

Cork County Council

**Proposed Amendment No2 to Midleton Local Area Plan (Carrigtwohill North Framework Masterplan)
Habitats Directive Screening Statement**

**Prepared by Cork County Council Planning Policy Unit
November 2015**



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1 Introduction

1.1 Background and Context

- 1.1.1 The Carrigtwohill Special Policy Area (zoned X-01 in the Midleton Electoral Area Local Area Plan) is a site located to the north of Carrigtwohill Town which has been zoned to provide for significant future expansion of the town of Carrigtwohill. This zoning is intended to allow for the development of a new residential neighbourhood to facilitate a significant expansion of the population of the town of Carrigtwohill. The zone incorporates the townlands of Terry's-Land, Carrigtwohill, Fahydorgan, Gortnamucky, Poulaniska and Ballyadam.
- 1.1.2 Cork County Council has developed a Framework Masterplan for the Carrigtwohill Special Policy Area. The purpose of the Framework Masterplan is to set out proposals for the development of the site. The plan proposes the development of between 2,000-3,000 houses with supporting roads and water infrastructure, primary and post-primary schools a linear park and other smaller parks within the special policy zone.
- 1.1.3 The Framework Masterplan has informed an amendment to the Midleton Electoral Area Local Area Plan 2011 in order to give the Framework Masterplan a statutory footing. The Framework Masterplan acts as a background planning guidance document to inform the future development of the site.
- 1.1.4 In accordance with requirements under the EU Habitats Directive (43/92/EEC) and EU Birds Directive (79/409/EEC) as transposed into the Planning and Development Act 2010, the impacts of draft Planning Schemes for Strategic Development Zones, 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, amending or varying these. This is to determine whether or not the implementation of such schemes could have negative consequences for the habitats or plant and animal species for which these sites are designated, and to avoid such impacts. This assessment process is called a Habitats Directive Assessment (HDA). In accordance with section 177S (b) of the Planning and Development Act 2010, the responsibility for assessing such impacts is the Planning Authorities in whose area the zone is situated, or, on appeal An Bord Pleanála, as the case may be.
- 1.1.5 The preliminary consultation document and amendment was published in April 2015 and put on display for a 4 week period from April 7th to May 4th and was assessed in

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. The designation of these sites is to contribute to ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European Territory.

accordance with this requirement. The results of that assessment are presented in a Habitats Directive Screening Report.

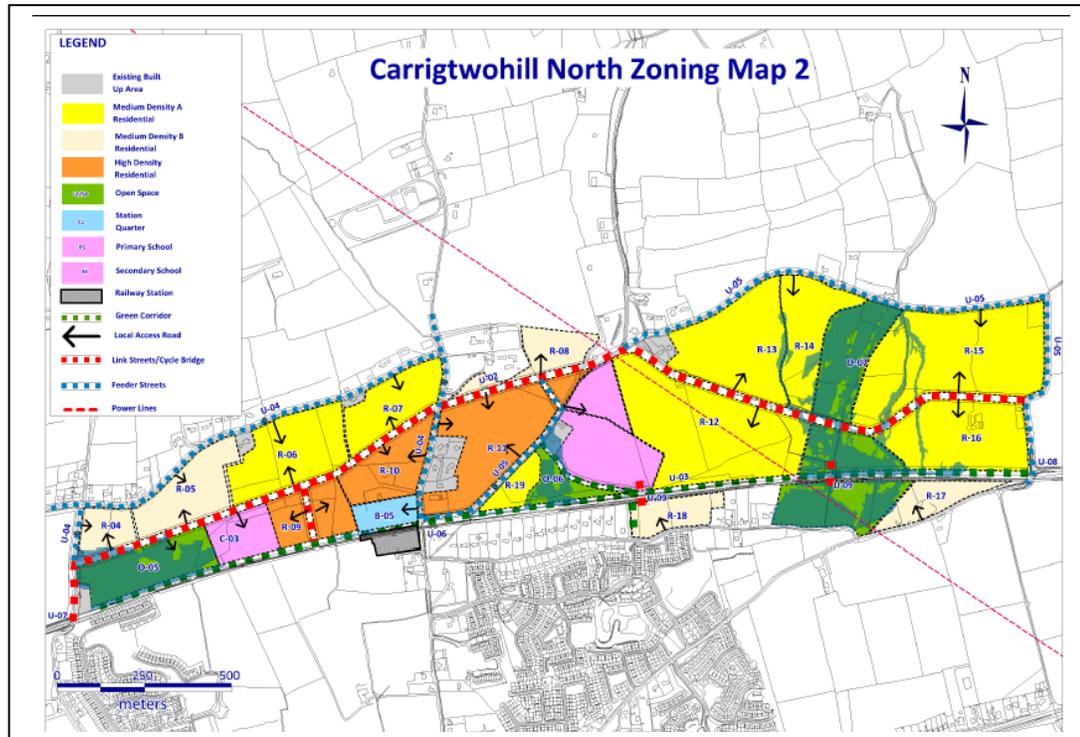
- 1.1.6 A total of 14 submissions were received and the proposed changes were discussed with members of the Cobh/Glanmire Municipal District at their meeting in July.
- 1.1.7 The Draft Amendment and Habitats Screening Report, as well as the Environmental Report (SEA Requirements) were put on display for a 6 week statutory public consultation period which ran from Tuesday 4th August to Tuesday 15th September 2015) and submissions and observations were invited from members of the public as well as from statutory consultees. A total of 14 submissions were received, and a number of minor text changes are now recommended to be made to the scheme on foot of those submissions. These changes are discussed in the CEO's Report. No further material changes were proposed to be made to the scheme at that meeting. The recommended changes have been screened to determine whether they could have implications for one or more Natura 2000 site. The outcome of that screening is presented in this report.

