

## **Appropriate Assessment Screening**

**as required under Article 6(3) of the Habitats Directive  
(Council Directive 92/43/EEC)**

### **Cork Lower Harbour Main Drainage Project Outfall Upgrade & Repair Works**

**20<sup>th</sup> May 2015**

**Prepared by: Moore Group – Environmental Services**



**On behalf of Irish Water**

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## **1. Introduction**

### **1.1. Project Description**

The Cork Lower Harbour Main Drainage Project (Cork LHMD Project) is a Project for the provision of collection systems and wastewater treatment facilities in the Cork Lower Harbour area. The Project includes the population/industrial centres of Cobh, Carrigaline (including Crosshaven), Passage West/Monkstown (including Glenbrook) and Ringaskiddy (including Shanbally and Coolmore). The existing sewer network serving the Lower Cork Harbour area comprises mainly combined sewer systems. Wastewater from Cobh, Carrigaline, Passage West/Monkstown and Ringaskiddy is currently discharged untreated into the Harbour.

Planning approval for the Cork LHMD Project (An Bord Pleanála Register Reference YA0005) was granted, subject to a number of planning conditions in June 2009. The application included an Environmental Impact Statement (EIS), which considered the potential impacts of the entire development.

The Cork LHMD Project involves upgrading the existing sewerage network infrastructure (including pump stations and outfalls) together with the provision of a new Wastewater Treatment Plant (WwTP) located to the east of Carrigaline near the townland of Shanbally.

Combined sewer overflows will be located in the collection system at individual pumping stations to prevent localised flooding in the event of a peak rainfall event. The provision of duty/standby pumping arrangements in each pumping station will minimise the potential for the discharge of raw sewage except in the event of a power outage (in which case the discharge will be screened before entering the waterbody). In this event the pumping stations will, at a minimum, incorporate facilities to allow the connection of standby generators.

Irish Water are in the process of preparing a request to alter the terms of the development, the subject of the above 2009 planning permission, under Section 146B of the Planning and Development Act 2000 as amended (the "Planning Act"). This Alteration application includes works associated with this foreshore licence application.

This Alteration refers to the areas of Passage West, Glenbrook, Monkstown, Shanbally, Ringaskiddy and Carrigaline for which works are proposed. Permission may be required at a later stage for further improvement projects relating to the original approved Project but the feasibility (environmentally,

technically and financially) of these has not yet been determined and as such it is not possible to describe them or their likely significant effects at present. Extensive further investigations must be carried out to enable decisions to be made to proceed on these. There is no interdependence between this project and any other project for which a Section 146B application may be lodged.

## **1.2. General Introduction**

The Habitats Directive (Council Directive 92/43/EEC) requires that all plans and projects must be screened for potential impact and the likelihood of significant effects on Natura 2000 sites including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). This process aims to establish whether a full Appropriate Assessment as required by Article 6 of the Directive is required in any particular case.

This report contains information required for the competent authority, in this case the Department of the Environment, Community and Local Government (Marine Planning and Foreshore Section), to commence an Appropriate Assessment (AA) process on the effects of a project consisting of the effects of the proposed upgrading of **two sewerage outfalls, replacement of a precast concrete culvert with an integrated sewerage pipeline and removal of a section of decommissioned sewerage pipeline** in the lower Cork Harbour area as part of the Cork Harbour Lower Main Drainage Project.

The outfalls are located at Passage West, Glenbrook and Carrigaline. The potential impacts on the Great Island Channel SAC (Site Code 001058) and Cork Harbour SPA (Site Code 004030) are considered in this screening assessment. Both sites form part of the Natura 2000 network of sites of highest biodiversity importance for rare and threatened habitats and species across the EU.

The report has been prepared by Moore Group - Environmental Services for Irish Water in accordance with Articles 6(3) and 6(4) of the Habitats Directive. The report was compiled by Ger O'Donohoe (B.Sc. Applied Aquatic Sciences (GMIT, 1993) & M.Sc. Environmental Sciences (TCD, 1999)) who has 20 years' experience in environmental impact assessment and has completed numerous Appropriate Assessment Screening Reports and Natura Impact Statements in terrestrial and aquatic habitats. Engineering and technical data was supplied by Nicholas O'Dwyer Ltd., Consultant Engineers for the project.

The report assesses the potential for the proposed development to impact on sites of European-scale ecological importance. It is necessary that the Project has regard to Article 6 of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (referred to

as the Habitats Directive). This is transposed into Irish Law, most recently by the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477) (referred to as the Habitats Regulations).

### **1.3. Legislative Background - The Habitats and Birds Directives**

The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the EU. Under the Directive member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a European Union context.

The Birds Directive (Council Directive 79/409/EEC as codified by Directive 2009/147/EC) on the conservation of wild birds), is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs.

Articles 6(3) and 6(4) of the Habitats Directive set out the requirements for an assessment of proposed plans and projects likely to affect Natura 2000 sites.

