

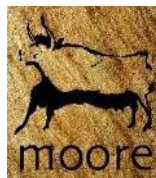
Report for Appropriate Assessment Screening

**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

June 2016

Prepared by: Moore Group – Environmental Services



On behalf of Irish Water

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1. Introduction

1.1. Project Background

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 Raffeen) 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.

Cork County Council was granted approval for the Cork LHMD Project (An Bord Pleanála Register Reference YA0005) 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 measures as contained in the EIS and the An Bord Pleanála planning conditions now form an integral part of the overall Cork Lower Harbour Main Drainage Project (Cork LHMD Project).

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 146B Request refers to proposed works in Cobh and includes works associated with the Cobh to Monkstown estuary crossing pipeline. The Appropriate Assessment of the proposed estuary crossing pipeline is addressed in a separate Screening Report.

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 European 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.

The project includes works at a total of 20 outfalls in the Cobh area between North Cobh, Ballynoe, Cork Dockyard, Whitepoint and Cobh, see Drawing 20506-FL-CH-100 in Appendix B – Project Drawings. Of these 20 outfalls, 4 will entail minor works which have no connectivity with the aquatic environment of Cork Harbour and for this reason these 4 outfall locations were excluded from the assessment at the pre-screening stage.

This report contains information required for the Competent Authority to commence an Appropriate Assessment (AA) process on the effects of the proposed construction works at **5 sewerage outfall locations** and the **removal of 11 decommissioned sewerage outfalls** in the lower Cork Harbour area as part of the Cork Harbour Lower Main Drainage Project.

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 and Cork County Council 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 over 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.

SACs designated under the Habitats Directive and SPAs, 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 forms part of the documentary record of the Appropriate Assessment process on the effects of the proposed upgrading of 5 existing sewerage outfalls and removal of 11 decommissioned sewerage outfalls in the lower Cork Harbour area as part of the Cork Harbour Lower Main Drainage Cobh 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 will or will not effectively offset the damage to the sites will be necessary.

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, a screening assessment of the Project has been carried out 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, 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 including; the Natura 2000 network Data Form; Site Synopsis; Conservation Objective & supporting documentation.
- Online database of rare, threatened and protected species
- Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2013)

2.3. Screening Steps

In complying with the obligations under Article 6(3) and following the EC2000 and MN2000 Guidance, this report has been structured as a stage by stage approach as follows:

Screening stage

- Description of the Project
- Brief description of the Natura 2000 site(s) potentially affected
- Conservation objectives of the Natura 2000 site(s)
- Assessment criteria;
 - Likely impacts on Natura 2000 site(s)
 - Cumulative and in combination impacts
 - Likely changes to Natura 2000 site(s)
 - Elements of the draft Plan where the impacts are likely to be significant
- Identification and description of individual and cumulative impacts likely to result
- Assessment of the significance of the impacts identified above on site(s) integrity
- Exclusion of site(s) where it can be objectively concluded that there will be no significant effects
- Screening conclusion and statement

If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA).

3. Description of the Project

The project includes works at a total of 20 outfalls in the Cobh area between North Cobh, Ballynoe, Cork Dockyard, Whitepoint and Cobh town, see Drawing 20506-FL-CH-100 in Appendix B – Project Drawings. Of these 20 outfalls, 4 will entail minor works which have no connectivity with the aquatic environment of

Cork Harbour and for this reason these 4 outfall locations are excluded from the assessment at the pre-screening stage.

This assessment will focus on the remaining 16 outfalls, 5 of which will require construction works in the foreshore and 11 of which will be removed to restore the natural state of the foreshore. **None of these works are located within Natura 2000 sites.**

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

The 5 proposed outfalls which require construction within the foreshore will operate as combined sewer overflows. Works will be required along the foreshore to below the MLWS at 4 locations, namely SW002 "Dock Cottages Overflow", SW007 "Old Town Hall Overflow", C-11 "Pebble Beach Overflow" and C-12 "Rushbrooke Overflow". These outfalls will have to be constructed such that they are buried along the foreshore and terminate below the MLWS tide-mark.

The proposed structure at C-04 "Station Car Park Overflow" will require upsizing of the existing pipeline to improve hydraulic capacity in the network. The structure will serve as a combined sewer overflow. 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 on the marine side of the quay wall. 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 remaining 11 outfall locations (C-01, C-10, C-09, C-07, C-08, C-06, SW003, SW020, SW009, SW010 and SW011) will be made redundant and the existing pipelines will be removed to restore the natural state of the foreshore. Where possible, the Contractor will track along the coastal zone at low tide to complete the removal works. The Contractor's site boundary may encroach on the foreshore above the Mean Low Water Spring tide mark (MLWS) for the duration of the works.

At each of the four work sites where outfalls are to be extended beneath the foreshore to below the MLWS, a silt curtain will be erected to prevent the sedimentation or siltation of the estuary as a result of the works. The silt curtain will extend from above the water surface to the seabed to ensure that silt from excavations is contained.

The following is a description of the proposals for each of the four such outfalls:

C-12 "Rushbrooke Overflow"

- Access to the works site will be along the foreshore at times of low tide. The first 30m of the outfall pipeline will be excavated through the intertidal area as far as the MLWS. This part of the works will be carried out at times of low tide;
- The remaining 10m of the outfall will be below the MLWS and will therefore require the construction of a causeway for machinery to access the works. Material will be imported to build a causeway to above the High Water-mark on a Spring-tide (MHWS). This will allow the excavator to dredge the remaining 10m of the pipeline from the causeway;
- Once the pipeline has been constructed, the material used to build the causeway will be removed and the foreshore will be returned to its natural condition. Once the silt/turbidity within the silt curtained area has settled, the silt curtain will be removed.

SW002 "Dock Cottages Overflow"

- Access to the works site will be along the foreshore at times of low tide;
- The first 50m of the outfall pipeline will be excavated through the intertidal area as far as the MLWS. This part of the works will also be carried out at times of low tide;
- The remaining 12m of the outfall will be below the MLWS and will therefore require the construction of a causeway for machinery to access the works. Material will be imported to build a causeway to above the MHWS. This will allow the excavator to dredge the remaining 12m of the pipeline from the causeway;
- Once the proposed outfall has been constructed, the existing outfall structure will be demolished and removed from the foreshore;
- The material used to build the causeway will then be removed and the foreshore will be returned to its natural condition. Once the silt/turbidity within the silt curtained area has settled, the silt curtain will be removed.

C-11 "Pebble Beach"

- Access to the works site will be along the foreshore at times of low tide. The first 90m of the outfall pipeline will be excavated through the intertidal area as far as the MLWS. This part of the works will be carried out at times of low tide;
- The remaining 40m of the pipeline will be dredged along the seabed by an excavator working from a jack up barge;

- Once the pipeline has been constructed, the foreshore will be returned to its natural condition and all machinery and equipment removed from it. Once the silt/turbidity within the area contained by the silt curtain has settled, the silt curtain will be removed.

SW007 "Old Town Hall Overflow"

- The outfall pipeline at this location will be constructed through the quay and dredged along the seabed for a distance of 10m by an excavator working from a jack up barge;
- A localised damming structure will be constructed to create a dry environment around the penetration of the quay wall thus allowing the opening in the quay wall around the outfall pipeline to be reinstated;
- Once the proposed outfall has been constructed, the existing outfall will be abandoned and filled with grout;
- The foreshore will then be returned to its natural condition and all machinery and equipment removed from it. Once the silt/turbidity within the area contained by the silt curtain has settled, the silt curtain will be removed.

It was a condition of granting planning permission that all environmental protection measures as set out in the 2008 EIS for the Cork LHMD Project are implemented in full. Hence, the environmental measures as outlined in the EIS now form part of the overall Cork LHMD Project, of which this pumping station is a part.

These measures have been reviewed in the context of Appropriate Assessment to ensure they will prevent any impact to the Qualifying Interests and Special Conservation Interests of the SAC and SPA, and additional best-practice construction measures have been included as necessary.

Along with the avoidance measure of restricted timing of works on the foreshore (i.e. works will be carried out in the months of April to August in order to avoid impacts on wintering wildfowl) the following project specific construction design measures are proposed:

- Further to the protection of water quality in Monkstown Creek and the greater Cork Harbour, the Contactor will be required to contain any cement mixing/preparation works and to avoid contamination of the harbour waters with cement which is toxic in the aquatic environment.
- For any sections of concrete that are under water, pre-cast units shall be used for construction. Where the use of pre-cast units is not possible, where *in situ* stitching is required or where

- concrete is to be placed under water or in tidal conditions, specific fast-setting mix is required to limit segregation and washout of fine material/cement.
- The Contractor will ensure that all equipment is in good working order and that refuelling will not take place within 10 m of Cork Harbour or any water course entering it when working from the shore side. Spill kits and hydrocarbon mats will be maintained at works areas for emergency use.
 - Operations will be undertaken in cognisance of the existing Port of Cork Oil Spill Contingency Plan.
 - The use of a wide track vehicle to spread the load and prevent habitat fragmentation will be employed when moving equipment along the shore at low tide at sites where intertidal access is required. The Contractor will ensure that the minimum number of trips is made to transport the required equipment for the works proposed.
 - Works in the foreshore areas will use chemicals that have been approved for use in the marine environment and employ methods that reduce the release of polluting materials into the water column. Operational procedures and contingency measures to reduce the impact of a pollution incident should it occur will be put in place prior to the commencement of construction.
 - Excavation works on the foreshore will ensure that the top layer of sediment/substrate is reinstated.
 - To prevent chemical pollution, all fuels or chemicals kept on the construction site will be stored in bunded containers. All refuelling and maintenance will be carried out in ramped containment areas away from sensitive environments (i.e. up-gradient of protected habitats or adjacent watercourses).
 - Prior to any construction taking place, local fishing interests should be notified. In the event of any spillage or accident occurring below the high water mark of ordinary or medium tides, or above the high water mark which may impact on the foreshore during the carrying out of the works, or during operations following the completion of these works, the Irish Coast Guard will be notified immediately by telephone.

The above measures form an integral part of the proposed outfall works. The contractor will be contractually required to implement them above in full.

Table 1. Location details and proposed works description.

Drawing No.	NOD Outfall Reference	Future Asset Owner	Proposal	Works proposed in Foreshore	Extend Outfall to Below MLWS
FL-CH-103	C-01 "Ballynoe"	Redundant	The existing structure on Cobh Road will be made redundant as a result of the works.	Yes	No
FL-CH-104	C-12 "Rushbrooke Overflow"	Irish Water	The proposed structure will serve as a combined sewer overflow for the Rushbrooke Hotel Pumping Station.	Yes	Yes
FL-CH-106	SW002-"Dock Cottages Overflow"	Irish Water	The proposed structure will serve as a combined sewer overflow for Dock Cottages Pumping Station.	Yes	Yes
FL-CH-109	C-11 "Pebble Beach Overflow"	Irish Water	The proposed structure will serve as a combined sewer overflow for the Dockyard Pumping Station.	Yes	Yes
FL-CH-112	C-10 "Whitepoint Drive A"	Redundant	The existing structure at Whitepoint Drive will be made redundant as a result of the works.	Yes	No
FL-CH-113	C-09 "Whitepoint Drive B"	Redundant	The existing structure at Whitepoint Drive will be made redundant as a result of the works.	Yes	No
FL-CH-114	C-07 "Whitepoint Drive C"	Redundant	The existing structure at Whitepoint Drive will be made redundant as a result of the works.	Yes	No
FL-CH-115	C-08 "Whitepoint Drive D"	Redundant	The existing structure at Whitepoint Drive will be made redundant as a result of the works.	Yes	No
FL-CH-116	C-06 "Whitepoint Moorings A"	Redundant	The existing structure at White Point Moorings will be made redundant as a result of the works.	Yes	No
FL-CH-117	SW003-"Railway Cottages"	Redundant	The existing structure at Railway Cottages will be made redundant as a result of the works.	Yes	No
FL-CH-119	C-04 "Station Car Park Overflow"	Irish Water	The proposed structure in Station Car Park will serve as a combined sewer overflow for Station Car Park Pumping Station. Localised works will be required on the seawall to upgrade the existing outfall pipe.	Yes	No
FL-CH-123	SW007- "Old Town Hall Overflow"	Irish Water	The proposed structure at Old Town Hall will serve as a combined sewer overflow for the Old Town Hall Pumping Station.	Yes	Yes
FL-CH-127	SW020- "Sirius Wharf"	Redundant	The existing structure at Sirius Wharf will be made redundant as a result of the works.	Yes	No
FL-CH-128	SW009-"Connolly Street A"	Redundant	The existing structure at Connolly Street will be made redundant as a result of the works.	Yes	No
FL-CH-129	SW010-"Connolly Street B"	Redundant	The existing structure at Connolly Street will be made redundant as a result of the works.	Yes	No
FL-CH-130	SW011- "Pilots Pier"	Redundant	The existing structure at Pilots Pier will be made redundant as a result of the works.	Yes	No

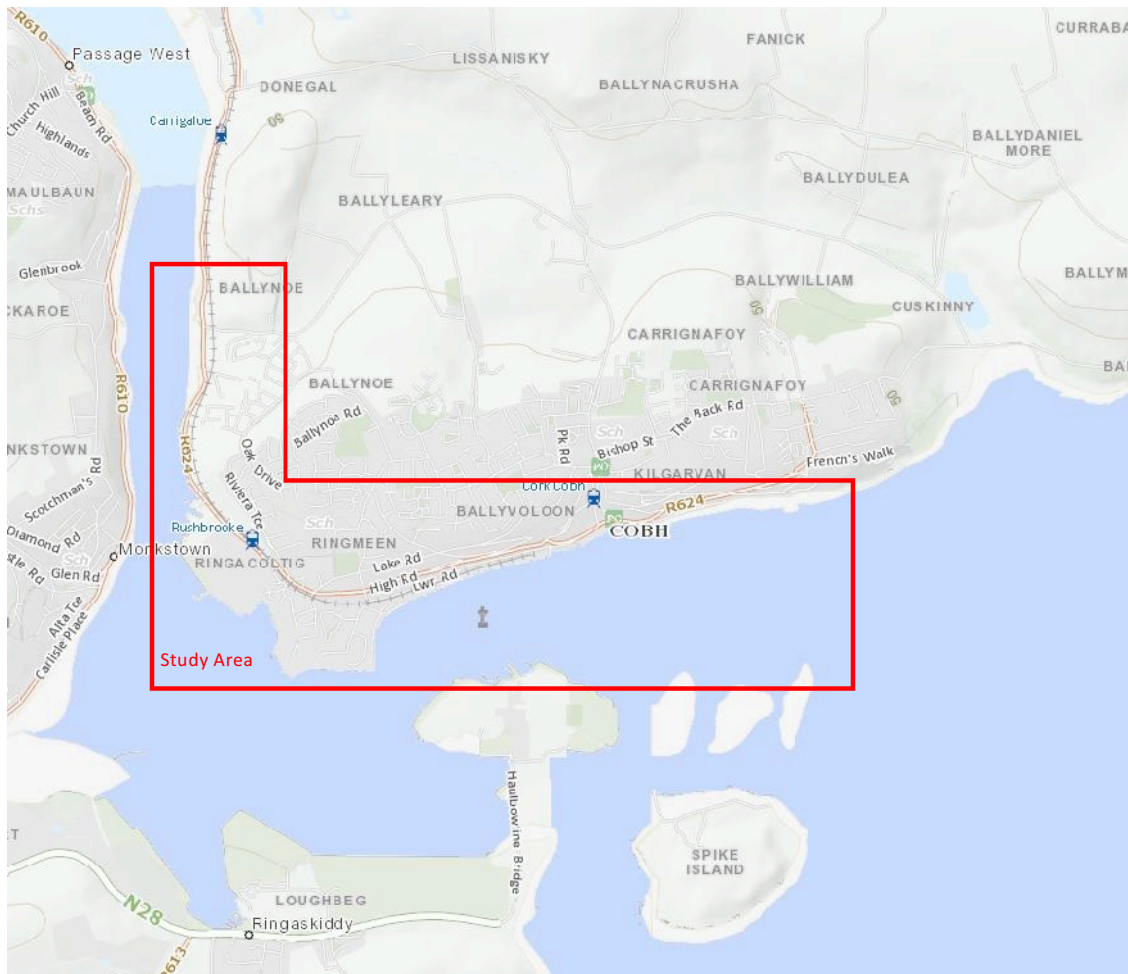


Figure 1. Showing the study area in Lower Cork Harbour (©GeoHive).