1.2 Description of the Proposed Amendment

- 1.2.1 The proposed amendment comprises the insertion of the relevant sections of the Framework Master Plan into the Chapter 1 of the Midleton Electoral Area Local Area Plan 2011 (Carrigtwohill). In the main, the proposed amendment reflects the policy and zonings which were contained in the Carrigtwohill Framework Master Plan as amended by the preliminary public consultation event in April-May 2015 and agreed by the Chief Executive Officer's Report containing changes to the plan. The policy changes are the replacement of Section 1.4.7 relating to the Framework Master Plan that identifies new policies for the residential densities, ecological considerations, transportation and road networks, phasing of development and the implementation of key infrastructure. In addition, the amendment identifies new text for the provision of schools, water and waste-water facilities, road and transportation, cycling, and public transport.
- 1.2.2 The new zonings provide for residential, business, community and open space, sports and recreational uses within the area designated as a Special Policy Area (X-01). The proposed amendment inserts new zonings and specific objectives for the following:-
- 16 new medium and high density residential zones in line with the County Development Plan 2014 guidelines (R-04 to R-19).
 - Provision of a new linear recreation park along the Poulinaska Stream and two other small parks in the scheme (O-05 to O-07)
 - An additional primary school and one primary and post primary school campus (C-03 and 4).
 - A network of new link roads and upgraded feeder roads throughout the site (U-01,2 and 4 to U-08)

- A new greenway along the railway line linking the proposed schools and open space/recreation areas and the proposed linear park (U-03)
- Two pedestrian and cycle bridges over the existing railway line (U-09)

Every attempt has been made to minimise the impact on the multiple landownership pattern. The full text of the amendment can be accessed at www.corkcoco.ie. The map showing the land use zoning proposals in the amendment is shown below.



1.3 Legislative Background Habitats Directive Assessment

1.3.1 Habitats Directive Assessment is a process which involves the evaluation of the potential impacts of plans and projects on Natura 2000 sites and the habitats and species that they support and, where necessary, the development of mitigation measures to avoid any such impacts. It is an iterative process which runs parallel to and informs the plan making process, involving analysis and review of draft policies, or amendments/variations, as they emerge during each stage of plan making. Within this process, regard must also be had to the potential for policies or amendments to 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.

- 1.3.2 Article 6(3) of the Habitats Directive sets out the principle requirements in relation to this process as follows:

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.

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

Stage One: Screening

- 1.3.4 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

- 1.3.5 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 following appropriate assessment.
- 1.3.6 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. A derogation can only be progressed in very limited circumstances which are set out in Article 6(4) of the Directive.

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.

- 1.3.7 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

- 1.3.8 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 are imperative reasons of overriding public interest 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

- 1.3.9 The fourth stage of the Habitats Directive Assessment process involves demonstrating that imperative reasons of overriding public interest (IROPI) exist for the plan to proceed, and provides for 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.
- 1.3.10 This document represents the first phase of the HDA process for the Midleton Local Area Plan Amendment No 2 (Carrigtwohill North Framework Masterplan), being a

screening of the proposed changes to the proposed amendment which have arisen out of the public consultation process and from Council members following deliberations.

2 Natura 2000 sites Subject to Screening - Proposed Changes Stage

2.1.1 Natura 2000 sites that could be vulnerable to impacts arising from the development of the masterplan lands at Carrigtwohill, are those with a hydrological linkage to the development site. These sites were identified and described in the screening document for the preliminary amendment.