Article 6(3) establishes the requirement to screen all plans and projects and to carry out a further assessment if required (Appropriate Assessment (AA)):

*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 subjected to an appropriate assessment of its implications for the site in view of the site's conservation objectives. In 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."*

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, Member States shall take all compensatory measures necessary to ensure that the overall coherence of the Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to the beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”*

This Screening Report is a documentary record of the Appropriate Assessment process on the effects of the proposed upgrading of two sewerage outfalls, replacement of a precast concrete culvert with an integrated sewerage pipeline and removal of a section of decommissioned sewerage pipeline in the lower Cork Harbour area as part of the Cork Harbour Lower Main Drainage Project.

## **2. Methodology**

The Commission’s methodological guidance (EC, 2002) promotes a four-stage process to complete the AA, and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1-2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

**Stage 1 Screening:** This stage examines in the first place whether the plan or project is not directly connected with or necessary to the management of the site and if not, the likely effects of a project either alone or in combination with other projects upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant.

**Stage 2 Appropriate Assessment:** In this stage, the impact of the project is considered on the integrity of the Natura 2000 site with respect to the conservation objectives of the site and to its structure and function.

**Stage 3 Assessment of Alternative Solutions:** This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures are required and can be successfully employed.

In order to ensure that the Project complies fully with the requirements of Article 6 of the Habitats Directive and all relevant Irish transposing legislation, Moore Group undertook a screening assessment of the Project on behalf of Irish Water to determine if Stage 2 AA is required.

## **2.1. Guidance**

This AA Screening Report has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 rev.).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10.
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission Environment Directorate-General, 2001); hereafter referred to as the EC Article Guidance Document.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC Environment Directorate-General, 2000); hereafter referred to as MN2000.

## **2.2. Data Sources**

Sources of information that were used to collect data on the Natura 2000 network of sites are listed below:

- Ordnance Survey of Ireland mapping and aerial photography available from [www.osi.ie](http://www.osi.ie), Google Earth and Bing aerial photography.
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from [www.npws.ie](http://www.npws.ie) including; the Natura 2000 network Data Form; Site Synopsis; Generic Conservation Objective data
- Online database of rare, threatened and protected species
- Publicly accessible biodiversity datasets.

- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2008)

### 3. Description of the Project

The project includes the proposed upgrading of two sewerage outfalls, replacement of a precast concrete culvert with an integrated sewerage pipeline and removal of a section of decommissioned sewerage pipeline in the lower Cork Harbour area as part of the Cork Harbour Lower Main Drainage Project.

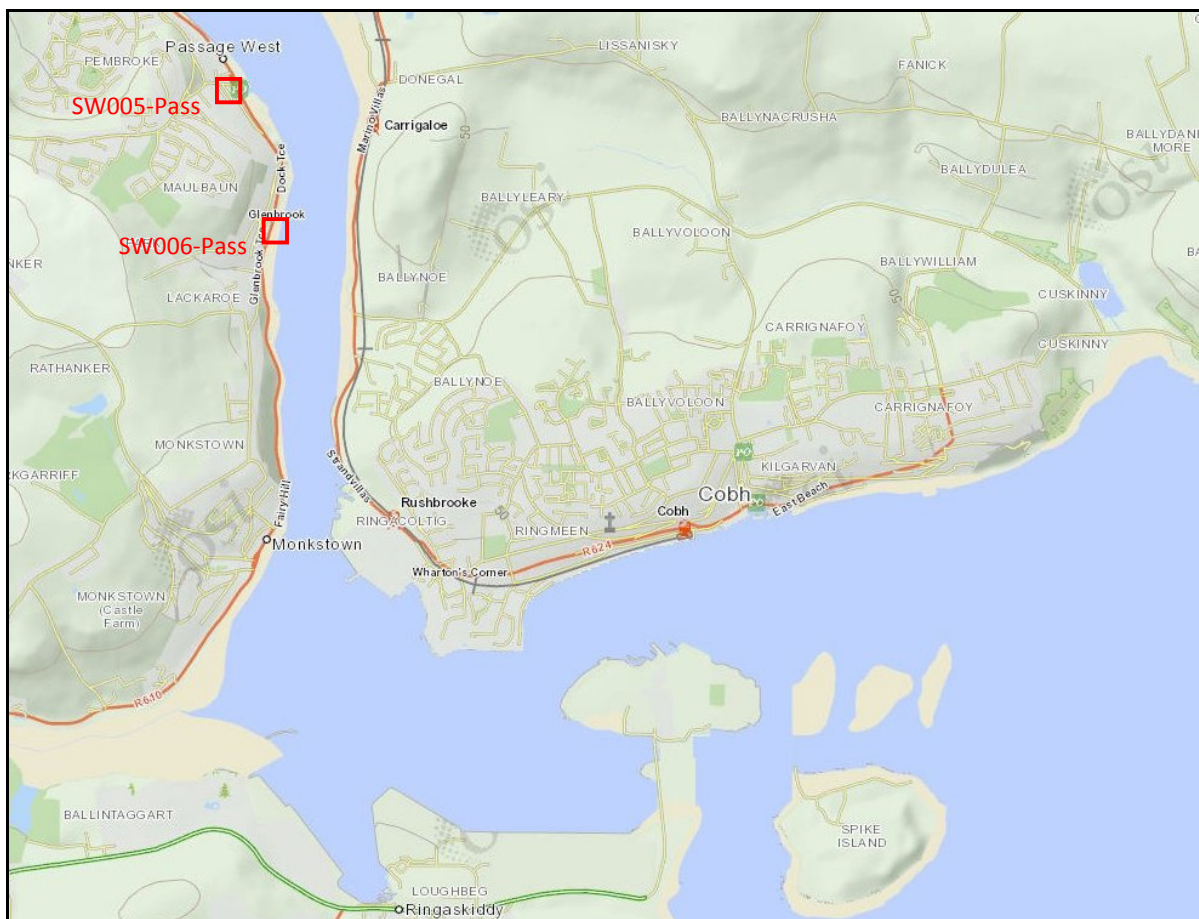
The outfall locations are presented in Figures 1 & 2, and a short description of the proposed works is presented in Table 1 below. Detailed site location drawings are presented in Appendix B.