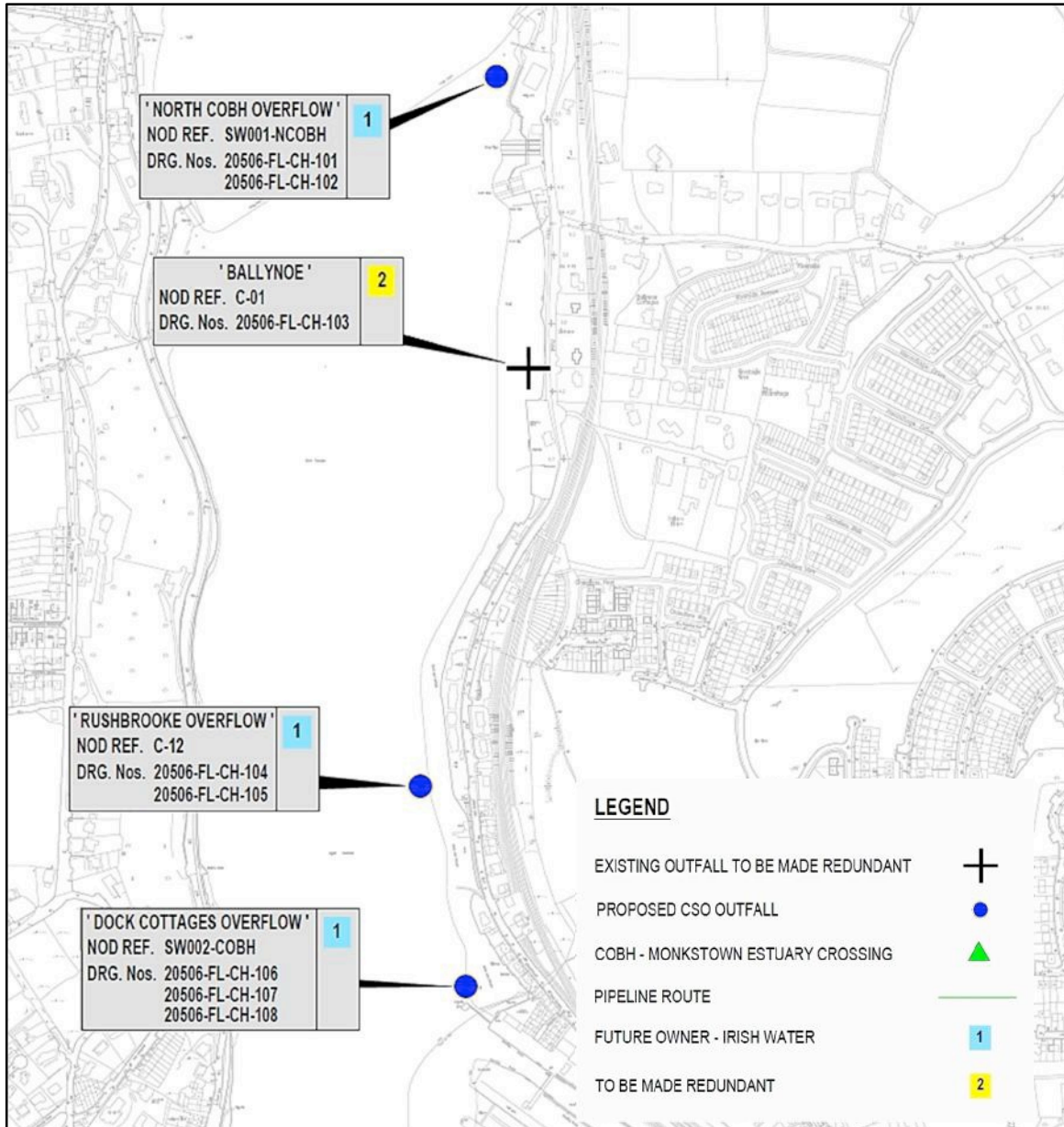


Figure 2a. Showing detail of the study area from Cobh North to Cork Dockyard.

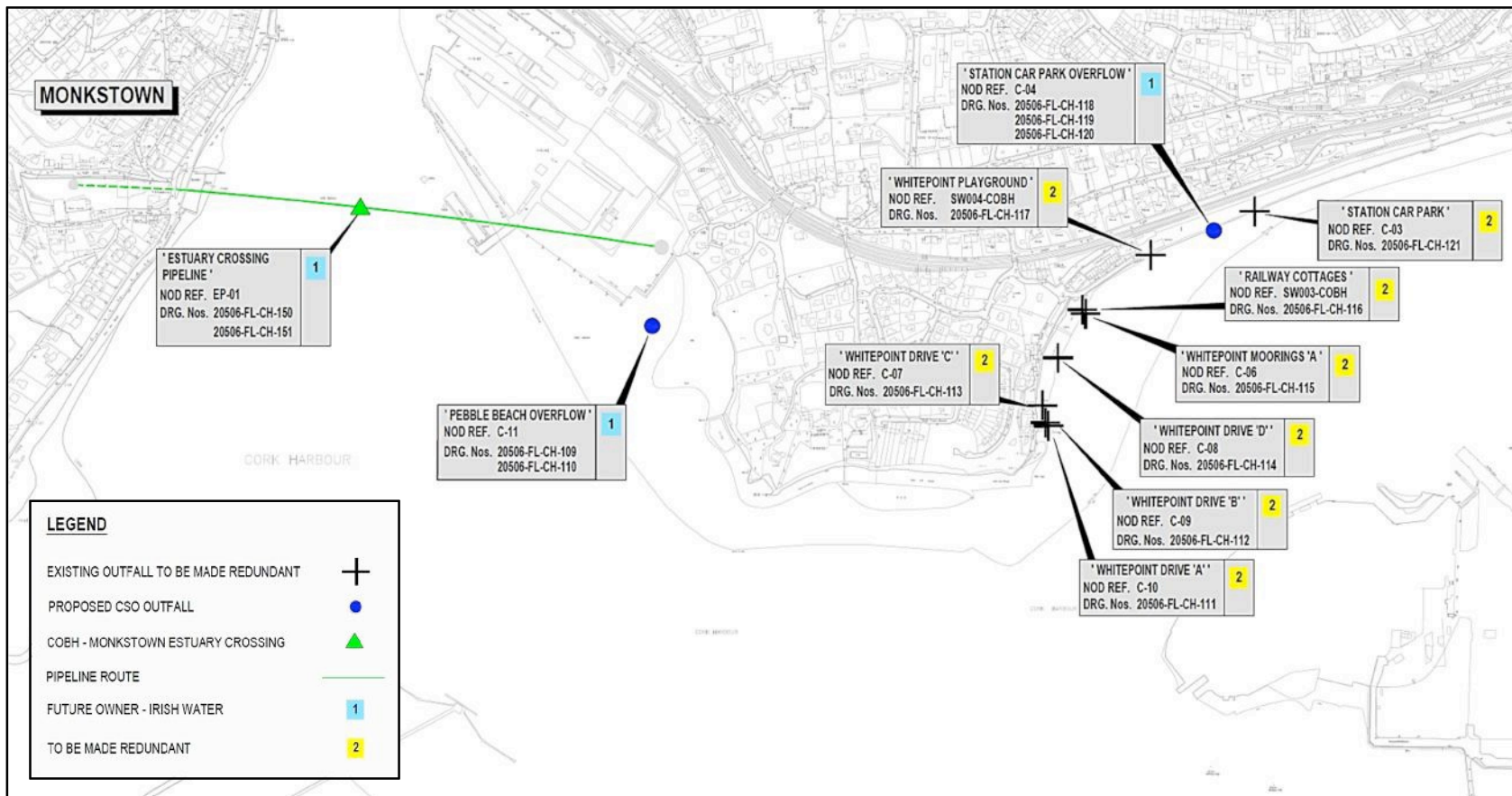


Figure 2b. Showing detail of the study area from Cork Dockyard to Cobh.

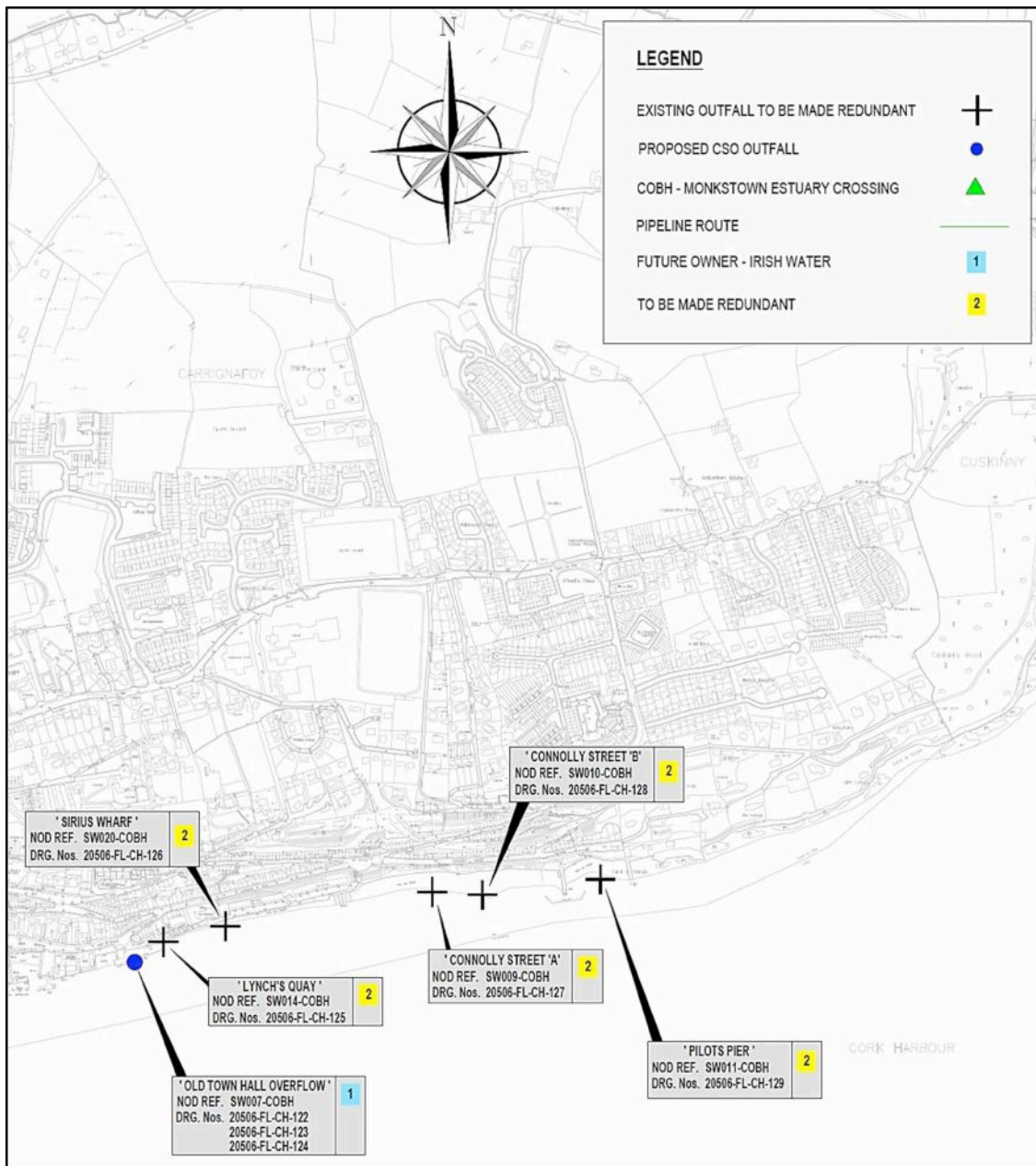


Figure 2c. Showing detail of the study area at Cobh.

4. Identification of European 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 European sites. Given the coastal nature of the proposed works, the zone of influence can be reduced to include the European sites with marine hydrological connectivity to the works areas. The two European 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 European sites in Figures 3 and 4 below.