The relevant sites are:

- [1058] Great Island Channel Special Area of Conservation
- [0101] The Gearagh Special Area of Conservation
- [4030] Cork Harbour Special Protection Area
- [4109] The Gearagh Special Protection Area

2.1.2 The Natura 2000 sites within Cork Harbour (Great Island Channel SAC and Cork Harbour SPA) were identified for further consideration as part of the screening assessment for this proposal as they occur downstream from Carrigtwohill and have a direct hydrological linkage to the Masterplan site.

2.1.3 These sites are designated for the protection of habitats (the SAC) and for birds (the SPA) that are sensitive to changes to water quality. There is a direct hydrological linkage between Carrigtwohill North and these sites (via various watercourses), and it is proposed that wastewater from the masterplan lands will be pumped to the upgraded Carrigtwohill Waste Water treatment plant at Rossmore, for treatment and ultimate discharge to Cork Harbour within 1km of both of these sites. Potential for impacts on these sites was considered during the initial screening assessment for the preliminary amendment and some potential for effects was identified as follows.

2.1.4 Screening of the Draft amendment raised issues in relation to nutrient discharges in Cork Harbour, as wastewater from the masterplan lands will be treated at Rossmore and discharged into the Great Island Channel SAC. Work completed for the Cork County Development Plan 2014 had previously concluded that that population targets in the harbour catchment (which includes Carrigtwohill) can be accommodated provided appropriate waste water treatment is provided for, but that upgrades to design at Carrigrennan, Midleton and Carrigtwohill WWTPs will be required to accommodate population increases while ensuring that there are no adverse effects on the Great Island Channel SAC. The upgraded Carrigtwohill WWTP will have adequate capacity to cater for the additional population and development without any adverse impact on the Great Island Channel SAC and Cork Harbour SPA.

- 2.1.5 The conservation status of the qualifying habitats for which this SAC has been designated was assessed by BEC Consultants on behalf of Cork County Council in 2014. The report concludes that the conservation status of this habitat will not be compromised by the population targets included in the Cork County Development Plan 2014 (including the master plan area), provided that the proposed upgrades to the relevant WWTPs at Carrigtwohill and Midleton are in place in advance of any population increase and provided that on-going monitoring is carried out to track any changes in water quality of the discharges and surface water. Further management measures may also be required if the water quality test detect failures.
- 2.1.6 The Screening Report also identified that poorly managed surface water run-off from this site could have the potential to introduce contaminants to intertidal habitats, thereby giving rise to potential for negative impacts on habitats for which the SAC is designated, and upon which birds for which the SPA is designated are dependent. The proposal in the masterplan to integrate SuDS into the Carrigtwohill North masterplan site will provide for effective protection of water quality, protection against flooding and opportunities for biodiversity enhancement within the site, provided that the system is designed to have the capacity to attenuate all surface water generated on the site is well built and maintained. The report concluded that risks of impacts on either the SAC or the SPA arising from the release of increased levels of surface water to the system can be minimised and that potential for significant negative impacts on the SAC and the SPA can be screened out.
- 2.1.7 In relation to drinking water for the proposed scheme at Carrigtwohill, the Screening report concluded that a detailed assessment of the potential for impact on the Cork Harbour SPA will be required to be completed, should it be proposed to increase the volume of water abstracted from the Glashaboy River to service this or other proposed schemes or development.
- 2.1.8 The Screening report also took account of the potential for impact on the hydrology of the estuary during the design of the proposed flood protection measures, any such impacts should be avoided through design. Flood protection measures will need to be subject to HDA when completed.
- 2.1.9 In relation to construction activity over a number of years on the Carrigtwohill site the screening report concludes that subject to ensuring retention and protection of watercourse buffer zones and to implementation of best practice procedures to ensure protection of water quality during the construction phase of this project which will require follow through at project design authorisation (planning consent) and implementation (construction)stages, it is considered that the risk of construction activities causing pollution of surface waters or contamination of intertidal habitats within the SAC and the SPA can be minimised, and that potential for significant negative impacts on the SAC and the SPA can be screened out.

- 2.1.10 The Gearagh SAC and the Gearagh SPA are located more than 57km upstream from Carrigtwohill. These are wetland sites which have multi designations. This has been designated as a Special Area of Conservation for the protection of woodland and wetland habitats as well as for Otter. It has been designated as a Special Protection Area for the protection of a number of wetland bird species. Developments affecting the hydrology of the Gearagh could affect extent of flooding and thereby the quality and extent of wetland habitats and the extent of birdlife within the site. Some of the water supply for the masterplan site may be supplied from the Inniscarra Reservoir which is within the catchment of the Gearagh, and the proposed development of the masterplan site will require a significant increase in levels of abstraction from the reservoir. Further consideration was therefore given during the original screening assessment to the question as to whether increased demand on water supply from Inniscarra could have the potential to affect hydrological processes in the upper catchment, and could thereby have the potential to affect habitats or species for which the SAC and the SPA have been designated. No potential for impacts on either of these sites were identified during this screening process.
- 2.1.11 This report assesses whether the changes which are proposed to be made to the proposed amendment on foot of the consultation process could have the potential to give rise to negative impacts on these sites. No additional sites have been identified which could potentially be affected by the proposed changes to the draft amendment. Information relating to these sites, including lists of their qualifying features, known conservation condition and relevant conservation objectives is provided in the Screening Report for the proposed amendment and is repeated in **Appendix I** of this report.