**Table 1.** Location details and proposed works description

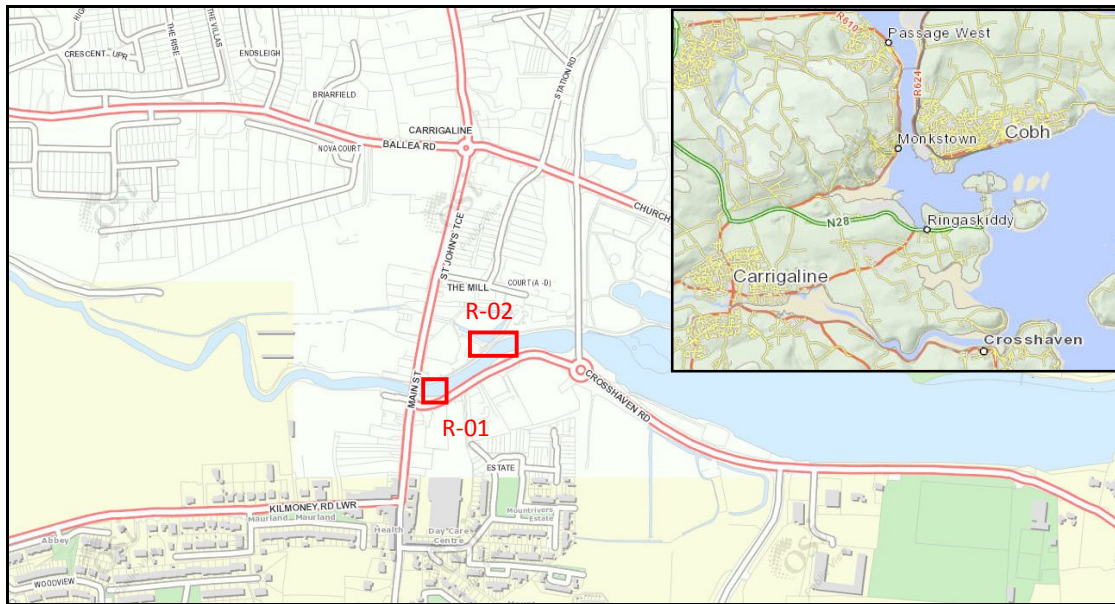
NOD Reference	Location	Proposal	Drawing No.
SW005-Pass	Passage West	<b>Outfall Upgrade:</b> The works will require upsizing of the existing pipeline near Passage West Pumping Station to improve hydraulic capacity in the network. The surface water pipeline will have a secondary use as a combined sewer overflow for the pump station. Works on the sea wall will be required to upsize the outfall. For constructability, health and safety and environmental reasons, a sheet pile solution with an appropriate seal will be required. This will ensure that the Contractor has a dry working area available to complete the works and will ensure that no surplus construction material will enter Cork Harbour. The works will be carried out in the period April to August to avoid impacts on Wintering Birds.	FL-105
SW006-Pass	Glenbrook Passage West	<b>Outfall Upgrade:</b> The works will require upsizing of the existing pipeline at Glenbrook Pumping Station to improve hydraulic capacity in the network. The upgraded structure will serve as a combined sewer overflow. Works on the sea wall will be required to upsize the outfall. The Contractor will track along the foreshore at low tide to complete the works. The works will be carried out in the period April to August to avoid impacts on Wintering Birds.	FL-111
R-01	Carrigaline	<b>Removal of a section of decommissioned sewerage pipeline:</b> The existing pipe bridge structure (including plinths) will be decommissioned and removed from the foreshore. The Contractor will remove the existing pipe bridge using a long reach excavating machine at Carrigaline Bridge and will then track along the banks of the river with a mini-digger to remove the existing concrete plinths.	FL-128



		The works will be carried out in the period April to August to avoid impacts on Wintering Birds.	
R-02	Carrigaline	<p><b>Replacement of a precast concrete culvert with an integrated sewerage pipeline:</b> The existing culvert will be removed and replaced with a new precast structure with an integrated section of pipeline. The Contractor will install a temporary cofferdam during the works. The removal of the existing culvert and installation of the new structure will take place from the road above. The works will be carried out in the period April to August to avoid impacts on Wintering Birds.</p> <p><i>Note: Outfall reference R-02 in this instance refers to outfall reference R-02 &amp; R-03 as noted in the foreshore licence application.</i></p>	FL-130