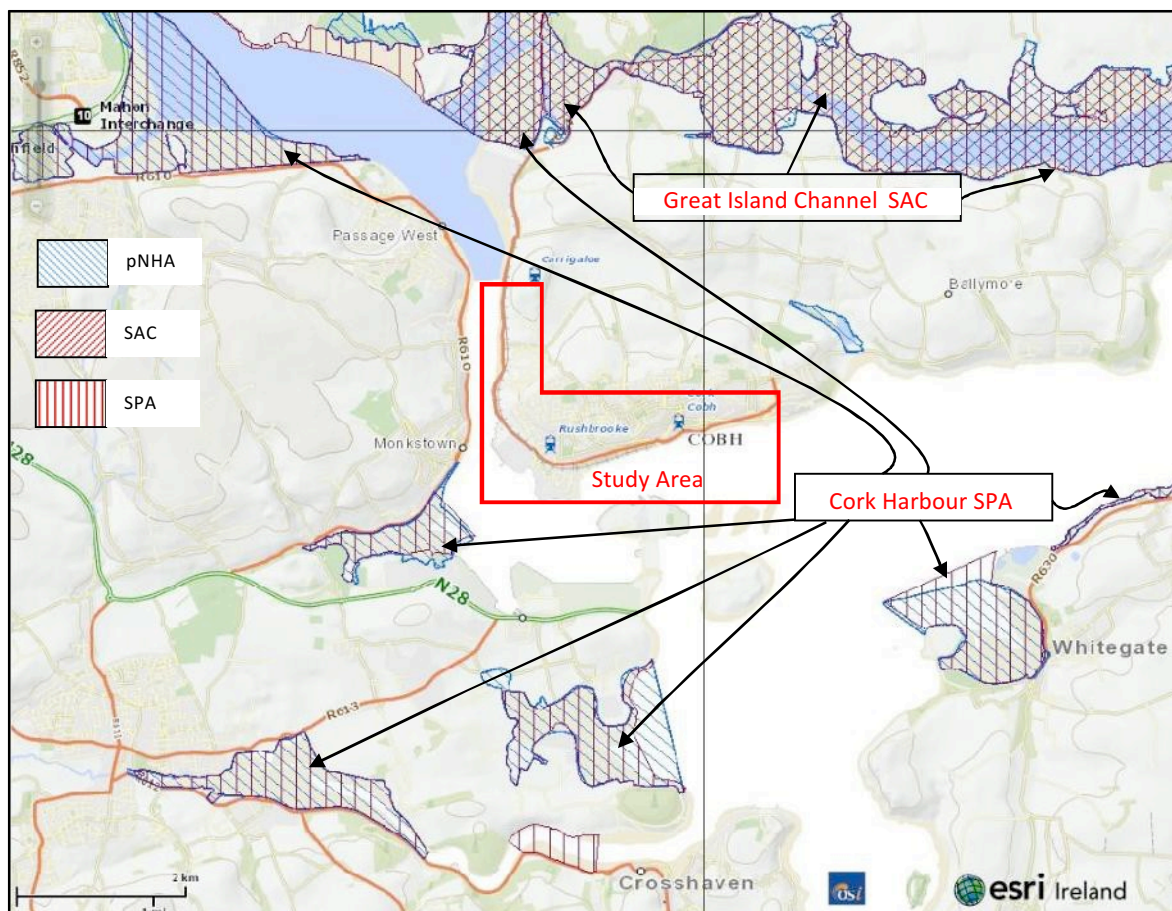


Figure 3. Study area in relation to the Cork Harbour European Sites.

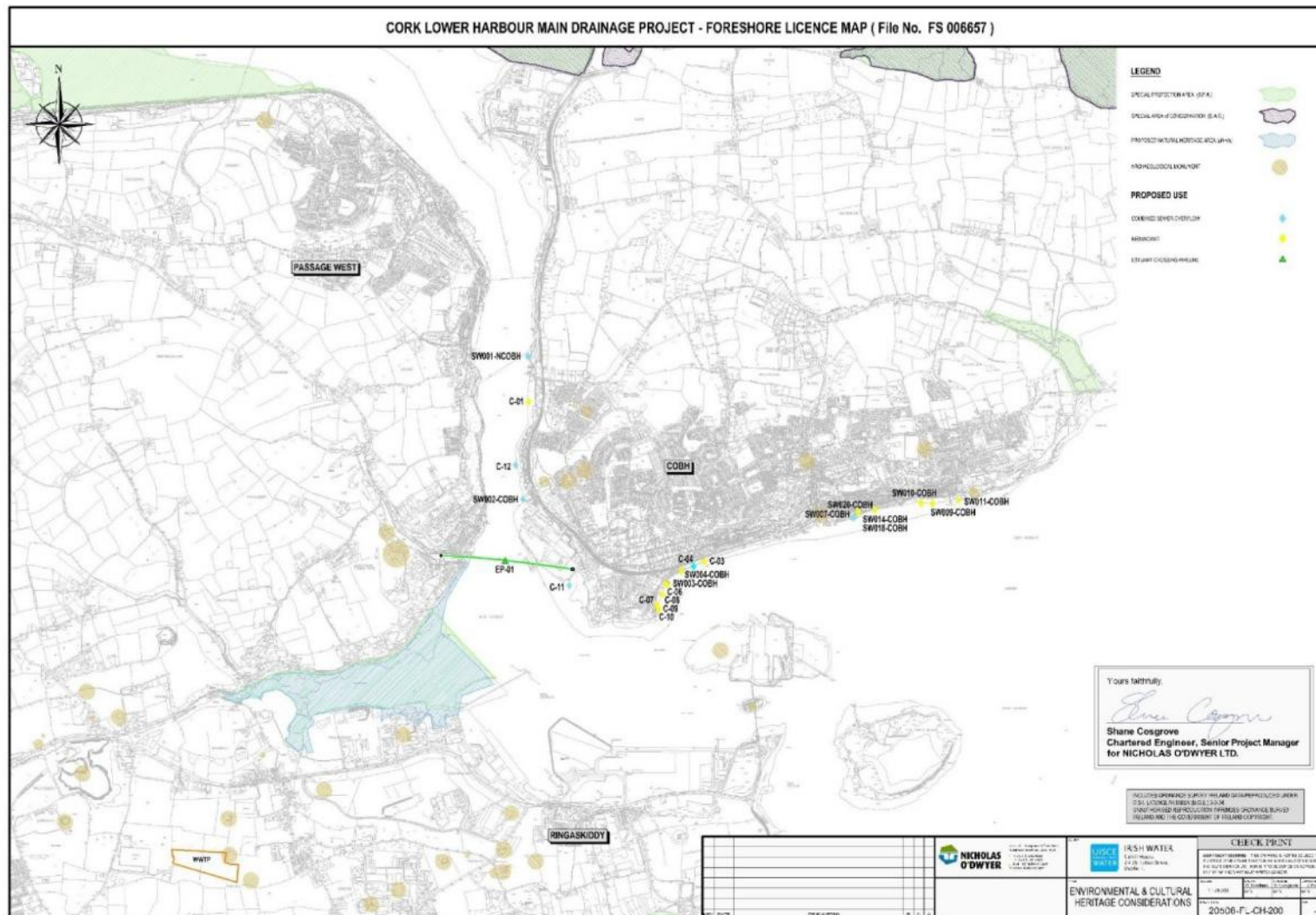


Figure 4. Site locations in relation to the Cork Harbour European Sites.

Details of the qualifying Interests of the Great Island Channel European 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 4th February 2016.

Table 2. Qualifying Interests of the Great Island Channel SAC [001058]

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 Conservation Interests of the Cork Harbour SPA [004030]

Site Code	Site Name	Qualifying Habitats	Qualifying Species
004030	Cork Harbour SPA	Wetlands & Waterbirds [A999]	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](Breeding)

4.2. Conservation Objectives of the European sites

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

Great Island Channel SAC [001058]. Conservation Objectives Version 1. 6th June 2014, Conservation objectives supporting document - Coastal Habitats May 2014 & Conservation objectives supporting document - Marine Habitats May 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; Carrigtwohill - 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]. Conservation Objectives Version 1. 16th December 2014 & Conservation Objectives Supporting Document Nov 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 European 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 European sites

An analysis of the proposed Natural Heritage Areas and designated Natural Heritage Areas in terms of their role in supporting the species using European 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 European 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. 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. Monkstown Creek located c. 900 m to the southwest of the C-11 “Pebble Beach” outfall and is designated as part of the Cork Harbour SPA and also a proposed Natural Heritage Area [001987]. Whitegate Bay, which is located c. 2.5 km to the southeast of the nearest outfall at Cobh, is designated as part of the Cork Harbour SPA and also a proposed Natural Heritage Area [001084]. As such, these pNHAs are addressed as per the conservation objectives of the SPA.

Cuskinny Marsh pNHA is located c. 1.3 km to the northeast of the nearest outfall (SW011 “Pilots Pier”), has no connectivity with the proposed project and will not be affected.

5. Likely Significant Effects

5.1. Assessment of Effects

This section uses the information collected on the sensitivity of each European 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 or habitat fragmentation in the nearby European 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 of the SAC or food sources of species for which the SPA are designated and this scenario will be avoided by undertaking the works at low tide at the majority of locations.

Biological effects include smothering/siltation of marine intertidal habitat, which would prevent access to the surface for respiration and feeding. Smothering may also impact recruitment by preventing larval settlement.

Recoverability will depend on the scale and intensity of the pressure and the presence of adults and spawning populations in the vicinity. Where the species is extracted from relatively small areas recovery will take place through adult migration in mobile species. Severe disturbances that remove the species from larger areas would require habitat recovery and a larval supply for reestablishment to occur. Habitat recovery has been shown to depend on the sediment type.

Potential minor local 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. Similarly, the potential future habitat improvement locations at Monkstown Creek or areas identified as potential foraging areas will not be affected by the proposed works. This statement is based on Ornithological Surveys undertaken for the Estuary Crossing aspect of the overall project which is addressed in separate reports but also considered in terms of potential cumulative impacts in this report.

5.1.1. Likely Effects on Great Island Channel 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 (closest 2.5km) from the SAC and best practice construction measures will prevent the release of any pollutants to the aquatic environment.

The majority of works are to be carried out above the Mean Low Water Spring tide mark and as such there will be no impact on the aquatic environment of Cork Harbour at 11 locations where redundant outfalls will be removed and at 5 locations where upgrading works will be carried out.

The inclusion of Best Practice Construction measures which form a key part of the project and the inclusion of design measures such as sheet piling around the works area of C-04 “Station Car Park Overflow” and the employment of silt curtains to contain the works and prevent significant elevated suspended solids from entering Cork Harbour at 4 locations, namely C-11 “Pebble Beach Overflow”, SW002 “Dock Cottages Overflow”, SW007 “Old Town Hall Overflow” and C-12 “Rushbrooke Overflow” will avoid potential significant impacts from elevated suspended solids and deterioration of water quality in the SAC.

5.1.2. Likely Effects on Cork Harbour SPA

The majority of works are to be carried out above the Mean Low Water Spring tide mark and as such there will be no impact on the aquatic environment of Cork Harbour at 11 locations where redundant outfalls will be removed and at 5 locations where upgrading works will be carried out.

The inclusion of Best Practice Construction measures which form a key part of the project and the inclusion of design measures such as sheet piling around the works area of C-04 "Station Car Park Overflow" and the employment of silt curtains to contain the works and prevent significant elevated suspended solids from entering Cork Harbour at 4 locations, namely C-11 "Pebble Beach Overflow", SW002 "Dock Cottages Overflow", SW007 "Old Town Hall Overflow" and C-12 "Rushbrooke Overflow" 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. As the proposed works are within a busy harbour and urban area any resident populations associated with the SPA will be accustomed to noise and disturbance. There are also similar suitable foraging and roosting habitats in proximity.

The works locations are not located in areas where Common tern nest or roost and there would be no impact on this species from noise or disturbance.

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	2.5 km at nearest to Ballynoe Outfall	No	None	All of the works sites are located at a distance of removal from the SAC and with the inclusion of best-practice measures to prevent the release of any pollutants to the aquatic environment there would be no significant impact from elevated suspended sediments in the SAC areas.	None	No
004030 Cork Harbour SPA	c. 900 m at nearest from Pebble Beach Outfall to Monkstown Creek	No	None	<p>Potential impacts on water quality will be negated by the inclusion of Best Practice Construction measures which form an integral part of the overall project.</p> <p>Works at four locations, namely C-11 "Pebble Beach Overflow", SW002 "Dock Cottages Overflow", C-12 "Rushbrooke Overflow" and SW007 "Old Town Hall Overflow" will be required to be undertaken below the MLWS mark and Construction Management measures will ensure no significant impacts on the water quality of Cork Harbour and nearby SPA areas.</p>	<p>Potential indirect impacts that would occur from noise disturbance to wintering bird species will be avoided by carrying out the works in the period April – August.</p> <p>The works locations are <u>not</u> located in areas where Common tern nest or roost and there would be no impact on this species from noise or disturbance.</p>	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 European sites.

5.2.1. Cobh Town Development Plan 2013

The Cobh Town Development Plan 2013 covers most of the coastal area in which the proposed outfall works are to be carried out. The Plan provides the planning policy and zoning objectives for Cobh. The Natura Impact Report associated with the Plan was reviewed, which took into consideration the development also provided for in the Cork City Development Plan 2009-2015.

Policy INF-01 of the plan seeks to encourage the implementation of the Cork Lower Harbour Sewerage Scheme and it requires the provision of appropriate and sustainable waste water infrastructure for new developments in the town in advance of the commencement of any new discharges from these. The policy precludes any increase in discharge of untreated wastewater to the harbour. On this basis, it is considered that the plan will not cause any increase in discharge of untreated wastewater to the harbour, and therefore is unlikely to contribute to negative impacts on water quality in the harbour.

The Cork County Development Plan in complying with the requirements of the Habitats Directive requires that all Projects and Plans, that could affect the European 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 Monkstown and Cobh 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.

5.2.2. Port of Cork Maintenance Dredging

Port of Cork submitted an application to the EPA in February 2014 for a maintenance dredging programme. That application was accompanied by a Natura Impact Statement (NIS) which was reviewed as part of this analysis. The dredging campaign extends from the City Quays and Tivoli Docks in Cork City, out to Roche's Point. Coastal hydrodynamic modelling was undertaken as part of that assessment to help determine the spread of the dredge plume. The NIS concluded that all of the potential impacts identified will be avoided, and that the proposed maintenance dredging would not have a significant negative impact on either European Site being considered here.

5.2.3. Monkstown Marina

Proposals for a new marina at Monkstown were submitted for planning permission and that application included a NIS. The marina comprises car-parking, retail, office and landscaping, with a requirement to dredge part of the seabed in the shallower parts of the marina and in a band paralleling the shore to enable safe access by craft during all states of the tide. The NIS concluded that the marina at Monkstown will not result in the loss of any feeding areas or roosting sites for wintering waterfowl or waders and consequently no impact on the qualifying interests for Cork Harbour SPA.