3 Summary of Modifications to the Proposed Amendments

1) Preliminary Public Consultation

- 3.1.1 As a result of the preliminary public consultation in April 2015, a number of changes were proposed to be made to the Proposed Amendment. These are summarised in Table 1 below and are set out in full in the Chief Executive Officer’s Report on the Proposed Amendment to the Midleton LAP, Carrigtwohill North dated July 2015.

Table 1: Summary of Recommended Changes to the Proposed Amendment to the Midleton Local Area Plan 2011, Carrigtwohill North – Preliminary Public Consultation Process

Chapter 1 Midleton Local Area Plan 2011	Proposed Changes Arising From Preliminary Public Consultation Process
Section 1.4.15	Insert new text in 1.4.15 as follow:-“Provision is made for a primary school (C-03) and an education campus comprising a primary and post primary school on site (C-04). If it is considered that the sites are no longer needed or that alternative locations are required, this zoning may be reviewed in time

Chapter 1 Midleton Local Area Plan 2011	Proposed Changes Arising From Preliminary Public Consultation Process
Mapping	Amend Map to show correct alignment of the underpass and link road.
Specific Objective R-11	Amend boundary of lands to be incorporated into High Density Residential (R-11).
Specific Objective O-06	Modification of open space zoning (O-06) to allow for a medium density residential zoning on the land un-affected by flood risk along the proposed feeder road.
Specific Objective R-19	Rezone subject area for Medium Density Residential (R-19).

- 3.1.2 The proposed changes to the proposed amendment in Table 1 were examined to identify whether any additions to the draft amendment or modifications being made to the text arising from it would be likely to cause significant impacts on any Natura 2000 site, having regard to their qualifying features. In summary, the changes relate to clarifications of text and mapping and proposed rezoning on sections of the site.
- 3.1.3 The Framework Masterplan lands are within 1.3 km of a Natura 2000 site and accordingly all of the changes which have been made may have the potential to give rise to direct impacts on habitats. Equally potential for impacts relating to the disturbance of species are discounted.
- 3.1.4 The potential for any change to give rise to indirect damage to the physical quality of the environment by affecting water quality or water levels, within the above listed sites are discounted, as the changes propose only a modest increase the scale of the development or the population targets for the site. There are minor increased requirements in terms of water supply, and there is only a minor projected increase in wastewater generation beyond those set out in the Draft Framework Masterplan and proposed Amendment.
- 3.1.5 Consideration was given to direct and indirect impacts which may arise from activities within or near Natura 2000 sites (eg recreational activities) which could be encouraged by any of the proposed changes. No such activities/impacts have been identified.

2) Statutory Public Consultation

- 3.1.6 As a result of the statutory public consultation on the revised amendment a number of textual changes were proposed to be made to the draft Amendment. These are summarised in Table 2 below and are set out in full in the Chief Executive Officer's Report on the Proposed Amendment to the Midleton LAP, Carrigtwohill North dated October 2015.

Table 2: Summary of recommended modifications to the Revised Amendment to the Midleton Local Area Plan 2011, Carrigtwohill North – Public Consultation Process

Section No	Proposed Modifications Arising from Statutory Consultation Process August/September 2015
Section 1.2.33	<p>Insert new text in section 1.2.33 as follows:-</p> <p>“On completion of the new rail policy to address the future role of rail transport in Ireland, as required under DTTaS’ Strategic Investment Framework for Land Transport (SIFLT) Action 6, a study of the Cork Metropolitan Areas future suburban rail network requirements should be considered. This could include consideration of additional stations, rail service patterns and interchange with other modes”.</p>
General	<p>Change any reference to Cork Metropolitan Cycle Strategy to “Study” and NRA to Transport Infrastructure Ireland (TII).</p>
Section 1.4.40	<p>Include reference to the role of bus-based transport in delivering modal shift in by inserting new text.</p> <p>”Future bus service provision and the potential for bus to meet the future public transport requirements of Carrigtwohill and the masterplan lands will be considered as part of a package of transport interventions. This will include the provision of high levels of permeability within and between new and existing development areas, which facilitates the operation of bus services through these areas at an early stage in their development.”</p>
Section 1.4.39	<p>Insert amended text:-</p> <p>“ It is proposed that Cork County Council and other agencies, including the National Roads Authority (now Transport Infrastructure Ireland), the National Transport Authority (NTA) and Irish Rail, will subject to agreement with the relevant agencies and programming, be responsible for the funding and/or implementation of the measures.”</p>