**Figure 1.** Site locations of outfall upgrades in Lower Cork Harbour.

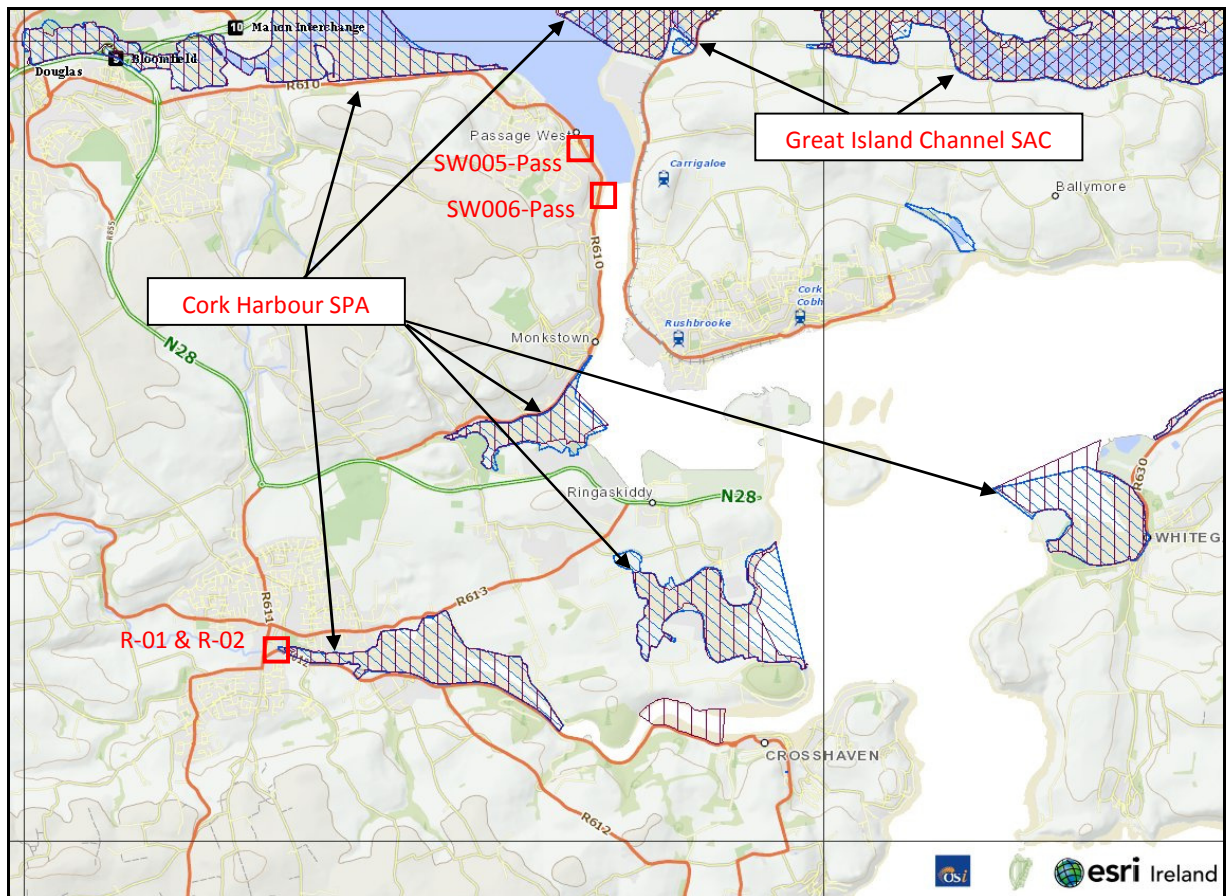


**Figure 2.** Site location of the pipeline removal and culvert replacement at Carrigaline.

## 4. Identification of Natura 2000 Sites

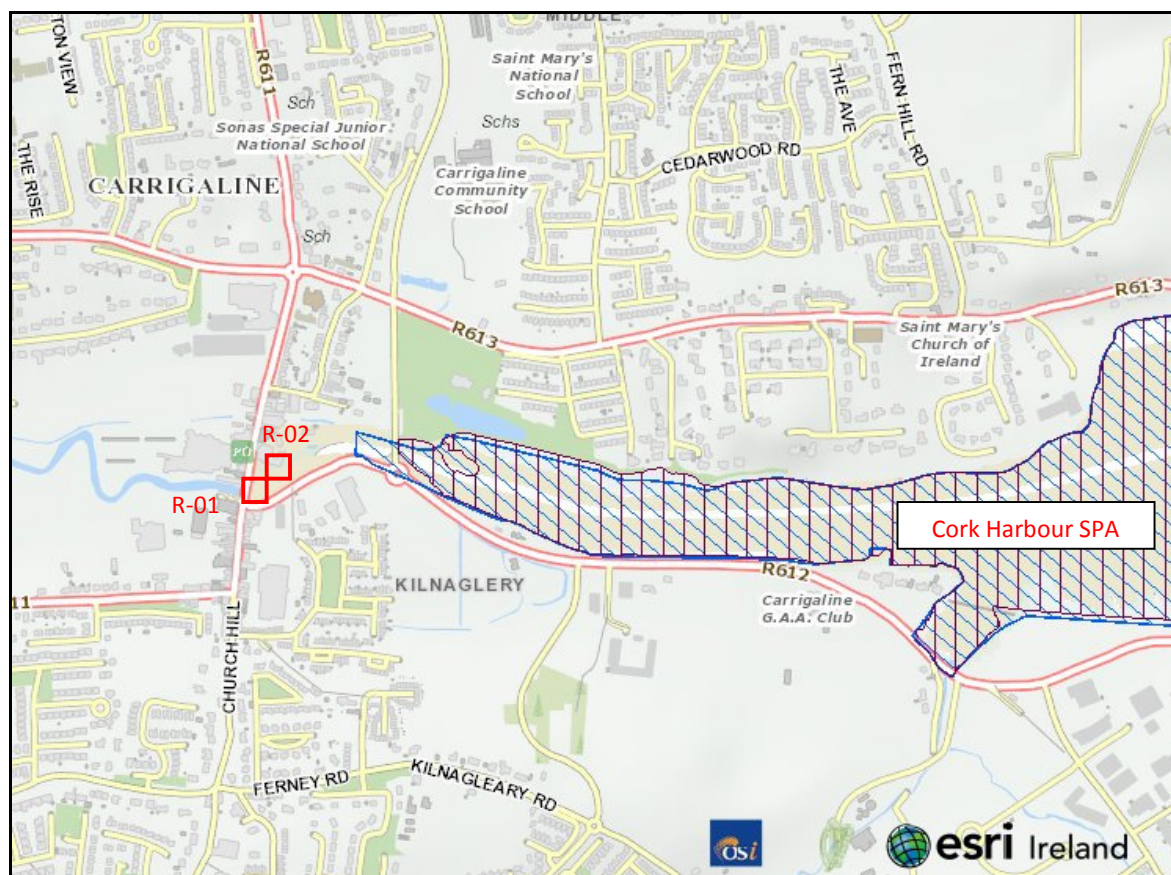
### 4.1. Description of Natura Sites Potentially Affected

In accordance with the Department of Environment, Heritage and Local Government guidance (DoEHLG, 2010), an initial distance of 15 km from the Project extents was selected for consideration of Natura 2000 sites. Given the coastal nature of the proposed works, the zone of influence can be reduced to include the Natura 2000 sites with marine hydrological connectivity to the works areas. The two Natura 2000 sites considered in this assessment are the Cork Harbour SPA (Site Code 004030) and the Great Island Channel SAC (Site Code 001058). The location of the proposed development is presented in relation to the relevant Natura 2000 sites in Figures 3 and 4 below.



**Figure 3.** Site location in relation to the Cork Harbour Natura 2000 areas.





**Figure 4.** Works locations in relation to the Cork Harbour SPA area at Carrigaline.

Details of the qualifying Interests of the Great Island Channel Natura 2000 site are listed in Table 2 and Cork Harbour SPA in Table 3 below. Site Synopses for all sites are available on the NPWS metadata site. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website on 24<sup>th</sup> March 2015.

**Table 2.** Special Areas of Conservation located within the zone of influence for the Project.

Site Code	Site Name	Qualifying Habitats	Qualifying Species
001058	Great Island Channel SAC	Mudflats and sandflats not covered by seawater at low tide [1140] Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritima</i> ) [1330]	

**Table 3.** Special Protection Areas located within the zone of influence for the Project.

Site Code	Site Name	Qualifying Habitats	Qualifying Species
