current Draft Local Area Plan relate to issues such as timely delivery of key infrastructure needed to cater for new development. In relation to water quality for example the plan recognises that in some areas the water services infrastructure needed to facilitate planned growth is not currently in place. In response to this the Draft Plan includes strong objectives requiring that appropriate and sustainable water and waste water infrastructure is provided and operational in advance of the commencement of any discharges from the development. In addition, the objectives provide that such infrastructure must be capable of treating discharges to ensure that water quality in the receiving water does not fall below legally required levels, while also meeting the objectives of the relevant River Basin Management Plan, and the requirements of any Natura sites in the area.
- 6.2.10 There are new zoning proposals for the urban expansion areas in this draft plan that further developed the original Special Policy Areas (X-01) from the 2011 Electoral Area Local Area Plans. While these previous plans and the selected sites for urban expansion were subject to the SEA and AA in 2011, careful consideration of the environmental implications of each new zoning has been made and consideration of the relevant guidelines, additional mitigating text has been included in specific objectives.
- 6.2.11 In relation to Traffic and Transportation the plan requires the submission of traffic impact assessments for key sites to ensure that these impacts are fully assessed and mitigated as appropriate, at the project stage.

Table 6.1: Evaluation of Draft Cobh Cork Municipal District Local Area Plan Objectives

Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
Section 1 Introduction						
IN-01	EPO 1, EPO 2, EPO 3, EPO 4, EPO 5, EPO 7, EPO 9, EPO 10, EPO 11			EPO 6, EPO 8,	No change required	
Section 2 Local Area Strategy						
LAS-01	EPO 1, EPO 2, EPO 3, EPO 4, EPO 5, EPO 7, EPO 9, EPO 10, EPO 11			EPO 6, EPO 8	No change required	
Section 3 Main Towns						
Cobh , Glanmire and Carrigtwohill General Objectives						
CH-GO-01, GM-GO 01, CT-GO-01, CT-GO-12	EPO 1 EPO-6 EPO-7, EPO-10			EPO-2 EPO-3 EPO-4 EPO-5 EPO-8 EPO-9 EPO-11	No change required	
GM-GO-02 CH-GO-06	EPO 1 EPO-4 EPO-5 EPO-6 EPO-7 EPO-8, EPO-9, EPO-10 EPO-11			EPO-2 EPO-3	No change required	

CH-GO-02, CT-GO-02	EPO-2 EPO 3 EPO-4 EPO-5 EPO-10 EPO-7 EPO11			EPO 1 EPO-6 EPO-8, EPO 9	No change required	
GM-GO-03	EPO-2 EPO-4 EPO-5 EPO-10			EPO-1, EPO-3 EPO-6 EPO-8, EPO 9 EPO-7 EPO11	No change required	
CH-GO-03 GM-GO-05, CT-GO-03,	EPO-3			EPO 1 EPO 2 EPO-4 EPO-5 EPO-6 EPO-7 EPO-8, EPO-9, EPO10 EPO11	No change required	
CH-GO-04, CH-GO-07, CT-GO-05,	EPO 1 EPO 3 EPO10			EPO 2 EPO 3 EPO-4 EPO-5 EPO-6 EPO-7 EPO-8, EPO-9 EPO11	No change required	
GM-GO-04	EPO-7 EPO11			EPO 1 EPO 2 EPO-4 EPO-5 EPO-6 EPO-8 EPO-9 EPO10	No change required	

CH-GO-05	EPO 10		EPO 8	EPO 1 EPO 2 EPO 3 EPO-4 EPO-5 EPO-6 EPO 7 EPO-9 EPO 11	Insert amended wording in relation to Belvelly bridge.	Change proposed by SEA and AA. ✓
CH-GO-08	EPO 1 EPO 2 EPO 10			EPO 3 EPO-4 EPO-5 EPO-6 EPO 7 EPO-8 EPO-9 EPO 11	No change required	
CH-GO-09, GM-GO-07, CT-GO-04	EPO 1 EPO 2 EPO-3 EPO 4 EPO 9 EPO 10			EPO-4 EPO-5 EPO-6 EPO 7 EPO-8 EPO-9 EPO 11	No change required	
GM-GO-06 CH-GO-10,	EPO-3 EPO-4 EPO 7 EPO-9 EPO-11			EPO 1 EPO 2 EPO-5 EPO-6 EPO-8 EPO 10	No change required	
CH-GO-11 GM-GO-08, CT-GO-07, CT-GO-08, CT-GO-14	EPO 1 EPO 2 EPO-6 EPO 7 EPO 10			EPO-3 EPO-4 EPO-5 EPO-8 EPO-9 EPO- 11	No change required	

CH-GO-12 GM-GO-09	EPO 1 EPO 2 EPO-6 EPO 7 EPO 10			EPO-3 EPO-4 EPO-5 EPO-8 EPO-9 EPO-11	No change required	
CH-GO-12 GM-GO-10 CT-GO-13, CT-GO-15	EPO-3 EPO-4 EPO-6 EPO 7 EPO-9			EPO 1 EPO 2 EPO-5 EPO-8 EPO 10 EPO-11	No change required	
CT-GO-06, CT-GO-09, CT-GO-10, CT-GO-11	EPO 2 EPO 10			EPO 1 EPO-3 EPO-4 EPO 5 EPO-6 EPO 7 EPO 8 EPO-9 EPO 11	No change required	
Cobh – Specific Development Objectives						
CH-R-01, R-02	EPO 1,			EPO 2, EPO 3, EPO 4, EPO 5, EPO 6, EPO 7, EPO 8, EPO 9 EPO 10 EPO 11	No change required	
CH R-03,04	EPO 1, EPO 10			EPO 2 EPO 3, EPO 4, EPO 5, EPO 6, EPO 7, EPO 8, EPO 9 EPO11	No change required	

CH R-10, R11, R12, R13, R14, 15, R-16, R- 17, R-18, R- 19, R20	EPO 1,			EPO 2, EPO 3, EPO 4, EPO 5, EPO 6, EPO 7, EPO 8, EPO 9 EPO 10 EPO11	No change required	
CH R-05,R- 06, R-08,R- 09,	EPO 1			EPO 2, EPO 3, EPO 4, EPO 5, EPO 6, EPO 7, EPO 8, EPO 9 EPO 10 EPO11	No change required	
CH R-07	EPO 1			EPO 2, EPO 3, EPO 4, EPO 5, EPO 6, EPO 7, EPO 8, EPO9 EPO10 EPO11	No change required	
CH-B-01				EPO 1, EPO 2, EPO 3, EPO 4, EPO 5, EPO 6, EPO 7, EPO8, EPO 9 EPO 10 EPO11	No change required	

CH-B-02, B-02	EPO 1, EPO 2,			EPO 3, EPO 4, EPO 5, EPO 6, EPO 7, EPO 8, EPO 9 EPO 10 EPO 11	No change required	
CH-I-01	EPO 10, EPO 2,			EPO 1 EPO 3 EPO 4 EPO 5 EPO 6 EPO 7, EPO 8 EPO 9 EPO 11	No change required	
CH-TC-01	EPO 1 EPO 2 EPO 10		EPO 8	EPO 4, EPO 5, EPO 6 EPO 9 EPO 3, EPO 7, EPO 11	Additional wording to the objective is recommended.	Development along the harbour front should be sensitively designed to protect the towns' historic landscape.
CH-TC-02, 03, 04	EPO 1 EPO 2 EPO 10		EPO 8	EPO 3 EPO 4, EPO 5, EPO 6, EPO 7 EPO 9, EPO 11	Additional wording to the objective is recommended	Developments should be sensitively designed to protect the towns' historic landscape.
CH-C-01	EPO 1 EPO 10			EPO 2 EPO 4, EPO 5, EPO 6 EPO 8 EPO 9 EPO 7 EPO 11 EPO 3	No change required	

CH-C-02, C-03, C-04	EPO 1 EPO 2 EPO 10			EPO 3 EPO 4, EPO 5, EPO 6, EPO 7 EPO 8 EPO 9, EPO 11	No change required	
CH-O-01, O-02	EPO 9			EPO 1, EPO 2 EPO 3 EPO 4, EPO 5, EPO 6, EPO 7, EPO 8 EPO 10 EPO 11	No change required	
CH -O-03, O-04,O-05, O-06, O-07, O-08,O-0-9, O-0-10, O-11, O-13,O-14,O-15, O-16, O-17, O-19, O-21, O-23	EPO 1, EPO 2 EPO 3 EPO 4, EPO 5, EPO 6, EPO 7, EPO 9 EPO 11			EPO 5 EPO 7 EPO 8, EPO10	No change required	
CH-O-18, O-20, O-22,O-24	EPO 9			EPO 1, EPO 2 EPO 3 EPO 4, EPO 5, EPO 6, EPO 7, EPO 8 EPO 10 EPO 11	No change required	
CH-U-01, U-02, U-03, U-04, U-05, U-06, U-07, U-08,	EPO 10			EPO 1, EPO 2 EPO 3 EPO 4, EPO 5, EPO 6, EPO 7, EPO 8 EPO 9 EPO 11	No change required	

CH-U-09	EPO 10			EPO 1, EPO 2 EPO 3 EPO 4, EPO 5, EPO 6, EPO 7, EPO 8 EPO 9 EPO 11	No change required	
CH-U-10	EPO 10			EPO 1, EPO 2 EPO 3 EPO 4, EPO 5, EPO 6, EPO 7, EPO 8 EPO 9 EPO 11	No change required	
CH-U-11	EPO 3		EPO 5, EPO 8,	EPO 1, EPO 2 EPO 4, EPO 6, EPO 7, EPO 9 EPO10, EPO 11	Additional wording to the objective is recommended	A detailed traffic and transport assessment will be required to address the additional transport demands, in particular the additional traffic, car and bus parking requirements. Development along the harbour front should be sensitively designed to protect the towns' historic landscape.
CH-X-01	EPO 1, EPO 2			EPO 3 EPO 4, EPO 5, EPO 6, EPO 7, EPO 8 EPO 9 EPO 10 EPO 11	No change required	Adequate Protective mitigation measures are included in the Draft Plan and County Development Plan 2014
Glanmire -Specific Development Objectives						

GM-R-01	EPO 1, EPO 2,		EPO 3 EPO 9	EPO 4 EPO 5, EPO 6 EPO 7 EPO 8, EPO 10 EPO 11	Provision should be made for the protection of features and species of biodiversity interest Wording of objective should be revised to include “advanced planting”	Changes arising from the SEA ✓
GM-R-02, R-03	EPO 1, EPO 2, ,		EPO 10	EPO 3, EPO 4 EPO 5, EPO 6 EPO 7, EPO 8, EPO 9 EPO 11	No change required	
GM R-04	EPO 1, EPO 2		EPO 10	EPO 3, EPO 4 EPO 5, EPO 6 EPO 7, EPO 8, EPO 9 EPO 11	Wording of objective should be revised to include key infrastructure should be delivered in tandem with development of these areas.	Change Proposed arising from SEA ✓
GM-R-05, R-06, R-07	EPO 1, EPO 4, EPO 5, , EPO 9		EPO 10	EPO 2 EPO 3, EPO6, EPO7 EPO 8, EPO 11	Wording of objective should be revised to include key infrastructure should be delivered in tandem with development of these areas.	Change Proposed arising from SEA ✓

GM –T-01, T-02, T 03	EPO 2, EPO 5, EPO 6, EPO 8, EPO 9			EPO 1, EPO 3, EPO 4, EPO 7, EPO11 EPO 2, EPO 10	No change required	
GM- I-01, GM-C-01	EPO 1, EPO 2			EPO 3, EPO 4, EPO 5 EPO 6, EPO 7 EPO 9 EPO 8, EPO 10, EPO 11,	No change required	
North Environs and Monard – General Objectives						
NE-GO-01	EPO 1 EPO-6 EPO-7 EPO-10			EPO-2 EPO-3 EPO-4 EPO-5 EPO-8 EPO-9 EPO11	No change required	
NE-GO-02	EPO-2 EPO- 3 EPO-4 EPO-5 EPO-10 EPO-7 EPO11			EPO 1 EPO-6 EPO-8, EPO 9	No change required	
NE-GO-03	EPO 9			EPO 1 EPO-2 EPO- 3 EPO-4 EPO-5 EPO-6 EPO-7 EPO-8, EPO-10 EPO-11	No change required	

NE-GO-04	EPO 1 EPO 2 EPO 3 EPO-6 EPO-7 EPO-9 EPO 10			EPO-4 EPO-5 EPO 8 EPO11	No change required	
NE-GO-05, NE-GO-06 NE-GO-07	EPO 3 EPO-4 EPO-6 EPO-7 EPO 9 EPO11			EPO 1 EPO 2 EPO-5 EPO 8 EPO 10	No change required	
North Environs -Specific Development Objective						
NE-R-01, R-02,	EPO 1 EPO 2		EPO 5	EPO 3 EPO 4 EPO 6 EPO 7 EPO 8 EPO 9 EPO10 EPO11	No change required	The general objectives of the Draft Plan and phasing schedule for Ballyvolane urban expansion area as per table 3.4.4 provide for adequate mitigation measures.
NE-R-03,R-04,R-05,R-10, R-11	EPO 1 EPO 2		EPO 5 EPO 9	EPO 3, EPO 4 EPO 6 EPO 7 EPO 8 EPO 9 EPO10 EPO11	No change required	The general objectives of the Draft Plan and phasing schedule for Ballyvolane urban expansion area as per table 3.4.4 provide for adequate mitigation measures.
NE-R-07, NE-R-08, NE-R-09,	EPO 1 EPO 2		EPO 5 EPO 9	EPO 3 EPO 4, EPO 6 EPO 7, EPO 8, EPO 9 EPO10 EPO11	No change required	The general objectives of the Draft Plan and phasing schedule for Ballyvolane urban expansion area as per table 3.4.5 provide for adequate mitigation measures.

NE-R-06	EPO 1 EPO 2		EPO 5 EPO 9	EPO 3 EPO 4, EPO 6 EPO 7, EPO 8, EPO10 EPO11	No change required	The general objectives of the Draft Plan and phasing schedule for Ballyvolane urban expansion area as per table 3.4.6 provide for adequate mitigation measures.
NE- R-12, NE- R-13	EPO 1 EPO 2			EPO 3 EPO 4, EPO 5 EPO 6 EPO 7 EPO 8 EPO 9 EPO10 EPO11	No change required	
NE- TC-01	EPO 1 EPO 2			EPO 3 EPO 4 EPO 5 EPO7 EPO 6, EPO 8 EPO 9 EPO10 EPO 11	No change required	
NE -R-14	EPO 1			EPO2 EPO 3 EPO 4, EPO 5 EPO 6 EPO 7, EPO 8, EPO 9 EPO 10 EPO11	No change required	
NE-I-01, NE- B-01	EPO 1			EPO 2, EPO 3 EPO 4, EPO 5 EPO 6 EPO 7, EPO 8 EPO 9 EPO 10 EPO11	No change required	

NE-0-01,O-02, O-03, O-04,O- 05, O-06,O- 07, O-08	EPO 3 EPO 4, EPO 9			EPO 1, EPO 2, EPO 5, EPO 6, EPO 7 EPO 8. EPO 10 EPO 11	No change required	
NE-U-01,U-02	EPO 10			EPO 1, EPO 2, EPO 3 EPO 4 EPO 5, EPO 6, EPO 7 EPO 8. EPO 9 EPO 11	No change required	
NE-C-01, NE-C-02	EPO 10			EPO 1, EPO 2, EPO 3 EPO 4 EPO 5, EPO 6, EPO 7 EPO 8 EPO 9 EPO 11	No change required	
Monard- Specific Development Objective						
MD-X-01	EPO 1, EPO 2 EPO 10			EPO 3, EPO 4, EPO 5 EPO 6, EPO 7 EPO 8. EPO 9 EPO 11	No change required	
Littleisland – General Objectives						

L-GO-01	EPO 2 EPO 10			EPO 1 EPO 3, EPO 4, EPO 5 EPO 6, EPO 7 EPO 8. EPO 9 EPO 11	No change required	
L-GO-02	EPO 1 EPO 2			EPO 3, EPO 4, EPO 5 EPO 6, EPO 7 EPO 8. EPO 9 EPO 10 EPO 11	No change required	
L-GO-03	EPO-2 EPO 3 EPO-4 EPO-5 EPO-10 EPO-7 EPO11			EPO1,E PO6,EP O8,EPO 9	No change required	
LI-GO-04	EPO 3			EPO 1 EPO 2 EPO-4 EPO-5 EPO-6 EPO-7 EPO-8, EPO-9, EPO10 EPO11	No change required	
LI-GO-05, LI-GO-08	EPO 2 EPO 10			EPO 1 EPO 3 EPO-4 EPO-5 EPO-6 EPO-7 EPO-8, EPO-9 EPO11	No change required	

LI-GO-06	EPO 1 EPO 2			EPO 3 EPO-4 EPO-5 EPO-6 EPO-7 EPO-8, EPO-9 EPO 10 EPO11	No change required	
LI-GO-07	EPO 1 EPO 2 EPO-6 EPO 7 EPO 10			EPO-3 EPO-4 EPO-5 EPO-8 EPO-9 EPO-11	No change required	
LI-GO-09	EPO-3 EPO-4 EPO-6 EPO 7 EPO-9			EPO 1 EPO 2 EPO-5 EPO-8 EPO 10 EPO-11	No change required	
Carrigtowhill -Specific Development Objective						
CT-R-05, R-06, R-07,R-08,R-09, R-10, R-11,R-19	EPO 1 EPO2 EPO 10			EPO 3, EPO 4, EPO 5 EPO6, EPO7 EPO 8, EPO 9 EPO11	No change required	The general objectives of the Draft Plan and phasing schedule for Carrigtwohill North Urban Expansion Area provide for adequate mitigation measures.
CT-R-01, R-04	EPO 1 EPO 2			EPO 3, EPO 4, EPO 5 EPO 6, EPO 7, EPO 8, EPO 9 EPO10 EPO 11	No change required	

CT-R-02,	EPO 1 EPO 2			EPO 3, EPO 4, EPO 5 EPO6, EPO7 EPO 8, EPO 9 EPO10 EPO11	No change required	
CT-R-03,	EPO 1			EPO 2 EPO 3, EPO 4, EPO 5 EPO 6, EPO7 EPO 8, EPO 9 EPO10 EPO11	No change required	
CT-R-20	EPO 1			EPO 2 EPO 3, EPO 4, EPO 5 EPO6, EPO7 EPO 8, EPO 9 EPO10 EPO11	No change required	
CT-R-04,R- 13,R-14,R- 15,R-16,R- 17,R-18,	EPO 1 EPO 2		EPO 11	EPO 3, EPO 4, EPO 5 EPO6, EPO 7 EPO 8, EPO 9 EPO10		The general objectives of the Draft Plan and phasing schedule for Carrigtwohill North Urban Expansion Area together with the mitigation measures included in the County Development Plan 2014 provide for adequate mitigation measures.

CT-I-O1, C-O2, B-O4, B-O5,				EPO 1 EPO 2 EPO 3 EPO 4 EPO 5 EPO 6 EPO 7, EPO 8 EPO 9 EPO 11 EPO 10	No change required	
B-O9			EPO 3 EPO 9	EPO 1 EPO 2 EPO 4, EPO 5 EPO6, EPO7 EPO 8, EPO10 EPO11	Insert additional wording about an ecological assessment required	Changes arising from the SEA ✓
CT-B-01			EPO 9 EPO 10	EPO 1 EPO 2 EPO 3, EPO 4, EPO 5 EPO6, EPO7 EPO 8, EPO 9 EPO10 EPO11	No change required	
CT-B-02, B-O3			EPO 9 EPO 10 EPO 7 EPO 11	EPO 1 EPO 2 EPO 3, EPO 4, EPO 5 EPO 6, EPO 8,	No change required	

CT-I-04, I-05			EPO 7 EPO 11	EPO 1 EPO 2 EPO 3, EPO 4, EPO 5 EPO 6, EPO 8, EPO 9 EPO10	No change required	
CT-B-06, B-07,B-08			EPO10	EPO 1 EPO 2 EPO 3, EPO 4, EPO 5 EPO 6, EPO 7 EPO 8, EPO 9 EPO11	No change required	
CT-T-01			EPO 7 EPO 11	EPO 1 EPO 2 EPO 3, EPO 4, EPO 5 EPO 6, EPO8, EPO 9 EPO10	No change required	
CT-T-02, T-03	EPO 1		EPO 10 EPO 7 EPO 11	EPO 2 EPO 3, EPO 4, EPO 5 EPO 6, EPO8, EPO 9	No change required	

CT-C-01	EPO 1		EPO 7 EPO 11	EPO 2 EPO 3, EPO 4, EPO 5 EPO 6, EPO 8, EPO 9 EPO10	Additional wording to objective recommended "The Flood Risk Assessment should take account of finished floor levels for any educational campus and any potential impacts downstream."	Changes arising from the SEA will be incorporated into the amendment
CT-C-03, C-04	EPO 1			EPO 2 EPO 3, EPO 4, EPO 5 EPO 6, EPO 7 EPO 8, EPO 9 EPO10 EPO 11	No change required	
CT-U-01,U-02,U-03,U-04,U-05,U-06,U-07,U-08, U-09, U-10,U-11,U-12,U-13,U-14	EPO 1 EPO 10			EPO 2 EPO 3, EPO 4, EPO 5 EPO 6, EPO 7 EPO 8, EPO 9 EPO11	No change required	
CT-O-01,O-02,O3,O-04,O-05,O-06,O-07	EPO 1 EPO 2 EPO 3, EPO 4, EPO 5 EPO 6, EPO 9			EPO 8 EPO10 EPO 7 EPO 11	No change required	

CT-O-08,09	EPO 1 EPO 2 EPO 3, EPO 4, EPO 5 EPO 6 EPO 7 EPO 9			EPO 8, EPO10 EPO11	No change required	
CT-X-01	EPO 1 EPO10			EPO 2 EPO 3, EPO 4, EPO 5 EPO 6 EPO 8, EPO 9 EPO 7 EPO 11	No change required	
Littleisland - Specific Development Objective						
LI-I-01			EPO 3, EPO 8 EPO 9	EPO 1, EPO 2, EPO 4 EPO 5 EPO 6, EPO 7 EPO 10 EPO 11	No change required	
LI-I- 02, LI-O- 03, LI-O-4				EPO 1, EPO 2, EPO 3 EPO 4 EPO 5 EPO 6, EPO 7 EPO 8 EPO 9 EPO 10 EPO 11	No change required	
LI-I-04			EPO 3 EPO 7 EPO 11	EPO 1, EPO2, EPO 4 EPO 5 EPO 6, EPO 8 EPO 9 EPO 10	No change required	