3.1.7 The proposed modifications to the revised amendment (listed in Table 2 above) were examined to identify whether any additions to revised amendment or modifications being made to the text arising from it would be likely to cause significant impacts on any Natura 2000 site, having regard to their qualifying features. The changes relate to clarifications of text and mapping and will have no impact on the Natura 2000 sites as shown in Table 3 below, which summarises the results of the screening of proposed modifications to the Midleton LAP 2011 Amendment No 2.

Table 3 Screening Matrix

Natura 2000 sites	Habitat Loss	Habitat Fragmentation	Disturbance to Key Species	Reduction in Species Richness and Density	Changes in key indicators of conservation value
Gearagh SAC	X	X	X	X	X
Gearagh SPA	X	X	X	X	X
Great Island Channel SAC	X	X	X	X	X
Cork Harbour SPA	X	X	X	X	X

Finding of No Significant Impacts, Screening Conclusion Statement

Plan Ref	Midleton LAP Amendment No.2 (Carrigtwohill North Framework Masterplan), Proposed Changes
Name and Location of Natura 2000 sites subject to screening for appropriate assessment.	Gearagh SAC, Gearagh SPA, Great Island Channel SAC, Cork Harbour SPA
Description of the proposed changes	See Tables 1 and 2 above.
Are the proposed changes directly connected with or necessary to the management of the Natura 2000 sites identified above	No.
Are there other projects or plans that together with the amendments being assessed could affect the site (provide details).	No impacts identified, therefore no potential for 'in combination' impacts identified.
Assessment of Significant Effects	
Describe how the proposed amendments (alone or in combination is likely to affect Natura 2000 sites)	No changes have been identified which could give rise to impacts which could be significant.
Explain why these effects are not considered significant	Proposed changes do not direct development within or near any Natura 2000 site. No increase in population is proposed. There are no significant increased demands on water or wastewater infrastructure, therefore no potential for impacts on any Natura 2000 site have been identified arising from the proposed changes to the scheme.
List of agencies consulted:	The Draft Amendment was referred to the NPWS, EPA and other Statutory Consultees as well as the general public during the public consultation process. The proposed changes set out above arise from that process.
Response to consultation	No submission was made in relation to the AA

Screening Report during public consultation.	
Data Collected To Carry Out The Assessment	
Who carried out the assessment	Planning Policy Unit, Cork County Council
Sources of data	National Parks and Wildlife Service Site Synopses and other data relating to Natura 2000 sites.
Level of assessment completed	Screening
Where can the full results of the assessment be accessed and viewed	AA Screening Report and Statement
Date Assessment Completed	23 rd November 2015

Appendix I Natura 2000 Sites Screened For Impacts – Site Data

Great Island Channel Special Area of Conservation (1058)

This site is located approximately 1.5km downstream from Carrigtwohill within Cork Harbour. The following description is based on NPWS Site Synopsis. The Great Island Channel SAC comprises the North Channel of Cork Harbour extending from Little Island to Midleton including the estuaries of the Owenacurra and Dungourney. The main habitats of conservation interest for which this site is designated are the sheltered tidal sand and mudflats and Atlantic salt meadows. The intertidal flats are composed mainly of soft muds which support a range of macro-invertebrate species that provide a valuable food source for large numbers of a wide range of wintering bird species. Saltmarshes are scattered through the site and are all of the estuarine type on mud substrate. The Great Island Channel is approximately 3 km downstream from Carrigtwohill and forms part of the Great Island Channel Special Area of Conservation. The Great Island Channel provides valuable habitat for wintering waterbirds, and forms part of the Cork Harbour Special Protection Area (see below).

Features of Interest identified for this site (www.npws.ie 12/03/2015) are as follows:

- Mudflats and sandflats not covered by seawater at low tide [1140]
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]

Detailed **Conservation Objectives** have been published for this SAC (06/06/2014 Version 1). These are as follows:

1. To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in the Great Island Channel SAC.
2. To restore the favourable conservation condition of Atlantic salt meadows (*Glauco Puccinellietalia maritimae*) in Great Island Channel SAC.

The attributes and targets which are associated within these objectives are available at http://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001058.pdf

The conservation status of the qualifying habitats for which this SAC has been designated was assessed by BEC Consultants on behalf of Cork County Council (Assessment of the Conservation Status of the Great Island Channel SAC (1058) in 2014).