004030	Cork Harbour SPA	Wetlands & Waterbirds [A999]	<p>Little Grebe (<i>Tachybaptus ruficollis</i>) [A004]</p> <p>Great Crested Grebe (<i>Podiceps cristatus</i>) [A005]</p> <p>Cormorant (<i>Phalacrocorax carbo</i>) [A017]</p> <p>Grey Heron (<i>Ardea cinerea</i>) [A028]</p> <p>Shelduck (<i>Tadorna tadorna</i>) [A048]</p> <p>Wigeon (<i>Anas penelope</i>) [A050]</p> <p>Teal (<i>Anas crecca</i>) [A052]</p> <p>Pintail (<i>Anas acuta</i>) [A054]</p> <p>Shoveler (<i>Anas clypeata</i>) [A056]</p> <p>Red-breasted Merganser (<i>Mergus serrator</i>) [A069]</p> <p>Oystercatcher (<i>Haematopus ostralegus</i>) [A130]</p> <p>Golden Plover (<i>Pluvialis apricaria</i>) [A140]</p> <p>Grey Plover (<i>Pluvialis squatarola</i>) [A141]</p> <p>Lapwing (<i>Vanellus vanellus</i>) [A142]</p> <p>Dunlin (<i>Calidris alpina</i>) [A149]</p> <p>Black-tailed Godwit (<i>Limosa limosa</i>) [A156]</p> <p>Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</p> <p>Curlew (<i>Numenius arquata</i>) [A160]</p> <p>Redshank (<i>Tringa totanus</i>) [A162]</p> <p>Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]</p> <p>Common Gull (<i>Larus canus</i>) [A182]</p> <p>Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183]</p> <p>Common Tern (<i>Sterna hirundo</i>) [A193](Breeding)</p>

#### 4.2. Conservation Objectives of the Natura 2000 Sites

The following Conservation Objectives, available from the NPWS, are set out for the SAC:

**Great Island Channel SAC [001058].** Version 1. 6<sup>th</sup> June 2014;

##### **1140 Mudflats and sandflats not covered by seawater at low tide**

To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Great Island Channel SAC, which is defined by the following list of attributes and targets:

Habitat area: Hectares;

The permanent habitat area is stable or increasing, subject to natural processes.