LI-C-01,O-02, L-I-03,L-I-04-			EPO 11, EPO 7, EPO 3	EPO 1, EPO 2, EPO 4 EPO 5 EPO 6, EPO 8 EPO 9 EPO 10	No change required	
LI-O-01	EPO 8		EPO 11, EPO 7, EPO 3	EPO 1, EPO2, EPO 4 EPO 5 EPO 6, EPO 8 EPO9 EPO 10	No change required	
LI-X-01			EPO 1, EPO 2 EPO 3 EPO 10	EPO 4 EPO 5 EPO 6, EPO 7 EPO8 EPO 9 EPO 11	Additional wording to objective recommended “Any residential component should be have regard to the Major Accidents Directive Seveso II as per the CDP Objective ZU- 2. “	Changes arising from the SEA will be incorporated into the amendment
LI-U-01	EPO 2, EPO10		EPO 9	EPO 1, EPO 3 EPO 4 EPO 5 EPO 6, EPO 7 EPO 8 EPO 11	No change required	

LI-U-02,U-03 U-04, U-05				EPO 1, EPO2, EPO3 EPO 4 EPO 5 EPO 6, EPO 7 EPO 8 EPO 9 EPO 10 EPO 11	No change required	
LI-U-06			EPO3	EPO 1 EPO 2 EPO 4 EPO 5 EPO 6 EPO 7 EPO 8 EPO 9 EPO 10 EPO 11	No change required	
Section 4 Key Villages						
GO-01	EPO 1, EPO 3, EPO 5, EPO 8, EPO 9, EPO 10, EPO 11			EPO 2, EPO 4, EPO 6, EPO 7,	No change required	
Carrignavar						
DB-01	EPO 1, EPO 2		EPO3, EPO5, EPO 9	EPO 4, EPO 6, EPO 7 EPO 8, EPO 10 EPO 11	No change required	
O-01, O-03, U-01	EPO 1, EPO 2, EPO 3, EPO 4, EPO 5, EPO 6, EPO 7, EPO 9, EPO 10, EPO 11			EPO 8,	No change required	

O-02,	EPO 1, EPO 2, EPO 3, EPO 4, EPO 5, EPO 6 EPO 9, EPO 10		EPO 7 EPO 11	EPO 8,	No change required	
Glenville						
DB-01	EPO 1, EPO 2		EPO3, EPO5, EPO 9	EPO 4, EPO 6, EPO 7 EPO 8, EPO10 EPO 11	No change required	
DB-02	EPO 3			EPO 1, EPO 2, EPO 4, EPO 5, EPO 6, EPO 7, EPO 8 EPO 9, EPO10 EPO11	No change required	
T-01	EPO 1		EPO 8 EPO 9	EPO 2 EPO 3, EPO 4, EPO 5, EPO 6, EPO 7, EPO 10 EPO 11	No change required	
O-01	EPO 1, EPO 2, EPO 4, EPO 5, EPO 6, EPO 7, EPO 9, EPO 10, EPO 11		EPO 3	EPO 8	No change required	

U-02	EPO 1, EPO 2, EPO 3 EPO 4, EPO 5, EPO 6, EPO 7, EPO 9, EPO 10, EPO 11			EPO 8	No change required	
O-02, U-01	EPO 1, EPO 2, EPO 3 EPO 4, EPO 5, EPO 6, EPO 9, EPO 10,		EPO 7 EPO 11	EPO 8	No change required	
Glounthaune						
DB-01	EPO 1 EPO 10			EPO 2, EPO 3, EPO 4, EPO 5, EPO 6, EPO 7, EPO 8 EPO 9, EPO11	No change required	
DB-02	EPO 3			EPO 1, EPO 2, EPO 4, EPO 5, EPO 6, EPO 7, EPO 8 EPO 9, EPO10 EPO11	No change required	

C-01,U-01	EPO 1 EPO 10			EPO 2 EPO 3 EPO 4, EPO 5, EPO 6 EPO 7 EPO 8 EPO 9, EPO 11	No change required	
C-02			EPO 7 EPO 11	EPO1, EPO 2, EPO 3 EPO 4, EPO 5, EPO6, EPO8 EPO9 EPO 10	No change required	
U-02	EPO 10		EPO 3	EPO1, EPO 2, EPO 4, EPO 5, EPO6, EPO7 EPO8 EPO9 EPO11	No change required	
Section 6 Villages, Village Nuclei and Other Locations						
Villages- Whitechurch, Kerry Pike, Upper Glanmire, Knockraha, Killeens						
GO-01	EPO1, EPO 2, EPO 6, EPO 7 EPO 9 EPO 10 EPO11			EPO 3 EPO 4, EPO 5 EPO8	No change required	
Killeens						

T0-01	EPO 1 EPO10		EPO 5 EPO 3	EPO 2 EPO 4 EPO6, EPO7 EPO8 EPO9 EPO 11	No change required	
O-01	EPO 1 EPO 2 EPO 3 EPO 4 EPO 5 EPO 6, EPO 9		EPO 7 EPO11	EPO 8 EPO10	No change required	
Knockraha						
C-01, C-02	EPO 1 EPO 10			EPO 2 EPO 3 EPO 4 EPO 5 EPO 6, EPO7 EPO 8 EPO 9 EPO11	No change required	
U-01,0-01	EPO 1 EPO 2 EPO 3 EPO 6, EPO7 EPO 9 EPO 10 EPO11			EPO 4 EPO 5 EPO 8	No change required	
Upper Glanmire						
T-01	EPO 1 EPO 10		EPO 5	EPO 2 EPO 3 EPO 4 EPO 6, EPO 7 EPO 8 EPO 9 EPO11	No change required	

C-01	EPO 1 EPO 2 EPO 10			EPO 3 EPO 4 EPO 5 EPO 6, EPO7 EPO 8 EPO 9 EPO11	No change required	
B-01	EPO 1 EPO 10		EPO 5	EPO 2 EPO 3 EPO 4 EPO 6, EPO 7 EPO 8 EPO 9 EPO11	No change required	
O-01	EPO 1 EPO 2 EPO 3 EPO 6, EPO7 EPO 9 EPO 10 EPO11			EPO 4 EPO 5 EPO 8	No change required	
Whitechurch						
T-01	EPO 1 EPO 10		EPO 5	EPO 2 EPO 3 EPO 4 EPO 6, EPO 7 EPO 8 EPO 9 EPO11	No change required	
Village Nuclei- Ballymore/Walterstown, Caherlag and Rathduff						
GO-01	EPO 1, EPO 2, EPO 6, EPO 7 EPO 9 EPO 10 EPO11			EPO 3 EPO 4, EPO 5 EPO8	No change required	
Ballymore/Walterstown						

DB-01	EPO 2, EPO 10			EPO 1, EPO 3 EPO 4 EPO 5 EPO 6, EPO 7 EPO 8 EPO 9 EPO11	No change required	
O-01	EPO 1 EPO 2 EPO 3 EPO 6, EPO7 EPO 9 EPO 10 EPO11			EPO 4 EPO 5 EPO 8	No change required	
Rathduff						
DB-01	EPO 2 EPO 10			EPO 1, EPO 3 EPO 4 EPO 5 EPO 6, EPO 7 EPO 8 EPO 9 EPO11	No change required	
DB-02			EPO 2 EPO 10	EPO 1 EPO 3 EPO 4 EPO 5 EPO 6, EPO 7 EPO 8 EPO 9 EPO11	No change required	
Other Locations						
GO-01	EPO 3 EPO 7 EPO11			EPO 1 EPO 2 EPO 4 EPO 5 EPO 6, EPO 8 EPO 9 EPO 10	No change required	

Haulbowline Island						
X-01			EPO 4 EPO 7 EPO 8 EPO11	EPO 1 EPO 2 EPO 3 EPO 5 EPO 6, EPO 9 EPO10	No change required	
Marino Point						
X-01			EPO 3 EPO 7 EPO 11	EPO 1 EPO 2 EPO 5 EPO 6, EPO 8 EPO 9 EPO10	No change required	
Spike Island						
			EPO 3 EPO 7 EPO 11	EPO 1 EPO 2 EPO 4 EPO 5 EPO 6, EPO 9 EPO 10	No change required	

6.3 Mitigation/Recommended Changes

6.3.1 This section will outline the mitigation measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of the Municipal District arising from the implementation of the LAP. This section seeks to tie together the SEA process. Environmental issues have been identified in Section 3 and the impact of the plan is outlined in Section 6, as a result of this analysis and in light of the SEA process, certain mitigation measures have been identified.

6.3.2 Mitigation involves ameliorating significant negative effects. Where the environmental assessment identifies significant adverse effects, consideration is given in the first instance to preventing such impacts or where this is not possible to lessening or offsetting those effects. Mitigation measures can be generally divided into those that:

- Avoid effects,
- Reduce the magnitude or extent, probability and/or severity of effect,
- Repair effects after they have occurred,
- Compensate for effects, by balancing out negative impacts with positive ones.

Mitigation measures could include:

- The choice of an alternative, with less significant environmental effect.

- The addition of policies to the plan to reduce likely impacts from other policies.
- Refining policy/objective wording.
- Adding new policy criteria
- Creating Supplementary Planning Guidance to add more detail to the Plan.

6.3.3 The following issues were identified and recommended mitigation measures were proposed:

Issue One – The Correlation between Population Targets for the Main Towns and Infrastructure

6.3.1 In the Municipal District the main towns in particular have been allocated substantial population target growth. In many instances wastewater infrastructure is at overcapacity or reaching capacity, in most cases there are programmes in place for the delivery of adequate waste water services to address this issue, however if the programmes are not delivered in a timely manner, development may not proceed as planned.

6.3.2 In the Urban Expansion Areas of Ballynoe, Ballyvolane, Carrigtwohill and Glanmire it will be important the developments are implemented in accordance with the general and specific objectives of the Draft plan and the phasing schedule and the phasing schedule which provides for adequate mitigation measures.

Mitigation Measures - Recommendations

6.3.3 To sustainably achieve the population and growth targets outlined in this plan a general objective has been included for the towns which are mainly affected by deficiencies in water and waste water infrastructure, which requires that appropriate Water and Waste water infrastructure be provided in tandem with proposed developments.

6.3.4 Furthermore prospective developers whose sites may be affected by the deficiencies highlighted above are required to enter into agreement with the council on the timing and provision of the necessary infrastructure before the design and layout of the development is commenced. This requirement is contained within the relevant site specific objectives.

Issue Two – Various textual changes to the objectives have been made as a result of the SEA process as follows:-

- In Glanmire wording of general objective should be revised to include key infrastructure should be delivered in tandem with development of these areas.
- In Cobh, development along the harbour front should be sensitively designed to protect the towns' historic landscape.
- In Cobh, Insert amended wording in relation to Belvelly bridge.
- In Carrigtwohill, insert additional wording about an ecological assessment required
- In Glanmire, wording of objective should be revised to include "advanced planting".

Issues Three – The following issues have been identified as a result of the SEA process and have not been include in the draft plan. They will need to be inserted at the amendment stage.

- In Cobh, a new specific objective for the cruise liner berth will require amendment to include a detailed traffic and transport assessment will be required to address the additional transport demands, in particular the additional traffic, car and bus parking requirements.
- In Little Island, any residential component should have regard to the Major Accidents Directive Seveso II.

- In Carrigtwohill, CT-C-01 shall be amended to include additional text stating “The Flood Risk Assessment should take account of finished floor levels for any educational campus and any potential impacts downstream”.

Conclusion

6.3.5 The SEA Statement which will be prepared and made public on adoption of the LAP will include information on, among other things, how environmental considerations have been integrated into the LAP including how measures have been integrated into the Plan in order to mitigate effects of implementing the LAP. A number of mitigation measures have already been incorporated into the LAP and there is an opportunity for the outstanding mitigation measures to be incorporated at the amendment stage. It should be noted that the purpose of the SEA Statement is to record how these mitigation measures were incorporated into the final plan.

Section 7: Monitoring and Next Steps

Sub-Section

- 7.1 Introduction
- 7.2 Next Steps
- 7.3 How to make a Submission

7 Monitoring and Next Steps

7.1 Introduction

7.1.1 The SEA Directive requires that the significant environmental effects of the implementation of plans are monitored in order to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action. Monitoring can also be used to analyse whether the Local Area Plan is achieving its environmental protection objectives and targets, whether such objectives need to be re-examined and whether the proposed mitigation measures are being implemented.

7.1.2 Section 4 identifies the Strategic Environmental Protection Objectives used in the assessment of the Draft Plan. The Section also identifies a number of indicators that will be used to assess the environmental Impact of implementing the plan. In addition to the indicators set out in this Section, the evaluation of the plan also sets out additional indicators that can be used to monitor the impacts of the plan. A completed list of indicators that will be used to monitor the predicted environmental impacts of implementing the plan will be set out in the Environmental Statement that will be prepared in the final stages of the SEA process. .

7.2 Next Steps

7.2.1 This Environmental Report forms a key element of the Strategic Environmental Assessment (SEA). However, the preparation of the environmental report does not bring the SEA process to an end. The SEA process should continue from the time the environmental report is completed through to the time Cork County Council monitors the implementation of the Municipal District Local Area Plan and will act as an important reference point for the continuing SEA of all policies, plans, strategies and programmes carried out by the Council.

Table 7.1: General Overview of the Process after the Environmental Report
A - Preparing the Environmental Report
B - Consulting on the Environmental Report and Draft Local Area Plan
C - Response of Consultation Authorities and the Public
D - Taking Account of Consultation Opinion
E - Adopting Local Area Plan
F - Providing Information
G - Monitoring plan

Preparing the Environmental Report

7.2.2 This Environmental Report has been produced to comply with the requirements of the Guidance for Regional Authorities and Planning Authorities on the Implementation of the SEA Directive (2001/42/EC). The Baseline analysis outlined the current state of the environment and was prepared using the most up to date information from a wide variety of state agencies. The evaluation of the plan as set out in Section 6, identifies a number of concerns with policies as they are presented in the draft plan and has suggested a number of changes that should be incorporated into the Draft Local Area Plan before publication.

Consulting on the Environmental Report and the Draft Plan

7.2.3 Consultation is an important element of the SEA process. The Environmental Report will be part of the consultation exercise for the Draft Municipal District Local Area Plan. Consultation will be carried out with a range of statutory bodies, including the Environmental Protection Agency and the National Parks and Wildlife Service and the public. As well as having an opportunity to comment on the Draft Plan, these bodies will have an opportunity to comment on the content of the environmental report and the overall SEA process.

Taking account of the consultation opinion

7.2.4 It is recognised that the opinion expressed through the public consultation exercise can be very useful in improving the quality of the plan being prepared. In order to track these changes, the consultation exercise will aim to include documentation of all the comments and the changes made.

Adopting Plan

7.2.5 The overriding aim of the SEA process is to improve the quality of the Draft Municipal District Local Area Plan and to ensure that it protects the environment; it is important that the relevant findings in the environmental report and any outcomes from the consultation process are incorporated into the plan before its adoption.

Providing information

7.2.6 Once the Draft Municipal District Local Area Plan is adopted a number of post-adoption steps are required to conclude the SEA process. The essence of this stage is to provide information regarding the difference the SEA process has made to the plan. This will involve the publication of an Environmental Statement which will specify: -

- How environmental considerations have been integrated into the plan;
- How the environmental report has been taken into account;
- How opinions expressed during various consultations have been taken into account;
- The reasons for choosing the plan as adopted in the light of other reasonable alternatives; and
- Measures to monitor significant environmental effects.

Monitor Plan

7.2.7 Once the plan is adopted and the necessary information is provided, the County Council will seek to monitor the significant environmental effects identified through the SEA process. The detail of the monitoring process will be included in the environmental statement. The framework for monitoring used in the environmental report /statement will be used to identify unforeseen adverse effects at an early stage so that, if necessary, the appropriate remedial action can be undertaken.

7.3 How to make a Submission

7.3.1 The Draft Cobh Municipal District Local Area Plan is available from the Council website at www.corkcoco.ie. If required, a hard copy of the document may be inspected between the hours of 9.30 a.m. and 4.00p.m, from Wednesday 16th November 2016 to Friday 06th January 2017at the following locations:

- Planning Department, Floor 1, County Hall, and Cork.
- Planning Department, Norton House, Skibbereen, Co. Cork.
- Cork County Council Offices, Mallow
- Public Libraries – Please check libraries regarding opening times and availability.

7.3.2 CD copies of the documents may be requested by phone (Tel: 021-4285900) or collected from the Planning Department, Floor 1, County Hall between the hours of 9.30am and 4.00pm during the above period.

7.3.3 Submissions or observations regarding the Draft Cobh Municipal District Local Area Plan document are hereby invited from members of the public, children, or groups or associations representing the interests of children and other interested parties during the period Wednesday 16th November 2016 to 4pm on Friday 06th January 2017.

7.3.4 Submissions may be made in either of the following two ways:

- On-line via www.corkcoco.ie following the instructions provided
- OR
- In written form to the Senior Planner, Planning Policy Unit, Cork County Council, Floor 13, County Hall, Cork. T12R2NC.

7.3.5 All such submissions lodged within the above period and prior to the close of business at 4.00pm on Friday 06th January 2017, will be taken into consideration in the finalization of the Cobh Municipal District Local Area Plan.

Section 8: Non Technical Summary

Sub-Section

- 8.1 Introduction
- 8.2 The Draft Cobh Municipal District Local Area Plan
- 8.3 Environmental Baseline
- 8.4 Environmental Protection Objectives
- 8.5 Alternatives
- 8.6 Evaluation of the Draft Local Area Plan
- 8.7 Monitoring & Next Steps

8 Non Technical Summary

8.1 Introduction

8.1.1 This is the Environmental Report on the Strategic Environment Assessment of the Draft Cobh Municipal District Local Area Plan 2016 and it describes the assessment of the likely significant effects on the environment of implementing the Draft Plan.

8.1.2 The most recent Local Area Plans were adopted in 2011. The Plans have a six year life and the Council is now commencing the process of preparing new plans which will be in place by August 2017. Following the re-organisation of local government in 2014, the electoral structure of the County is now based on eight Municipal Districts. A new Local Area Plan will be prepared for each of the eight Municipal Districts in the County.

8.1.3 Currently the Town Development Plans adopted by the nine former Town Councils of Cobh, Clonakilty, Fermoy, Kinsale, Macroom, Mallow, Midleton, Skibbereen and Youghal remain in force pending the making of the next Cork County Development Plan in 2020. It is proposed to vary the Town Development Plans, such that the zoning provisions and associated policy objectives of the Town Development Plans are updated and incorporated into the new Local Area Plans. The Town Plans will remain in force but the relevant zonings provisions will be those of the new Local Area Plan. .

Scoping

8.1.4 The process of scoping for SEA is defined as the procedure whereby the range of environmental issues and the level of detail to be included in the Environmental Report are decided upon, in consultation with the prescribed environmental authorities. Scoping is necessary in order to establish, with objectivity, the potential impacts of the implementation of the draft plan on a number of environmental elements from consultations with a range of environmental bodies and the incorporation of associated submissions into the draft plan by way of their inclusion in the Environmental Report.

8.1.5 Scoping for the current SEA was commenced with the circulation of a Draft Scoping Report to all the environmental authorities on the 22nd April 2016. A total of two (2) submissions were received from EPA and Irish Water respectively. The Scoping Report was finalised on the 31st May 2016 and issues raised were considered further in the preparation of this Draft Local Area Plan and SEA Environment Report.

Collection of Baseline Data, Assessment and Environmental Report

8.1.6 In order to assess the likely significant impacts of the Plan, baseline data on the current state of the environment has to be collected and evaluated and the potential effects of the plan predicted and considered. In accordance with legislation and guidance, the existing environment is described with respect to biodiversity, population, human health, fauna, flora, soil, water (surface freshwater, coastal, transitional, groundwater, bathing and water services (drinking water and waste water treatment), air, climatic factors, material assets (roads, transportation, energy etc), cultural heritage (including architectural and archaeological heritage), landscape and the interrelationships between these factors as appropriate. Any existing problems relevant to the new Plan are also identified at this baseline stage.

Documenting the SEA process

- 8.1.7 The SEA Process produces two documents – this environmental Report which is published with the Draft Municipal District Local Area Plan and an SEA statement which will be published at the end of the process, once the plan is adopted.
- 8.1.8 This Environmental Report will be submitted to the Elected Members with the Draft Municipal District Local Area Plan. The Members must take account of the Environmental Report before the Plan is adopted. When the Plan is adopted, an SEA Statement will be published, summarising, inter alia, how environmental considerations have been integrated into the Plan and the reasons for choosing the Plan as adopted over other alternatives considered in the Environmental Report.
- 8.1.9 Should alterations to the Draft Plan be proposed, there will be a further submission period of not less than four weeks during which time submissions and/or observations may be made on the proposed alterations. If material alterations are proposed they will need to undergo a screening process to determine if SEA is required. The proposed alterations, the screening document and SEA Environmental report, where relevant, will be sent to the Minister, the Board and the prescribed authorities and will be made available for public inspection.

8.2 The Draft Cobh Municipal District Local Area Plan

- 8.2.1 The Cobh Municipal District is located North and East of Cork City and in 2011 the population of the area stood at 53,544. This population is spread across the north environs of Cork City and a network of settlements including three towns, 23 villages and the open countryside. The District also includes the proposed new town of Monard which was designated by the Government as a Strategic Development Zone (SDZ) in 2010 with the aim of accommodating a new town of 5,000 houses. An Bord Pleanála approved the making of the 2015 Monard Planning Scheme in May 2016 subject to minor modifications.
- 8.2.2 The Cobh District also includes Little Island which is identified as a Strategic Employment Centre. Little Island also has a small local population but it is not a centre for population growth.

Population Trends

- 8.2.3 In the period to 2022, the population target allocated by the Cork County Development Plan 2014 provides for the population to grow by 19,036 persons or 35.5% approximately. The majority of this growth is targeted at the five towns of the District; Carrigtwohill, the Northern Environs of Cork City at Ballyvolane, Cobh and Glanmire. Growth is also planned for Monard, the proposed rail based settlement. It is anticipated that development at Monard will happen at a slower rate than other areas within the district. Growth is also provided for across the network of smaller settlements within the District.
- 8.2.4 This section also outlines the relationship that this plan has to other Relevant Plans and Programmes at a National and Regional level.

8.3 Environmental Baseline

8.3.1 The environmental baseline of this Municipal District is described in this section. This baseline information outlines the environmental context within which the Draft Cobh Municipal District Local Area Plan will operate. The purpose of this section is to provide enough environmental baseline data to:

- support the identification of environmental problems;
- support the process of assessing the environmental effects;
- provide a baseline against which future monitoring data can be compared.

8.3.2 A number of key environmental issues set the context for the collection of the baseline data and each section includes an overview of the current situation, the key environmental problems and an analysis of the likely evolution in the absence of the Draft Plan. The Environmental issues are listed below:

- Population and Human Health,
- Biodiversity – Flora and Fauna,
- Soil,
- Water,
- Air and Climatic factors,
- Material Assets,
- Cultural Heritage,
- Landscape.

8.3.3 This section outlines the different environmental issues concerned above and highlights the most pertinent environmental issues within the Cobh Municipal District.