5.2.4. Ringaskiddy Port Redevelopment

The Ringaskiddy Port Redevelopment project consists of a new 314m Container Berth 1/ Multipurpose Berth that will be capable of accommodating vessels carrying a range of different cargoes including containers, freight and general cargoes, an additional 200m Container Berth 2, surfacing of existing port lands to provide operational areas, dredging of the seabed to a level of -13.0 m Chart Datum (CD), demolition of existing link-span, installation of link-span comprising a floating pontoon and access bridge, installation of container handling cranes and terminal transport equipment, maintenance building, administrative buildings and entrance kiosks, ancillary car parking, lighting and fencing. In addition, a new 182m extension to the existing Deepwater Berth (DWB) which will comprise a filled quay structure extending no further seaward than the edge of the existing DWB, dredging works to varying levels to facilitate navigational access to the new facilities and construction of a new public pier, slipway and boarding platform at Paddy's Point Amenity Area.

The EIS was accompanied by an NIS which determined that with the employment of mitigation measures that the proposal will not result in direct, indirect or cumulative impacts which would have the potential to adversely affect the qualifying interests / special conservation interests of the Natura 2000 sites within

the study area with regard to the range, population densities or conservation status of the habitats and species for which these sites are designated (i.e. conservation objectives).

5.2.5. Lower Cork Harbour Main Drainage Project

An NIS for the estuary crossing was prepared by Moore Group. This NIS report reviewed the impacts arising from the proposed crossing from the Cork Dockyard to Marine Villas in Monkstown and found, following a Stage 1 Screening Assessment, that without the implementation of mitigation measures, significant effects could impact upon the integrity of the Cork Harbour SPA and Great Island Channel SAC. With the implementation of the mitigation measures specified in the NIS, it is considered that the implementation of the proposed crossing will not result in significant effects to the conservation objectives or integrity of the Cork Harbour SPA and Great Island Channel SAC, either individually or in combination with other plans or projects.

All elements of the Cork Lower Harbour Main Drainage Project have been screened for Appropriate Assessment. No works will be taking place within the Cork Harbour SPA or the Great Island Channel SAC. It was a condition of granting planning permission for the Project in 2009 that all environmental protection measures as set out in the 2008 EIS for the Cork LHMD Project are implemented in full. Hence, the environmental measures as outlined in the EIS now form part of the overall Cork LHMD Project and therefore are an integral part of all protect components. These measures have been reviewed in the context of Appropriate Assessment to ensure they will prevent any impact to the Qualifying Interests and Special Conservation Interests of the SAC and SPA, and additional best-practice construction measures have been included as necessary. The contractor will be contractually required to these measures in full. The sequence of works for all elements of the Project has not yet been determined however with the implementation of the environmental protection measures of the EIS no in combination effects/impacts are predicted.

5.2.6. Summary of In-combination Effects

The plans and projects listed in this section are not considered likely to act in combination with the Cork Lower Harbour Main Drainage Project Outfall Upgrade and Repair Works to give rise to negative effects that have the potential to affect the conservation objectives of the European Sites considered here, including their structure and function.

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 European site;
- Based on (i) the review of the EIS measures in the context of Appropriate Assessment to ensure they will prevent any impact to the Qualifying Interests and Special Conservation Interests of the SAC and SPA, (ii) the additional best-practice construction measures which have been included as necessary and (iii) the fact that the appointed contractor will be contractually required to implement them above in full:
 - the proposed project does not have the potential to give rise to significant adverse effects on the overall integrity of the Great Channel Island SAC;
 - the proposed project will not have the potential to give rise to significant adverse effects on the overall integrity of the Cork Harbour SPA.

This assessment has therefore stopped at Stage 1 Screening and there should be no further requirement for Stage 2 (Appropriate Assessment).

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) 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 (2013a) 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 (2013b) 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 (2014a) Conservation Objectives: Great Island Channel SAC 001058. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

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

NPWS. (2014c). Conservation Objectives: Great Island Channel SAC 001058. Conservation objectives supporting document - Marine Habitats Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS. (2014d). Conservation Objectives: Cork Harbour SPA 004030. Conservation Objectives Supporting Document 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 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 areas to the SAC boundary is c. 2.5 km.

The distance from works to the SPA boundary are c. 900 m at nearest from the C-11 "Pebble Beach" Outfall to Monkstown Creek.

Description of the project or plan

The project includes works at a total of 20 outfalls in the Cobh area between North Cobh, Ballynoe, Cork Dockyard, Whitepoint and Cobh town. Of these 20 outfalls, 4 will entail minor works which have no connectivity with the aquatic environment of Cork Harbour and for this reason these 4 outfall locations are excluded from the assessment at the pre-screening stage.

This assessment focuses on the remaining 16 outfalls, 5 of which will require construction works in the foreshore and 11 of which will be removed to restore the natural state of the foreshore.

None of these works are located within Natura 2000 sites.

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

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 European sites.

Cobh Town Development Plan 2013

The Cobh Town Development Plan 2013 covers most of the coastal area in which the proposed outfall works are to be carried out. The Plan provides the planning policy and zoning objectives for Cobh. The Natura Impact Report associated with the Plan was reviewed, which took into consideration the development also provided for in the Cork City Development Plan 2009-2015.

Policy INF-01 of the plan seeks to encourage the implementation of the Cork Lower Harbour Main Drainage Project and it requires the provision of appropriate and sustainable waste water infrastructure for new developments in the town in advance of the commencement of any new discharges from these. The policy precludes any increase in discharge of untreated wastewater to the harbour. On this basis, it is considered that the plan will not cause any increase in discharge of untreated wastewater to the harbour, and therefore is unlikely to contribute to negative impacts on water quality in the harbour.

The Cork County Development Plan in complying with the requirements of the Habitats Directive requires that all Projects and Plans, that could affect the European 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 Monkstown and Cobh 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.

Port of Cork Maintenance Dredging

Port of Cork submitted an application to the EPA in February 2014 for a maintenance dredging programme. That application was accompanied by a Natura Impact Statement (NIS) which was reviewed as part of this analysis. The dredging campaign extends from the City Quays and Tivoli Docks in Cork City, out to Roche's Point. Coastal hydrodynamic modelling was undertaken as part of that assessment to help determine the spread of the dredge plume. The NIS concluded that all of the potential impacts identified will be avoided, and that the proposed maintenance dredging would not have a significant negative impact on either European Site being considered here.

Monkstown Marina

Proposals for a new marina at Monkstown were submitted for planning permission and that application included a NIS. The marina comprises car-parking, retail, office and landscaping, with a requirement to dredge part of the seabed in the shallower parts of the marina and in a band paralleling the shore to enable safe access by craft during all states of the tide. The NIS concluded that the marina at Monkstown will not result in the loss of any feeding areas or roosting sites for wintering waterfowl or waders and consequently no impact on the qualifying interests for Cork Harbour SPA.

Ringaskiddy Port Redevelopment

The Ringaskiddy Port Redevelopment project consists of a new 314m Container Berth 1/ Multipurpose Berth that will be capable of accommodating vessels carrying a range of different cargoes including containers, freight and general cargoes, an additional 200m Container Berth 2, surfacing of existing port lands to provide operational areas, dredging of the seabed to a level of -13.0 m Chart Datum (CD), demolition of existing link-span, installation of link-span comprising a floating pontoon and access bridge, installation of container handling cranes and terminal transport equipment, maintenance building, administrative buildings and entrance kiosks, ancillary car parking, lighting and fencing. In addition, a new 182m extension to the existing Deepwater Berth (DWB) which will comprise a filled quay structure extending no further seaward than the edge of the existing DWB, dredging works to varying levels to facilitate navigational access to the new facilities and construction of a new public pier, slipway and boarding platform at Paddy's Point Amenity Area.

The EIS was accompanied by an NIS which determined that with the employment of mitigation measures that the proposal will not result in direct, indirect or cumulative impacts which would have the potential to adversely affect the qualifying interests / special conservation interests of the Natura 2000 sites within the study area with regard to the range, population densities or conservation status of the habitats and species for which these sites are designated (i.e. conservation objectives).

Cork Lower Harbour Main Drainage Project

An NIS for the estuary crossing was prepared by the Moore Group. This NIS report reviewed the impacts arising from the proposed crossing from the Cork Dockyard to Marine Villas in Monkstown and found, following a Stage 1 Screening Assessment, that without the implementation of mitigation measures, significant effects could impact upon the integrity of the Cork Harbour SPA and Great Island Channel SAC. With the implementation of the mitigation measures specified in the NIS, it is considered that the implementation of the proposed crossing will not result in significant effects to the conservation objectives or integrity of the Cork Harbour SPA and Great Island Channel SAC, either individually or in combination with other plans or projects.

All elements of the Cork Lower Harbour Main Drainage Project have been screened for Appropriate Assessment. No works will be taking place within the Cork Harbour SPA or the Great Island Channel SAC. It was a condition of granting planning permission for the Project in 2009 that all environmental protection measures as set out in the 2008 EIS for the Cork LHMD Project are implemented in full. Hence, the environmental measures as outlined in the EIS now form part of the overall Cork LHMD Project and therefore are an integral part of all protect components. These measures have been reviewed in the context of Appropriate Assessment to ensure they will prevent any impact to the Qualifying Interests and Special Conservation Interests of the SAC and SPA, and additional best-practice construction measures have been included as necessary. The contractor will be contractually required to implement the following measures in full. The sequence of works for all elements of the Project has not yet been determined however with the implementation of the environmental protection measures of the EIS no in combination effects/impacts are predicted.

Summary of In-combination Effects

The plans and projects listed in this section are not considered likely to act in combination with the Cork Lower Harbour Main Drainage Project Outfall Upgrade and Repair Works to give rise to negative effects that have the potential to affect the conservation objectives of the European Sites considered here, including their structure and function.

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 or habitat fragmentation in the nearby European 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 of the SAC or food sources of species for which the SPA are designated and this scenario will be avoided by undertaking the works at low tide at the majority of locations.

Explain why these effects are not considered significant.

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 and best-practice construction measures will prevent the release of any pollutants to the aquatic environment. Therefore, there is no potential for silt to be transported there whereby potential significant impacts would not occur.

The majority of works are to be carried out above the Mean Low Water Spring tide mark and as such there will be no impact on the aquatic environment of Cork Harbour at 11 locations where redundant outfalls will be removed and at 5 locations where construction works will be carried out.

The inclusion of Best Practice Construction measures which form a key part of the project and the inclusion of design measures such as sheet piling around the works area of C-04 "Station Car Park Overflow" and the employment of best practice construction measures to contain the works and prevent significant elevated suspended solids from entering Cork Harbour at 4 locations, namely C-11 "Pebble Beach Overflow", SW002 "Dock Cottages Overflow", SW007 "Old Town Hall Overflow" and C-12 "Rushbrooke Overflow" will avoid potential significant impacts from elevated suspended solids and deterioration of water quality in the SAC or SPA.

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.

Response to consultation

Not Applicable.

Data collected to carry out the assessment

Who carried out the assessment

Moore Group Environmental Services.

Sources of data

NPWS database of designated sites at www.npws.ie

National Biodiversity Data Centre database <http://maps.biodiversityireland.ie>

Level of assessment completed

Desktop Assessment

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.

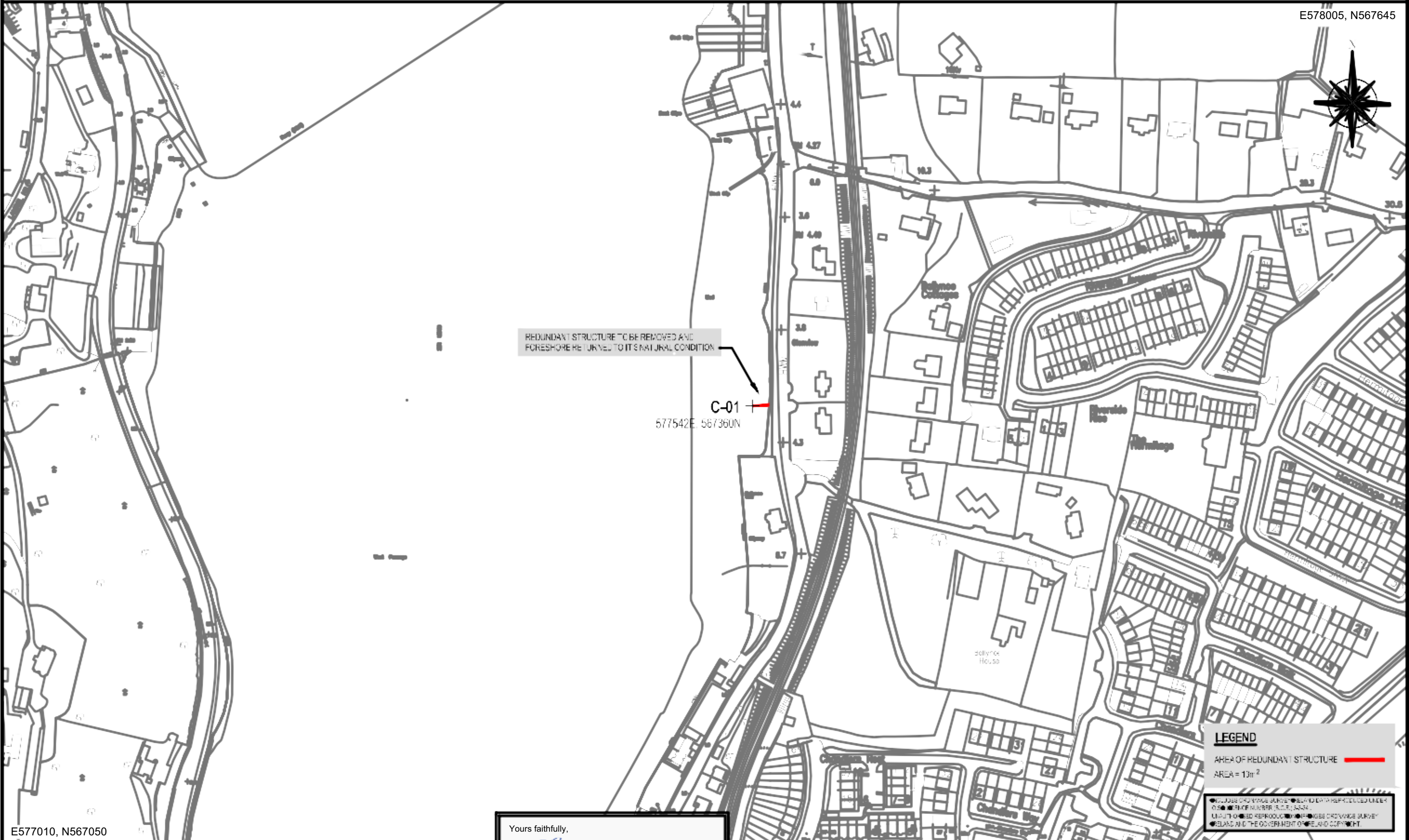
From the findings of the Screening exercise, it is concluded that:

- the proposed project is not directly connected with or necessary to the management of any European site;


- It was a condition of granting planning permission that all environmental protection measures as set out in the 2008 EIS for the Cork LHMD Project are implemented in full. Hence, the environmental measures as outlined in the EIS now form part of the overall Cork LHMD Project, of which this pumping station is a part. These measures have been reviewed in the context of Appropriate Assessment to ensure they will prevent any impact to the Qualifying Interests and Special Conservation Interests of the SAC and SPA, and additional best-practice construction measures have been included as necessary. The above measures form an integral part of the proposed outfall works and the appointed contractor will be contractually required to implement them above in full. Based on the above the following is concluded:
 - the proposed project does not have the potential to give rise to significant adverse effects on the overall integrity of the Great Channel Island SAC;
 - the proposed project will not have the potential to give rise to significant adverse effects on the overall integrity of the Cork Harbour SPA.