Community distribution: Hectares;

Conserve the following community type in a natural condition: Mixed sediment to sandy mud with polychaetes and oligochaetes community complex.

**1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)**

To restore the favourable conservation condition of Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) in Great Island Channel SAC, which is defined by the following list of attributes and targets:

Habitat area: Hectares;

Area stable or increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Bawnard - 0.29 ha; Carrigatohil - 1.01 ha.

Habitat distribution: Occurrence;

No decline or change in habitat distribution, subject to natural processes.

Physical structure: sediment supply: Presence/ absence of physical barriers;

Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions.

Physical structure: creeks and pans: Occurrence;

Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession.

Physical structure: flooding regime: Hectares flooded; frequency

Maintain natural tidal regime.

Vegetation structure: zonation: Occurrence;

Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession.

Vegetation structure: vegetation height: Centimetres;

Maintain structural variation within sward.

Vegetation structure: vegetation cover: Percentage cover at a representative number of monitoring stops;

Maintain more than 90% area outside creeks vegetated.

Vegetation composition: typical species and sub-communities: Percentage cover at a representative number of monitoring stops;

Maintain range of sub-communities with typical species listed in SMP (McCorry and Ryle, 2009).

Vegetation structure: negative indicator species – *Spartina anglica*: Hectares

No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1% where it is known to occur.

The following Conservation Objectives, available from the NPWS, are set out for the SPA:

**Cork Harbour SPA [004030].** Version 1. 16<sup>th</sup> December 2014;

**To maintain the favourable conservation condition of [the qualifying bird species listed] in Cork Harbour SPA, which is defined by the following list of attributes and targets:**

Population trend: Percentage change;

Long term population trend stable or increasing.

Distribution: Range, timing and intensity of use of areas;

No significant decrease in the range, timing or intensity of use of areas by [the qualifying bird species listed], other than that occurring from natural patterns of variation.

Specific Conservation Objectives are set out for the following species and habitats:

***A193 Common Tern *Sterna hirundo****

Breeding population abundance: Apparently occupied nests (AONs): Number

No significant decline.

Productivity rate: fledged young per breeding pair: Mean number;

No significant decline

Distribution: breeding colonies: Number; location; area (hectares);

No significant decline.

Prey biomass available: Kilogrammes;

No significant decline.

Barriers to connectivity: Number; location; shape; area (hectares);

No significant increase.

Disturbance at the breeding site: Level of impact;

Human activities should occur at levels that do not adversely affect the breeding common tern population.

#### **A999 Wetlands**

Habitat area: Hectares;

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

### **4.3. Assessment Criteria**

#### **4.3.1. Examples of Direct, Indirect or Secondary Impacts**

In order to identify those sites that could be potentially affected, it is necessary to describe the Natura 2000 site in the context of why it has been designated *i.e.* in terms of its Qualifying Interests and the environmental and ecological conditions that maintain the condition of these features. The underpinning conditions that are required to maintain the 'health' of these features are listed in Table 4 below.



**Table 4.** Qualifying Interests and Key environmental conditions supporting site integrity.

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests
Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion.	Overgrazing, erosion, invasive species, particularly common cordgrass ( <i>Spartina anglica</i> ), infilling and reclamation.
Mudflats and sandflats not covered by seawater at low tide	Surface and marine water dependent. Low sensitivity to hydrological changes. Aquaculture, fishing and pollution.	Aquaculture, fishing, dumping of wastes and water pollution.
Wetlands & Waterbirds	Highly sensitive to hydrological changes and loss of wetland habitat. Sensitive to disturbance.	A number of pressures have been identified by Crowe (2005). These pressures include: the modification of wetland sites, particularly for industry or housing and increased levels of disturbance, largely related to recreational activity. Eutrophication at a number of wetland sites as a result of nutrient inputs from a range of polluting activities were also identified as a potential pressure. However this latter pressure is now being alleviated through stricter control of activities associated with water discharge/runoff etc. Climate change was also noted as a significant factor underlying changes in trends of wintering waterbirds in Ireland.

#### 4.3.2. Ecological Network Supporting Natura 2000 Sites

An analysis of the proposed Natural Heritage Areas and designated Natural Heritage Areas in terms of their role in supporting the species using Natura 2000 sites was undertaken. It was assumed that these supporting roles mainly related to mobile fauna such as mammals and birds which may use pNHAs and NHAs as “stepping stones” between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations (2011) place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account during the rest of the AA process.