8.4 Environmental Protection Objectives

8.4.1 This section identifies the Strategic Environmental Protection Objectives used in the assessment of the Draft Plan. Environmental Protection Objectives (EPOs) are methodological measures against which the environmental effects of the Plan can be tested. If complied with in full, EPOs would result in an environmentally neutral impact from the implementation of the Plan. The EPOs are set out under a range of topics and are used as standards against which the provisions of the Plan can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, unless mitigated.

8.4.2 The SEA Directive requires that the evaluation of plans and programmes be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected. EPOs are developed from international, national and regional policies including various European Directives which have been transposed into Irish law and which are intended to be implemented within the County. The EPOs selected have also been informed by Table 4B of the SEA Guidelines (DEHLG, 2004), those used in the preparation of the current County Development Plan and the issues arising from the baseline assessment. The use of EPOs, although not a statutory requirement, does fulfil obligations set out in Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004).

8.4.3 The EPOs are linked to indicators which can facilitate monitoring the environmental effects of implementing the Plan when adopted, as well as to targets which the Plan can help work towards.

8.5 Alternatives

8.5.1 The SEA Directive and Regulations require the Environmental Report to consider ‘reasonable alternatives taking into account the objectives and geographical scope of the plan or programme’ and the significant environmental effects of the alternatives selected. The alternatives must be reasonable and capable of implementation within the statutory and operational requirements of the Plan.

8.5.2 Three alternative scenarios have been considered during the drafting process for the preparation of the Draft Municipal District Local Area Plan. Each scenario was prepared having regard to Ministerial Guidelines, the National Spatial Strategy and the Regional Planning Guidelines for the South West Region, including its population targets, and the key aims of the County Development Plan 2014. Any scenario that runs counter to these higher level plans would not be reasonable and has not been considered as part of the Environmental Assessment process.

Scenario 1: Public Transport

8.5.3 This scenario seeks to focus development within Metropolitan Cork within the city suburbs in the first instance and then along an east/ west public transport corridor between Midleton/Cork City/Ballincollig to facilitate greater use of public transport infrastructure and underpin additional investment in public transport services. In the Greater Cork Ring, Strategic Planning Area the scenario focuses a greater proportion of development in a smaller number of settlements to enhance the viability of bus based inter-urban public transport services. Under this scenario the potential for growth is still dispersed over the entire settlement network but a greater proportion of the growth is focused on a smaller number of locations.

8.5.4 In summary, within the CobhMunicipal District, this scenario concentrates growth in fewer settlements, with most of the growth directed towards Midleton and Youghal with the aim of delivering a sufficient critical mass of population in these towns so as to justify further investments in primarily rail and bus based public transport around the county and growth in rural areas is curtailed.

Scenario 2: Employment Towns

8.5.5 This strategy continues to focus the greatest proportion of population growth to the Metropolitan Area which is the employment focus for the Cork City Gateway. This approach is similar to the planning strategy adopted in the previous County Development Plan. Within the Cork Ring the growth strategy is adjusted to focus higher levels of growth in a fewer number of settlements where accessibility to good roads infrastructure is available and these towns can perform an important sub-regional focus. This is offset by lower levels of growth in the remaining Ring Towns.

8.5.6 This Scenario looks at employment-led growth which focuses development in key locations where employment growth is more likely to be delivered and differs from previous Plan strategies which spread growth more evenly across all the Main Settlements.

8.5.7 In summary, within the CobhMD this scenario focuses growth in Midleton with reduced growth targets in Youghal. This takes account of the proposed employment policies of the Plan. This approach reinforces the important regional employment focus allocated to Midleton as part of the Metropolitan Gateway in the CDP and acknowledges the existing role Youghal plays as an employment centre serving a wider hinterland area.

Scenario 3: Balanced Growth

- 8.5.8 In this scenario, significant growth is allocated across the main settlements with lower levels of growth in the villages and rural areas. The principle strength of this scenario lies in the balanced approach allowing for the majority of growth to take place in the main settlements but at the same time allowing for continued, more modest growth in the villages and rural areas, continuing to support the economies of these areas to underpin local services and quality of life. The pattern of population distribution in this scenario is more dispersed than in the other scenarios as it seeks to support all the main towns. However this is balanced with an employment strategy which seeks to bring people and jobs closer together either in the same settlement or by high quality transport links connecting settlements together.
- 8.5.9 In summary, within the CobhMD, the majority of the growth is assigned to Midleton with more modest growth in the other main town of Youghal. Additional growth is also allocated to the villages and rural areas.
- 8.5.10 The evaluation of the three proposed alternative scenarios for their respective impacts on the environment was undertaken utilising the Environmental Protection Objectives (EPOs) specifically developed to protect, maintain, conserve or restore environmental elements within the Municipal District. Each scenario was assessed as to whether it was likely to have a positive, negative, uncertain or neutral impact on the EPO's.
- 8.5.11 All scenarios are assessed on the basis that appropriate water services infrastructure will be available to cater for growth and development will not be permitted in the absence of this critical infrastructure.

The Preferred Scenario

- 8.5.12 The Planning Acts require that a Local Area Plan must be consistent with the objectives of the development plan, its core strategy and any regional spatial and economic strategy that applies to the area. This makes the consideration of alternative scenarios more difficult and the key parameters have already been determined. The provisions of the core strategy imply that higher level plans are the ones where the strategic alternative scenarios need to be considered and subjected to rigorous environmental assessment.
- 8.5.13 Given the parameters established by the Regional Planning Guidelines and the extensive nature of the designated settlement network within the county, the alternatives considered in preparing the draft plan are all rather similar in promoting balanced development across the county and have relatively similar impacts.
- 8.5.14 Scenario 3 is the one that places the most emphasis on building on what has already been achieved within the county in terms of supporting the network of settlements, the established employment areas while continuing to support the development of villages and rural areas and it is therefore the preferred scenario, giving the most positive interaction for most of the population with EPO 1. Scenarios 1 and 2 in promoting a more focused development pattern would inevitably lead to the decline and contraction of some of the other towns, villages and rural areas resulting in the loss of economic opportunities in those areas, reduced investment and an overall reduction in the quality of life for the people living in those areas.

8.6 Evaluation of the Draft Local Area Plan

- 8.6.1 SEA legislation requires the Environmental Report to include the likely significant effects on the environment of implementing the Plan. The effects should be shown on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above. Section 6 of this report provides details of the Evaluation of the provisions of the Draft CobhLocal Area Plan.

- 8.6.2 The Draft Cobh Municipal District Local Area Plan 2016 document has been prepared by undertaking a review of the existing statutory plans for the area including the Blarney Electoral Area Local Area Plan adopted in 2011, the Midleton Electoral Area Local Area Plan adopted in 2011, and the Cobh Town Development Plan 2013 and updating the provisions those plans as necessary to take account of by changes in national planning policy, legislation, government guidelines etc which has taken place in the interim and by changes in local circumstances, needs etc. It is important to recognise that the current statutory plans for the area were themselves subject to Strategic Environmental Assessment and Habitats Directive Assessment prior to adoption, and many of the provisions of these plans have been carried forward, unchanged, into the new Draft Plan 2016. Therefore there are not that many new issues arising that need to be assessed.
- 8.6.3 In addition, given the current body of planning knowledge of the area gathered from previous planning work for the area, policy and objectives likely to give rise to significant environmental effect are simply not put forward in the first instance. In this way many of the possible environmental impacts of objectives were avoided or had previously been anticipated and mitigated for through the inclusion of objectives in the current statutory plans.
- 8.6.4 The County Development Plan 2014 includes many protective objectives in relation to issues such as Development Management and Protection of Amenities, Sustainable Residential Development, Natural, Built and Cultural Heritage, Landscape, Water Quality, Pollution Control, protecting Air Quality, managing Noise and Light emissions, flood risk management, sustainable energy etc. All proposals for development under the Local Area Plan, must comply in the first instance, with all the provisions of the County Development Plan.
- 8.6.5 In this context all of the objectives of the Draft Plan were assessed for possible impacts within the context of these existing mitigation measures. As these mitigation measures negate or mitigate any significant negative impacts that could otherwise have been expected, there were few recommendations arising from the SEA process in relation to the Draft Local Area Plan. The majority of the recommendations related to wording changes to the general and specific objectives.

8.7 Monitoring & Next Steps

- 8.7.1 Once the plan is adopted and the necessary information is provided, the County Council will seek to monitor the significant environmental effects identified through the SEA process. The detail of the monitoring process will be included in the environmental statement. The framework for monitoring used in the environmental report /statement will be used to identify unforeseen adverse effects at an early stage so that, if necessary, the appropriate remedial action can be undertaken.

Consulting on the Environmental Report and the Draft Plan

- 8.7.2 Consultation is an important element of the SEA process. The Environmental Report will be part of the consultation exercise for the Draft Municipal District Local Area Plan. Consultation will be carried out with a range of statutory bodies, including the Environmental Protection Agency and the National Parks and Wildlife Service and the public. As well as having an opportunity to comment on the Draft Plan, these bodies will have an opportunity to comment on the content of the environmental report and the overall SEA process.

Taking account of the consultation opinion

8.7.3 It is recognised that the opinion expressed through the public consultation exercise can be very useful in improving the quality of the plan being prepared. In order to track these changes, the consultation exercise will aim to include documentation of all the comments and the changes made.

Adopting Plan

8.7.4 The overriding aim of the SEA process is to improve the quality of the Draft Municipal District Local Area Plan and to ensure that it protects the environment; it is important that the relevant findings in the environmental report and any outcomes from the consultation process are incorporated into the plan before its adoption.

Preparing the Environmental Report

8.7.5 This Environmental Report has been produced to comply with the requirements of the Guidance for Regional Authorities and Planning Authorities on the Implementation of the SEA Directive (2001/42/EC). The Baseline analysis outlined the current state of the environment and was prepared using the most up to date information from a wide variety of state agencies. The evaluation of the plan as set out in Section 6, identifies a number of concerns with policies as they are presented in the draft plan and has suggested a number of changes that should be incorporated into the Draft Local Area Plan before publication.

Appendices

Appendix A: Sample Settlement Enhancement Measures

Settlement Enhancement Measures

A sample of potential measures for enhancing the sustainability of these settlements is set out in Table D1 below. The key areas where the Plan can deliver enhanced sustainability outcomes are in the areas of transportation and Water and wastewater. The Plan's transportation policies now place a strong emphasis on modal shift targets to sustainable forms of movement especially prioritising walking and cycling for shorter trips and better access to public transport within the towns. A number of towns scored poorly in terms of settlement walkability and recommendations are made to undertake a movement audit at these locations. The audit of the pedestrian and cycling environment of the town should focus on improving the quality, safety, connectivity and attractiveness of the movement network within the town together with a complementary set of traffic calming and parking measures.

The provision of good quality public transport provision is inherently linked to density within the service catchment of an operator. Most of the County is starting from a low public transport base but a revised approach to density in the Plan should make the delivery of a more extensive high frequency bus service viable within the Metropolitan area where the largest proportion of the target growth is allocated. The integration of public transport services is also a key consideration at some locations to encourage modal shift together with the provision of stops at convenient locations. The delivery of these enhancement measures will help increase a modal shift to green travel modes and should consequently reduce car based commuting and associated CO2 emissions.

The Plan has identified the infrastructure status of all the main settlements allocated growth within the County. Where deficiencies have been identified the Plan has specified that development may only proceed where appropriate infrastructure is available which satisfies the environmental regulations and complies with EPA licensing. Water conservation is also identified as a key priority area of investment in the Plan and a number of Category 3 settlements in North Cork have been identified with significant water leakage issues. While investment in these deficiencies will be outside the scope of the Council, the Plan will not exacerbate the existing situation.

Table D1: Sample Sustainability Enhancement Measures

Town	SDI score	Livability		Infrastructure & Location		Water & Wastewater			Population & Urban Form		Transport & Energy	
		Provide public park	Local employment opportunities	Improve infrastructure Capacity	Provision recycling facilities	Improve water quality	Compliance with Urban wastewater treatment	Water conservation measures	Address Housing Vacancy	Increase pop density	Improve walking & cycling network	Improve public transport
Ballincollig	1											X
Blarney	1										X	
Carrigaline	1			X								X
Carrigtwohill	1					X	X				X	X
Midleton	1			X	X	X			X		X	
Cobh	1		X	X	X				X		X	X
Bandon	1	X	X								X	X
Mallow	1		X				X			X	X	X
Glanmire	1				X		X				X	X
Bantry	1	X		X								X
Clonakilty	2		X	X			X					X
Kinsale	2				X						X	X
Fermoy	2					X						X
Passage West	2			X	X						X	X
Macroom	2			X					X	X		
Buttevant	2		X	X					X	X		
Schull	2			X					X	X		
Mitchelstown	2		X	X				X				
Charleville	3		X						X	X	X	X
Newmarket	3			X								X
Skibbereen	3			X						X		
Youghal	3		X									X
Dunmanway	3			X			X	X	X	X		X
Castletownbere	3	X		X			X			X		
Millstreet	3	X		X				X				
Kanturk	3		X	X			X	X	X	X		

Cobh Municipal District Draft Local Area Plan

Strategic Flood Risk Assessment

November 2016

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Section 1 Introduction

1.1 Scope

- 1.1.1 This Strategic Flood Risk Assessment of the Draft Cobh Municipal District Local Area Plan has been prepared in accordance, in so far as is practicable, with 'The Planning System and Flood Risk Management: Guidelines for Planning Authorities', published in November 2009 by the DEHLG and the OPW, and having specific regard to the areas, within the settlements of this Municipal District, that have been identified as being at risk of flooding.
- 1.1.2 This report sets out how the Flood Risk Assessment was undertaken, as well as how its findings were addressed and integrated into the Draft Local Area Plan. The report should be read in conjunction with the Cobh Municipal District Draft Local Area Plan, and the associated maps.

1.2 Report Structure

- 1.2.1 Section 2 of this report provides a brief introduction to the Cobh Municipal District, identifying the settlement hierarchy and the key population and household growth targets for the respective categories of settlement with the settlement hierarchy.
- 1.2.2 Section 3 examines the main sources of flood risk within the Municipal District and recent flood events.
- 1.2.3 Section 4 examines how the issue of managing flood risk was addressed in the review of the Local Area Plan and outlines the main provisions of the flood risk management strategy.
- 1.2.4 Section 5 sets out what this assessment has achieved in terms of managing the adverse effects of flooding within the Cobh Municipal District. It also identifies how information on flood risk will be reviewed and monitored over the lifetime of the plan.

1.3 The Planning System and Flood Risk

- 1.3.1 'The Planning System and Flood Risk Management: Guidelines for Planning Authorities', published in November 2009, describe flooding as a natural process that can occur at any time and in a wide variety of locations. Flooding can often be beneficial and many habitats rely on periodic inundation. However, when flooding interacts with human development, it can threaten people, their property and the environment. Flooding may be from rivers, the sea, groundwater, sewers or overland flow caused by intense or prolonged periods of rainfall. Climate change effects suggest that the frequency and severity of flooding is likely to increase in the future.
- 1.3.2 The Guidelines describe good flood risk practice in planning and development management and seek to integrate flood risk management into the planning process, thereby assisting in the delivery of sustainable development. Planning Authorities are directed to have regard to the Guidelines in the preparation of Development Plans and Local Area Plans, and for development management

purposes. For this to be achieved, flood risk must be assessed as early as possible in the planning process.

1.3.3 Paragraph 1.6 of the Guidelines states that the core objectives are to:

avoid inappropriate development in areas at risk of flooding;

- avoid new developments increasing flood risk elsewhere, including that which may arise from surface run-off;
- ensure effective management of residual risks for development permitted in floodplains;
- avoid unnecessary restriction of national, regional or local economic and social growth;
- improve the understanding of flood risk among relevant stakeholders; and
- ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management".

1.3.4 The Guidelines aim to facilitate 'the transparent consideration of flood risk at all levels of the planning process, ensuring a consistency of approach throughout the country. The Guidelines work on a number of key principles, including:

- Adopting a staged and hierarchical approach to the assessment of flood risk;
- Adopting a sequential approach to the management of flood risk, based on the frequency of flooding (identified through Flood Zones) and the vulnerability of the proposed land use.

1.4 Definition of Flood Risk

1.4.1 Prior to discussing the management of flood risk, it is helpful to understand what is meant by the term. It is also important to define the components of flood risk in order to apply the principles of the Guidelines in a consistent manner.

1.4.2 Flood risk is generally accepted to be a combination of the likelihood of flooding and the potential consequences arising, and is normally expressed in terms of the following relationship:

Flood risk = Probability of flooding x Consequences of flooding

1.4.3 Likelihood of flooding is normally defined as the percentage probability of a flood of a given severity occurring in any given year. For example, a 1% probability indicates the severity of a flood that is expected to be exceeded on average once in 100 years, i.e. it has a 1 in 100 chance of occurring in any given year.

1.4.4 In the Local Area Plan, flood risks are defined in relation to the following zones;

- **Flood Zone A:** where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding);
 - **Flood Zone B:** where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding or between 0.1% or 1 in 1000 and 0.5% or 1 in 200 for coastal flooding);
 - **Elsewhere**, sometimes referred to as Zone C, the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding). This zone covers all areas of the Plan which are not in zones A or B.
- 1.4.5 Consequences of flooding depend on the hazards caused by flooding (depth of water, speed of flow, rate of onset, duration, wave-action effects, water quality) and the vulnerability of receptors (type of development, nature, e.g. age-structure, of the population, presence and reliability of mitigation measures etc).
- 1.4.6 The 'Planning System and Flood Risk Management: Guidelines for Planning Authorities', provides three vulnerability categories, based on the type of development, detailed in Table 3.1 of the Guidelines, and are summarised as:
- Highly vulnerable, including residential properties, essential infrastructure and emergency service facilities;
 - Less vulnerable, such as retail and commercial and local transport infrastructure
 - Water compatible, including open space, outdoor recreation and associated essential facilities, such as changing rooms.

Section 2 Local Study Area

2.1 Introduction: The Cobh Municipal District

2.2.1 The Cobh Municipal District straddles two Strategic Planning Areas for which the County Development Plan 2014 sets out differing objectives. The majority of the District, and all of the main settlements, are within the Metropolitan Strategic Planning Area, while part of the more rural northern section of the district, including villages like Glenville and Rathduff are within the Greater Cork Ring Strategic Planning Area. The Cobh Municipal District accommodates an extensive network of settlements as follows:

- **Seven Main Settlements** comprising Cobh, Glanmire, Cork City North Environs, Ballyvolane Urban Extension Area, Monard, Carrigtwohill and Little Island.
- **Three Key Villages** comprising Carrignavar, Glenville and Glounthaune.
- Five Villages comprising Kerry Pike, Killeens, Knockraha, Upper Glanmire and Whitechurch.
- **Three Village Nuclei** comprising Ballymore/Walterstown, Caherlag and Rathduff.
- **Twelve Other Locations** comprising Belvelly, Bottlehill, Carrigaloe, Clogheen, Fota Island, Haulbowline Island, Killard, Marino Point, Rathcooney, Spike Island, Templemichael and Whites Cross.

Figure 1 Cobh Municipal District



2.2 Population and Household Growth

- 2.2.1 Within the Cobh Municipal District the County Development Plan provides for growth in population of 19,036 persons. The number of households is expected to grow by 10,993 leading to a net requirement for 12,367 new houses. The County Development Plan indicates that 430ha of zoned land are required to meet this level of housing provision in the main towns, in addition to housing opportunities in the villages and rural areas.
- 2.2.2 The majority of the growth is allocated to the towns, with 10,762 new houses proposed, with significant new housing planned in each areas, particularly in Carrigtwohill, the northern environs of Cork City (at Ballyvolane) and Cobh. Housing growth is also planned within the villages (1,045 units).
- 2.2.3 Arising from the County Development Plan 2014, Table 2.2 shows that there is a net requirement within the towns of the Municipal District for 10,762 new dwelling units and capacity, in terms of the current provision of zoned lands within the main towns, to accommodate 15,225.

	Housing Requirement					Housing Supply	
	Census 2011	Population Target	Total New Households	New Units Required	Net Estimated Requirement (ha)	Est. Net Residential area zoned in Local Area Plan/TCP (ha)	Estimated Housing Yield (Laps and TCPs) (Units)
Cobh	12,347	14,543	1,625	1,778	71	72.53	1,907
Carrigtwohill	4,551	11,618	3,195	3,656	146	127.8	3,656
Glanmire	8,924	10,585	1,205	1,320	53	57.70	1,321
Monard	0	3,619	1,502	1,727	69	170.00	5,000
Cork North Environs	6,692	10,719	2,058	2,281	91	143.80	3,371
Main Towns	32,514	51,084	9,585	10,762	430	571.83	15,255
Villages	4,366	5,979	922	1,045	--	--	770
Rural	16,664	15,517	487	560	--	--	--
Total Villages and Rural	21,030	21,496	1,049	1,605	--	--	770
Total Municipal District	53,544	72,580	10,993	12,367	430	571.83	16,025

Current Estimated Strategic Land Reserve (LAPs and TCPs) for this Municipal District is 141.4Ha
Source: Cork County Development Plan 2014 – Appendix B, Table B9

2.3 Environment and Heritage

- 2.3.1 European and National legislation now protects the most valuable of our remaining wild places, through designation of sites as proposed Natural Heritage Areas, Special Areas of Conservation and Special Protection Areas. The current list of protected sites is contained in the County Development Plan 2014 and is shown on the Heritage and Scenic Amenity Maps in Volume 2 in that Plan. Designated sites in the Cobh Municipal District are detailed in the table below.

Designated Sites in the Cobh Municipal District		
Code	Description	Natura 2000 Site
SPA 4030	Cork Harbour	Yes
SPA 4090	Blackwater Callows	Yes
SPA 4022	Ballycotton Bay	Yes
SAC 1058	Great Island Channel	Yes
SAC 2170	Blackwater River (Cork/Waterford)	Yes
NHA 1987	Cuskinny Marsh	No
NHA 1058	Great Island Channel Cork Harbour	No
NHA 1857	Blarney Bog	No
NHA 1082	Dunkettle Shore	No
NHA 1054	Glanmire Woods	No
NHA 1074	Rockfarm Quarry	No

- 2.3.2 To date, sites of geological interest have not been comprehensively covered by the existing nature conservation designations. Cork County Council recognises the importance of geological heritage and to this end has listed the important geological features within the County, in the County Development Plan 2014, with the intention of maintaining their possible conservation value. Geological features of interest in the Cobh Municipal District include; coastal geomorphology within Cork Harbour, Cork Red Marble and Fossils at Banshane and Little Island and Lower Carboniferous-type section for Cork Ref Marble and younger limestones at Little Island.
- 2.3.3 In terms of built heritage, there are numerous recorded monuments and protected structures throughout the Municipal District and these are also detailed in the County Development Plan 2014.