The conservation status of **Mudflats and Sandflats habitat [1140]** was assessed to be unfavourable-bad. The primary source of impact on this habitat was identified to be pollution from surface waters with sources including both the Carrigtwohill and Midleton treatment plants, nutrient inputs from agricultural sources within the river catchments that discharge to the harbour, and leaks in the existing sewer network giving rise to further nutrient inputs to the system. Other sources of pressure on this habitat include the spread of *Spartina* within the estuary.

The conservation status of **Atlantic Salt Meadows habitat [1330]** was assessed to be unfavourable-inadequate. A number of sources of impact on this habitat were identified on this habitat during field survey for the assessment. These related to development of sea-walls/coastal protection infrastructure which prevents the development of salt marsh habitat,

storm damage, coastal erosion, shading from treelines, water pollution, litter, *Spartina* invasion, rabbit grazing and climate change.

Cork Harbour Special Protection Area (4030)

This site is located downstream from Carrigtwohill within Cork Harbour. The following description of this site is based on NPWS Site Synopsis and on the Cork Harbour Special Protection Area Conservation Objectives Supporting Document ver 1, 2014.

This is a large sheltered bay system comprising several river estuaries. The SPA comprises most of the main intertidal areas of Cork Harbour. Muddy sandflats within the site support a range of macro-invertebrate species which are a valuable foodsource for wetland bird species that winter in the Harbour. The site also includes some areas of salt marsh, shallow bay water, Rostellan Lake which is a small brackish lake that is used by swans in the winter period and some marginal wet grassland which is of importance for feeding and roosting birds.

Cork Harbour is a wetland site which is of international importance as it regularly supports in excess of 20,000 wintering waterfowl. The site supports internationally important populations of Black-tailed Godwit and Redshank, and nationally important of a further 19 species including **Shelduck, Wigeon, Teal, Pintail, Shoveler, Red-breasted Merganser, Little Grebe, Great Crested Grebe, Cormorant, Grey Heron, Oystercatcher, Golden Plover, Grey Plover, Lapwing, Dunlin, Bar-tailed Godwit, Curlew, Black-headed Gull, Lesser Black-backed Gull and Common Tern.** Other species using the site include **Mute Swan, Whooper Swan, Pochard, Gadwall, Tufted Duck, Goldeneye, Coot, Ringed Plover, Knot and Turnstone.** It is an important site for a range of gull species including **Mediterranean Gull**, a species which has recently begun to occur in Ireland. It also supports a breeding population of **Little Egret**, another species which was first recorded as breeding in Ireland in the 1990's.

A range of passage waders occurs regularly in the autumn, including **Ruff, Spotted Redshank and Green Sandpiper.** The Harbour also supports a nationally important colony of Common Tern. Several of the species which occur in the Harbour are listed on Annex I of the EU Birds Directive.

The NPWS has recently (March 2015) notified Cork County Council of its intention to extend the Cork Harbour Special Protection Area to include an area of wetland habitat at Ringabella Estuary. This proposed extension to the SPA is currently subject to a public consultation process.

Features of Interest identified for this site (www.NPWS.ie 12/03/2015) are as follows:

- Little Grebe (*Tachybaptus ruficollis*) [A004];
- Great Crested Grebe (*Podiceps cristatus*) [A005];
- Cormorant (*Phalacrocorax carbo*) [A017];
- Grey Heron (*Ardea cinerea*) [A028];
- Shelduck (*Tadorna tadorna*) [A048];
- Wigeon (*Anas penelope*) [A050];
- Teal (*Anas crecca*) [A052];
- Pintail (*Anas acuta*) [A054];

- Shoveler (*Anas clypeata*) [A056];
- Red-breasted Merganser (*Mergus serrator*) [A069];
- Oystercatcher (*Haematopus ostralegus*) [A130];
- Golden Plover (*Pluvialis apricaria*) [A140];
- Grey Plover (*Pluvialis squatarola*) [A141];
- Lapwing (*Vanellus vanellus*) [A142];
- Dunlin (*Calidris alpina*) [A149];
- Black-tiled Godwit (*Limosa limosa*) [A156];
- Bar-tailed Godwit (*Limosa lapponica*) [A157];
- Curlew (*Numenius arquata*) [A160];
- Redshank (*Tringa tetanus*) [A162];
- Black-headed Gull (*Chroicocephalus ridibundus*) [A179];
- Common Gull (*Larus canus*) [A183];
- Lesser Black-backed Gull (*Larus fuscus*) [A183];
- Common Tern (*Sterna hirundo*) [A193];
- Wetland and Waterbirds [A999].

Conservation Objectives for non-breeding waterbird species and wetland habitats have been published in the Cork Harbour SPA Conservation Objectives Supporting Document Version 1 (Nov 2014)) as follows:

1. To maintain the favourable conservation condition of the non-breeding waterbird Special Conservation Interest Species listed for the Cork Harbour SPA.

The objective is defined by the following attributes and targets :

- To be favourable, the long term (site) population trend for each waterbird Special Conservation Interest species should be stable or increasing. Waterbird populations are deemed to be unfavourable when they have declined by 25% or more, as assessed by the most recent population trend analysis.
- To be favourable, there should be no significant decrease in the range, timing or intensity of use of areas by the waterbird species of Special Conservation Interest, other than that occurring from natural patterns of variation.

2. To maintain the favourable conservation condition of the wetland habitat at Cork Harbour as a resource for the regularly-occurring migratory waterbirds that utilise it.

The objective is defined by the following attributes and targets:

- To be favourable, the permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,587ha, other than that occurring from natural patterns of variation.

The Conservation Objective for Common Tern has been published in the Cork Harbour SPA Conservation Objectives Document (Dec 2014) as follows:

3. To maintain the favourable conservation condition of Common Tern in Cork Harbour SPA.

The conservation condition of the Species of Conservation Interest (other than Common Tern) for which this SPA has been designated have been published in the Cork Harbour SPA Conservation Objectives supporting document (Dec 2014) and are as follows:

Special Conservation Interests	BoCCI Category ^a	Site Population Trend ^b	Site Conservation Condition	Current all-Ireland Trend ^c	Current International Trend ^d
Shelduck	Amber	- 39	Unfavourable	Stable	Increasing
Wigeon	Red	- 27	Unfavourable	Declining	Stable
Teal	Amber	- 1	(Intermediate) Unfavourable	Stable	Increasing
Pintail	Red	- 65	Highly Unfavourable	Increasing	Increasing
Shoveler	Red	- 75	Highly Unfavourable	Increasing	Increasing
Red-breasted Merganser	Green	- 51	Highly Unfavourable	Stable	n/c
Little Grebe	Amber	+ 16	Favourable	Stable	Increasing
Great Crested Grebe	Amber	- 46	Unfavourable	Declining	Declining?
Cormorant	Amber	- 50	Highly Unfavourable	Stable	Increasing
Grey Heron	Green	- 15	(Intermediate) Unfavourable	Stable	Increasing
Oystercatcher	Amber	- 20	(Intermediate) Unfavourable	Stable	Declining
Golden Plover	Red	+ 21	Favourable	Declining	Declining
Grey Plover	Amber	- 68	Highly Unfavourable	Declining	Declining?
Lapwing	Red	- 68	Highly Unfavourable	Declining	Stable
Dunlin	Red	- 49	Unfavourable	Declining	Stable
Black-tailed Godwit	Amber	+ 16	Favourable	Increasing	Increasing
Bar-tailed Godwit	Amber	+ 41	Favourable	Stable	Increasing
Curlew	Red	-44	Unfavourable	Declining	Declining
Redshank	Red	-29	Unfavourable	Stable	Stable/Increasing?
Black-headed Gull	Red	- 53	Highly Unfavourable	n/c	n/c
Common Gull	Amber	- 89	Highly Unfavourable	n/c	n/c
Lesser Black-backed Gull	Amber	- 83	Highly Unfavourable	n/c	n/c

^aAfter Colhoun & Cummins, 2013; ^bSite population trend analysis; see Table 4.3; ^call-Ireland trend - where a species is deemed to be increasing or declining if the annual rate of change is equal to or greater than 1.2% (after Crowe & Holt, 2013); ^dcurrent international trend after Wetlands International (2012).

Table 4.4 also shows the relationship between a species' long-term site trend and the current all-Ireland trend for the period 1999/00 to 2010/11. The colour coding used represents the following cases:-

- **Grey** – un-assessed.
- **Green** – species whose populations are stable or increasing at both site level and all-Ireland level.
- **Beige** – species whose populations are declining at both site level and all-Ireland level. Therefore there is a potential for factors at a larger spatial scale to be influencing the observed trend at site level.
- **Orange** - species whose populations are exhibiting a 1.0 – 24.9% decline at site level but are stable or increasing at all-Ireland level.
- **Pink** - species whose populations are exhibiting a 25.0 – 49.9% decline at site level but are stable or increasing at all-Ireland level.
- **Red** - species whose populations are exhibiting a decline of >50.0% at site level but are stable or increasing at all-Ireland level.