This assessment has therefore stopped at Stage 1 Screening and there should be no further requirement for Stage 2 (Appropriate Assessment).

Appendix B
Project Drawings



E577010, N567050

Yours faithfully,

Shane Cosgrove
 Chartered Engineer, Senior Project Manager
 for NICHOLAS O'DWYER LTD.

LEGEND

AREA OF REDUNDANT STRUCTURE █
 AREA = 13m²

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REV	DATE	DESCRIPTION	D	C	A



BALLYNOE
C-01
FORESHORE LICENCE MAP

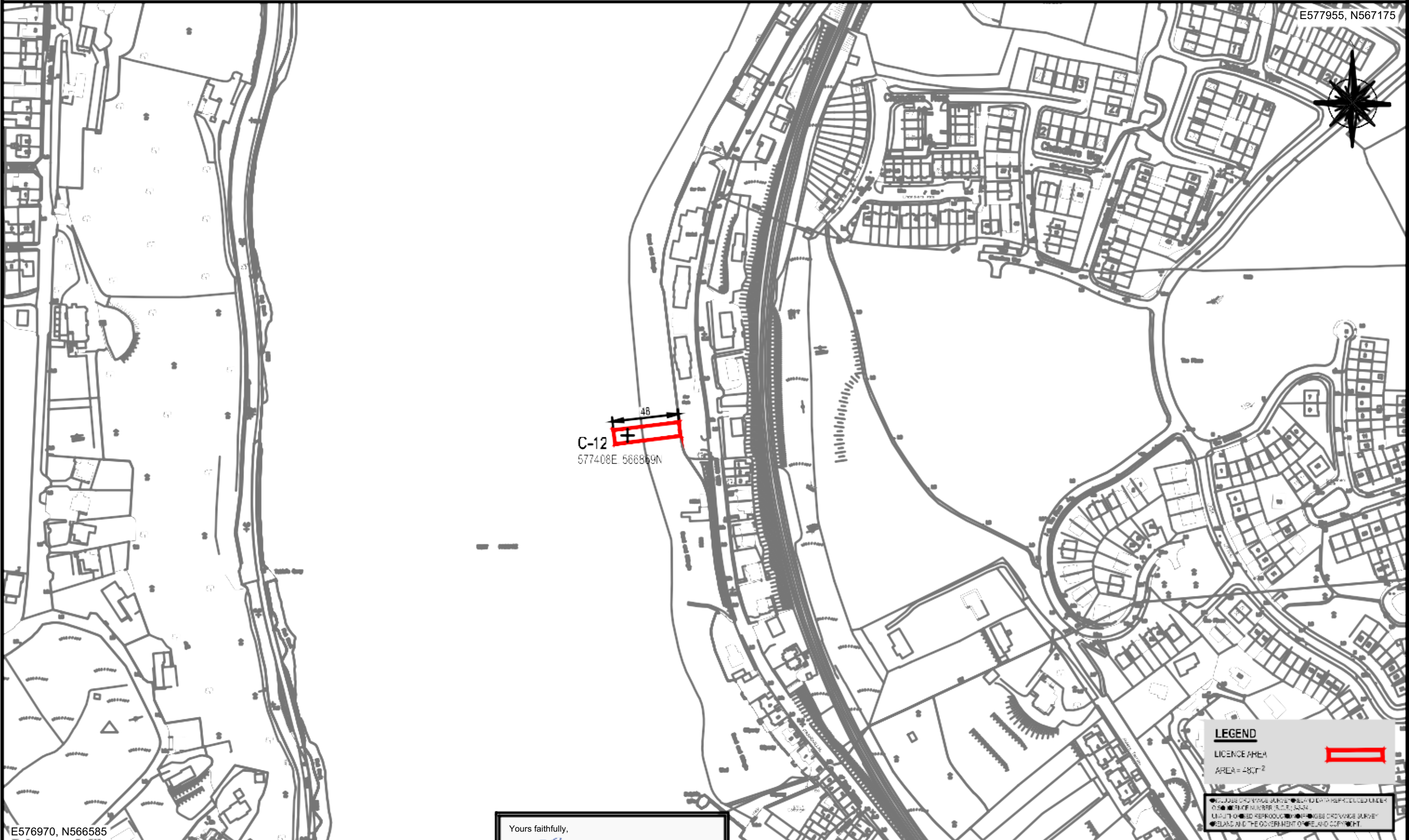
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DESIGNED	D. Smithers
CHECKED	S. Cosgrove
DATE	29.07.16
DATE	29.07.16
DATE	29.07.16
DRAWING NO.	20506-FL-CH-103
REV	-

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E577955, N567175



E576970, N566585

LEGEND

LICENCE AREA

AREA = 480m²

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Yours faithfully,

Shane Cosgrove
 Chartered Engineer, Senior Project Manager
 for NICHOLAS O'DWYER LTD.

REV	DATE	DESCRIPTION	D	C	A

NICHOLAS O'DWYER
 Unit E4, Rutgrove Office Park,
 Rutgrove Avenue, Dublin 14
 T +353 1 296 9000
 F +353 1 296 9001
 E daniel@odwyer.com
 W www.odwyer.com

IRISH WATER
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 24-26 Talbot Street,
 Dublin 1.

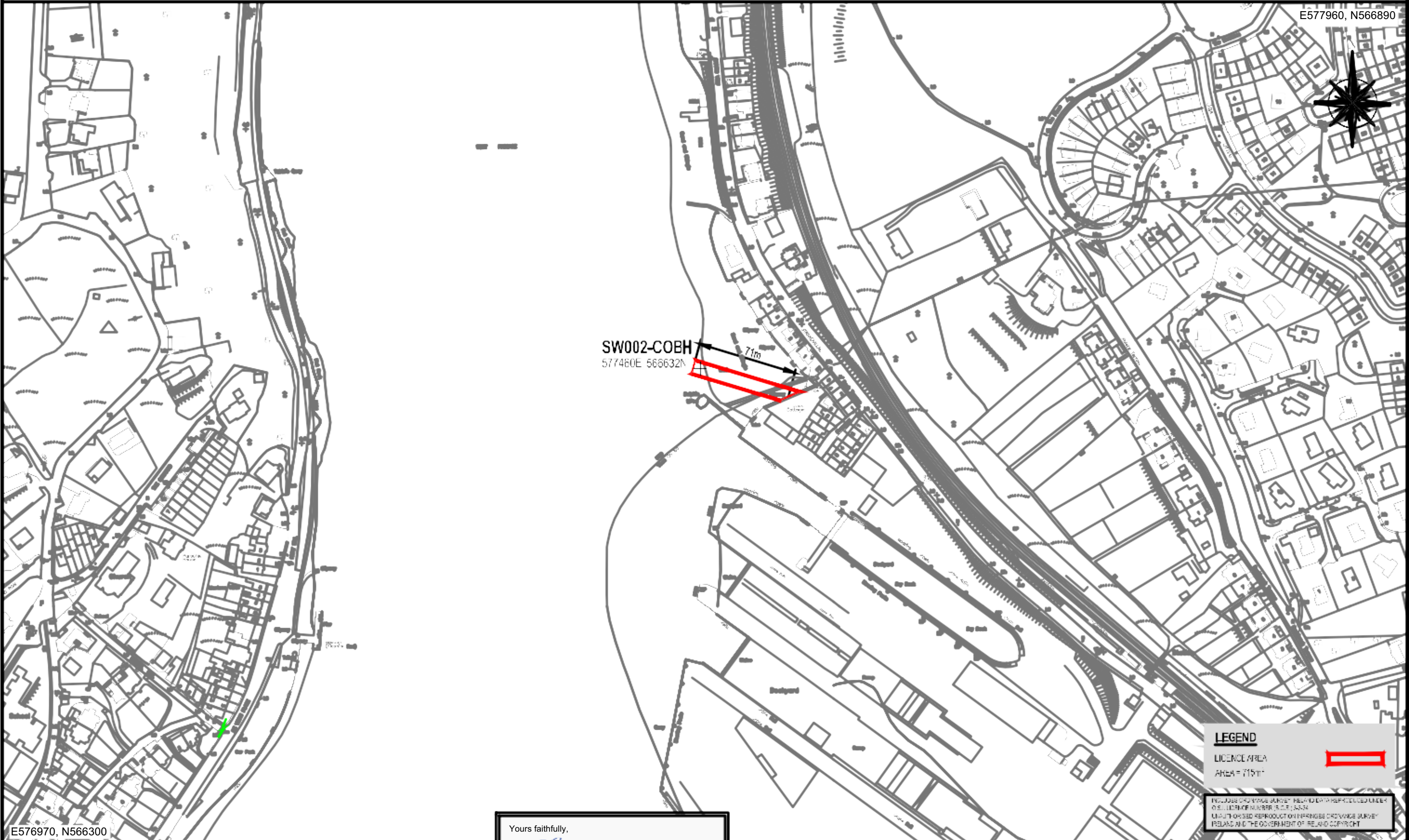
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DESIGNED D. Smithers 29.07.16	CHECKED S. Cosgrove 29.07.16	APPROVED J. Power 29.07.16
-------------------------------------	------------------------------------	----------------------------------

DRAWING NO: 20506-FL-CH-104



SW002-COBH
577480E 566632N

71m

LEGEND

LICENCE AREA
AREA = 71511



INCLUDES DRAINAGE SURVEY. HEIGHT DATA REPRODUCED UNDER
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Yours faithfully,
Shane Cosgrove
Shane Cosgrove
Chartered Engineer, Senior Project Manager
for NICHOLAS O'DWYER LTD.

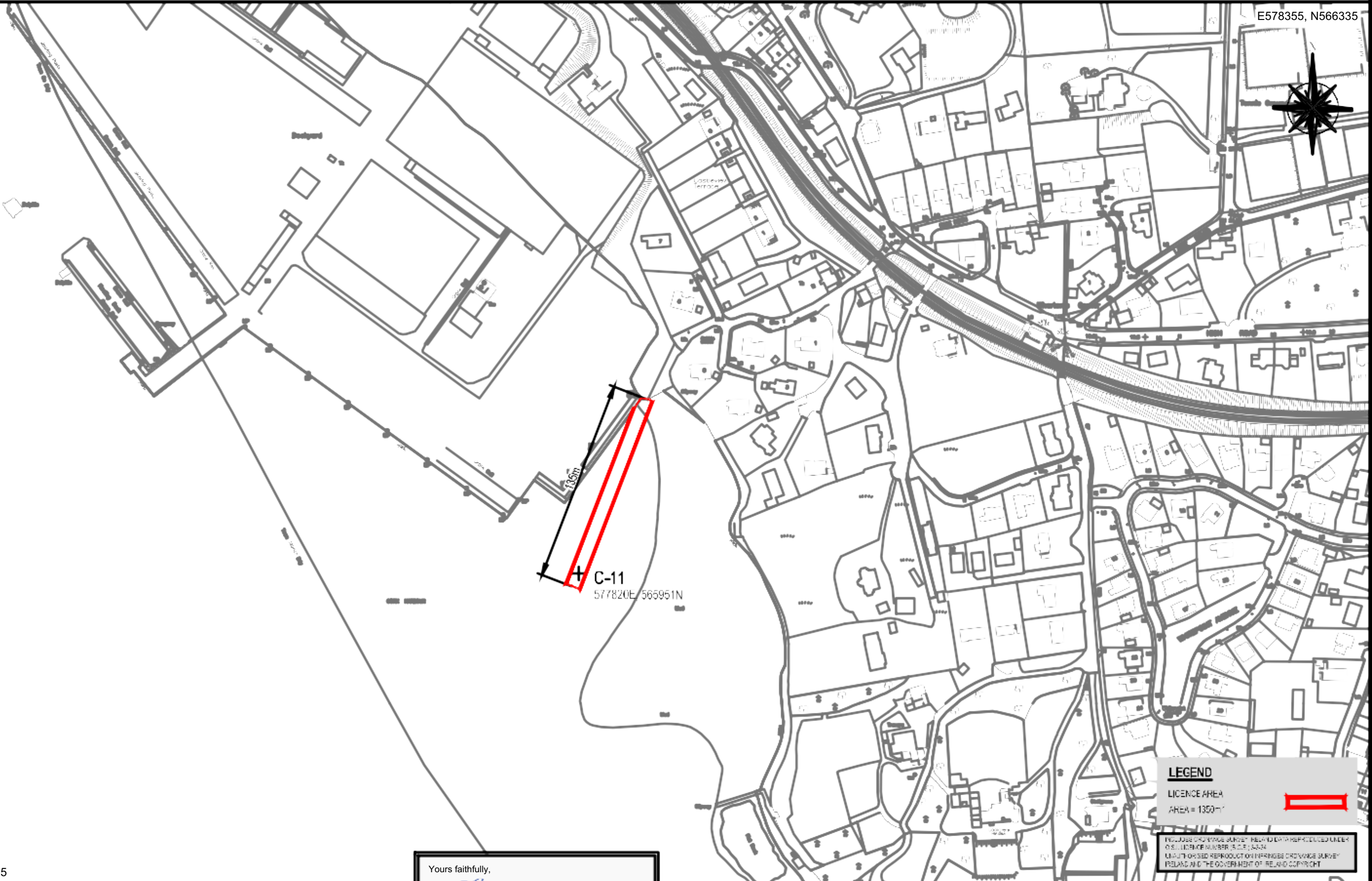
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APPROVED J. Power	DATE 29.07.16
DRAWING NO. 20506-FL-CH-106	

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E578355, N566335



LEGEND

LICENCE AREA
AREA = 1350m²

INCLUDES DRAINAGE SURVEY* REPRODUCED UNDER
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UNAUTHORISED REPRODUCTION INFRINGES DRAINAGE SURVEY*
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E577360, N565745

Yours faithfully,
Shane Cosgrove
Shane Cosgrove
Chartered Engineer, Senior Project Manager
for NICHOLAS O'DWYER LTD.