2.4 Infrastructure

- 2.4.1 There are few infrastructural deficiencies within the Municipal District in terms of waste water treatment and water supply services that will need to be addressed over the lifetime of the Local Area Plan if the growth targets for the Municipal District to be achieved, particularly in relation to the proposed settlement of Monard. Upgrading of waste water treatment plant facilities and water supply facilities will also be required in a number of the settlements within the Municipal District to facilitate planned growth.
- 2.4.2 Roads infrastructure investment is required within many of the settlements, particularly where urban expansion is proposed, from the upgrade of relevant National and Regional Roads to the provision of local access roads. The Dunkettle

Interchange is due to be upgraded as well as the delivery of the Northern Ring Road. The area benefits from a suburban rail line serving Cobh and Midleton.

Section 3 Flood Risk in the Cobh Municipal District

3.1 Sources of Flooding

- 3.1.1 This SFRA has primarily reviewed flood risk from fluvial and tidal sources. Flood risks from pluvial and groundwater sources or from drainage systems, reservoirs and canals and other artificial or man-made systems have not been considered in detail in this study and such risks will need to be assessed at the project stage.
- 3.1.2 This approach has been adopted for two main reasons. Firstly, the review of flooding in the Cobh Municipal District shows rivers to be the most common source of damage and it is this source of flooding that has been taken into account in the Local Area Plan process. Other sources of flooding are considered to present a lesser risk in this Municipal District but should be considered at the planning application stage. Secondly, Flood Zones in the 'Planning System and Flood Risk Management' are defined on the basis of fluvial, and where appropriate, tidal flood risk.

3.2 Fluvial Flooding

- 3.2.1 Flooding of watercourses is associated with the exceedance of channel capacity during higher flows. The process of flooding on watercourses depends on a number of characteristics associated with the catchment including; geographical location and variation in rainfall, steepness of the channel and surrounding floodplain and infiltration and rate of runoff associated with urban and rural catchments. There are two main catchment types - large and relatively flat or small and steep, the two giving two very different responses during large rainfall events.
- 3.2.2 In a large, relatively flat catchment, flood levels will rise slowly and natural floodplains may remain flooded for several days, acting as the natural regulator of the flow. In small, steep catchments, local intense rainfall can result in the rapid onset of deep and fast-flowing flooding with little warning. Such "flash" flooding, which may only last a few hours, can cause considerable damage and possible threat to life.
- 3.2.3 The form of the floodplain, either natural or urbanised, can influence flooding along watercourses. The location of buildings and roads can significantly influence flood depths and velocities by altering flow directions and reducing the volume of storage within the floodplain. Critical structures such as bridge and culverts can also significantly reduce capacity creating pinch points within the floodplain. These structures are also vulnerable to blockage by natural debris within the channel or by fly tipping and waste.
- 3.2.4 Rivers are the primary cause of flooding in the Cobh Municipal District with flood events attributed to fluvial sources ranging from the Glashaboy and Butlerstown Rivers in particular to smaller tributaries and drains.

Rivers in the Cobh Municipal District Area:

- 3.2.5 The Cobh Municipal District is served by a number of large rivers, including tributaries of the River Lee and River Blackwater and the southern and northern extents of the District, respectively. The Lower River Lee system runs west-east through Cork City and demarcates the southern boundary of the District.

- 3.2.6 The Lower Lee system runs between Inniscarra Dam and the City boundary before entering Lough Mahon where extensive areas of mudflat define the shallows of the inner harbour between Dunkettle, Fota Island and Glounthaune. The Lower River Lee is joined by its largest tributary the Shournagh River at Leemount Bridge; the Shournagh joins the River Lee from the north at a point approximately 4km south of Blarney. The Shournagh is in turn fed by three large tributaries; the Martin, Blarney and Owenagearagh Rivers.
- 3.2.7 A small river known as the 'North Bride' rises directly south of Whitechurch village and ultimately drains into the Lee at Pope's Quay in the city centre. Its upper reaches contain trout but the stream is impacted by urban encroachment in Blackpool and becomes extensively culverted before it joins with the River Lee in the city centre. The North Bride is also joined by the Glenamought River, which supports a healthy population of Brown Trout.
- 3.2.8 The rivers north of the Lee follow a typical north-south drainage pattern and all ultimately drain into Cork Harbour with the exception of a number of rivers located in the northeast of the Municipal District.
- 3.2.9 The northeastern boundary of the Blarney electoral district is bordered by the River Bride and its adjoining eastward flowing tributaries, the Toor, Coom, Owenbawn and Glashanabrack Rivers. The Bride itself is a significant tributary of the River Blackwater.
- 3.2.10 The Cloghnashee River flows into Carrignavar from the northwest, connecting into the Glashaboy River and flowing east-west through the settlement and flowing further in a south east direction into Glanmire. The Glashaboy River has a significant catchment within the Municipal District with a number of tributaries, including the Butlerstown River in Glanmire, and terminates in the harbour where it meets the River Lee.
- 3.2.11 The Blarney River runs North-South within the western perimeter of the Monard Strategic Development Zone, and discharges to the Martin River, SE of Blarney town. This also forms part of the extensive Lee Catchment. The area is also served by the Kilcronan Stream, a first order tributary of the Blarney River.
- 3.2.12 There are a number of streams serving the District also, feeding into the larger rivers and also the harbour. The other notable water body, aside from the harbour itself, is Slatty Waters/Pond to the south of Carrigtwohill and north of Fota Island.
- 3.2.13 Recent significant flood events have included significant inundation of the floodplain along the Glashaboy River in 2009 and 2012, affecting large parts of Glanmire. It should be noted that such events occur relatively frequently though there is currently a draft Glashaboy Flood Relief Scheme in place to lessen and or eliminate impacts from future flood events. Other recent notable events include flooding in Carrigtwohill in 2005, 2012 and 2015 and Ballyvolane in 2012 from the Glenamought River and Glen Stream.

Periodic tidal flooding has also occurred in the area, with occasional flood events in Glounthaune and Cobh affecting a small number of properties.

3.3 Other Sources of Flooding

3.3.1 Other sources of flooding including pluvial, ground water, drainage systems and reservoirs are detailed below. Risks from these sources have not been specifically considered in the Strategic Flood Risk Assessment undertaken for the Cobh Municipal District and need to be addressed at the planning application stage.

- **Pluvial Flooding:** Pluvial flooding is a result of rainfall generated overland flows of water. Flooding of land from surface water runoff is usually caused by intense rainfall that may only last a few hours. The resulting water follows natural valley lines, creating flow paths along roads and through and around developments and ponding in low spots, which often coincide with fluvial floodplains in low lying areas.
- **Groundwater Flooding:** Groundwater flooding is caused by the emergence of water originating from underground, and is particularly common in karstic landscapes. This can emerge from either point or diffuse locations. The occurrence of groundwater flooding is usually very local and unlike flooding from rivers and the sea, does not generally pose a significant risk to life due to the slow rate at which the water level rises.
- **Flooding from Drainage Systems:** Flooding from artificial drainage systems occurs when flow entering a system, such as an urban storm water drainage system, exceeds its discharge capacity, it becomes blocked or it cannot discharge due to a high water level in the receiving watercourse. Sewer flooding problems will often be associated with regularly occurring storm events during which sewers and associated infrastructure can become blocked or fail.
- **Flooding from Reservoirs, Lakes and other Artificial Sources:** Reservoirs can be a major source of flood risk, as demonstrated in the 2009 flooding, when waters released from the Inniscarra Dam flooded sections of Cork City.

Section 4 Addressing Flood Risk in the Cobh Local Area Plan

4.1 Introduction

4.1.1 This section details the approach to Flood Risk Management adopted in the Cobh Municipal District Local Area Plan.

4.2 Collation of Flood Risk Data

4.2.1 In 2010, as part of the review of its Local Area Plans, and in order to meet the needs of the Strategic Environmental Assessment process and the requirements of the Department of the Environment, Heritage and Local Government / Office of Public Works Guidelines, “The Planning System and Flood Risk Management” (2009), Cork County Council undertook a county wide Strategic Flood Risk Assessment using data prepared on its behalf by JBA Consultants. The Council also conferred with OPW officials, the Lead Agency for Flood Risk Management in Ireland, in completing the county wide assessment of flood risks and in formulating the flood risk management strategy which informed the preparation the 2011 Local Area Plans.

4.2.2 For the purposes of the assessment, information about flood risks was collated from a number of sources including:

- ‘Floodmaps.ie’ – The national flood hazard mapping website operated by the Office of Public Works, where information about past flood events is recorded and made available to the public. ‘Flood point’ information available on this site has not been included for technical reasons.
- ‘Flood Hazard Mapping’ for fluvial and tidal areas commissioned by Cork County Council from JBA Consulting. These indicative flood extent maps provided flood extent information for river catchments where a more detailed CFRAMS study was not available.
- Draft River Lee Catchment Flood Risk Assessment and Management Study (Lee CFRAMS) data was used for areas within the catchment of the study.

4.2.3 This data was amalgamated into a single ‘Indicative Flood Zone Map’ for the County, which was then used as the basis for the flood risk assessment of the 2011 Local Area Plans. The flood zone map showed the areas known to be at risk of fluvial (river) or tidal flooding only. It should be noted that the flood zones are based on an undefended scenario and do not take the presence of flood protection structures such as walls or embankments into account. This is to allow for the fact that there is still a residual risk of flooding behind the defences due to overtopping or breach, and that there may be no guarantee that the defences will be maintained in perpetuity. This is accordance with the requirements of the Guidelines which specify an undefended assessment of risk.

4.2.4 In 2016, as part of the further review of the Local Area Plans the Council commissioned an update of the flood zone mapping used in the 2011 to take account of the information that has become available in the intervening period from other flood studies, including the outputs from the National CFRAM Programme (Catchment Flood Risk Assessment and Management), undertaken by the OPW.

- 4.2.5 The updated flood zone mapping provides information on the three main flood zones as follows:
- Zone A – High probability of flooding. Most areas of the County that are subject to flood risks fall into this category. Here, most types of development would be considered inappropriate. Development in this zone should be avoided and/or only considered in exceptional circumstances, such as in major urban or town centres, or in the case of essential infrastructure that cannot be located elsewhere. A Justification Test set out in Ministerial Guidelines applies to proposals in this zone. Only water-compatible development, such as docks and marinas, dockside activities that require a waterside location, amenity open space, outdoor sports and recreation, would be considered appropriate in this zone.
 - Zone B - Moderate probability of flooding. In most parts of the County this designation applies only to limited areas of land. In only a few locations do significant sites fall into this category. Here, highly vulnerable development, such as hospitals, residential care homes, Garda, fire and ambulance stations, dwelling houses and primary strategic transport and utilities infrastructure, would generally be considered inappropriate. Less vulnerable development, such as retail, commercial and industrial uses, sites used for short-let for caravans and camping and secondary strategic transport and utilities infrastructure, should only be considered in this zone if adequate sites are not available in Zone C, and subject to a flood risk assessment demonstrating that the risk can be appropriately managed”.
 - Elsewhere (referred to in the Guidelines as Flood Zone C) – Localised flooding from sources other than rivers and the coast can still occur and may need to be taken into account at the planning application stage.
- 4.2.6 Extracts from the flood zone map are shown, where relevant, on the settlement maps included in the Local Area Plan. The maps are indicative in nature and are intended to primarily function as a screening tool. The areas at risk may be more or less extensive in practice than indicated in the flood mapping. The mapping may be refined where possible over time as other more detailed flood risk assessments are completed by the OPW.
- 4.2.7 Within areas not specifically identified by the plan as being at risk of fluvial or tidal flooding (i.e. within Zone C) a flood risk screening assessment may still be required to assess potential impact of development on adjoining Flood Zones A or B, particularly with respect to surface water management . An assessment of the risk of other sources of flooding such as pluvial or ground water flooding may also be needed.
- 4.2.8 The inclusion of the flood zone information on the settlement maps of the Municipal District is the first step in managing flood risk in the future. The updated mapping provides for an improved understanding of flood risk issues within the County. The maps indicate the extent of flood zones that should be safeguarded from development and will support the application of the sequential approach, and the justification test as appropriate, in areas where development is proposed.

4.2.9 As part of the review of the Local Area Plans, all zoned lands in areas at risk of flooding have been considered in the context of the updated indicative flood zone maps.

4.3 Flood Risk within the Cobh Municipal District

4.3.1 Flood risk to each settlement has been appraised based on the Indicative Flood Zones which cross the settlement boundary, and is summarised in Table 4.1.

Table 4.1: Flood Risk by Settlement in the Cobh Municipal District		
Settlement	Indicative Fluvial/ Coastal Flood Risk within Development Boundary	Comment
Main Settlements		
Cobh	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Glanmire	Yes	
Cork City North Environs	Yes	
Monard	Yes	
Carrigtowhill	Yes	
Little Island	Yes	
Key Villages		
Carrignavar	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Glenville	Yes	
Glounthaune	Yes	
Villages		
Kerry Pike	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Killeens	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the

Table 4.1: Flood Risk by Settlement in the Cobh Municipal District		
Settlement	Indicative Fluvial/ Coastal Flood Risk within Development Boundary	Comment
		requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Knockraha	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Upper Glanmire	No	
Whitechurch	No	
Village Nuclei		
Ballymore/Walterstown	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Caherlag	No	
Rathduff	No	
Other Locations		
Belvelly	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Bottlehill	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Carrigaloe	No	
Clogheen	No	
Fota Island	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Haulbowline Island	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Killard	No	
Marino Point	Yes	All development proposals within

Settlement	Indicative Fluvial/ Coastal Flood Risk within Development Boundary	Comment
		the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Rathcooney	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Spike Island	No	
Templemichael	No	
Whites Cross	No	

4.4 Flood Risk Management Strategy

- 4.4.1 The assessment and management of flood risks in relation to planned future development is an important element of sustainable development. The majority of towns, villages and smaller settlements have a river or stream either running through the built-up area or close by and are inevitably exposed to some degree of flood risk when those rivers or streams overflow their normal course. Similarly, in coastal areas, flooding can periodically occur following unusual weather or tidal events.
- 4.4.2 Generally, the purpose of zoning is to indicate to property owners and members of the public the types of development which the Planning Authority considers most appropriate in each land use category. Zoning is designed to reduce conflicting uses within areas, to protect resources and, in association with phasing, to ensure that land suitable for development is used to the best advantage of the community as a whole.
- 4.4.3 The approach adopted has generally been to
- Include, on the settlement maps, information on the areas at risk of flooding (extent of Flood Zones A and B),
 - Avoid development in areas at risk of flooding; and
 - Where development in floodplains cannot be avoided, to take a sequential approach to flood risk management based on avoidance, reduction and mitigation of risk.
- 4.4.4 In response to local circumstances, particularly where there may be some uncertainties in relation to flood risk data or where land has been zoned in a previous plan or planning permission has already been granted, the approach has

been modified and lands have been zoned for development with a requirement that a detailed site specific flood risk assessment be carried out at the project stage. This is explained in more detail below.

4.5 The Approach to Zoning in Areas at Risk of Flooding.

4.5.1 Within the areas identified by the Indicative Flood Risk Mapping as being at risk (Zone A or B), all proposals for development will need to comply with the Ministerial Guidelines – ‘The Planning System and Flood Risk Management. In this LAP, land use zoning objectives within the indicative Flood Risk Areas have been included in the plan where either:

- The land use zoning objective has been considered in the context of the “Development Plan Justification Test” set out in the Ministerial Guidelines;
- The zoning objective stemmed from a similar objective in a previous Plan and has been included in this Plan in order to facilitate the local verification of the indicative Flood Risk Maps at the project planning/planning application stage.

4.5.2 In the preparation of the draft Cobh Municipal District LAP, proposed zonings were generally assessed relative to the provisions of the Guidelines and the Justification Test for Development Plans as detailed in the Guidelines. The Justification Test is generally required in situations where the planning authority needs to consider future development in areas at a high or moderate risk of flooding, for uses or development vulnerable to flooding that would otherwise be inappropriate. In such circumstances, all of the following criteria must be satisfied :

- a) the urban settlement is targeted for growth in the NSS, RPGs, or statutory plans defined under the provisions of the Planning and Development Act, 2000, as amended.
- b) the zoning is required to achieve the proper planning and sustainable development of an urban settlement and is
 - Essential to facilitate the regeneration and/or expansion of the centre of the urban settlement;
 - Comprises significant previously developed and/or under-utilised lands;
 - Is within or adjoining the core of an established or designated urban settlement;
 - Will be essential to achieving compact and sustainable urban growth;
 - and
 - There are no suitable alternative lands for the particular use in areas at lower risk of flooding within or adjoining the core of the urban settlement

- c) A flood Risk Assessment to the appropriate level of detail has been carried out as part of the SEA, which demonstrates that flood risk to the development can be adequately managed and the development will not cause adverse impacts elsewhere.
- 4.4.5 In the preparation of the Draft Cobh Municipal District Local Areas Plan, the final element of the Justification Test (part (c) above), which requires a site specific flood risk assessment to be carried out, was not undertaken. In some cases, certain zonings were included in areas at risk of flooding, even when such zoning did not pass the Justification Test, as a response to a desire to retain those zonings where planning permission had been granted or where the zoning had already been made in a previous Plan.
- 4.4.6 Instead, the approach taken in the Draft Local Area Plan provides, in the first instance, for the detailed assessment of the extent of the actual flood risk relative to that indicated on the indicative mapping via a phased flood risk assessment procedure, as detailed in Section 4.6 of this report. The first stage of this assessment process provides a prospective developer with the opportunity to verify the Indicative Flood Zone Mapping in the first instance, and address any local ambiguities. Depending on the outcome of the verification stage, a prospective developer may then have the opportunity to demonstrate compliance with the requirements of the Development Plan Justification Test and carry out a detailed site specific assessment, as appropriate.
- 4.4.7 Development proposals on lands within areas at risk of flooding will also be subject to the 'Development Management Justification Test', details of which are set out in the Guidelines.
- 4.4.8 The Table below lists the specific zoned sites within the Cobh Municipal District that are located within either Flood Zone A or B and the circumstances of their inclusion.

Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
Cobh	CH-TC-01	Justification Test	Not applied	-
		Existing Zoning	✓	Previously zoned as town centre in the Cobh Town Development Plan 2013. Part of the area is at risk of flooding and it is not defended. Areas within the designated flood risk zones relate primarily to pontoons and slipways, all of which are water compatible. Small

Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				<p>number of existing buildings within flood risk zones but all are well established.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Cobh	CH-I-01	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as Industrial in the Cobh Town Development Plan 2010. Part of the area is at risk of flooding. It is not defended.</p> <p>Areas within the designated flood risk zones relate primarily to docks and slipways, all of which are water compatible. Small number of existing buildings within flood risk zones but all are well established.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Cobh	CH-U-12	Justification Test	Not Applied	-
		Existing Zonings	✓	<p>Water compatible</p> <p>Only a small portion of this site is subject to flood risk. Previously zoned for residential use in the 2005 and 2011 LAP.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Glanmire	GM-I-01	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as Industrial within the Blarney Electoral Area Local Area Plan 2011.</p> <p>Only part of the area is subject to flood risk. It is not</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				<p>defended.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Glanmire	GM-T-01	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as town centre in the Blarney Electoral Area Local Area Plan 2011.</p> <p>Only part of the area is subject to flood risk. It is not defended.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
Glanmire	GM-T-02	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as town centre in the Blarney Electoral Area Local Area Plan 2011.</p> <p>Only part of the area is subject to flood risk. It is not defended.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Glanmire	GM-C-01	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as Community Uses in the Blarney Electoral Area Local Area Plan 2011.</p> <p>Lands are partially at risk of flooding (Zone A & B) and are not defended.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Cork City North Environs	NE-T-01	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as Town Centre in the Blarney Electoral Area Local Area Plan 2011.</p> <p>Lands are partially at risk of flooding (Zone A & B) and are not defended.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Monard	MD-X-01	Justification Test	Not applied	-
				<p>Previously zoned X-01 in the Monard Planning Scheme 2015.</p> <p>Lands are partially at risk of</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				<p>flooding (Zone A & B) and are not defended.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p> <p>All development proposals shall include a site specific and detailed SuDS strategy.</p>
Carrigwohili	CT-R-01	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as Residential in the Midleton Electoral Area Local Area Plan 2011.</p> <p>Small part of lands are partially at risk of flooding and are not defended.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Carrigwohill	CT-R-04	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as Residential in the Carrigwohill North Framework Masterplan 2015.</p> <p>Lands are partially at risk of flooding and are not defended.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Carrigwohill	CT-I-01	Justification Test	Not applied	-
		Existing Zonings	✓	<p>Previously zoned as Industrial in the Middleton Electoral Area Local Area Plan 2011.</p> <p>Lands are partially at risk of flooding and are not defended.</p> <p>A site specific flood risk assessment will be required</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Carrigwohili	CT-I-02	Justification Test	Not applied	-
		Existing Zonings	✓	<p>Previously zoned for Industrial use in the Midleton Electoral Area Local Area Plan 2011.</p> <p>Only a small part of the site is at risk of flooding.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Carrigwohili	CT I-04	Justification Test	Not Applied	-
		Existing Zonings	✓	Site consists of IDA Business Park and has been extensively developed.

Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				<p>Previously zoned for Industrial use in the Midleton Electoral Area Local Area Plan 2011.</p> <p>Only a small part of the site is at risk of flooding.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Carrigtwohill	CT-I-05	Justification Test	Not applied	-
		Existing Zonings	✓	<p>The site is an existing pharmaceutical complex and has been extensively developed. Previously zoned for Industrial use in the Midleton Electoral Area Local Area Plan 2011.</p> <p>Only a small part of the site is at risk of flooding.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Carrigtwohi II	CT-B-05	Justification Test	Partially applied	Part three of the test was not completed.
		Existing Zonings	✓	<p>Previously zoned as Enterprise within the Midleton Electoral Area Local Area Plan 2011.</p> <p>Only part of the land is at risk of flooding.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Carrigtwohi II	CT-B-06	Justification Test	Not applied	-
		Existing Zonings	✓	<p>Previously zoned for Enterprise within the Midleton Electoral Area Local Area Plan 2011.</p> <p>Part of the land is at risk of flooding.</p> <p>A site specific flood risk assessment will be required</p>

Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Carrigwohili	CT-B-07	Justification Test	Not applied	-
		Existing Zonings	✓	<p>Previously zoned for Enterprise use in the Midleton Electoral Area Local Area Plan 2011.</p> <p>Part of this site is at risk of flooding.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Carrigwohili	CT-T-01	Justification Test	Not applied	-
		Existing Zonings	✓	Previously zoned as Town Centre in the Midleton

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				<p>Electoral Area Local Area Plan 2011.</p> <p>Only a small part of these lands is at risk of flooding.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Carrigtwohill	CT-T-02	Justification Test	Not applied	-
		Existing Zonings	✓	<p>Previously zoned as Town Centre in the Midleton Electoral Area Local Area Plan 2011.</p> <p>Only a small part of these lands is at risk of flooding.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				County Development Plan, 2014.
Carrigtwohill	CT-C-01	Justification Test	Partially applied	Part three of the test was not completed.
		Existing Zoning	✓	<p>Part of site was previously zoned for Community/Utility use (primary school) and part zoned for residential use within the Midleton Electoral Area Local Area Plan 2011.</p> <p>A more detailed Flood Risk Assessment has been completed for Carrigtwohill since 2011 and has indicated that parts of this landholding is at risk of flooding and the land has not been defended. As a result of this flood risk, any residential development on this land would fail the justification test.</p> <p>Since 2011, the Department of Education has received planning permission for the construction of a primary school on the former C-01 education site to the west of the landholding. In addition, the Department of Education is in the process of acquiring land for a secondary school adjacent to the proposed primary school.</p> <p>Notwithstanding the flood risk on the site, the Department are interested in constructing an education campus comprising a primary and secondary school together with ancillary open space and recreation facilities. The site is centrally located to</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				<p>other land uses in Carrigtwohill and is within close proximity to both residential areas and key transport routes (train, cycle, pedestrian and roads).</p> <p>Any development proposals will need to follow the flood risk assessment procedure detailed in Sections 4.6 and 4.7 of this report i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.</p> <p>Should the applicant wish to proceed further with the development proposal, then the applicant needs to be able to demonstrate, to the satisfaction of the Planning Authority, that the proposal meets the requirements of the 'Development Plan Justification Test' as set out in the Guidelines and as detailed in section 4.4.3 above. Where the Council is satisfied that the proposal satisfies the requirements of the Development Plan Justification Test, it shall confirm this in writing to the applicant.</p> <p>If the proposal is considered to meet the requirements of the Development Plan Justification Test then prospective developers</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				<p>should proceed to a more detailed site specific flood risk assessment in line with Chapter 5 of the Guidelines.</p> <p>Thereafter, where development has to take place in areas at risk of flooding, the risks should be mitigated and managed through the location, layout and design of the development to reduce such risks to an acceptable level.</p>
Carrigtwohill	CT-U-03	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as walkway within the Carrigtwohill North Framework Masterplan 2015.</p> <p>Part of the lands are at risk of flooding.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Little Island	LI-I-04	Justification Test	Not applied	-
		Existing Zoning	✓	Previously zoned as Industrial within the Blarney Electoral

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				<p>Area Local Area Plan 2011.</p> <p>Part of the lands are at risk of flooding.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Little Island	LI-C-01	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as Community/Utility within the Blarney Electoral Area Local Area Plan 2011.</p> <p>Part of the lands are at risk of flooding.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan,</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				2014.
Little Island	LI-U-04	Justification Test	Partially applied	Part three of the test not completed.
		Existing Zoning	✓	Part of the lands are at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Carrignavar	U-01	Justification Test	Not applied	-
		Existing Zoning	✓	Part of the lands are at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
Glenville	U-01	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Part of the lands are at risk of flooding.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Glounthaune	C-02	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as Community/Utility within the Blarney Electoral Area Local Area Plan 2011.</p> <p>All of the lands are at risk of flooding. Existing use consists of playground, which is water compatible.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance</p>

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Haulbowline	X-01	Justification Test	Partially applied	
		Existing Zoning	X	<p>Lands are partially at risk of flooding (Zone A & B) and are not defended.</p> <p>Future development relates predominantly to open space, recreation and amenity, which is normally water compatible.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>
Marino Point	X-01	Justification Test	Not applied	-
		Existing Zoning	✓	<p>Previously zoned as Special Policy Area within the Midleton Electoral Area Local Area Plan 2011.</p> <p>Part of the lands are at risk of flooding. Existing use consists</p>

Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
				<p>of playground, which is water compatible.</p> <p>A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.</p>

Note: Proposals for 'open space or outdoor recreation development have not been included in Table 4.2 because these are normally water compatible forms of development and, therefore, do not need to be subjected to the 'Development Plan' Justification Test. However, an appropriate flood risk assessment will be necessary at the project planning/ planning application stage.

4.6 Approach to Development in Areas at Risk of Flooding

4.6.1 Where development is proposed within an area at risk of flooding, either on land that is subject to a specific zoning objective, lands within the "existing built up area" of a town or within a development boundary of a village, intending applicants need to comply with the provisions of Chapter 11 of the Cork County Development Plan 2014 and objectives WS 6-1 and WS 6-2, as appropriate, and with the provisions of the Ministerial Guidelines – 'The Planning System and Flood Risk Management'.

4.7 Flood Risk and Development Management

4.7.1 The following key requirements for the management of development in the areas at risk of flooding shall be adhered to:

- a) Minor proposals for development, for example small extensions to existing houses or changes of use, in areas at moderate to high risk of flooding should be assessed in accordance with Planning Guidelines: The Planning System and Flood Risk Management.

- b) Where flood risk constitutes a significant environmental effect of a development proposal, a sub-threshold EIS may be triggered. Screening for EIA should be an integral part of all planning applications in areas at risk of flooding.
- c) Any proposal in an area at risk of flooding that is considered acceptable in principle must demonstrate that appropriate mitigation measures can be put in place and that residual risks can be managed to acceptable levels. Addressing flood risk in the design of new development should consider the following:
- Locating development away from areas at risk of flooding, where possible.
 - Substituting more vulnerable land uses with less vulnerable ones.
 - Identifying and protecting land required for current and future flood risk management, such as conveyance routes, flood storage areas and flood protection schemes etc.
 - Addressing the need for effective emergency response planning for flood events in areas of new development.
- d) Site layout, landscape planning and drainage of new development must be closely integrated to play an effective role in flood-reduction. As such, proposals should clearly indicate:
- The use of Sustainable Drainage Systems (SuDS) to manage surface water run-off.
 - Water conveyancing routes free of barriers such as walls or buildings.
 - The signing of floodplain areas to indicate the shared use of the land and to identify safe access routes.
- e) To ensure that adequate measures are put in place to deal with residual risks, proposals should demonstrate the use of flood-resistant construction measures that are aimed at preventing water from entering a building and that mitigate the damage floodwater causes to buildings. Alternatively, designs for flood resilient construction may be adopted where it can be demonstrated that entry of floodwater into buildings is preferable to limit damage caused by floodwater and allow relatively quick recovery. Such measures include the design and specification of internal building services and finishes. Further detail on flood resilience and flood resistance are included in the Technical Appendices of the Planning Guidelines, The Planning System and Flood Risk Management.

Section 5 Managing Flood Risk in the Future

5.1 What has the LAP Achieved

5.1.1 The inclusion of Indicative Flood Zone maps for the settlements of the Municipal District is the first step in managing flood risk in the future. The maps are primarily intended to function as a screening tool. They are not a substitute for detailed hydraulic modelling, such as may be required to assess the level of flood risk for a specific development. The flood maps should be used to guide decision making when determining whether a detailed Flood Risk Assessment is required for any given site. The maps are intended for guidance, and cannot provide details for individual properties.

5.2 Monitoring and Review

5.2.2 Information in relation to flood risk will be monitored and reviewed by the Council and the Flood Risk Assessment will be updated as appropriate as new information becomes available. There are a number of key outputs from possible future studies and datasets which could inform any update of the FRA as availability allows. A list of potential sources of information which will inform an FRA review is provided in the table below.

Potential Sources of Flood Risk Data		
Data	Source	Timeframe
Ongoing CFRAM Studies	OPW	End of 2016 / Early 2017
County Development Plan Updates	Cork County Council	2020
Flood maps of other sources, such as canal breach and drainage networks	Various	Unknown
Significant flood events	Various	Unknown
Changes to Planning and / or Flood Management Policy	DoEHLG /OPW /Cork County Council	Unknown
SFRAs for Local Area Plans	Cork County Council	Upon LAP review
Detailed FRAs	Various	Unknown
Flood Defence Feasibility / Design Reports	OPW primarily	Unknown

Habitats Directive Assessment - Screening Report

draft Cobh Municipal District Local Area Plan

Consultation Draft

Prepared by Cork County Council
Planning Policy Unit
November 2016

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1 Introduction

1.1 Context

Cork County Council is in the process of preparing the Cobh Municipal District Electoral Area Local Area Plan. This is a plan which will set development policy for the towns, villages and other settlements within the Cobh Municipal District until 2023.

In accordance with requirements under the EU Habitats Directive (43/92/EEC) and EU Birds Directive (79/409/EEC) as provided for in part XAB of the Planning and Development Act 2010, the impacts of the policies and objectives of all statutory land use plans on certain sites that are designated for the protection of nature (Natura 2000 sites¹), must be assessed as an integral part of the process of drafting of the plan. This is to determine whether or not the implementation of plan policies could have negative consequences for the habitats or plant or animal species for which these sites are designated. This assessment process is called a Habitats Directive Assessment (HDA) and must be carried out at all stages of the plan making process.

1.2 Legislative Background Habitats Directive Assessment

Habitats Directive Assessment is an iterative process which runs parallel to and informs the plan making process. It involves analysis and review of draft policies as they emerge during each stage of plan making, to ensure that their implementation will not impact on sites designated for nature conservation, nor on the habitats or species for which they are designated. Within this process, regard is had to the potential for policies and zoning proposals set out in the plan to contribute to impacts which on their own may be acceptable, but which could be significant when considered in combination with the impacts arising from the implementation of other plans, programmes, policies or projects.

The process may result in the development of new policy areas and/or the modification or removal of certain policies to be presented in the final plan. The results of this analysis and review are presented in Habitats Directive Reports which are produced for at each stage of the plan making process plan. At the end of the plan making process, an Appropriate Assessment Conclusion Statement or Screening Conclusion Statement will be produced which will contain a summary of how ecological considerations in relation to Natura 2000 sites have been integrated into the plan. The final Habitats Directive Report and a declaration in relation to the potential for the plan to affect the integrity of Natura 2000 sites within its potential impact zone will also be produced at that time.

¹ Natura 2000 sites include Special Areas of Conservation designated under the Habitats Directive and Special Protection Areas designated under the Birds Directive. Special Areas of Conservation are sites that are protected because they support particular habitats and/or plant and animal species that have been identified to be threatened at EU community level. Special Protection Areas are sites that are protected for the conservation of species of birds that are in danger of extinction, or are rare or vulnerable. Special Protection Areas may also be sites that are particularly important for migratory birds. Such sites include internationally important wetlands.

Article 6(3) of the Habitats Directive identifies what is required in terms of assessment of plans of projects.

Habitats Directive Article 6(3)

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

EU and National Guidance sets out two main stages to the assessment process which are as follows:

Stage One: Screening

The process which identifies what might be likely impacts arising from a plan on a Natura 2000 site, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant. No further assessment is required if no significant impacts on Natura 2000 sites are identified during the screening stage. The screening assessment is normally contained in a Habitats Directive Screening Report.

Stage Two: Appropriate Assessment

Where the possibility of significant impacts has not been discounted by the screening process, a more detailed assessment is required. This is called an Appropriate Assessment and involves the compilation of a Natura Impact Report by the Planning Authority which is a report of scientific evidence and data relating to European sites for which significant negative impacts have not been previously screened out. This is used to identify and classify any implications of the plan for these sites in view of their conservation objectives. The Appropriate Assessment must include a determination as to whether or not the plan or its proposed amendments would adversely affect the integrity of any European site or sites. The plan may be adopted if adverse effects on the integrity of European sites can be ruled out during the Appropriate Assessment process. The plan may not be adopted on foot of an Appropriate Assessment, if it is found that it will give rise to adverse impacts on one or more European sites, or if uncertainty remains in relation to potential impacts on one or more European sites.

The directive provides for a derogation procedure which can allow a plan or project to proceed in spite of a finding that the plan or project could / would give rise to adverse effects on the overall integrity of one or more Natura 2000 sites. Derogation procedures can only be progressed in very limited circumstances which are set out in Article 6(4) of the Directive (see below).

Habitats Directive Article 6(4)

If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

EU and National Guidance identifies the procedures which must be followed in circumstances where a derogation from the Habitats Directive is sought to allow a project or a plan to proceed, despite a finding that it will give rise to adverse effects on the integrity of one or more Natura 2000 sites. These procedures can only be invoked where it has been shown that there are no alternative ways to implement the plan/project which avoid adverse effects on the integrity of one or more European sites, where it has been demonstrated that there are imperative reasons of overriding public interest for which the plan/project must proceed and where measures have been developed and provided to compensate for any losses to be incurred. These further stages are described below.

Stage Three: Assessment of alternative solutions

In circumstances where the potential for a plan to give rise to adverse effects on the integrity of a European site or sites has not been ruled out during the appropriate assessment process, it can only be considered for authorisation where it is demonstrated that there are no alternative solutions and that there Imperative Reasons of Overriding Public Interest (IROPI) which can allow the plan or project to proceed. Stage three of a Habitats Directive Assessment involves the assessment of alternative solutions.

Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain
The fourth stage of the Habitats Directive Assessment process involves demonstrating that Imperative Reasons of Overriding Public Interest exist, and the assessment of the compensatory measures which are proposed to be implemented. In every case in which a local authority envisages approving or proceeding with a plan or project on grounds of IROPI, the Minister for Arts, Heritage and the Gaeltacht must be consulted.

The assessment may stop at any of the above stages if significant impacts on Natura 2000 sites can be ruled out.

This document represents the first phase of the Habitats Directive Assessment process for the Draft Cobh Municipal District Local Area Plan Consultation Draft. It contains the findings of the Habitats Directive screening assessment of this plan.

2 How this Report Was Prepared

2.1 Working Methods

The approach taken in the making of this assessment follows European Communities, 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, 2002, and on Local Government and Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities, 2009.

2.2 Consultation

This report, with the draft Cobh Municipal District Local Area Plan and the Environmental Report has been referred to statutory consultees and is available for public consultation from Wednesday 16th November 2016 to Friday 06th January 2017, so that the public or other interested stakeholders and statutory consultees have the opportunity to submit their comments and observations. These matters will then be considered and a decision made as to whether it is necessary to amend the draft plan to reflect the issues raised. The plan and this report are now available from the Council website at www.corkcoco.ie.

2.3 Data Sources, Gaps and Limitations

The information contained in this report is based on a desktop review of information relating to these sites and to the habitats and species that they support. References and data used are cited in the back of this report.

3 Draft Plan Screening

3.1 Screening Methodology

EU Guidelines (2001) set out a process for screening landuse plans, which involves four main steps as follows:

- Provide a description of the proposed plan.
- Identify relevant Natura 2000 sites, and compile information on their qualifying interests and conservation objectives.
- Identify the potential effects of the plan on the identified Natura 2000 sites.
- Assess of the significance of any effects on identified Natura 2000 sites, having regard to potential for 'in combination' effects.

This process is applied to all proposed plans or projects except those which are directly connected with the necessary management of a Natura 2000 site or sites. This report follows the steps set out above.

3.2 Description of the draft Plan

The Cobh Municipal District Local Area Plan will be a strategic plan identifying where development is to be directed and how/where supporting infrastructure is to be provided within

the plan area from 2017 to 2023. The draft plan proposes population targets for settlements within the district and identifies where that development is proposed to be located through its zoning maps and corresponding policy objectives.

Section 1 Introduction

This section of the plan sets out the review process to date, the overall plan context and the overall approach/key policies that will influence the preparation of the Draft Plan namely the:

- Role of the Cork County Development Plan 2014
- Approach to Town Council Development Plans
- Special Policy Areas Framework Masterplans
- Settlement Network
- Infrastructure
- Water Services
- Development Contributions
- Regeneration Areas
- Flood Risk Assessment and Management
- Quality in Urban Design
- Green Belts around Towns
- Strategic Land Reserve
- Environmental Assessments including:
 - Strategic Environmental Assessment,
 - Strategic Flood Risk Assessment and
 - Habitats Directive Assessment

Section 2 Local Area Strategy

This section set out the overall strategy for the Cobh Municipal District. It sets out the housing requirements and zoned housing land supply for each of the five main towns, sets out the appropriate scale of growth within the village network and the current infrastructure position for all the main towns and smaller settlement within the settlement network. It assesses the current employment position in the Municipal District and the key Environment and Heritage assets within the area. The key message is that sufficient land has been provided to meet population targets but that infrastructure remains a key constraint to delivering on those targets.

Section 3 Main Towns

The purpose of this section is to set out the policies and objectives including land use zoning maps for the five Main Towns of Cobh, Carrigtwohill, Glanmire, Monard and Cork North Environs in the Cobh Municipal District. Where appropriate, Regeneration Areas have also been identified.

This section of the plan sets out proposals for population growth and other development objectives for the main towns.

Section 4 Key Villages

There are three key villages in the Cobh Municipal District Carrignavar, Glenville and Glounthaune.

This section of the plan sets out proposed scale of growth and other development objectives for each of these main villages over the lifetime of the plan.

Section 5 Villages, Village Nuclei and Other Locations

There are five villages, three village nuclei and twelve other locations in the Cobh Municipal District. The villages are Whitechurch, Kerry Pike, Upper Glanmire, Knockraha and Killeens. The village nuclei are Ballymore/Walterstown, Caherlag and Rathduff. The other locations are Bottlehill, Killard, Whites Cross, Templemichael, Rathcooney, Clogheen, Marino Point, Belvelly, Carrigaloe, Fota Island, Haulbowline Island and Spike Island.

This section of the plan sets out proposed scale of growth and other development objectives for each of settlements over the lifetime of the plan.

Section 6 Putting the Plan into Practice

This section of the plan assigns responsibility for the implementation of the Plan's policies to various agencies including the Local Authority. It also sets out the expected timeframes for the delivery of physical and social infrastructure, including the assignment of Plan priorities and funding streams necessary to secure key development objectives. It also outlines the approach to monitoring and how the Plan will inform other Plans within its functional area.

3.3 Natura 2000 Sites Within the Potential Impact Zone of the Plan

The Cobh Municipal District covers the metropolitan areas to the north and east of Cork City. The Cobh Municipal District incorporates the main towns of Cobh, Carrigwohill, Glanmire, Cork City North Environs along with the proposed new town of Monard and the key Strategic Employment Centre of Little Island as well as twenty three villages and village nuclei and rural areas. The boundaries of the plan area are shown on Figure 1 below. The Natura 2000 sites subject to screening are shown in Figure 2.

Table 1: Natura 2000 Sites Subject to Screening

Site Code	Site Name	Qualifying Interests	Conservation Objectives
1058	Great Island Channel SAC	Mudflats and sandflats not covered by seawater at low tide [1140] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]	To maintain the favourable conservation condition of the following habitats for which the Great Island Channel SAC is designated: <ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide [1140] and to restore the favourable conservation condition of <ul style="list-style-type: none"> • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] which are defined by attributes and targets set out in Conservation Objectives for the Great Island Channel SAC June 6 2014 available at www.NPWS.ie
2170	Blackwater River (Cork/Waterford) SAC	<ul style="list-style-type: none"> • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Perennial vegetation of stony banks [1220] • <i>Salicornia</i> and other annuals colonising mud and sand [1310] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Water courses of plain to montane levels with 	To maintain the favourable conservation condition of the following habitats and species for which the Blackwater River SAC is designated: <ul style="list-style-type: none"> • <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092] • <i>Lampetra planeri</i> (Brook Lamprey) [1096] • <i>Lampetra fluviatilis</i> (River Lamprey) [1099] • <i>Salmo salar</i> (Salmon) [1106] • Estuaries [1130] • Mudflats and sandflats not covered by seawater at

Table 1: Natura 2000 Sites Subject to Screening

Site Code	Site Name	Qualifying Interests	Conservation Objectives
		<p>the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]</p> <ul style="list-style-type: none"> • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • <i>Taxus baccata</i> woods of the British Isles [91J0] • <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] • <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092] • <i>Petromyzon marinus</i> (Sea Lamprey) [1095] • <i>Lampetra planeri</i> (Brook Lamprey) [1096] • <i>Lampetra fluviatilis</i> (River Lamprey) [1099] • <i>Alosa fallax fallax</i> (Twaite Shad) [1103] • <i>Salmo salar</i> (Salmon) [1106] • <i>Lutra lutra</i> (Otter) [1355] • <i>Trichomanes speciosum</i> (Killarney Fern) [1421] 	<p>low tide [1140]</p> <ul style="list-style-type: none"> • Perennial vegetation of stony banks [1220] • <i>Salicornia</i> and other annuals colonising mud and sand [1310] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • <i>Trichomanes speciosum</i> (Killarney Fern) [1421] • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] <p>and to restore the favourable conservation condition of</p> <ul style="list-style-type: none"> • <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] • <i>Petromyzon marinus</i> (Sea Lamprey) [1095] • <i>Alosa fallax fallax</i> (Twaite Shad) [1103] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • <i>Lutra lutra</i> (Otter) [1355] <p>which are defined by attributes and targets set out in Conservation Objectives for Blackwater River SAC July</p>

Table 1: Natura 2000 Sites Subject to Screening

Site Code	Site Name	Qualifying Interests	Conservation Objectives
			<p>31 2012 available at www.NPWS.ie</p> <p>*status of <i>Taxus baccata</i> woods of the British Isles as a qualifying feature for this SAC is currently under review.</p>
4022	Ballycotton Bay SPA	<ul style="list-style-type: none"> • Teal (<i>Anas crecca</i>) [A052] • Ringed Plover (<i>Charadrius hiaticula</i>) [A137] • Golden Plover (<i>Pluvialis apricaria</i>) [A140] • Grey Plover (<i>Pluvialis squatarola</i>) [A141] • Lapwing (<i>Vanellus vanellus</i>) [A142] • Black-tailed Godwit (<i>Limosa limosa</i>) [A156] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] • Curlew (<i>Numenius arquata</i>) [A160] • Turnstone (<i>Arenaria interpres</i>) [A169] • Common Gull (<i>Larus canus</i>) [A182] • Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] • Wetland and Waterbirds [A999] 	<p>To maintain the favourable conservation condition of the following bird species in Ballycotton Bay SPA:</p> <ul style="list-style-type: none"> • Teal (<i>Anas crecca</i>) [A052] • Ringed Plover (<i>Charadrius hiaticula</i>) [A137] • Golden Plover (<i>Pluvialis apricaria</i>) [A140] • Grey Plover (<i>Pluvialis squatarola</i>) [A141] • Lapwing (<i>Vanellus vanellus</i>) [A142] • Black-tailed Godwit (<i>Limosa limosa</i>) [A156] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] • Curlew (<i>Numenius arquata</i>) [A160] • Turnstone (<i>Arenaria interpres</i>) [A169] • Common Gull (<i>Larus canus</i>) [A182] • Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] <p>and to maintain the favourable conservation condition of the wetland habitat in Ballycotton Bay SPA as a resources for the regularly-occurring migratory birds that utilise it as defined by attributes and targets set out in Conservation Objectives Ballycotton Bay SPA Aug 26 2014 which are available at www.NPWS.ie</p>