The Owenboy River Estuary at Carrigaline is also a proposed Natural Heritage Area. Cork Harbour consists of a central basin with a number of narrow estuaries running E-W in line with the ridge structure of this part of Ireland. The Owenboy River is the most southerly of these bays on the western side and runs from Carrigaline to Crosshaven. It consists of two expanded sections with extensive mudflats at low tide, separated by a much narrower channel. Only the upper part is included in the pNHA because it is here that the great majority of birds congregate in winter. As such this pNHA is addressed as per the conservation objectives of the SPA.

## **5. Identification of Potential Impacts & Assessment of Significance**

### **5.1. Potential Impacts**

This section uses the information collected on the sensitivity of each Natura 2000 site and describes any likely significant effects of implementation of the Project. The likely significant effects of the Project are presented in Table 5 below, both in isolation and potentially in combination with other plans and projects.

There will be no direct impact on the adjacent and nearby Natura 2000 sites. Having established no direct impacts or habitat fragmentation, the assessment concentrates on potential indirect impacts.

A worst case scenario would occur whereby the project would result in a significant detrimental change in water quality in Cork Harbour either alone or in combination with other projects or plans as a result of indirect pollution through surface water discharge during the construction process. The effect would have to be considered significant in terms of changes in water quality which would affect the habitats or food sources for which the SAC and SPA species are designated and this scenario will be avoided by undertaking the works at low tide at the majority of locations. Furthermore, the works at two sites at Passage West will include design measures including sheet piling to provide a dry working area and avoid any significant release of suspended solids into Cork Harbour. The works at R-02 at Carrigaline include a design measure for a coffer dam to provide a dry working area and avoid any significant release of suspended solids into Cork Harbour.

Potential impacts on winter waterfowl will be avoided by timing the works outside the winter season for which the SPA birds are designated, *i.e.* works will be carried out within the period April – August. The works locations are not located in areas where Common tern nest or roost (Ringaskiddy Mooring Dolphins) and there would be no impact on this species from noise or disturbance given the distance of removal from the proposed works area.

#### **5.1.1. Potential Impacts on Great Island SAC**

It is considered that there would be no direct or indirect impacts on the Great Island Channel SAC as the site works are located at a distance from the SAC whereby potential significant impacts would not occur.

#### **5.1.2. Potential Impacts on Cork Harbour SPA**

The inclusion of mitigation measures from the EIS for the project and the inclusion of design measures such including piling around the works areas of SW005 and SW006 at Passage West and the employment of a coffer dam to contain the works and prevent significant elevated suspended solids from entering Cork Harbour at R-02 Carrigaline, will avoid potential significant impacts from elevated suspended solids and deterioration of water quality in the SPA.

Undertaking the works during the period April – August will avoid significant impacts on the Wintering Bird species for which the SPA is designated.

**Table 5.** The potential impacts in the absence of mitigation of the Project.

Site	Distance from Project	Potential Direct Impacts e.g. Habitat Loss	Potential Indirect Impacts e.g. alteration to hydrological regime	Surface or Groundwater Contamination	Disturbance to Protected Species (Habitats Directive Annex II & IV)	Stage 2 AA Required
001058 Great Island Channel SAC	SW005-Pass = 1.15 km, SW006-Pass = 2.16 km, R-01 = 8.7 km & R-02 = 8.6 km	No	None	All of the works sites are located at a distance of removal from the SAC such that there would be no significant impact from elevated suspended sediments in the SAC areas.	None	No
004030 Cork Harbour SPA	SW005-Pass = 1.15 km, SW006-Pass = 2.16 km, R-01 = 0.26 km, R-02 = 0.14 km	No	None	Potential impacts on water quality will be avoided by the inclusion of Best Practice Construction measures included from the project EIS and the additional use of sheet piling and coffer dams.	Potential indirect impacts that would occur from noise disturbance to bird species will be avoided by carrying out the works in the period April – August.	No

## **5.2. Assessment of Potential Cumulative Effects**

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

As part of the Screening for an Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region must also be considered at this stage. This step aims to identify at this early stage any possible significant in-combination or cumulative effects/impacts of the proposed development with other such plans and projects on the Natura 2000 sites.

The Cork County Development Plan in complying with the requirements of the Habitats Directive requires that all Projects and Plans, that could affect the Natura 2000 sites in Cork Harbour, would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any in-combination impacts with Plans or Projects for the areas of Passage West, Glenbrook and Carrigaline would be avoided.

Any new applications for the project areas will be assessed on a case by case basis by Cork County Council which will determine the requirement for AA as per the requirements of Article 6(3) of the Habitats Directive.

## **6. Screening Statement**

The Screening Assessment was completed in compliance with the relevant European Commission and National guidelines. The potential impacts, during the construction and operation of the associated activities with the Cork Lower Harbour Main Drainage Project Outfall Upgrade and Repair Works, have been considered in the context of the European Sites potentially affected, their Qualifying Interests and conservation objectives. From the findings of the Screening exercise, it is concluded that the proposed project:

- Is not directly connected with or necessary to the management of any Natura 2000 site;

- Will not have the potential to give rise to significant adverse effects on the qualifying interests of Cork Harbour SPA once the mitigation measures of the Cork LHMD project EIS and design avoidance measures are included in the works programme.