REV	DATE	DESCRIPTION	D	C	A

NICHOLAS O'DWYER
Unit E4, Rutgrove Office Park,
Rutgrove Avenue, Dublin 14
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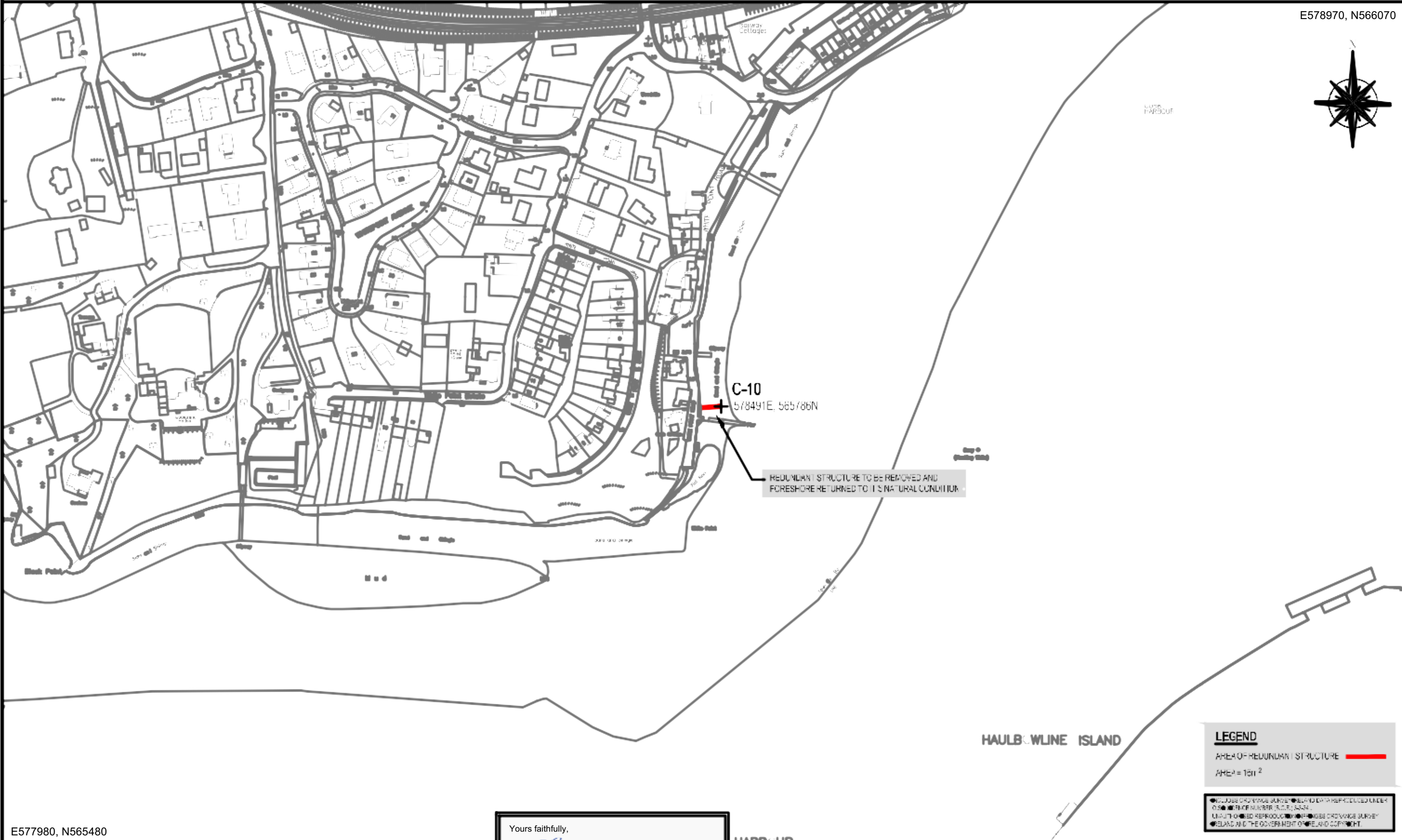
SCALE: 1 : 2,500

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DATE: 29.07.16	DATE: 29.07.16	DATE: 29.07.16

DRAWING NO: 20506-FL-CH-109

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E578970, N566070



REDUNDANT STRUCTURE TO BE REMOVED AND FORESHORE RETURNED TO ITS NATURAL CONDITION

LEGEND

AREA OF REDUNDANT STRUCTURE █

AREA = 1611 m²

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E577980, N565480

Yours faithfully,

Shane Cosgrove
 Chartered Engineer, Senior Project Manager
 for NICHOLAS O'DWYER LTD.

REV	DATE	DESCRIPTION	D	C	A

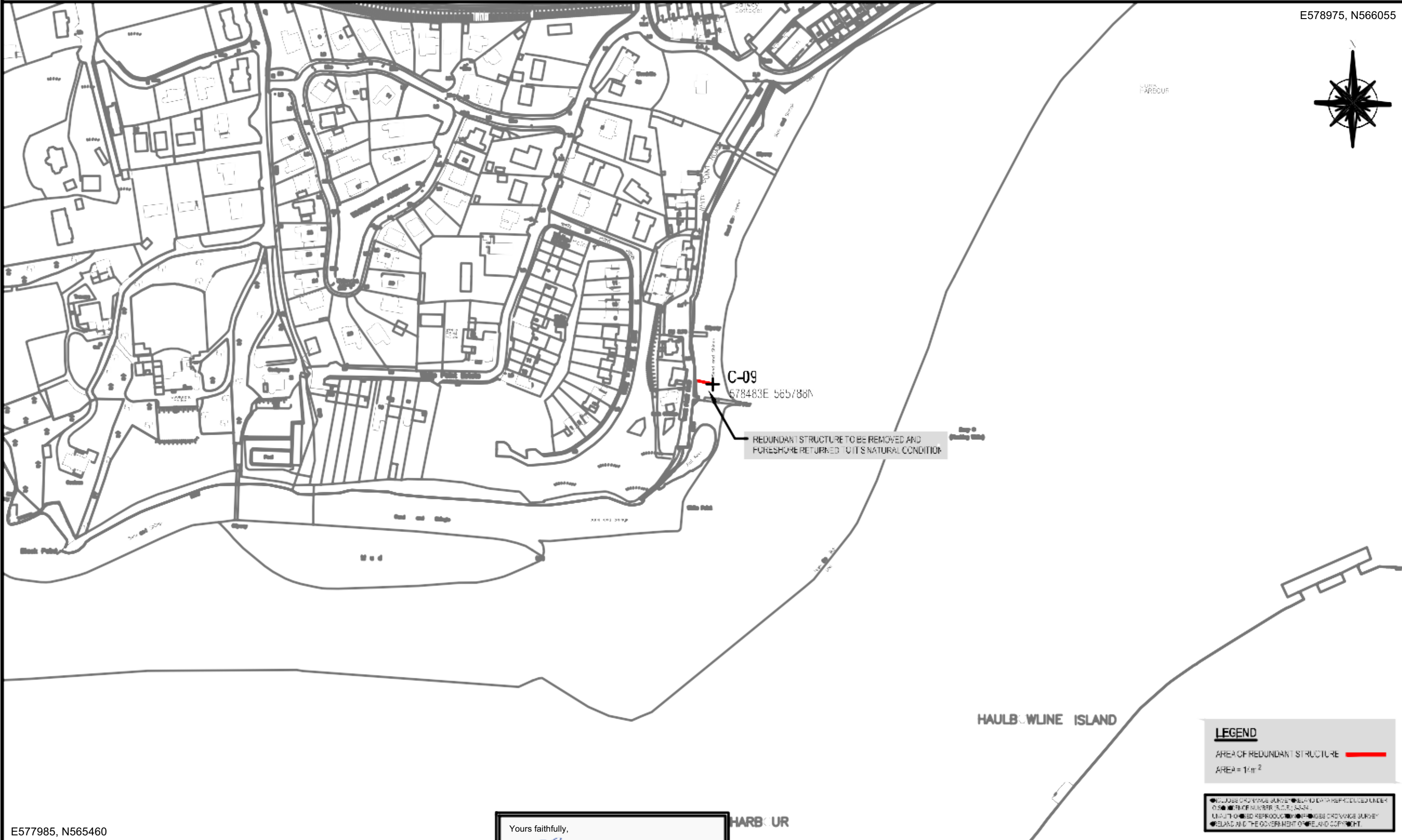


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DATE	29.07.16
DESIGNED	D. Smithers
CHECKED	S. Cosgrove
APPROVED	J. Power
DATE	29.07.16
DRAWING NO.	20506-FL-CH-111
REV	-

TITLE
 WHITEPOINT DRIVE 'A'
 L-10
 FORESHORE LICENCE MAP

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E578975, N566055



LEGEND

AREA OF REDUNDANT STRUCTURE █

AREA = 1.0m²

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E577985, N565460

Yours faithfully,

Shane Cosgrove
 Chartered Engineer, Senior Project Manager
 for NICHOLAS O'DWYER LTD.

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NICHOLAS O'DWYER
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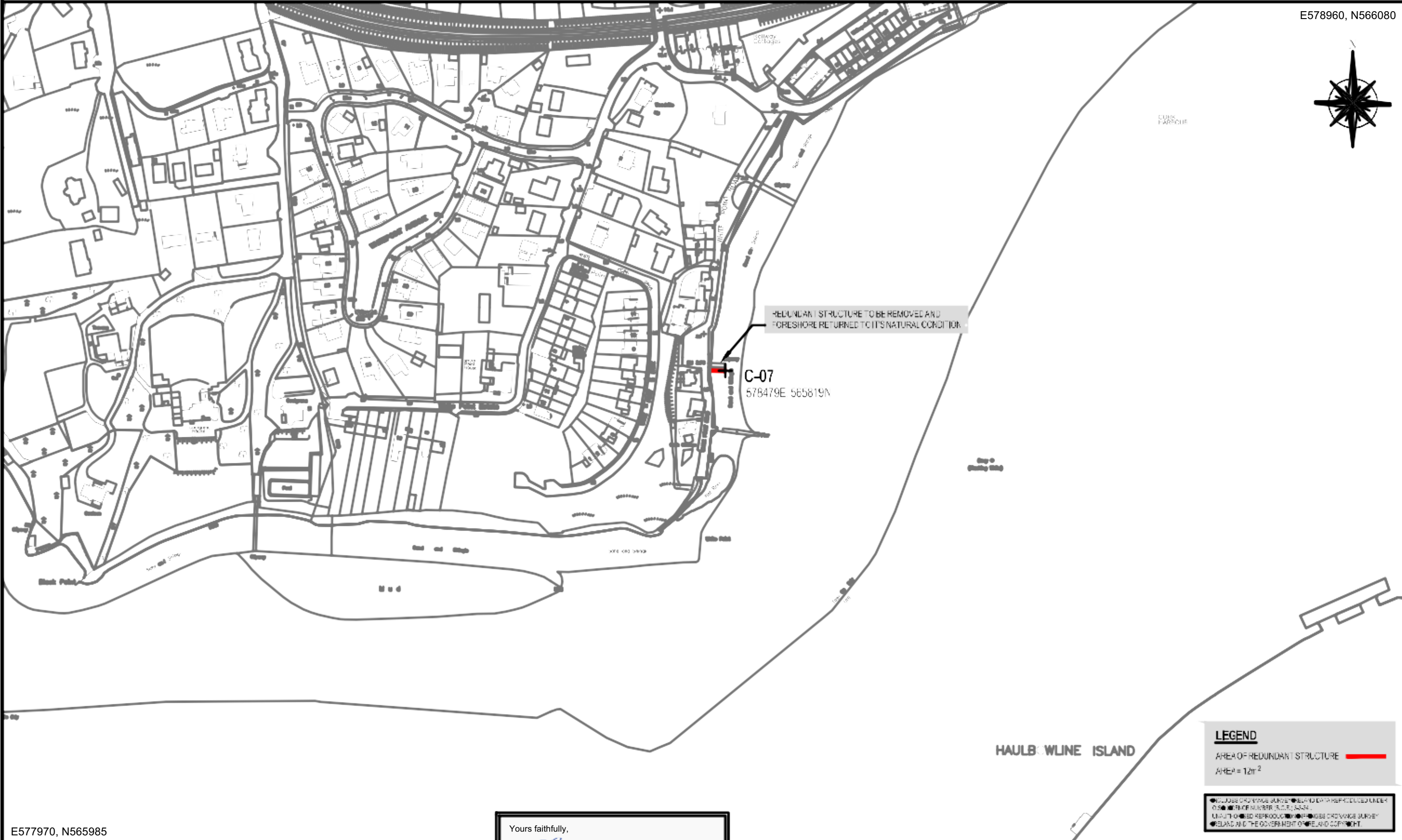
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DRAWN BY	D. Smithers	CHECKED BY	S. Cosgrove
DATE	29.07.16	DATE	29.07.16
APPROVED BY	J. Power	DATE	29.07.16

DRAWING NO. 20506-FL-CH-112

TITLE
**WHITEPOINT DRIVE 'B'
 C-09
 FORESHORE LICENCE MAP**

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E578960, N566080



E577970, N565985


LEGEND

AREA OF REDUNDANT STRUCTURE █

AREA = 12m²

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Yours faithfully,



Shane Cosgrove
Chartered Engineer, Senior Project Manager
for NICHOLAS O'DWYER LTD.