Table 1: Natura 2000 Sites Subject to Screening

Site Code	Site Name	Qualifying Interests	Conservation Objectives
4030	Cork Harbour SPA	<ul style="list-style-type: none"> • Little Grebe (<i>Tachybaptus ruficollis</i>) [A004] • Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] • Cormorant (<i>Phalacrocorax carbo</i>) [A017] • Grey Heron (<i>Ardea cinerea</i>) [A028] • Shelduck (<i>Tadorna tadorna</i>) [A048] • Wigeon (<i>Anas penelope</i>) [A050] • Teal (<i>Anas crecca</i>) [A052] • Pintail (<i>Anas acuta</i>) [A054] • Shoveler (<i>Anas clypeata</i>) [A056] • Red-breasted Merganser (<i>Mergus serrator</i>) [A069] • Oystercatcher (<i>Haematopus ostralegus</i>) [A130] • Golden Plover (<i>Pluvialis apricaria</i>) [A140] • Grey Plover (<i>Pluvialis squatarola</i>) [A141] • Lapwing (<i>Vanellus vanellus</i>) [A142] • Dunlin (<i>Calidris alpina</i>) [A149] • Black-tailed Godwit (<i>Limosa limosa</i>) [A156] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] • Curlew (<i>Numenius arquata</i>) [A160] • Redshank (<i>Tringa totanus</i>) [A162] • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] • Common Gull (<i>Larus canus</i>) [A182] • Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] • Common Tern (<i>Sterna hirundo</i>) [A193] • Wetland and Waterbirds [A999] 	<p>To maintain the favourable conservation condition of the following bird species in Cork Harbour SPA:</p> <ul style="list-style-type: none"> • Little Grebe (<i>Tachybaptus ruficollis</i>) [A004] • Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] • Cormorant (<i>Phalacrocorax carbo</i>) [A017] • Grey Heron (<i>Ardea cinerea</i>) [A028] • Shelduck (<i>Tadorna tadorna</i>) [A048] • Wigeon (<i>Anas penelope</i>) [A050] • Teal (<i>Anas crecca</i>) [A052] • Pintail (<i>Anas acuta</i>) [A054] • Shoveler (<i>Anas clypeata</i>) [A056] • Red-breasted Merganser (<i>Mergus serrator</i>) [A069] • Oystercatcher (<i>Haematopus ostralegus</i>) [A130] • Golden Plover (<i>Pluvialis apricaria</i>) [A140] • Grey Plover (<i>Pluvialis squatarola</i>) [A141] • Lapwing (<i>Vanellus vanellus</i>) [A142] • Dunlin (<i>Calidris alpina</i>) [A149] • Black-tailed Godwit (<i>Limosa limosa</i>) [A156] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] • Curlew (<i>Numenius arquata</i>) [A160] • Redshank (<i>Tringa totanus</i>) [A162] • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] • Common Gull (<i>Larus canus</i>) [A182] • Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] • Common Tern (<i>Sterna hirundo</i>) [A193]

Table 1: Natura 2000 Sites Subject to Screening

Site Code	Site Name	Qualifying Interests	Conservation Objectives
			and to maintain the favourable conservation condition of the wetland habitat in Cork Harbour SPA as a resources for the regularly-occurring migratory birds that utilise it as defined by attributes and targets set out in Conservation Objectives Cork Harbour SPA Dec 16 2014 which are available at www.NPWS.ie
4094	River Blackwater Callows SPA	<ul style="list-style-type: none"> • Whooper Swan (<i>Cygnus cygnus</i>) [A038] • Wigeon (<i>Anas penelope</i>) [A050] • Teal (<i>Anas crecca</i>) [A052] • Black-tailed Godwit (<i>Limosa limosa</i>) [A156] • Wetland and Waterbirds [A999] 	<p>To maintain or restore the favourable conservation condition of bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> • Whooper Swan (<i>Cygnus cygnus</i>) [A038] • Wigeon (<i>Anas penelope</i>) [A050] • Teal (<i>Anas crecca</i>) [A052] • Black-tailed Godwit (<i>Limosa limosa</i>) [A156] <p>and to maintain or restore the favourable condition of the wetland habitat at Blackwater Callows as a resource for the regularly-occurring migratory waterbirds that utilise it as set out in the Conservation Objectives for the Blackwater Callows SPA which are available at www.NPWS.ie</p>

3.4 Screening Assessment

Preliminary Screening

The purpose of this screening exercise is to identify whether any of the policies or zoning objectives set out in the draft plan could have the potential to give rise to negative effects on any of the Natura 2000 sites listed above.

As a preliminary assessment, the Natura 2000 sites were assessed to identify whether there was any hydrological or other linkage between them and the plan areas, or whether implementation of the plan would require exploitation of resources (e.g. water) from within any Natura 2000 site (identifying potential pathways for impact). The results of this preliminary screening are set out in Table 2 below.

Table 2: Preliminary Screening Assessment

Site Name	Screening Determination
Great Island Channel (1058)	<p>This SAC is located within the Cobh MD. The boundaries of a number of the settlements within the MD overlap with the SAC. These include the settlements boundaries of Little Island and Marino Point, while there is a very minor overlap between the settlement boundary for Carrigtwohill and the SAC. Fota Island is surrounded by the SAC and a small section of woodland on the island adjacent to Belvelly Bridge lies within the SAC boundary. The settlements of Glounthane and of Belvelly bound the SAC. Further assessment is required in respect of policy proposed for these settlements.</p> <p>The Carrigtwohill WWTP discharges treated wastewater into the north channel within the SAC. Wastewater from the settlements of Glanmire, Little Island and Glounthane is directed to the Carrigrenan WWTP for treatment. Treated effluent from this plant discharges into the harbour just south of Marino Point adjacent to the SAC.</p> <p>The plan refers to new infrastructure requirements (new access) for Cobh require further assessment in relation to the potential for impacts on the SAC.</p> <p>The settlements of Caherlag, Upper Glanmire, Ballymore/Walterstown, Knockraha, Templemichael, Rathcooney, Carrigaloe and Haulbowline Island are all located within 5km of the SAC. However, there is no hydrological linkage between these settlements and the SAC and no policies in the plan associated with these settlements direct activity into the SAC. No further assessment is considered to be required in relation to these settlements.</p> <p>Detailed screening Required</p>

Table 2: Preliminary Screening Assessment

Site Name	Screening Determination
<p>Blackwater River (Cork/Waterford) SAC (2170)</p>	<p>The development boundary of Glenville which lies within the Cobh MD LAP overlaps with the Blackwater River SAC. The Glenville WWTP discharges wastewater directly to the Owenbawn River which forms part of the Blackwater River SAC. Most of the settlement of Bottlehill is within the Cobh MD with parts of it within the Kanturk Mallow MD. Bottlehill has been identified as a landfill site for biodegradable municipal waste. There is a hydrological connection between the site and the SAC (Bride River) via the Coom River. Further assessment is required in relation to these settlements.</p> <p>Detailed screening required</p>
<p>Ballycotton Bay SPA (4022)</p>	<p>The Cobh MD is located circa 13km east of this SPA. The MD is not hydrologically connected to the SPA. No policies in the plan direct activity into this SPA. No potential for impact on this site is identified.</p> <p>No further assessment is considered to be required.</p>
<p>Cork Harbour SPA (4030)</p>	<p>Parts of this SPA are located within the Cobh Municipal District, and the boundaries of a number of its settlements overlap with the boundary of the SPA. These include the settlements of Glanmire, Little Island and Fota Island. There are minor boundary overlaps with between the SPA and the settlements of Glounthane and Carrigtwohill. The settlements of Marino Point and Belvelly are surrounded by the SPA.</p> <p>The Carrigtwohill WWTP discharges treated wastewater directly to the SPA. Wastewater from the settlements of North Environs, Glanmire, Little Island and Glounthane is directed to the Carrigrenan WWTP which discharges to the harbour close to Marino Point within approximately 300m of the SPA. The Carrignavar WWTP discharges to the catchment of the SPA.</p> <p>The plan refers to new infrastructure requirements (new access) for Cobh require further assessment in relation to the potential for impacts on the SAC.</p> <p>The plan also references proposals for development of Haulbowline Island and Spike Island as tourist attractions. Further assessment will be required to determine whether these proposals could have the potential to affect the SPA.</p> <p>The settlements of Caherlag, Upper Glanmire, Ballymore/Walterstown, Knockraha, Templemichael, Rathcooney and Carrigaloe are all located within 5km of the SPA. However, there is no hydrological linkage between these settlements and the SPA and no policies in the plan associated with these</p>

Table 2: Preliminary Screening Assessment

Site Name	Screening Determination
	settlements direct activity into the SPA. No further assessment is considered to be required in relation to these settlements. Detailed screening is required.
River Blackwater Callows SPA (4094)	The Cobh MD is located circa 17km to the south of this SPA. There is no hydrological connection between the SPA and any of the settlements in this Municipal District. No policies in the plan direct activity into this SPA. No potential for impact on this site is identified. No further assessment is considered to be required. No further screening is required.

Preliminary Screening Summary

Potential for significant negative effects were screened out as a result of preliminary screening for the following Natura 2000 sites:

Code	Site Name
4022	Ballycotton Bay Special Protection Area
4094	River Blackwater Callows Special Protection Area

Detailed Screening

Further screening was then completed for the remaining sites. These are sites which are located in areas where hydrological or other possible ecological linkages have been identified between them and settlements for which policy is proposed at preliminary screening stage. Screening has been completed having regard to plan policies and zoning objectives. Particular attention has been paid in this exercise to policies which could

- direct development into areas within or adjacent to Natura 2000 sites;
- give rise to a risk of increased levels of disturbance affecting populations of species in any Natura 2000 site;
- encourage increased recreational or other human activity within or near any Natura 2000 sites;
- give rise to increased pressure on environmental resources (e.g. water) which could affect any Natura 2000 sites;
- increase risk of spread of invasive species within or near Natura 2000 sites; or
- influence how land within or close to Natura 2000 sites is developed and managed in the future.

The focus of detailed screening is on the following sites:

Code	Site Name
1058	Great Island Channel Special Area of Conservation
2170	Blackwater River Special Area of Conservation
4030	Cork Harbour Special Protection Area

The qualifying interests and conservation objectives which have been set for each of these sites are summarised in **Appendix I**.

The outcomes of screening assessments completed for each of these sites is set out below.

Great Island Channel SAC (1058) - Screening Assessment

SAC Description and Key Concerns

This site is located in the north channel of Cork Harbour. It is of conservation importance for its estuarine habitats including saltmarsh (Atlantic salt meadows) and mudflat habitat types. The Conservation Objectives which have been established for these habitats are set out in Appendix I of this plan. Mudflat habitat supports the benthic community type 'Mixed sediment to sandy mud with polychaetes and oligochaetes community complex' to which conservation targets are applied. This community complex is recorded throughout the intertidal and into the shallow subtidal areas of the SAC. The other habitat for which the SAC is designated - Atlantic saltmeadows, has been recorded at Bawnard (Dungourney Estuary), Carrigtwohill on the northern side of Fota Island, Lough Atalia, Harpers Island, Slatty Bridge, Belvelly, Rossmore and Midleton. Both habitat types for which the SAC is designated are currently assessed to have unfavourable-bad conservation status.

The site overlaps with the Cork Harbour SPA which is a site of international importance for the large numbers and variety of wintering birds which are dependent upon it. Water quality in the north channel is assessed to be Moderate status only (EPA Envision Maps 2010-2012).

A number of settlements within the Cobh MD are located adjacent to this SAC and significant growth is proposed for some of these settlements including for the City North Environs, Carrigtwohill, Glanmire, Cobh, Monard and Glounthane. Furthermore, a number of parcels of land are identified in the plan which are currently under consideration to be zoned for future development (Metropolitan Cork Strategic Land Reserve). These include lands within the Cobh MD at Kilbarry, Carhoo and Kilcully (SLR8 and SLR9), lands to the west of Carrigtwohill (SLR10), lands between Carrigtwohill and Midleton (SLR11) and lands to the North of Cobh (SLR1).

The boundaries of some of these settlements overlap with the SAC. These include Carrigtwohill, Glounthane, Little Island, Marino Point, Fota Island and Belvelly.

Treated effluent from the Carrigtwohill WWTP discharges within the SAC while wastewater from the settlements of Glanmire, Cork North Environs, Little Island and Glounthanue is directed to the Carrigrenan WWTP for treatment. Treated effluent from this plant discharges into the

harbour just south of Marino Point and south of the SAC.

In order to protect the habitats for which the SAC is designated, it will be important to ensure that natural dynamic hydrological processes within the coastal zone are preserved, that water quality is protected and that direct damage to habitats within the SAC is prevented.

In the context of this report, and having regard to the Conservation Objectives which apply to the site, the key requirements for the plan are to ensure that:

- policies in the plan will not hinder natural dynamic coastal hydrological processes – ie prevent natural retreat of coastal habitats as sea levels rise, interfere with natural circulation of sediments or interfere with natural tidal flooding regimes ;
- policies in the plan will not result in increased nutrient loading to the SAC;
- policies in the plan will not encourage or direct development into the SAC; and
- policies in the plan will not put undue recreational or other pressure on coastal habitats.

Assessment

Protection of natural dynamic coastal hydrological processes:

The installation of coastal protection infrastructure or other physical infrastructure in the coastal zone could have the potential to affect natural hydrological processes and could thereby interfere with the achievement of the Conservation Objectives which have been set for estuarine habitats within this SAC. Significant increases in surface water run-off to the harbour could also have the potential to affect natural hydrological processes within the SAC.

There are no policies in the plan which propose the installation of coastal protection infrastructure or which propose development directly within the coastal zone around this SAC.

The additional growth proposed for the settlements adjacent to the SAC including Carrigtwohill, Glounthane and Little Island could have the potential to significantly increase levels of surface water run-off and possibly to alter hydrological patterns within this SAC, including areas where annexed habitat has been recorded. However, it is clarified in General Objectives (CT-GO-016, LI-GO-09 and GO-01(e)) that new developments in these settlements must integrate SuDS or make adequate provision for storm water storage and disposal measures, to ensure that Greenfield rates of run off are preserved. Subject to adherence to these policies, it is considered that development proposed through this plan will not pose a significant risk of impact on hydrological processes and natural flooding patterns around the SAC.

The settlement of Belvelly lies immediately adjacent to the south of Belvelly Bridge adjacent to SAC. It lies within the Metropolitan Green Belt where development is generally discouraged. Section 5.4.9 of the plan clarifies that new development in the area should adhere to General

Objective GO-01(a) for Other Locations. It is recommended that an addition would be made to the General Objectives - Other Locations which would clarify that developments in these areas will need to make provision for appropriate surface water attenuation and disposal.

Waste-water treatment – nutrient inputs:

Elevated nutrients in surface water can have the potential to have negative effects on mudflat habitat for which this SAC is designated by affecting the distribution and health of benthic communities which are associated with this habitat type.

The primary sources of nutrients in this catchment are identified to be associated with agricultural activities and with urban wastewater systems. The Carrigtwohill WWTP discharges treated effluent within the SAC, while the Midleton plant discharges treated effluent just south of the site. The Carrigrennan WWTP which discharges to the estuary at Marino Point, just south of the SAC takes waste water from many of the settlements in this MD including Glanmire, Little Island, North Environs and Glounthane.

The provision of waste-water treatment infrastructure with sufficient capacity and treatment capability will be essential to ensuring that the level of growth provided for in this plan can be achieved in a manner which is compatible with the Conservation Objectives which have been set for the SAC. Settlement specific objectives clarify that new growth cannot proceed in these settlements until appropriate wastewater infrastructure is in place. A new WWTP for Carrigtwohill was opened in January 2016. No data is available as yet to assess how this plant is performing.

A study on the Great Island Channel SAC was completed as part of the assessment process during the completion of the Cork County Development Plan 2014 (BEC, 2014). That study recommended that as a priority waste water infrastructure in the harbour area would be upgraded in order that it can meet the requirements of the Urban Waste Water Directive Regulations; and that the Great Island North Channel Pollution Reduction Programme should be implemented. The study concluded that conservation condition of Mudflat habitat within the SAC would be likely to recover provided that appropriate upgrades (both capacity and treatment standards) to waste water infrastructure are put in place. The study stated that it may be necessary to provide for review outfall locations for a number of treatment plants and/or to improve treatment plant treatment standards, in particular those in or near the north channel (Midleton and Carrigtwohill) where problems with eutrophication are most acute, to ensure that the growth which is proposed in the plan can be achieved while ensuring compliance with the requirements of both the Water Framework Directive and the Habitats Directive. With the implementation of these measures, the study concludes that the conservation status of this habitat would not be compromised by the population targets proposed for the harbour area.

Cork County Council has committed to engaging with stakeholders to prepare and implement a

Wastewater Management Strategy for Cork Harbour which will include addressing issues relating to the discharge of effluent within or near the Great Island Channel SAC (Section 11 of County Development Plan 2014) in the short to medium term. It is recommended that this position would be clarified in this plan.

Subject to adherence to policies Carrigtwohill (CT-GO-01), Glanmire (GM-GO-03), City North (NE-GO-02), Little Island (LI-GO-03) and Glounthane (Key Villages GO-01(d)) which will only allow development in these to proceed when adequate waste water infrastructure is in place, and having regard to CCC's commitment to engage with stakeholders to prepare and implement a wastewater management strategy for the harbour, it is considered that potential for the plan to give rise to negative effects associated with nutrient discharges, on this SAC can be screened out.

Boundary Issues:

The boundary of Carrigtwohill is proposed to be extended through this plan to incorporate a new portion of land to the west of the town north of the N25. The area is zoned for business uses (CT-B-09) and is located immediately adjacent to the Great Island Channel Special Area of Conservation which lies to the north of the proposed site. Intensive development within this area could pose risks of impact on water quality and natural hydrological processes within the SAC. General Objectives CT-GO-02 and CT-GO-03 clarify that development within the settlement of Carrigtwohill must be supported by adequate waste-water infrastructure and that it will only be granted where it is shown that it is compatible with the requirements of the Habitats Directive. Objective CT-GO-16 clarifies that new development in this settlement must incorporate provision for SuDS. Subject to adherence to these objectives, it is considered that this zoning can be accommodated without posing a significant risk of impact on the SAC.

There is small overlap between the zoned parcel of land CT-B-02 and the SAC. The overlap is very minor and may just be an anomaly of the digitisation process. It is recommended however, that it would be clarified in the zoning objective associated with this site that the hedgerow boundary in the north western corner of this zone would be maintained intact in order to maintain a buffer between the SAC and any new development which may be proposed in this zone.

The boundary of the SAC overlaps with a portion of land within the settlement boundary of Little Island at Carrigrennan. There is an existing amenity walk identified in the area (LI-U-04), but there are no plans for further development of this walk. In order to reduce pressure for development in this area, it is recommended that consideration be given to zoning the SAC parcel land of land at Carrigrennan as Open Space - not suitable for development.

Marino Point on the Great Island is identified as an Other Location in the Cobh MD LAP. This is a large former industrial site located on the shoreline of the Great Island and is immediately

adjacent to the Great Island Channel. The site is identified to be developed for port related industrial uses (Marino Point X-01 zoning). The proximity of the site to the SAC is recognised in the wording of the zoning which states that new development in this area may only proceed where it can be shown that it will not have negative implications for the adjacent Natura 2000 sites.

A small area of woodland habitat to the north of Belvelly Bridge on Fota Island which lies within the SAC. There are no specific housing targets set for Fota and given the location of this woodland on the shoreline within the SAC, it is considered that it is unlikely that it would come under pressure to be developed. No action is required.

Strategic Land Reserve:

A number of parcels of land are identified in the plan, which are currently under consideration to be zoned for future development (Metropolitan Cork Strategic Land Reserve). These include land blocks that are located proximal to the SAC between Carrigtowhill and Middleton (SLR11) and land to the west of Carrigtwohill (SLR10). Development of land in these areas could have the potential to increase pressure on water quality within the SAC. More detailed assessment of possible implications of development of these areas on the Cork Harbour SPA will be required before a decision is made as to whether these areas can be zoned. This is stated in section 1.7.43 of the plan. This assessment will be progressed prior to the completion of the making of this plan.

Conclusions

Nutrients Issues:

Subject to adherence to DB and GO objectives which clarify the position in relation to the requirement to provide adequate wastewater treatment infrastructure around Cork Harbour to accommodate proposed development, it is considered that the growth which is proposed in this plan can be accommodated without giving rise to significant negative effects on the Great Island Channel SAC.

Hydrological Issues:

Subject to adherence to plan objectives CT-GO16, LI-GO-09, GO-01(3)-Villages and IN-01, then it is considered that there will be no significant risk that development provided for in this plan will affect natural hydrological processes within the SAC.

Boundary Issues:

There is only one location within the MD where there is a significant boundary overlap between a settlement and the Great Island Channel SAC. This is at Carrigrennan, Little Island. It is recommended that consideration would be given to zoning this area as Open Space, not suitable for development in the interests of reducing pressure for development within this area.

Strategic Land Reserve:

More detailed assessment of possible implications of development of lands adjacent to the Great Island Channel SAC will be required before a decision is made as to whether these lands can be zoned without giving rise to negative effects on this site. This assessment will be progressed prior to the completion of the making of this plan. The main locations of concern are SLR10 and SLR11 as they are located within close proximity to the SAC.

Overall Conclusion:

Some changes to the draft plan are required to ensure compliance with the Habitats Directive. It is recommended that these changes would be made at the amendments stage. Subject to the implementation of these changes and adherence to protective policies set out in the LAP, it is considered that potential for development supported by this plan to give rise to significant negative effects on the Great Island Channel SAC can be ruled out. Further assessment will also be required within the coming months to determine whether the zoning of additional lands proximal to the SAC is compatible with the protection of this site.

Blackwater River SAC (2170)-Screening Assessment

SAC Description and Key Concerns

The Blackwater River Special Area of Conservation is a very large site extending from its headwaters on the Cork Kerry border to its estuary at Youghal on the Cork Waterford border. It incorporates the main channels of the Blackwater, Bride, Allow and Awbeg as well as their many tributaries and to the Licky River (Co. Waterford) which meets the sea upstream of Youghal. The site designated for the protection of a number of freshwater and estuarine habitat types, woodland habitat types, freshwater mammalian, fish and invertebrate species as well as the protected plant species the Killarney Fern.

The village of **Glenville** is located on the Owenbawn River which forms part of the Blackwater River SAC. The **Bottlehill** Landfill site which is identified as an Other Location within this plan is within the catchment of the Blackwater River Special Area of Conservation. The Coom and Toor Rivers which flow east to the Bride rise within the Bottlehill site – however, the plan does not include objectives relating to this site.

In the context of this report, and having regard to the Conservation Objectives which apply to the site, the key requirements for the plan are to ensure that:

- the Owenbawn River has sufficient assimilative capacity to cope with the additional nutrient loading which will be generated by the increased population growth

provided for in Glenville;

- policies in the plan will not result in increased nutrient loading to the Owenbawn River;
- policies in the plan will not affect natural hydrological processes within the receiving catchment;

Assessment

Protection of water quality – Nutrient Inputs

The plan proposes an additional 100 houses in Glenville up to 2022. However inadequacy of the existing WWTP is recognised as a constraint on this development and it is stated in the plan that in the absence of any investment to provide additional capacity and appropriate treatment standards that development will be limited to a small number of individual dwellings to be serviced by individual waste water treatment facilities. Development boundary objective DB-02 states that development in this settlement will only be permitted where it is shown that it is compatible with the requirements of the Habitats Directive while GO-01(c) clarifies that appropriate and sustainable waste water infrastructure must be in place in the villages to facilitate the levels of development which are proposed. Adherence to this policy will be particularly important in this location as licensing and reporting documentation for this WWPT indicates that the treatment plant is failing to meet its license conditions and has been identified to be having a negative effect on valuable Salmon spawning headwaters.