The Gearagh SAC (0108)

This site is located approximately 57 km from Carrigtwohill and within a separate catchment. However, it is anticipated that some of the water supply for Carrigtwohill North and Carrigtwohill may be sourced from the Inniscarra Lake which is within the catchment of this site. The following description is based on the NPWS Site Synopsis. The Gearagh SAC is located on the River Lee just south of Macroom. It extends along approximately 7km of the river occupying a wide, flat valley on a bed of limestone overlain with sand and gravel. The site supports two woodland habitat types which are listed on Annex I of the EU Habitats Directive, being Residual Alluvial woodland and Old Oak Woodland. It is thought that the area has been continuously wooded since the ice-age. It supports a number of plant species that are relatively scarce in Ireland including the protected Mudwort which is listed in the Red Data Book and on the Flora (Protection) Order, 1999. The site has a well developed epiphytic bryophyte flora associated with the old woodland as well as freshwater and wet grassland habitat types. The site represents the only extensive alluvial woodland in Ireland or Britain, or west of the Rhine in Europe which has retained a high level of naturalness. It is a unique site which has many other nature conservation designations including Ramsar Site, Statutory Nature Reserve and Biogenetic Refuge. The Gearagh supports an important wintering bird population, and is also designated as a Special Protection Area on this basis.

Features of Interest identified for this site (www.NPWS.ie 12/03/2015) are as follows:

- Water courses of plain to montane levels with the *Ranunculus fluitans* and *Callitriche-Batrachion* vegetation [3260];
- Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0];
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae** [91E0];
- *Lutra lutra* (Otter) [1355]

Detailed Conservation Objectives have not been identified for this site to date. The generic Conservation Objective which applies to this site is as follows:

1. To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:
 - Water courses of plain to montane levels with the *Ranunculus fluitans* and *Callitriche-Batrachion* vegetation [3260];
 - Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0];
 - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae** [91E0];
 - *Lutra lutra* (Otter) [1355]

NPWS (2015) Conservation Objectives for The Gearagh SAC [000108]. Generic Version 4.0 Department of Arts, Heritage and the Gaeltacht.

The Conservation Status of this SAC has not been assessed. However, activities which could interfere with the achievement of the Conservation Objectives for this site include activities which cause direct loss or damage to the quality of woodland habitats [91A0 and 91E0](eg woodland clearance or burning, changes in woodland grazing patterns, spread of invasive

species); activities causing a deterioration in water quality which thereby has the potential to affect the quality of freshwater habitats for which the SAC is designated (habitat [3260]); and activities causing significant disturbance to Otters at their breeding sites or resting areas (eg development of river crossings), or affecting the availability of their prey species (eg impacts on water quality).

The Gearagh Special Protection Area (4109)

This site is located approximately 57 km from Carrigtwohill, but it is possible that some of the water supply for the Masterplan site - may be sourced from the Inniscarra Lake which is within the catchment of this site. No description of this site is currently available on the NPWS website, however the Gearagh SAC site synopses does include some information relating to the wintering bird population as follows:

‘the Gearagh supports part of an important wintering bird populations: the area most utilised by birds extends also east of the site towards Cork City (Carrigadrohid). At the Gearagh, Whooper Swans are regular (40-110, 1990’s), as are Wigeon (640, average max. 1992-1994), Teal (707, average max. 1992-94), Mallard (250 in January 1993) and Tufted Duck (154, average max. 1992-94). Golden Plover utilise the site on occasions (eg 2,000 in January 1994), while there is a regular flock of Dunlin (100-200, 1990s) a species unusual at inland sites. A late summering flock of Mute Swan is regular, with numbers between 120 and 250 from 1992 to 1994. Great Crested Grebe and Tufted Duck breed in small numbers, while there is a feral flock of about 50 Grey lag Geese.’

Features of Interest identified for this site (www.NPWS.ie 12/03/2015) are as follows:

- Wigeon (*Anas penelope*) [A050]
- Teal (*Anas crecca*) [A052]
- Mallard (*Anas platyrhynchos*) [A125]
- Coot (*Fulica atra*) [A125]
- Wetland and Waterbirds [A999]

Detailed Conservation Objectives have not been identified for this site to date. The generic Conservation Objectives which apply to this site are as follows:

1. To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:
 - Wigeon (A050)
 - Teal (A052)
 - Mallard (A053)
 - Coot (A125)
2. To maintain or restore the favourable conservation condition of the wetland habitat at the Gearagh SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

NPWS (2015) Conservation Objectives for The Gearagh SPA [004109]. Generic Version 4.0. Department of Arts, Heritage and the Gaeltacht.

The Conservation Status of this SPA has not been assessed. However activities which could interfere with the achievement of the Conservation Objectives for this site include activities which could cause significant disturbance to birds at their feeding sites or resting places or activities causing removal of the extent or deterioration of the quality of feeding habitat within the SPA.