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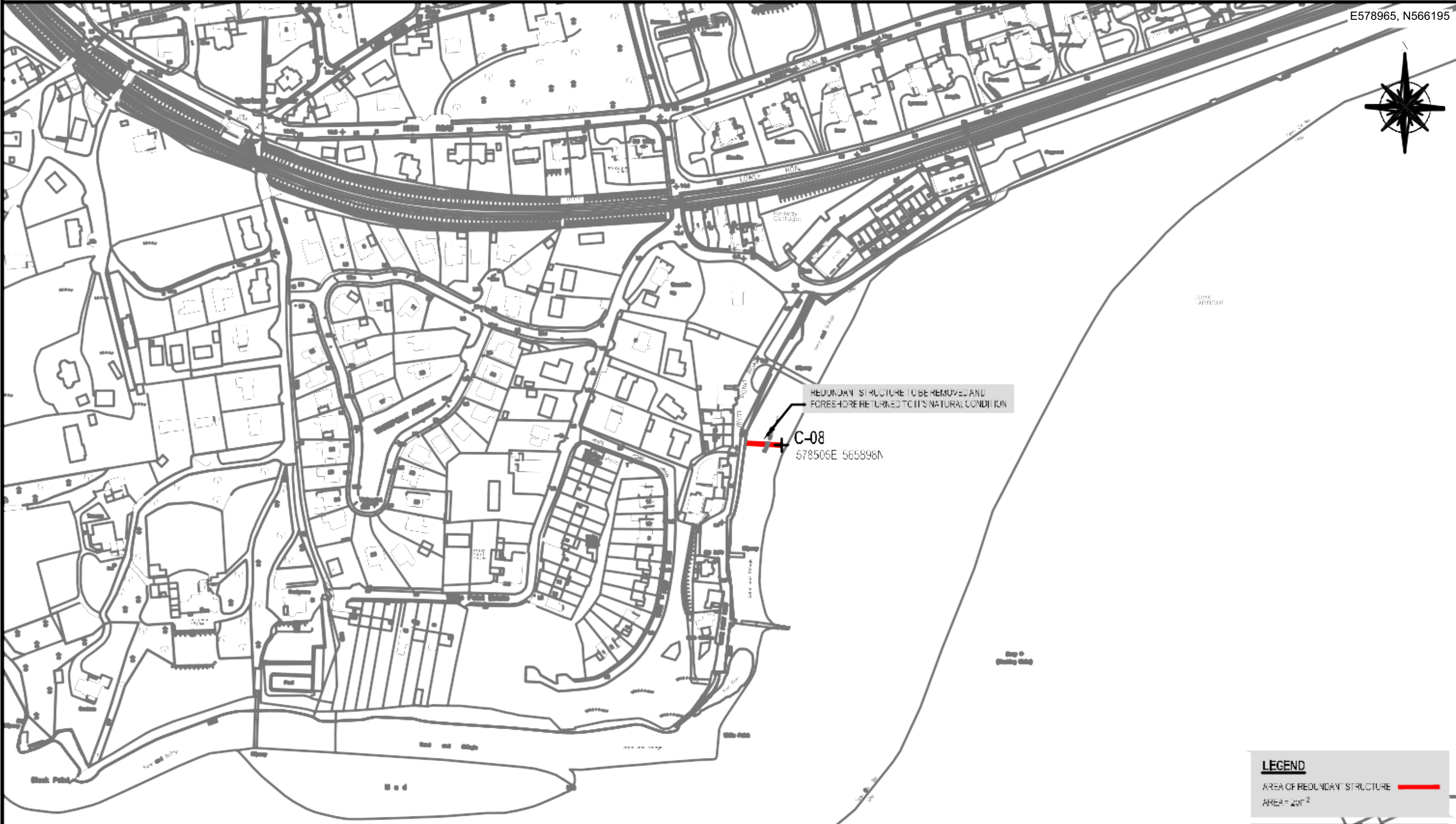
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DRAWN BY	D. Smithers	CHECKED BY	S. Cosgrove	APPROVED BY	J. Power	DATE	29.07.16
DRAWING NO.	20506-FL-CH-113			REV	-		

TITLE
**WHITEPOINT DRIVE 'C'
C-07
FORESHORE LICENCE MAP**

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E578965, N566195



REDUNDANT STRUCTURE TO BE REMOVED AND
FORESHORE RETURNED TO IT'S NATURAL CONDITION

C-08
578505E 565898N

LEGEND

AREA OF REDUNDANT STRUCTURE —

AREA = 20T²

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E577975, N565605

Yours faithfully,
Shane Cosgrove
Shane Cosgrove
Chartered Engineer, Senior Project Manager
for NICHOLAS O'DWYER LTD.

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CLIENT IRISH WATER	PROJECT WHITEPOINT DRIVE 'D' C-08 FORESHORE LICENCE MAP
DESIGNED D. Smithers	CHECKED S. Cosgrove
DRAWN J. Power	DATE 29.07.16
DRAWING NO. 20506-FL-CH-114	REV -

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E579005, N566265



E578015, N565670


LEGEND

AREA OF REDUNDANT STRUCTURE █

AREA = 207 m²

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Yours faithfully,



Shane Cosgrove
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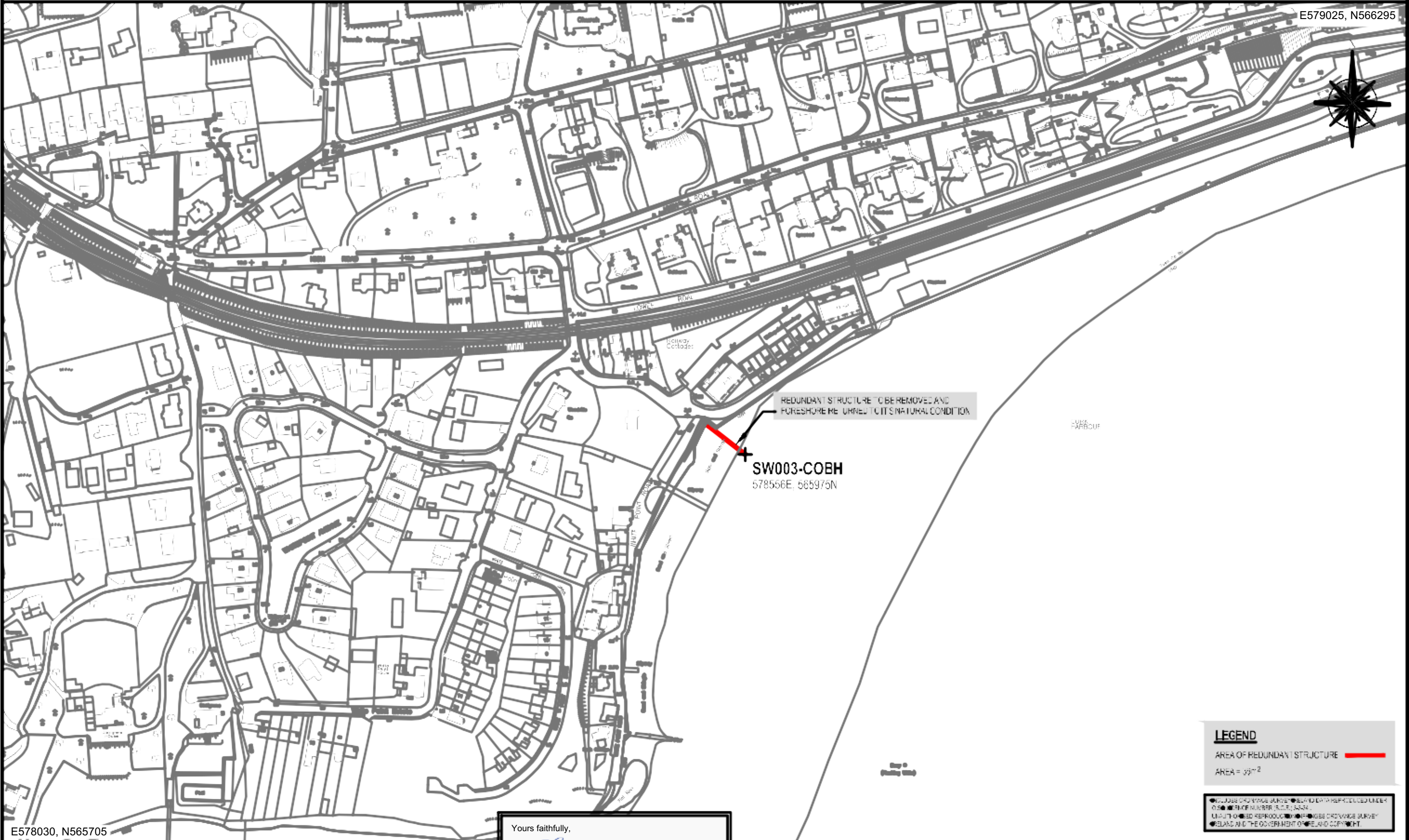
SCALE	DATE	DESIGNED	CHECKED
1 : 2,500	29.07.16	D. Smithers	S. Cosgrove
			J. Power

CLIENT: WHITEPOINT MOOR NG5 'A' L-01
 FORESHORE LICENCE MAP

DRAWING NO: 20506-FL-CH-115

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E579025, N566295



SW003-COBH
578556E, 585975N

REDUNDANT STRUCTURE TO BE REMOVED AND
FORESHORE RETURNED TO ITS NATURAL CONDITION

LEGEND

AREA OF REDUNDANT STRUCTURE █
AREA = 33m²

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E578030, N565705

Yours faithfully,

Shane Cosgrove
Chartered Engineer, Senior Project Manager
for NICHOLAS O'DWYER LTD.

REV	DATE	DESCRIPTION	D	C	A



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DRAWN J. Power	DATE 29.07.16
DRAWING NO. 20506-FL-CH-116	

RAILWAY COTTAGES
SW003-COBH
FORESHORE LICENCE MAP


CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E579225, N566390



E578230, N565975

LEGEND

LICENCE AREA 

AREA = 100 m²

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 Chartered Engineer, Senior Project Manager
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DRAWING NO. 20506-FL-CH-118	

STATION CAR PARK OVERFLOW
 C-04
 FORESHORE LICENCE MAP


CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E580465, N566795




E579470, N566205

LEGEND

LICENCE AREA 

AREA = 150m²

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 Shane Cosgrove
 Chartered Engineer, Senior Project Manager
 for NICHOLAS O'DWYER LTD.

REV	DATE	DESCRIPTION	D	C	A

NICHOLAS O'DWYER
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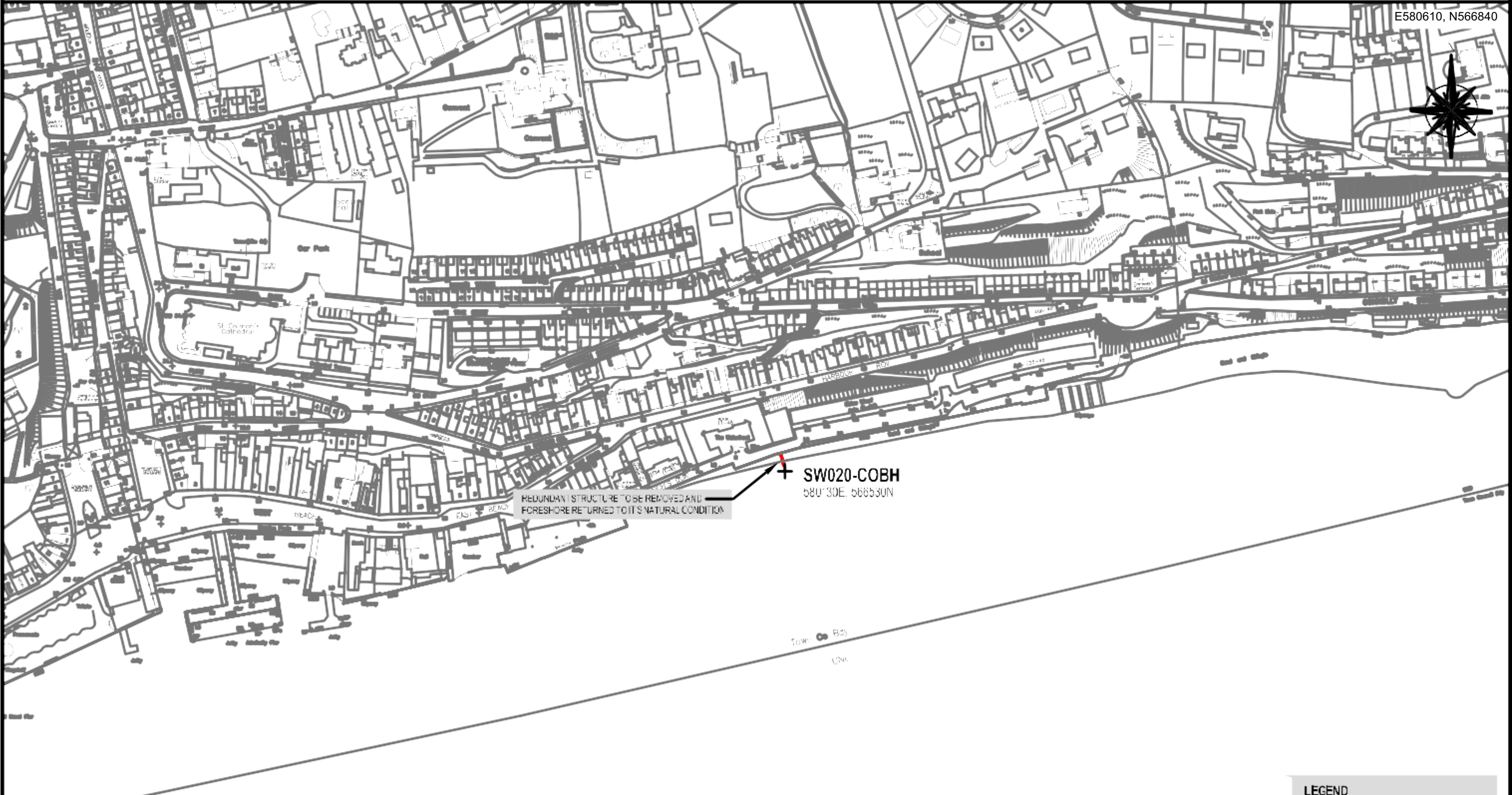
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CHECKED BY	S. Cosgrove
DATE	29.07.16
APPROVED BY	J. Power
DATE	29.07.16
DRAWING NO.	20506-FL-CH-122
REV	-

TITLE
 OLD TOWN HALL OVERFLOW
 SW007-COBH
 FORESHORE LICENCE MAP

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E580610, N566840



REDUNDANT STRUCTURE TO BE REMOVED AND FORESHORE RETURNED TO ITS NATURAL CONDITION

SW020-COBH
580°30E, 566530N

LEGEND

AREA OF REDUNDANT STRUCTURE —

AREA = 13m²

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E579615, N566245

Yours faithfully,

Shane Cosgrove
Chartered Engineer, Senior Project Manager
for NICHOLAS O'DWYER LTD.