## 7. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

European Commission (2000) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission Environment DG (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission, Brussels.

European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC: Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interests, compensatory measures, overall coherence and opinion of the Commission. European Commission, Brussels.

NPWS (2008) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

NPWS (2008) Site synopsis of the Cork Harbour SPA 004030. Version date: 26.02.2008. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

NPWS (2013) Site synopsis of the Great Island Channel SAC 001058. Version date: 24.09.2013 001058\_Rev13.Doc. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

NPWS (2014) Conservation Objectives: Great Island Channel SAC 001058. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2014) Conservation Objectives: Cork Harbour SPA 004030. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

**Appendix A****FINDING OF NO SIGNIFICANT EFFECTS REPORT****Finding no significant effects report matrix****Name of project or plan**

Cork Lower Harbour Main Drainage Project Outfall Upgrade & Repair Works.

**Name and location of the Natura 2000 site(s)**

There are two European sites that are considered in the assessment: 001058 Great Island Channel SAC and 004030 Cork Harbour SPA.

The distance from works to the SAC boundary are as follows: SW005-Passage West = 1.15 km, SW006-Passage West = 2.16 km, R-01 = 8.7 km & R-02 = 8.6 km.

The distance from works to the SPA boundary are as follows: SW005- Passage West = 1.15 km, SW006-Passage West = 2.16 km, R-01 = 0.26 km, R-02 = 0.14 km.

These sites form part of the Natura 2000 network of sites of highest biodiversity importance for rare and threatened habitats and species across the EU.

**Description of the project or plan**

The project includes the proposed upgrading of two sewerage outfalls, replacement of a precast concrete culvert with an integrated sewerage pipeline and removal of a section of decommissioned sewerage pipeline in the lower Cork Harbour area as part of the Cork Harbour Lower Main Drainage Project.

**Is the project or plan directly connected with or necessary to the management of the site(s)**

No

**Are there other projects or plans that together with the projects or plan being assessed could affect the site**

The Cork County Development Plan in complying with the requirements of the Habitats Directive requires that all Projects and Plans that could affect the Natura 2000 sites in the same zone of influence of the project site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any in-combination impacts with Plans or Projects for the areas of Passage West, Glenbrook and Carrigaline in which the development site is located, would be avoided.

Any new applications for the project areas will be assessed on a case by case basis by Cork County Council which will determine the requirement for AA as per the requirements of Article 6(3) of the Habitats Directive.



***The assessment of significance of effects***

**Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.**

There will be no direct impact on the nearby Natura 2000 sites. Having established no direct impacts or habitat fragmentation, the assessment concentrates on potential indirect impacts.

A worst case scenario would occur whereby the project would result in a significant detrimental change in water quality in the Cork Harbour either alone or in combination with other projects or plans as a result of indirect pollution through surface water discharge. The effect would have to be considered significant in terms of changes in water quality which would affect the habitats or food sources for which the SAC and SPA species are designated.

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**Explain why these effects are not considered significant.**

The worst case scenario will be avoided by undertaking the works at low tide at the majority of locations. Furthermore, the works at two sites at Passage West will include design measures such as sheet piling to provide a dry working area and avoid any significant release of suspended solids into Cork Harbour. The works at R-02 at Carrigaline include a design measure for a coffer dam to provide a dry working area and avoid any significant release of suspended solids into Cork Harbour.

Potential impacts on winter waterfowl will be avoided by timing the works outside the winter season for which the SPA birds are designated, i.e. works will be carried out within the period April – August. The works locations are not located in areas where Common tern nest or roost (Ringaskiddy Mooring Dolphins) and there would be no impact on this species from noise or disturbance given the distance of removal from the proposed works area.

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**List of agencies consulted: provide contact name and telephone or e-mail address**

Consultation is not required with the NPWS when a proposed project has been screened out.

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**Response to consultation**

Not Applicable.

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***Data collected to carry out the assessment***

**Who carried out the assessment**

Moore Group Environmental Services.

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**Sources of data**

NPWS database of designated sites at [www.npws.ie](http://www.npws.ie)  
National Biodiversity Data Centre database <http://maps.biodiversityireland.ie>

**Level of assessment completed**Desktop Assessment

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***Overall Conclusions***

The Screening Assessment was completed in compliance with the relevant European Commission and National guidelines. The potential impacts, during the construction and operation of the associated activities with the Cork Lower Harbour Main Drainage Project Outfall Upgrade and Repair Works, have been considered in the context of the European Sites potentially affected, their Qualifying Interests and conservation objectives. From the findings of the Screening exercise, it is concluded that the proposed project:

- Is not directly connected with or necessary to the management of any Natura 2000 site;
- Will not have the potential to give rise to significant adverse effects on the qualifying interests of Cork Harbour SPA once the approved Project EIS mitigation measures (which now form an integral part of the Cork LHMD Project) and design avoidance measures as stipulated in this report are included in the works programme.

## **Appendix B**

### **Project Drawings**