Hydrological Issues:

The maintenance of open water and stable hydrological processes in freshwater river systems within the SAC is an important component in ensuring the protection of river substrates which can support healthy freshwater habitats and sustainable populations of freshwater species. GO-01((e) for the villages including Glenville clarifies that adequate provision must be made for storm water storage and disposal for new developments. It is recommended that consideration would be given to strengthening the General Objective relating to disposal of surface water in the plan, to clarify that surface water run-off should always be maintained at Greenfield rates, and to encourage use of SuDS.

Boundary Issues: None

Other Issues: It is proposed through the plan to develop a pedestrian walk linking new open space areas through Glenville linking to the river within the SAC (U-01). It is clarified in the plan that the walk should be designed to ensure compatibility with the protection of the Blackwater River Special Area of Conservation. This is considered to be an acceptable approach.

Conclusion:

Nutrients Issues

DB-02 states that development in this settlement will only be permitted where it is shown that it is compatible with the requirements of the Habitats Directive while GO-01(c) clarifies that appropriate and sustainable waste water infrastructure must be in place in the villages to facilitate the levels of development which are proposed. Subject to adherence to this policies GO-01(c) and DB-02 for Glenville, it is considered that the potential for new development which is supported by this plan to give rise to increased nutrient inputs to the Blackwater river SAC, can be ruled out.

Hydrological Issues:

Subject to adherence to policy G-01(e) Villages, it is considered that the potential for new development which is supported by this plan to affect natural hydrological processes in the Bride River can be ruled out.

Overall Conclusion:

The development proposals for Glenville and for the wider Cobh MD LAP are generally compatible with the protection of the Blackwater River SAC.

Cork Harbour SPA (4028)-Screening Assessment

SPA Description and Key Concerns

This is a large site which is made up of a number of discrete sheltered river estuarine systems discharging to Cork Harbour. The primary habitats of the SPA are intertidal mudflats which are of very high importance for the high numbers and variety of wintering waterfowl species which occur here. The SPA also has a nationally important breeding colony of Common Tern. The qualifying interests of the SPA and their Conservation Objectives are set out in **Appendix 1** of this report. The north channel of Cork Harbour including the Owenacurra Estuary, the estuary at Rostellan, the Owenboy Estuary and Lough Mahon which form part of the SPA are assessed to have moderate water quality status. Water quality in other portions of the SPA at Lough Beg and Whitegate/Aghada are assessed to be reaching good water quality status (EPA Envision Maps, 2010-2012).

Significant growth is proposed for this MD including within the following settlements - **City North Environs, Carrigtwohill, Glanmire, Cobh, Monard and Glounthane**. Furthermore, a number of parcels of land are identified in the plan which are currently under consideration to be zoned for future development (Metropolitan Cork Strategic Land Reserve). These include lands at Kilbarry, Carhoo and Kilcully (SLR8 and SLR9), lands to the west of Carrigtwohill (SLR10), lands between Carrigtwohill and Midleton (SLR11) and lands to the North of Cobh (SLR1).

A number of settlements in the Municipal District are located adjacent to or overlapping with

the boundary of the SPA. These include the settlements of **Glanmire, Glounthane, Little Island, Carrigtwohill, Fota Island, Belvelly** and **Marino Point**.

Significant tourism related development is proposed for **Spike Island** in the centre of Cork Harbour which could increase boating activity in areas sensitive for birds.

Treated effluent from the Carrigtwohill WWTP discharges within the SPA while wastewater from the settlements of Glanmire, Cork North Environs, Little Island and Glounthanue is directed to the Carrigrenan WWTP for treatment. Treated effluent from this plant discharges into the harbour just south of Marino Point and south of the SPA.

The key concerns for this assessment, having regard to the Conservation Objectives which apply to this SPA are to ensure that:

- policies in the plan will not affect the extent or quality of available feeding and roosting habitats or sites in the estuary;
- policies in the plan will not cause disturbance at Common Tern breeding sites;
- policies in the plan do not support recreational / amenity uses or other activities within or near the SPA which would have a high risk of causing disturbance to species for which the SPA is designated.

Assessment

Protection of natural dynamic coastal hydrological processes:

The installation of coastal protection infrastructure or other physical infrastructure in the coastal zone could have the potential to affect natural hydrological processes and could thereby interfere with the protection of wetland habitats upon which birds for which this SPA is designated are dependant. There are no policies in the plan which propose the installation of coastal protection infrastructure or which propose development directly within the coastal zone around this SPA.

The additional growth proposed for the settlements adjacent to the SPA including Carrigtwohill, Glounthane and Little Island could have the potential to significantly increase levels of surface water run-off and possibly to alter hydrological patterns affecting wetland areas used by feeding birds. However, it is clarified in General Objectives (CT-GO-016, LI-GO-09 and GO-01(e)) that new developments in these settlements must integrate SuDS or make adequate provision for storm water storage and disposal measures, to ensure that Greenfield rates of run-off are preserved. Subject to adherence to these policies, it is considered that development proposed through this plan will not pose a significant risk of impact on hydrological processes and natural flooding patterns around the SPA.

Waste-water treatment – nutrient inputs:

Elevated levels of nutrients are a less critical issue for estuarine birds than they are for estuarine habitats, as increased nutrients in mudflat systems can result in increased food availability for birds, notwithstanding the fact that the conservation condition of the habitat is reduced. Elevated levels of nutrients can in some circumstances result in a decrease in food availability for birds by causing an increase in the spread of algal mats over these areas.

The provision of adequate waste water treatment infrastructure is a key requirement to ensuring the protection of mudflat habitats for which the Great Island Channel SAC is designated and will also contribute towards the maintenance of healthy populations of invertebrate communities of mudflat habitats upon which birds for which the Cork Harbour SPA is designated, feed.

The primary sources of nutrients in this catchment are identified to be associated with agricultural activities and with urban wastewater systems. The new **WWTP** in Carrigtwohill discharges treated effluent within the SPA, while the Midleton WWTP (East Cork MD) also discharges to the SPA. Wastewater from many of the settlements within this MD is directed to Carrigrennan. Treated effluent from this plant is discharged just south of Marino Point close to the SPA boundary. The plan provides for significantly increased levels of growth in areas around the harbour including Carrigtwohill, as well for additional levels of growth in the other Municipal Districts around the harbour. Against this background, water quality in the SPA is considered to be eutrophic and has been assigned Moderate water quality status.

Settlement specific objectives clarify that the new growth in the main town settlements and key villages cannot proceed until/unless appropriate wastewater infrastructure is in place (CT-GO-02, GM-GO-03, NE-GO-02, LI-GO-03 and GO-01(c)) to cater for the additional growth proposed in this plan.

Subject to adherence to these objectives and having regard also to CCC's commitment to engage with relevant stakeholders to prepare and implement a Wastewater Management Strategy for the harbour, it is considered that potential for development supported by this plan to give rise to negative effects on the Cork Harbour SPA can be screened out.

Boundary Issues:

The boundary of Carrigtwohill is proposed to be extended through this plan to incorporate a new portion of land to the west of the town north of the N25. The area is zoned for business uses (CT-B-09) and will bring development closer to the Cork Harbour SPA which lies to the west of the proposed site. Intensive development and increased levels of activity within this area could pose risks of impact on water quality and natural hydrological processes within the SPA and could have the potential to give rise to disturbance related impacts on wintering birds. Issues relating to water quality and hydrology are adequately dealt with under policies CT-GO-

02, CT-GO-03 and CT-GO-16.

While not within the SPA, these fields may be of importance to populations of birds linked to the Cork Harbour SPA, at certain periods of the tidal cycle. Further investigation and possibly survey work will be required to determine whether the zoning of this area for development could give rise to negative impacts on one or more species of bird for which the SPA is designated. This assessment is to be progressed in the coming months prior to the completion of the development of the plan.

The boundary of the SPA overlaps with a portion of land within the settlement boundary of Glanmire. However, SPA land within the boundary of the settlement comprises the estuary itself, and is not anticipated to be likely to be subject to development pressure. There is no conflict of zoning in respect of this area.

There is a very minor overlap between a small parcel of land zoned for community uses (C-02), within settlement of Glounthane and the SPA. The overlap is very minor and may just be an anomaly of the digitisation process. There is a playground on the site and no additional development is proposed in the plan. No changes are required.

The boundary of the SPA overlaps with a portion of land within the settlement boundary of Little Island at Carrigrennan. There is an existing amenity walk identified in the area (LI-U-04), but there are no plans for further development of this walk. In order to reduce pressure for development in this area, it is recommended that consideration be given to zoning the SPA parcel land of land at Carrigrennan as Open Space - not suitable for development.

Marino Point on the Great Island is identified as an Other Location in the Cobh MD LAP. This is a large former industrial site located on the shoreline of the Great Island and is immediately adjacent to the Cork Harbour SPA. The site is identified to be developed for port related industrial uses (Marino Point X-01 zoning). The proximity of the site to the SPA is recognised in the wording of the zoning which states that new development in this area may only proceed where it can be shown that it will not have negative implications for the adjacent Natura 2000 sites.

Potential for disturbance related issues to arise

No new walks or cycleways area proposed within or near this SPA. However, the development of the tourism potential of Spike Island is an objective of the plan (Spike Island X-01) which could result in increased leisure boat activity within and around the harbour in areas of sensitivity for birds. A reference to the proximity of the island to the SPA in the X-01 zoning is recommended.

Strategic Land Reserve:

A number of parcels of land are identified in the plan, which are currently under consideration

to be zoned for future development (Metropolitan Cork Strategic Land Reserve). These include land blocks that are located proximal to the SAC between Carrigtowhill and Midleton (SLR11) and land to the west of Carrigtwohill (SLR10). Development of land in these areas could have the potential to increase pressure on water quality and possibly on natural hydrological processes within the SPA. More detailed assessment of possible implications of development of these areas on the Cork Harbour SPA will be required before a decision is made as to whether these areas can be zoned. This is stated in section 1.7.43 of the plan. This assessment will be progressed prior to the completion of the making of this plan.

Conclusion

Nutrients Issues:

Subject to adherence to CT-GO-01, GM-GO-03, NE-GO-02, LI-GO-03 and Villages GO-0(d) which clarify the position in relation to the requirement to provide adequate wastewater treatment infrastructure around Cork Harbour to accommodate proposed development, it is considered that the growth which is proposed in this plan can be accommodated without giving rise to significant negative effects on the Cork Harbour SPA.

Hydrological Issues:

Subject to adherence to plan objectives CT-GO-16, LI-GO-09, Villages GO-01(e) and IN-01, then it is considered that there will be no significant risk that development provided for in this plan will affect natural hydrological processes within the SPA.

Potential for disturbance related issues to arise

It is recommended that the proximity of Spike Island to the Cork Harbour SPA would be referenced in the X-01 objective for this site. New development on the island must be assessed in this context to ensure that it does not increase disturbance related impacts on breeding or overwintering birds.

Boundary Related Issues:

Further investigation and possibly survey work will be required to determine whether the proposed zoning of an area of land proximal to the Cork Harbour SPA at Carrigtwohill (CT-B-09) could give rise to negative impacts on one or more species of bird for which the SPA is designated. This assessment is to be progressed in the coming months and will determine whether it is possible to proceed with this zoning.

The boundary of the SPA overlaps with a portion of land within the settlement boundary of Little Island at Carrigrennan. In order to reduce pressure for development in this area, it is recommended that consideration be given to zoning the SPA parcel land of land at Carrigrennan as Open Space - not suitable for development.

Strategic Land Reserve:

More detailed assessment of possible implications of development of lands adjacent to the Cork Harbour SPA will be required before a decision is made as to whether these lands can be zoned without giving rise to negative effects on this site. This assessment will be progressed prior to the completion of the making of this plan. The main locations of concern are SLR10 and SLR11 as they are located within close proximity to the SPA. Further assessment will also be required within the coming months to determine whether the zoning of additional lands proximal to the SAC is compatible with the protection of this site.

Overall Conclusion:

Some changes to the draft plan are recommended to ensure that it is compliant with the Habitats Directive. It is recommended that these changes would be made at the amendments stage. Subject to the implementation of these changes and adherence to protective policies set out in the LAP, it is considered that potential for development supported by this plan to give rise to significant negative effects on the Cork Harbour SPA can be ruled out. Further assessment will also be required within the coming months to determine whether the zoning of additional lands proximal to the SPA (Strategic Land Reserve and CT-B-09 is compatible with the protection of this site.

4 Screening Conclusions and Recommendations

Cobh Municipal District Local Area Plan – Consultation Draft Screening Conclusion	
Name and Location of Natura 2000 sites subject to Screening for Appropriate Assessment	Great Island Channel SAC (1058) Blackwater River (Cork/Waterford) SAC (2170) Ballycotton Bay SPA (4022) Cork Harbour SPA (4030) River Blackwater Callows (4094)
Description of the Plan	See Section 2 of this report.
Is the Plan Directly Connected with Or Necessary to the Management of the Natura 2000 sites identified above	No

<p>Are there other projects or plans that together with this plan could give rise to cumulative impacts on any of the above listed sites.</p>	<p>Other plans that set land use policy and promote the development of economic, tourism, agriculture activity in within the catchment of Cork Harbour may include policies whose implementation could result in negative ‘in combination’ effects on habitats and species for which the Great Island Channel SAC and the Cork Harbour SPA are designated include <i>inter alia</i>:</p> <ul style="list-style-type: none"> • Atlantic Gateways Initiative 2006 • Common Agricultural Policy (2014-2020) • Cork Area Strategic Plan (2008) • Cork City Development Plan (2015-2021) • Draft Local Area Plan - East Cork Municipal District 2016 • Draft Local Area Plan – Ballincollig – Carrigaline Municipal District 2016 • Forests, products and people – Irelands forest policy-a renewed vision 2014 • Harvest 2020-A Vision for Irish Agri-Food and Fisheries • Marine Leisure Infrastructure Strategy for the Southern Division of Cork County 2010-2020 • National Climate (2007-2012) Climate Adaptation Framework (2012) • National Development Plan 2007-2013 • National Renewable Energy Action Plan • National Spatial Strategy • National Tourism Policy for Ireland (draft) 2014 • National Waste Management Plan 2004-2009 • Port of Cork Strategic Development Plan 2010 • Smarter Travel. A New Transport Policy for Ireland 2009-2020 • South Western Regional Planning Guidelines 2010-2022 <p>The primary issues of concern are policies resulting in an increased pressure on water quality, policies which may hinder natural hydrological processes within the coastal zone and policies which increase human activity within and near areas of high importance for feeding and roosting birds.</p> <p>Other plans that set land use policy and promote the development of agriculture and forestry activity within the catchment of the Blackwater River may include policies whose implementation could result in negative ‘in combination’ effects</p>
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	<p>on habitats and species for which the Blackwater River is designated include <i>inter alia</i>:</p> <ul style="list-style-type: none"> • Atlantic Gateways Initiative 2006 • Common Agricultural Policy (2014-2020) • Cork Area Strategic Plan (2008) • Draft Local Area Plan - Kanturk-Mallow Municipal District 2016 • Draft Local Area Plan - Fermoy Cork Municipal District 2016 • Draft Local Area Plan – East Cork Municipal District 2016 • Forests, products and people – Irelands forest policy-a renewed vision 2014 • Harvest 2020-A Vision for Irish Agri-Food and Fisheries • National Climate (2007-2012) Climate Adaptation Framework (2012) • National Development Plan 2007-2013 • National Renewable Energy Action Plan • National Spatial Strategy • National Waste Management Plan 2004-2009 • South Western Regional Planning Guidelines 2010-2022 <p>The primary issues of concern are policies resulting in an increased pressure on water quality, policies which may hinder natural flooding patterns and other hydrological processes in the river.</p>
<p>Assessment of Significant Effects</p>	
<p>Describe how the plan (alone or in combination is likely to affect Natura 2000 sites)</p>	<p>The key policy areas which were identified at the draft plan screening stage which could have the potential to give rise to impacts on the Natura 2000 networks were:</p> <ul style="list-style-type: none"> • Proposed increases in population and support for the intensification of industrial and business economic activity around Cork Harbour could have the potential to affect water quality in the Great Island Channel SAC by causing increases in nutrient inputs to the harbour area. Increased nutrient inputs could have the potential to contribute to negative effects on the diversity of benthic faunal communities associated with mudflat habitats for which this SAC is designated.

	<ul style="list-style-type: none"> • Intensification of development within the catchment of Cork Harbour could have the potential to increase hydrological pressures on estuarine habitats within the Great Island Channel SAC by increasing volumes of surface water run-off to the SAC from surrounding built up areas and/or by reducing available space to allow for coastal retreat. Alterations in natural coastal dynamic processes could have the potential to affect habitats for which the Great Island Channel SAC is designated. • Boundary overlaps between settlements around the harbour and designated sites could increase pressure for development within protected sites.
<p>Recommended changes to the plan</p>	<p>A number of recommendations for modifications to the draft plan are proposed to ensure compliance with the Habitats and Birds Directives. These are summarised below.</p> <p>Great Island Channel SAC and Cork Harbour SPA - Zone undeveloped SAC and SPA land identified as existing built up area in Little Island as Open Space - not suitable for development.</p> <p>More detailed assessment is required in respect of sites identified for possible zoning at amendments stage (SLR packages) to determine whether zoning is compatible with protection of the Natura 2000 network;</p> <p>More detailed assessment is required to determine whether proposed zoning of CT-B-09 lands is compatible with protection of Cork Harbour SPA.</p> <p>Cork Harbour SPA: Recommended inclusion of reference in X-01 for Spike Island of need to ensure that development of tourism capacity of island is managed in a manner which is compatible with the protection of the Cork Harbour SPA.</p> <p>Blackwater River (Cork/Waterford) SAC No changes required Ballycotton Bay SPA No changes required River Blackwater Callows No changes required</p>

List of Agencies Consulted	The draft plan and this report will be referred to all of the relevant Statutory Authorities and will be available for consideration by the general public from November 16 th 2016.
Conclusion	<p>Further assessment is required in respect of certain lands to determine whether their zoning is compatible with protection of the Natura 2000 network. No conclusions can be reached in respect of these proposals at this point.</p> <p>Subject to adherence to protective policies in the plan relating to provision of appropriate waste water infrastructure and management of surface water, and to adoption of recommended changes as set out above, it is considered that potential for this plan to give rise to significant negative effects on the Natura 2000 network can be screened out.</p>
Data Collected to Carry Out the Assessment	
Who carried out the assessment	Planning Policy Unit Cork County Council
Sources of Data	See references
Level of Assessment Completed	Screening for Appropriate Assessment
Where can the full results of the assessment be accessed and viewed	Habitats Directive Assessment will continue through the process of making this plan. All documents associated with the process will be available at www.corkcoco.ie

5 Next Steps

5.1 Post Consultation

Submissions or observations regarding the **Cobh Municipal District Draft Local Area Plan** document and to the Environmental Report and Habitats Directive Screening Report are now welcome up to 4pm on Friday 06th January 2017.

All such submissions lodged within the above period and prior to the close of business at 4.00pm on Friday 06th January 2017, will be taken into consideration in the finalisation of the Local Area Plan, and proposed amendments will be published during a second round of public consultation which will commence in the spring of 2017. Proposed amendments will be subject to Habitats Directive Screening Assessment and the findings of that assessment will be published alongside the proposed amendments.

6 Sources of Information

6.1 National Parks and Wildlife Service Data

Information relating to individual Natura 2000 sites including Article 17 Conservation Assessment Reports for Habitats and Species In Ireland (2013), individual site synopses, Natura 2000 data forms, and information relating to the qualifying features and conservation objectives of individual sites was sourced from the NPWS database (www.NPWS.ie)

6.2 Guidance

Guidance used in the preparation of this report included the following:

European Communities, Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC. European Communities, 2000.

European Communities, 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 Communities, 2001.

Environment, Heritage and Local Government. Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. 2009.