REV	DATE	DESCRIPTION	D	C	A



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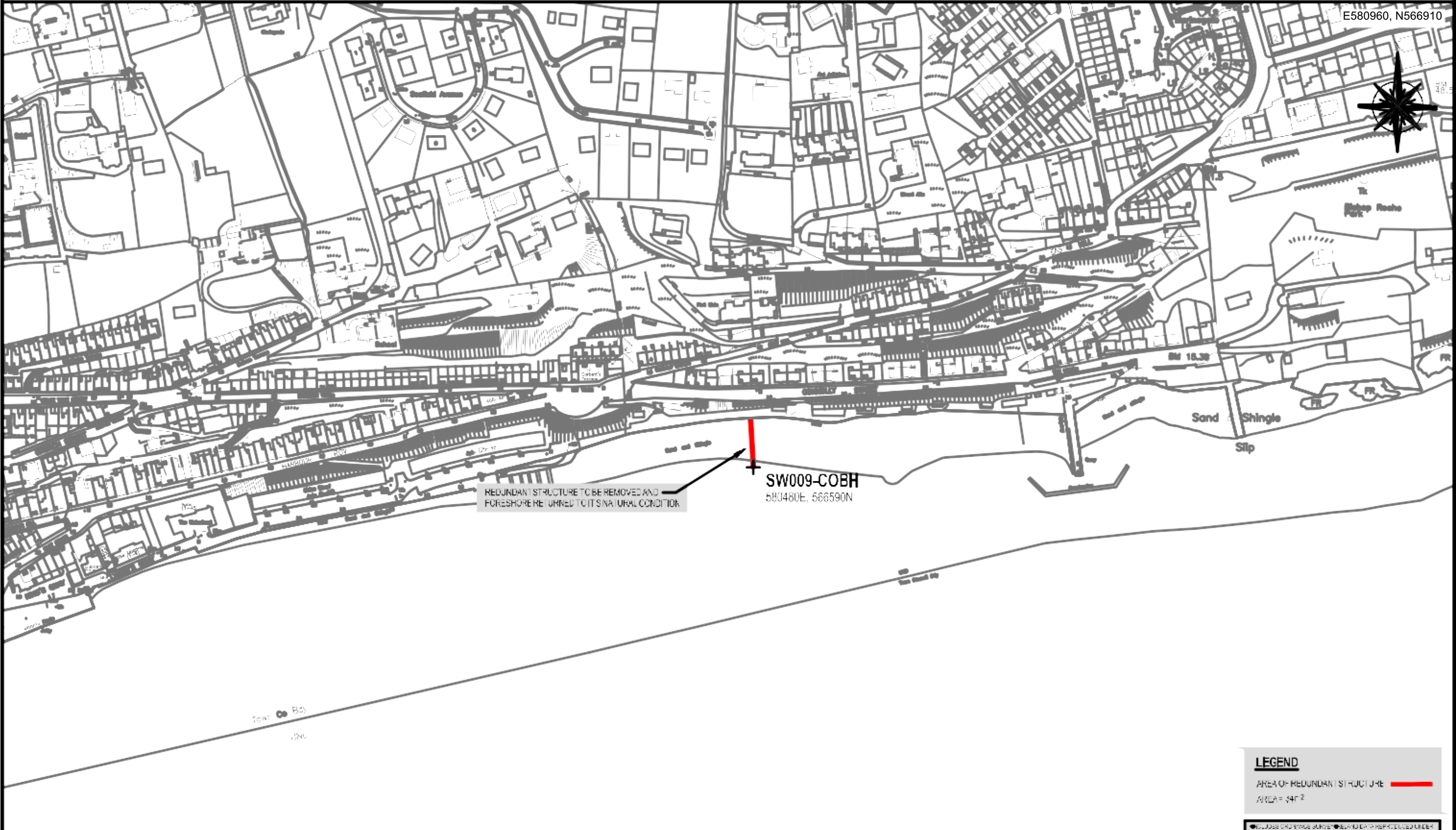
SCALE: 1 : 2,500

DESIGNED: D. Smithers	CHECKED: S. Cosgrove	APPROVED: J. Power
DATE: 29.07.16	DATE: 29.07.16	DATE: 29.07.16

DRAWING NO: 20506-FL-CH-126

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E580960, N566910




LEGEND

AREA OF REDUNDANT STRUCTURE █

AREA = 547 m²

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E579965, N566315

Yours faithfully,

 Shane Cosgrove
 Chartered Engineer, Senior Project Manager
 for NICHOLAS O'DWYER LTD.

REV	DATE	DESCRIPTION	D	C	A



PRELIMINARY

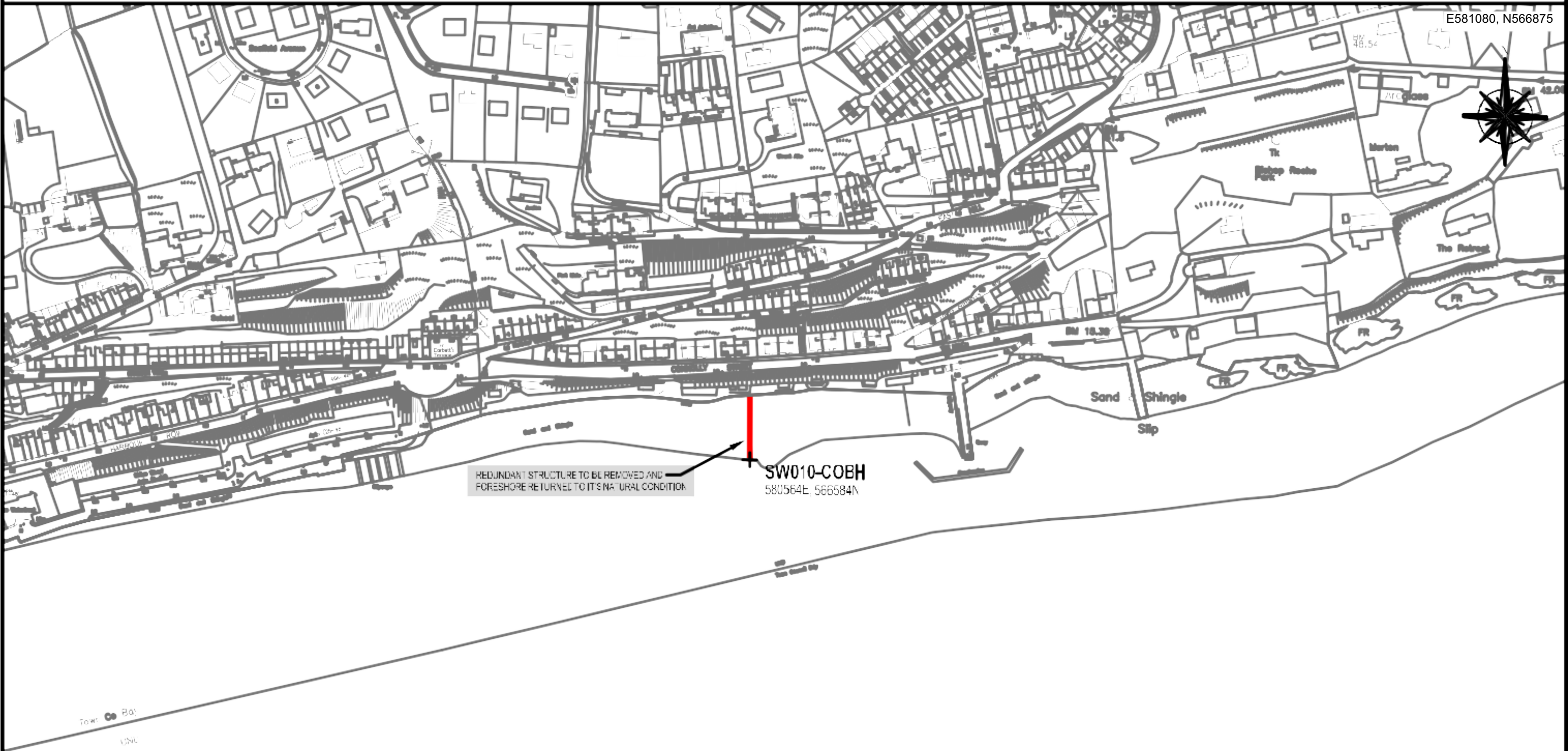
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SCALE	1:2,500
DRAWN BY	D. Smithers
CHECKED BY	S. Cosgrove
DATE	29.07.16
DATE	29.07.16
DATE	29.07.16
DATE	29.07.16
DRAWING NO.	20506-FL-CH-127
REV	-

TITLE
 CONNOLLY STREET 'A'
 SW009-COBH
 FORESHORE LICENCE MAP

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E581080, N566875



REDUNDANT STRUCTURE TO BE REMOVED AND
FORESHORE RETURNED TO ITS NATURAL CONDITION

SW010-COBH
58U564E, 566584N

LEGEND

AREA OF REDUNDANT STRUCTURE █

AREA = 42m²

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E580090, N566280

Yours faithfully,

Shane Cosgrove
Chartered Engineer, Senior Project Manager
for NICHOLAS O'DWYER LTD.

REV	DATE	DESCRIPTION	D	C	A

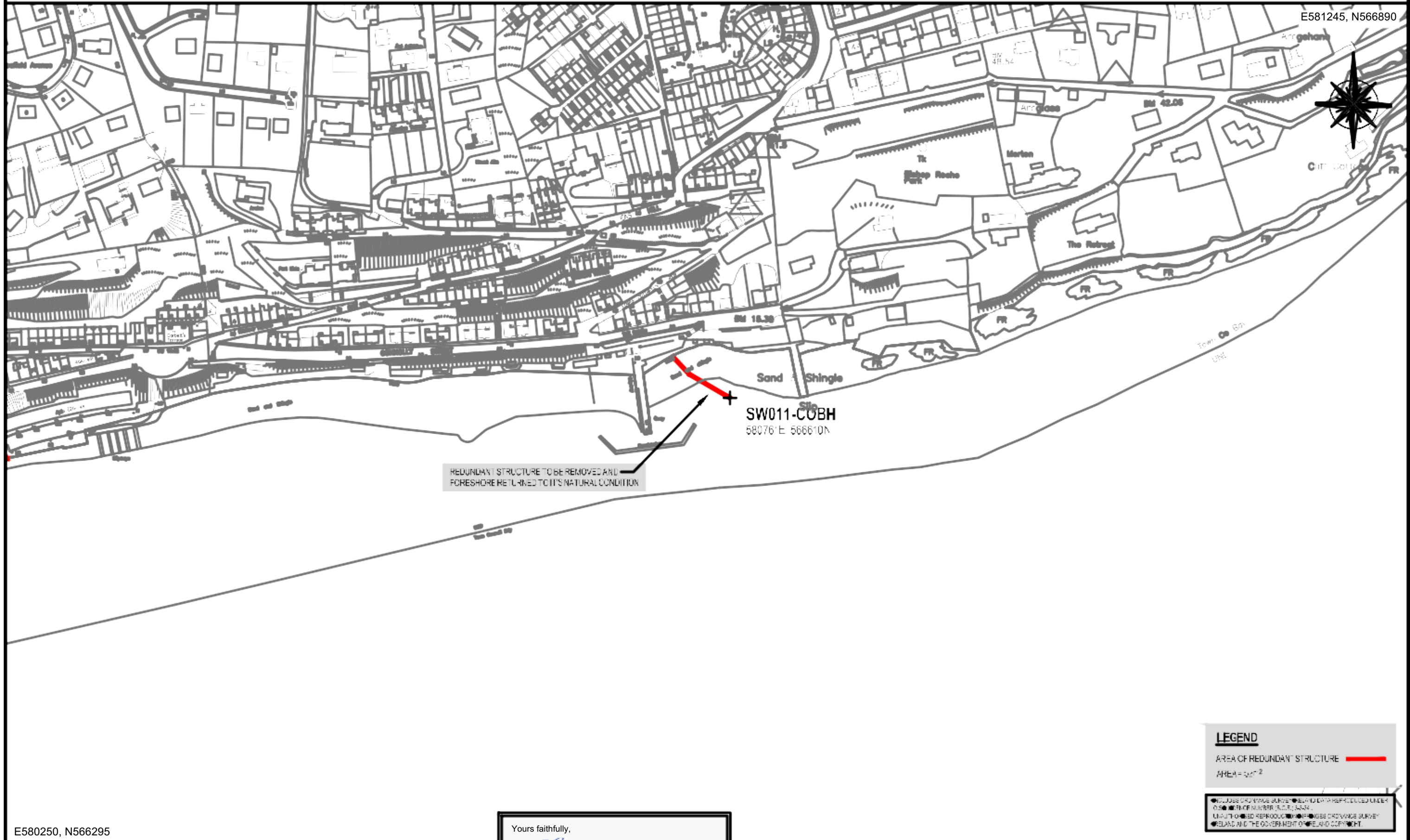


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CHECKED BY	S. Cosgrove
DATE	29.07.16
DATE	29.07.16
DATE	29.07.16
DRAWING NO.	20506-FL-CH-128
REV	-

TITLE
CONNOLLY STREET 'B'
SW010-COBH
FORESHORE LICENCE MAP

CORK LOWER HARBOUR MAIN DRAINAGE PROJECT - FORESHORE LICENCE MAP (File No. FS 006657)

E581245, N566890



REDUNDANT STRUCTURE TO BE REMOVED AND
FORESHORE RETURNED TO ITS NATURAL CONDITION

SW011-COBH
58076°E 566610N

LEGEND

AREA OF REDUNDANT STRUCTURE —

AREA - m^2

● CLOSE DRAINAGE SURVEY ● RELAND DATA REPRODUCED UNDER
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E580250, N566295

Yours faithfully,
Shane Cosgrove
Shane Cosgrove
Chartered Engineer, Senior Project Manager
for NICHOLAS O'DWYER LTD.

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