Appendix I – Summary Site Data

Great Island Channel SAC (Site Code 1058)

Qualifying Interests

- 1140 Mudflats and sandflats not covered by seawater at low tide
- 1330 Atlantic salt meadows

Conservation Objectives - Attributes and Targets (summary)

Mudflats and sandflats not covered by seawater at low tide [1140]	
Conservation Objective: To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Great Island Channel SAC.	
Attribute/Target	
Habitat Area	Community Distribution
The permanent habitat is stable or increasing subject to natural processes (723ha).	Conserve the following community type in a natural condition: Mixed sediment to sandy mud with polychaetes and oligochaetes community complex.
Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	
Conservation Objective: To maintain the favourable conservation condition of Atlantic salt meadows (Glauco-Puccinellietalia maritimae) in Great Island Channel SAC	
Attribute/Target	

Habitat Area	Habitat Distribution	Physical Structure: sediment supply	Physical structure: creeks and pans	Physical structure: flooding regime
Stable or increasing subject to natural processes including erosion and succession – Baw nard 0.29ha; Carrigtwohill 1.01ha	No decline or change in habitat distribution subject to natural processes	Maintain natural circulation of sediments and organic matter, without any physical obstructions	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession	Maintain natural tidal regime

Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) cont'd				
Conservation Objective: To maintain the favourable conservation condition of Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) in Great Island Channel SAC				
Attribute/Target				
Vegetation structure: zonation	Vegetation structure: height	Vegetation structure: vegetation cover	Vegetation composition: typical species and sub-communities	Vegetation structure: negative indicator species – <i>Spartan angelica</i>
Maintain the range of coastal habitats including transitional zones, subject	Maintain structural variation in sward	Maintain more than 90% of area outside creeks vegetated	Maintain range of sub-communities with typical species listed in SMP	No significant expansion of common cordgrass with an annual spread of less than

to natural processes including erosion and succession				1% where it is known to occur
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NPWS (2014) Conservation Objectives: Great Island Channel SAC 1058. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Blackwater River SAC (Site Code 2170)

Qualifying Interests

- 1130 Estuaries
- 1140 Mudflats and sandflats not covered by seawater at low tide
- 1220 Perennial vegetation of stony banks
- 1310 *Salicornia* and other annuals colonising mud and sand
- 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- 1410 Mediterranean salt meadows (*Juncetalia maritimi*)
- 3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation
- 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
- 91E0 *Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)
- 91J0 **Taxus baccata* woods of the British Isles

- 1029 Freshwater Pearl Mussel *Margaritifera margaritifera*
- 1092 White-clawed Crayfish *Austropotamobius pallipes*
- 1095 Sea Lamprey *Petromyzon marinus*
- 1096 Brook Lamprey *Lampetra planeri*
- 1099 River Lamprey *Lampetra fluviatilis*

1103	Twaite Shad	<i>Alosa fallax</i>
1106	Atlantic Salmon	<i>Salmo salar</i>
1355	Otter	<i>Lutra lutra</i>
1421	Killarney Fern	<i>Trichomanes speciosum</i>

Conservation Objectives - Attributes and Targets (summary)

<i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]					
Conservation Objective: To restore the favourable conservation condition of Freshwater Pearl Mussel in the Blackwater River SAC					
Attribute/Target					
Distribution	Population Size	Population Structure: recruitment	Population Structure: adult mortality	Habitat Extent	Water quality: macroinverts and phytobenthos (diatoms)
Maintain at 161km	Restore to 35,000 adult mussels.	Restore to least 20% of population no more than 65mm in length; and at least 5% of population no more than 30mm in length	No more than 5% decline from previous number of live adults counted; dead shells less than 1% of the adult population and scattered in distribution	Restore suitable habitat in more than 35km and any additional stretches necessary for salmonid spawning	Restore water quality macroinvertebrates: EQR greater than 0.90; phytobenthos: EQR greater than 0.93

<i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] cont'd					
Conservation Objective: To restore the favourable conservation condition of Freshwater Pearl Mussel in the Blackwater River SAC					

Attribute/Target				
Substratum quality: filamentous algae (macroalgae), macrophytes (rooted higher plants)	Substratum quality: sediment	Substratum quality: oxygen availability	Hydrological regime: flow variability	Host Fish
Restore substratum quality-filamentous algae: absent or trace (<5%); macrophytes: absent or trace (<5%)	Restore substratum quality-stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment	Restore to no more than 20% decline from water column to 5cm depth in substrate	Restore appropriate hydrological regimes	Maintain sufficient juvenile salmonids to host glochidial larvae

<i>Austropotamobius pallipes</i> White-clawed Crayfish 1092					
Conservation Objective: To maintain the favourable conservation condition of White-clawed Crayfish in the Blackwater River SAC					
Attribute/Target					
Distribution	Population Structure Recruitment	Negative Indicator Species	Disease	Water Quality	Habitat Quality Heterogeneity
No reduction from baseline	Juveniles and/or females with eggs in at least 50% of positive samples	No alien crayfish species	No instances of disease	At least Q 3-4 at all sites sampled by EPA	No decline in heterogeneity or habitat quality

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<i>Petromyzon marinus</i> (Sea Lamprey) [1095]				
Conservation Objective: To restore the favourable conservation condition of Sea Lamprey in the Blackwater River SAC				
Attribute/Target				
Distribution: extent of anadromy	Population structure of juveniles	Juvenile density in fine sediment	Extent and distribution of spawning habitat	Availability of juvenile habitat
Greater than 75% of main stem length of rivers accessible from estuary	At least three age/size groups present	Juvenile density at least 1/m ²	No decline in extent and distribution of spawning beds	More than 50% of sample sites positive
<i>Lampetra planeri</i> (Brook Lamprey) [1096]				
Conservation Objective: To maintain the favourable conservation condition of Brook Lamprey in the Blackwater River SAC				
Attribute/Target				
Distribution: extent of anadromy	Population structure of juveniles	Juvenile density in fine sediment	Extent and distribution of spawning habitat	Availability of juvenile habitat
Access to all watercourses down to first order streams	At least three age/size groups of brook/river lamprey present	Mean catchment juvenile density of brook/river lamprey at least 2/m ²	No decline in extent and distribution of spawning beds	More than 50% of sample sites positive
<i>Lampetra fluviatilis</i> (River Lamprey) [1099]				
Conservation Objective: To maintain the favourable conservation condition of River Lamprey in the Blackwater River SAC				

Attribute/Target				
Distribution: extent of anadromy	Population structure of juveniles	Juvenile density in fine sediment	Extent and distribution of spawning habitat	Availability of juvenile habitat
Access to all watercourses down to first order streams	At least three age/size groups of river/brook lamprey present	Mean catchment juvenile density of brook/river lamprey at least 2/m ²	No decline in extent and distribution of spawning beds	More than 50% of sample sites positive for brook/river lamprey juveniles

<i>Alosa fallax</i> (Twaite Shad) [1099]				
Conservation Objective: To restore the favourable conservation condition of Twaite Shad in the Blackwater River SAC				
Attribute/Target				
Distribution: extent of anadromy	Population structure: age classes	Extent and distribution of spawning habitat	Water quality and oxygen levels	Spawning habitat quality: Filamentous algae; macrophytes; sediment
Greater than 75% of main stem length of rivers accessible from estuary	More than one age class present	No decline in extent and distribution of spawning habitats	No lower than 5mg/l	Maintain stable gravel substrate with very little fine algal (macroalgae growth and macrophyte (rooted higher plant) growth

<i>Salmo salar</i> (Atlantic Salmon) [1106]				
Conservation Objective: To maintain the favourable conservation condition of Salmon in the Blackwater River SAC				

Attribute/Target					
Distribution: extent of anadromy	Adult spawning fish	Salmon fry abundance	Out-migrating smolt abundance	Number and distribution of reeds	Water quality
100% of river channels down to second order accessible from estuary	Conservation Limit (CL) for each system consistently exceeded	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5min sampling	No significant decline	No decline in number and distribution of spawning reeds due to anthropogenic causes	At least Q4 at all sites sampled by EPA

Estuaries [1130]			
Conservation Objective: To maintain the favourable conservation condition of Estuaries in the Blackwater River SAC			
Attribute/Target			
Habitat Area	Community Extent	Community Structure: <i>Mytilus edulis</i> density	Community Distribution
Permanent habitat area is stable or increasing, subject to natural processes (1208ha)	Maintain the extent of the <i>Mytilus edulis</i> – dominated community, subject to natural processes.	Conserve the high quality of the <i>Mytilus edulis</i> – dominated community, subject to natural processes.	Conserve the following community types in natural conditions: Intertidal estuarine sandy mud community complex; Subtidal estuarine fine sand with <i>Bathyporeia</i> spp. community complex; Sand and mixed sediment with polychaetes and crustaceans community complex; Coarse sediment community complex.

Mudflats and sandflats not covered by seawater at low tide [1140]
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Conservation Objective: To maintain the favourable conservation condition of mudflats and sandflats not covered by seawater at low tide for the Blackwater River SAC				
Attribute/Target				
Habitat Area	Community extent	Community structure: <i>Zostera</i> shoot density	Community structure: <i>Mytilus edulis</i> density	Community Distribution
The permanent habitat is stable or increasing subject to natural processes 284ha.	Maintain the extent of the <i>Zostera</i> and <i>Mytilus edulis</i> dominated communities, subject to natural processes	Conserve the high quality of the <i>Zostera</i> dominated community, subject to natural processes	Conservation the high quality of the <i>Mytilus edulis</i> dominated community, subject to natural processes	The following community types should be conserved in a natural condition: Intertidal estuarine sandy mud community complex and Sand and mixed sediment with polychaetes and crustaceans community complex

Perennial vegetation of stony banks [1220]					
Conservation Objective: To maintain the favourable conservation condition of Perennial vegetation of stony banks for the Blackwater River SAC					
Attribute/Target					
Habitat Area	Habitat Distribution	Physical structure: functionality and sediment supply	Vegetation structure: zonation	Vegetation composition: typical species and sub- communities	Vegetation composition: negative indicator species
Area stable or increasing, subject to	No decline, or change in habitat	Maintain the natural circulation of	Maintain the range of coastal habitats	Maintain the typical vegetated shingle	Negative indicator species (including

natural processes including erosion and succession	distribution, subject to natural processes.	sediment and organic matter, without any physical obstructions	including transitional zones, subject to natural processes including erosion and succession	flora including the range of sub-communities within the different zones	non-natives) to represent less than 5% cover
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Salicornia and other annuals colonising mud and sand				
Conservation Objective: To maintain the favourable conservation condition of <i>Salicornia</i> and other annuals colonising mud and sand in Blackwater River SAC				
Attribute/Target				
Habitat Area	Habitat Distribution	Physical Structure: sediment supply	Physical structure: creeks and pans	Physical structure: flooding regime
Stable or increasing subject to natural processes	No decline or change in habitat distribution, subject to natural processes	Maintain natural circulation of sediments and organic matter, without any physical obstructions	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession	Maintain natural tidal regime

Salicornia and other annuals colonising mud and sand cont'd				
Conservation Objective: To maintain the favourable conservation condition of <i>Salicornia</i> and other annuals colonising mud and sand in Blackwater River SAC				

Attribute/Target				
Vegetation structure: zonation	Vegetation structure: height	Vegetation structure: vegetation cover	Vegetation composition: typical species and sub-communities	Vegetation structure: negative indicator species – <i>Spartina anglica</i>
Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Maintain structural variation in sward	Maintain more than 90% of area outside creeks vegetated	Maintain the presence of species-poor communities listed in SMP	No significant expansion of common cordgrass with an annual spread of less than 1% where it is known to occur

Atlantic Salt Meadows (<i>Glauco-Puccinellietalia maritimae</i>) 1330				
Conservation Objective: To restore the favourable conservation condition of Atlantic Salt Meadows (<i>Glauco-Puccinellietalia maritimae</i>) for the Blackwater River SAC				
Attribute/Target				
Habitat Area	Habitat Distribution	Physical Structure: sediment supply	Physical structure: creeks and pans	Physical structure: flooding regime

Area stable or increasing subject to natural processes including erosion and succession (min 30.90ha)	No decline or change in habitat distribution subject to natural processes	Maintain natural circulation of sediments and organic matter, without any physical obstructions	Maintain creek and pan structure, subject to natural processes, including erosion and succession	Maintain natural tidal regime
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Atlantic Salt Meadows (<i>Glauco-Puccinellietalia maritimae</i>) 1330 cont'd				
Conservation Objective: To restore the favourable conservation condition of Atlantic Salt Meadows (<i>Glauco-Puccinellietalia maritimae</i>) for the Blackwater River SAC				
Attribute/Target				
Vegetation structure: zonation	Vegetation structure: height	Vegetation structure: vegetation cover	Vegetation composition: typical species and sub-communities	Vegetation structure: negative indicator species – <i>Spartina anglica</i>
Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Maintain structural variation in sward	Maintain more than 90% of area outside creeks vegetated	Maintain range of sub-communities with typical species listed in SMP	No significant expansion of common cordgrass, with an annual spread of less than 1%

Lutra Lutra (<i>Otter</i>)

Conservation Objective: To restore the favourable conservation condition of Lutra lutra (<i>Otter</i>) in the Blackwater River SAC							
Attribute/Target							
Distribution	Extent of terrestrial habitat	Extent of marine habitat	Extent of freshwater (river) habitat	Extent of freshwater (lake) habitat	Couching sites and holts	Fish biomass available	Barriers to connectivity
No significant decline	No significant decline. Area mapped and calculated as 103ha above HWM; 1165.7ha along river banks/around ponds	No significant decline. Area mapped as 647.2ha	No significant decline. Length mapped and calculated as 599.54km	No significant decline. Area mapped and calculated as 25.06ha	No significant decline	No significant decline	No significant increase

Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]							
Conservation Objective: To restore the favourable conservation condition of Mediterranean salt meadows (<i>Juncetalia maritimi</i>) for Kenmare River SAC							
Attribute/Target							

Habitat Area	Habitat Distribution	Physical Structure: sediment supply	Physical structure: creeks and pans	Physical structure: flooding regime	Vegetation structure: zonation
Area stable or increasing subject to natural processes including erosion and succession	No decline or change in habitat distribution subject to natural processes	Maintain natural circulation of sediments and organic matter, without any physical obstructions	Maintain creek and pan structure, subject to natural processes, including erosion and succession	Maintain natural tidal regime	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession

Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] cont'd
Conservation Objective: To restore the favourable conservation condition of Mediterranean salt meadows (<i>Juncetalia maritimi</i>) for Kenmare River SAC
Attribute/Target

Vegetation structure: height	Vegetation structure: vegetation cover	Vegetation composition: typical species and sub-communities	Vegetation structure: negative indicator species – <i>Spartina Anglica</i>
Maintain structural variation in sward	Maintain more than 90% of area outside creeks vegetated	Maintain range of sub-communities with typical species listed in SMP	No significant expansion of common cordgrass, with an annual spread of less than 1%

Killarney Fern (<i>Trichomanes speciosum</i>)							
Conservation Objective: To maintain the favourable conservation condition of Killarney Fern in the Blackwater River SAC							
Attribute/Target							
Distribution	Population size	Habitat Extent	Hydrological conditions: visible water	Hydrological conditions: water	Hydrological conditions: humidity	Light levels: shading	Invasive Species
No decline. Two locations known within the SAC	Maintain size and extent of existing colonies, including sporophyte from counts	No loss of suitable habitat, such as shaded rock crevices, caves or	Maintain hydrological conditions at the locations so that all colonies are in dripping or damp seeping	No increase. Presence of dessicated sporophyte mats indicates conditions are unsuitable	No increase. Presence of dessicated sporophyte fronds or gametophyte mats indicates	No changes due to anthropogenic impacts	Absent or under control

	and number of gametopye patches	gullies in, or near to, known colonies. No loss of woodland canopy at or near to known locations	habitats, and water is visible at all locations		conditions are unsuitable		
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Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260]							
Conservation Objective: To maintain the favourable conservation condition of Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation in the Blackwater River SAC							
Attribute/Target							
Habitat area	Habitat area	Hydrological regime: river flow	Hydrological regime: tidal influence	Substratum composition: particle size range	Water quality nutrients	Vegetation composition: typical species	Floodplain connectivity
Area stable or increasing subject to natural processes	No decline, subject to natural processes	Maintain appropriate hydrological regimes	Maintain natural tidal regime	The substratum should be dominated by the particle size ranges, appropriate to the habitat sub-type (typically	The concentration of nutrients in the water column should be sufficiently low to prevent changes in species	Typical species of the relevant habitat sub-type should be present and in good condition	The area of active floodplain at and upstream of the habitat should be maintained

				sands, gravels and cobbles)	composition or habitat condition		
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Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles					
Conservation Objective: To maintain the favourable conservation condition of Old Sessile Oak Woods in the Blackwater River SAC					
Attribute/Target					
Habitat Area	Habitat Distribution	Woodland Size	Woodland Structure: cover and height	Woodland Structure; community diversity and extent	Woodland Structure: natural regeneration
Area stable or increasing, subject to natural processes at least 263.7ha for subsites surveyed	No decline	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size	Diverse structure with a relatively closed canopy containing mature trees; sub-canopy layer with semi mature trees and shrubs; and well-developed herb layer	Maintain diversity and extent of community types	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy

Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles cont'd					
Conservation Objective: To maintain the favourable conservation condition of Old Sessile Oak Woods in the Blackwater River SAC					
Attribute/Target					

Woodland Structure: dead wood	Woodland Structure: veteran trees	Woodland Structure: indicators of local distinctiveness	Vegetation composition: native tree cover	Vegetation composition: typical species	Vegetation composition: negative indicator species
At least 30m ³ /ha of fallen timber greater than 10cm diameter; 30 snags/ha;; both categories should include stems greater than 40cm diameter	No decline	No decline	No decline. Native tree cover not less than 95%	A variety of typical native species present, depending on woodland type, including Sessile Oak and Birch	Negative indicator species, particularly non-native invasive species , absent or under control

Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0]

Conservation Objective: To restore the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) in the Blackwater River SAC

Attribute/Target

Habitat Area	Habitat Distribution	Woodland size	Woodland structure: cover and height	Woodland structure: community diversity and extent	Woodland Structure: natural regeneration
Area stable or increasing subject to natural processes, at least 19.2ha for sites surveyed	No decline	Area stable or increasing. Where topographically possible 'large' woods at least 25ha in size and 'small woods' at least 3 ha in size	Diverse structure with a relatively closed canopy containing mature trees; sub-canopy layer with semi-mature trees and shrubs; and well	Maintain diversity and extent of community types	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy

			developed herb layer		
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Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] cont'd

Conservation Objective: To restore the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) in the Blackwater River SAC

Attribute/Target						
Hydrological regime: Flooding depth/height of water table	Woodland structure: dead wood	Woodland structure: veteran trees	Woodland structure: indicators of local distinctiveness	Vegetation composition: native tree cover	Vegetation composition: typical species	Vegetation composition: negative indicator species
Appropriate hydrological regime necessary for maintenance of alluvial vegetation	At least 30m ³ /ha of fallen timber; 30 snags/ha; both categories should include stems greater than 40cm diameter (greater than 20cm diameter in the case of alder)	No decline	No decline.	No decline. Native tree cover not less than 95%	A variety of typical native species present, depending on woodland type, including alder, willows, and locally, oak and ash	Negative indicator species, particularly non-native invasive species, absent or under control

NPWS (2012) Conservation Objectives: Blackwater River SAC 2165. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Cork Harbour SPA (Site Code 4030) - Site Data

Qualifying Interests

A004 Little Grebe
A005 Great Crested Grebe
A017 Cormorant
A028 Grey Heron
A048 Shelduck
A050 Wigeon
A052 Teal
A054 Pintail
A056 Shoveler
A069 Red-breasted
A130 Oystercatcher
A140 Golden Plover
A141 Grey Plover
A142 Lapwing
A149 Dunlin
A156 Black-tailed Godwit
A157 Bar-tailed Godwit
A160 Curlew
A162 Redshank
A179 Black-headed Gull
A183 Common Gull
A183 Lesser Black-backed Gull
A193 Common Tern
A999 Wetland and Waterbirds

Conservation Objectives - Attributes and Targets (summary)

A004 Little Grebe <i>Tachybaptus ruficollis</i>			
To maintain the favourable conservation condition of Little Grebe in Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by little grebe, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A005 Great Crested Grebe <i>Podiceps cristatus</i>			
To maintain the favourable conservation condition of Great Crested Grebe in Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by great crested grebe, other	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

		than occurring from natural patterns of variation	
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A017 Cormorant <i>Phalacrocorax carbo</i>			
To maintain the favourable conservation condition of Cormorant in Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by cormorant, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A028 Grey Heron <i>Ardea cinerea</i>			
To maintain the favourable conservation condition of Grey Heron in Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

		areas by Grey Heron, other than occurring from natural patterns of variation	
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A048 Shelduck *Tadorna tadorna*

To maintain the favourable conservation condition of Shelduck in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by Shelduck, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A050 Wigeon *Anas penelope*

To maintain the favourable conservation condition of Wigeon in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

		intensity of use of areas by Wigeon, other than occurring from natural patterns of variation	
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A004 Teal <i>Anas crecca</i>			
To maintain the favourable conservation condition of Teal in Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by teal, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A052 Pintail <i>Anas acuta</i>			
To maintain the favourable conservation condition of Pintail in Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of	No significant decrease in the	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation

	areas	range, timing or intensity of use of areas by pintail, other than occurring from natural patterns of variation	objective supporting document.
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A056 Shoveler *Anas clypeata*

To maintain the favourable conservation condition of Shoveler in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by shoveler, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A069 Red-breasted Merganser *Mergus serrator*

To maintain the favourable conservation condition of Red-breasted Merganser in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of	No significant decrease in the	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation

	areas	range, timing or intensity of use of areas by Red-breasted merganser, other than occurring from natural patterns of variation	objective supporting document.
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A130 Oystercatcher Haematopus ostralegus

To maintain the favourable conservation condition of Oystercatcher in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by oystercatcher, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A140 Golden Plover Pluvialis apricaria

To maintain the favourable conservation condition of Golden Plover in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population	Waterbird population trends are presented in part four of

		trend stable or increasing	the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by golden plover, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A141 Grey Plover *Pluvialis squatarola*

To maintain the favourable conservation condition of Grey Plover in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by grey plover, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A142 Lapwing *Vanellus vanellus*

To maintain the favourable conservation condition of Lapwing in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by lapwing, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A004 Dunlin *Calidris alpina alpina*

To maintain the favourable conservation condition of Dunlin in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by dunlin, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A156 Black-tailed Godwit *Limosa limosa*

To maintain the favourable conservation condition of Black tailed Godwit in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by black-tailed godwit, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A157 Bar-tailed Godwit *Limosa lapponica*

To maintain the favourable conservation condition of Bar-tailed Godwit in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by bar-tailed godwit, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A160 Curlew Numenius arquata			
To maintain the favourable conservation condition of Curlew in Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by curlew, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A162 Redshank Tringa totanus			
To maintain the favourable conservation condition of Redshank in Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by redshank, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

Greenshank <i>Tringa nebularia</i>			
To maintain the favourable conservation condition of Greenshank in Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by greenshank, other than occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

A179 Black-headed Gull <i>Chroicocephalus ridibundus</i>			
To maintain the favourable conservation condition of Black-headed Gull in Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by black-headed gull, other than occurring from	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objective supporting document.

		natural patterns of variation	
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A193 Common Tern <i>Sterna hirundo</i>			
To maintain the favourable conservation condition of Common Tern in Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Breeding population abundance : apparently occupies nests (AONs)	Number	No significant decline	Measures based on standard tern survey methods (see Walsh et al., 1995). In 2012 the total population of common terns that nested within the wider Cork Harbour was between 85 and 95 pairs , a proportion of which now breeds outside the SPA (RPS, 2014)
Productivity rate: fledged young per breeding pair	Mean number	No significant decline	Measure based on standard tern survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) (JNCC, 2014) provides population data for this species.
Distribution: breeding colonies	Number, location , area (hectares)	No significant decline	Common tern breeding colonies can be sited in both coastal and inland areas using a wide variety of habitats including sandy, rocky or well –vegetated islands in estuaries, lakes and rivers. This species can also use artificial substrates (Del Hoyo et al., 1996). First recorded nesting in saltmarsh in 1969-1970 (Smiddy,1985) , the colony now largely breeds on artificial structures in at least two locations (see Wilson et al., 2000 and RPS, 2014)
Prey biomass available	Kilogrammes	No significant decline	Key prey items: Small fish, crustaceans, insects and occasionally squid. Key habitats: common tern forage in/over shallow coastal waters, bays inlets ,shoals,tidal-rips,drift lines, beaches, saltmarsh creeks, lakes,ponds or rivers. Foraging range: max. 37km , mean ma.33.81km , mean 8.67km (BirdLife International Seabird Database(Birdlife International,2014)
Barriers to	Number; location;	No significant	Seabirds species can make extensive use of marine waters

connectivity	shape; area(hectares)	increase	adjacent to their breeding colonies. Foraging range: maz.37km , mean max.33.81km , mean 8.67km (BirdLife International Seabird Database 2014)
Disturbance at the level of impact breeding site	Level of impact	Human activities should occur at levels that do not adversely affect the breeding common tern population	In the Cork Harbour area, this species largely breeds on artificial structures (see Wilson et al., 2000 and RPS, 2014)

A999 Wetlands			
To maintain the favourable conservation condition of wetland habitats in Cork Harbour SPA, as a recourse for the regularly – occurring migratory waterbirds that utilise it. This is defined by the following attribute and target:			
Attribute	Measure	Target	Notes
Habitat area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,587 hectares, other than that occurring from natural patterns of variation	The wetland habitat area was estimated as 2,587ha using OSI data and relevant orthophotographs. For further information see part three of the conservation objectives supporting documents

NPWS (2014) Conservation objective for Cork Harbour SPA {4030}. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs

