



N8 Silversprings Junction Upgrade

Cork City Council

Screening Report for Appropriate Assessment

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Contents

1. Introduction	1
1.1 Legislative Context for Appropriate Assessment	1
2. The Appropriate Assessment Process	2
2.1 Stages in Screening and Appropriate Assessment.....	2
2.2 Role of the Competent Authority	4
3. Methodology	5
3.1 Guidance	5
3.2 Screening Methodology.....	5
3.3 Identification of European Sites.....	5
3.4 Information Informing Baseline Environment	7
4. Baseline Environment	9
4.1 Site Description	9
4.2 Desktop Summary	9
5. The Proposed Works	10
5.1 Programme and Timing of Works.....	10
5.2 Inherent Mitigation	10
5.3 Potential Effects remaining after Inherent Mitigation.....	12
6. Screening Assessment	13
6.1 Proximity of European Sites and their Qualifying Interests	13
6.2 Source-Pathway-Receptor Links	14
6.3 European Sites and Qualifying Interests	14
7. Screening Conclusion Statement	17
8. References	18
Appendix A. Figures	19

1. Introduction

Cork City Council (CCC) has developed proposals for the improvement of the Silversprings junction section of the N8 Lower Glanmire Road to the east of Cork City, hereafter referred to as “the proposed scheme”.

In accordance with The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (hereafter ‘The Habitats Directive’) this Screening for Appropriate Assessment (AA) assesses whether there is potential for the proposed scheme, either alone or in combination with other plans or projects to result in Likely Significant Effects (LSEs) on European sites (‘Natura 2000 sites’¹), comprising Special Areas of Conservation (SACs²) and Special Protection Areas (SPAs).

This report details the Screening for Appropriate Assessment of the proposed scheme which was undertaken by a qualified Jacobs’s ecologist.

1.1 Legislative Context for Appropriate Assessment

The Habitats Directive has been transposed into Irish law by the Planning and Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011). Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites. The first step of the AA process is to carry out a Screening to establish whether, in relation to a particular plan or project, an Appropriate Assessment is required.

Article 6(3) established the requirement for AA:

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

Article 6(4) states:

“If, in spite of a negative assessment of the implications for the [Natura 2000] 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 Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted”.

¹ “European site” replaced the term “Natura 2000 site” under the EU (Environmental Impact Assessment and Habitats) Regulations 2011 S.I. No. 473 of 2011.

² The formal designation process for making candidate Special Areas of Conservation (cSACs) into SACs by means of Statutory Instrument has begun. While this process is ongoing the term SAC will be used, in conformance with nomenclature used in NPWS databases.

2. The Appropriate Assessment Process

2.1 Stages in Screening and Appropriate Assessment

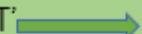
The methodology in this report draws on, and has evolved from European Commission guidance (European Commission, 2001) and Irish guidance from the former Department of Environment, Heritage and Local Government (DoEHLG, 2010). The entire process can be broken down into four stages (EC, 2001), as outlined below;

- **Stage 1 - Screening for Appropriate Assessment (AA)/Test of Significance** - Screening determines whether Stage 2 AA is required by determining if the project or plan would be likely to have significant effect(s) on any European site(s) either alone or in-combination with other plans or projects. The test is a 'likelihood' of effects rather than a 'certainty' of effects. In accordance with the Waddenze Judgement³ a likely effect is one that cannot be ruled out on the basis of objective information. This is underpinned by the precautionary principle which is enshrined in law in the Habitats Directive, and the test of beyond reasonable scientific doubt as presented in the Habitats Directive. The same judgement also adds 'where a plan or project is likely to undermine the site's conservation objectives, it must be considered likely to have a significant effect on that site.' The two outcomes to Screening are illustrated in **Graphic 2.1**.

Screening Outcome A:

- Likely Significant Effects (LSEs)
- Or uncertainty remains  'SCREEN-IN'  Proceed to AA

Screening Outcome B:

- Potential for Significant effects ruled out
- No reasonable uncertainty  'SCREEN-OUT'  No further action

Graphic 2.1 : Screening for AA

- **Stage 2 - AA** – If the Screening has determined that AA is required, the competent authority then considers the effect of the project or plan on the integrity of the European site(s). The AA considers the structure and function of European sites, and their conservation objectives, and effects from the project/plan both alone and in-combination with other projects or plans. Where there are adverse effects on site integrity identified, mitigation measures are proposed as appropriate to avoid adverse effects. For projects, the AA process is documented within a Natura Impact Statement (NIS). This is provided to the competent authority by the applicant, to facilitate an informed assessment of the project.
- **Stage 3 - Assessment of alternative solutions** – If following AA including proposal of mitigation, adverse effects on integrity remain, or uncertainty remains, an Assessment of Alternatives is required. This process examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European site. This assessment may be carried out concurrently with Stage 2 in order to

³ [ECJ case C-127/02]

find the most appropriate solution. If no alternatives exist or all alternatives would result in negative impacts to the integrity of the European site then the process either moves to Stage 4 or the project is abandoned.

- **Stage 4 - Imperative Reasons of Over-Riding Public Interest (IROPI)** - In the unlikely event where an Assessment of Alternatives was required, and only if this failed to identify any alternatives which would not adversely affect European sites, Imperative Reasons of Over-Riding Public Interest (IROPI) could potentially be enacted, whereby compensatory measures are implemented to maintain the coherence of the European site network in the face of adverse effects to site integrity.

2.1.1 Conservation Status

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of annexed habitats and annexed species (Qualifying Interest) of community interest for which a Special Area of Conservation (SAC) or Special Protection Area (SPA) has been designated. The Conservation Objectives (COs) for a European site, are set out to ensure that the Qualifying Interest (QI) of that site is maintained or restored to a favourable conservation condition. Maintenance of favourable conservation condition of habitats and species at a site level in turn contributes to maintaining or restoring favourable conservation status of habitats and species at a national level and ultimately at the Natura 2000 network level.

Definitions of conservation status, integrity and significance used in this assessment are defined in accordance with 'Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC' (EC, 2000a).

- The conservation status of a natural habitat is defined as the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species.
- The conservation status of a species is defined as the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its population.
- The integrity of a European site is defined as the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be designated.
- Significant effect should be determined in relation to the specific features and environmental conditions of the protected site concerned by the plan or project, taking particular account of the site's conservation objectives.

2.1.2 Conservation Objectives

Detailed site synopses for each European site are available from the National Parks and Wildlife Service (NPWS) website⁴. In Ireland 'generic' COs have been prepared for all European sites, while 'site specific' COs have been prepared for a number of individual sites to take account of the specific QIs of that site. Both the generic and the site specific COs aim to define the requirements of favourable conservation condition for habitats and species at the site level⁵. Generic COs which have been developed by the NPWS to encompass the spirit of site specific COs in the context of maintaining and restoring favourable conservation condition as follows (NPWS, 2016);

- For SACs: 'To maintain or restore the favourable conservation condition of the Annex I habitats and/or Annex II species for which the SAC has been selected'.
- For SPAs: 'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for the SPA'.

COs for relevant sites will be assessed to inform the judgement on whether effects are likely to be significant (NPWS, 2012; NPWS, 2014a, b).

⁴ <https://www.npws.ie/protected-sites>

⁵ <http://www.irishstatutebook.ie/eli/2011/si/477/made/en/pdf> (access November 2017).

2.1.3 ‘Significant’ Effect and the Precautionary Principle

‘Significant’ effects on a European site(s) are those that have the potential to affect the ‘favourable conservation status’ of species or habitats for which a site is designated (as defined in the habitats directive). The duration of the proposed works and its associated effects is a key consideration in determining significance, in particular because the European Court of Justice has recently ruled—albeit in specific reference to priority habitats—that effects to site integrity must be “lasting”⁶.

The European Commission (EC, 2000b) has also provided communication on the precautionary principle which is fundamental to the screening stage (and AA). The precautionary principle prevails where reasonable scientific doubt cannot be ruled out. Known threats to QIs of relevant European sites are analysed to avoid overlooking subtle or far-field effect pathways.

2.2 Role of the Competent Authority

The information in this Screening report will be provided to Cork City Council (CCC) as competent authority under the Planning Act to enable them to make an informed decision on AA. Should CCC conclude that the proposed scheme, either individually or in-combination with other plans or projects, is likely to cause significant effects to any European site, they will undertake an AA. Information for CCC to be able to undertake an AA will be presented in an NIS. Alternatively, should CCC conclude that there is no potential for LSEs to European sites from the proposed scheme CCC will make publically available the evidence of their Screening determination, i.e. this report.

⁶ Judgment Of The European Court (Third Chamber) on 11 April 2013 in Case C-258/11 (REQUEST for a preliminary ruling under Article 267 TFEU from the Supreme Court (Ireland)) in relation to Peter Sweetman, Ireland, Attorney General, Minister for the Environment, Heritage and Local Government v An Bord Pleanála, para 46 (and others).

3. Methodology

3.1 Guidance

Both EU and national guidance exists in relation to Member States fulfilling their requirements under the Habitats Directive, with particular reference to Article 6(3) and 6(4) of that Directive. The methodology followed in relation to this Screening for AA has had regard to the following guidance;

- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. DEHLG (2010);
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 and PSSP 2/10. NPWS (2010)⁷;
- 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 (2001);
- Communication from the Commission on the Precautionary Principle. European Commission, (2000b); and
- Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. European Commission (2000a).
- 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. Office for Official Publications of the European Communities, Luxembourg. European Commission (2002).

3.2 Screening Methodology

This AA Screening was informed by a desk study of all relevant environmental information and involved the following steps (broadly based on EC (2000a));

- Determined if the proposed scheme is directly connected with or necessary to the management of a European site (s);
- Described the proposed scheme;
- Described the baseline environment;
- Listed European sites which are those sites potentially connected to the proposed scheme by source-pathway-receptor linkages (see Section 3.3.1 below);
- Listed the qualifying interests for each European site; and
- Concluded if pathway linkages to European sites could give rise to LSEs.

3.3 Identification of European Sites

Current Irish departmental guidance (DEHLG, 2010) on the zone of influence (ZoI) to be considered during the AA process states the following:

"A distance of 15km is currently recommended in the case of plans, and derives from UK guidance (Scott Wilson et al., 2006). For projects, the distance could be much less than 15km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects".

It is acknowledged that QIs of European sites have different ranges and sensitivities and therefore a set distance of 15km may not be appropriate to assess the potential effects on all QIs. For example, in the case of Atlantic salmon (*Salmo salar*), the release of polluting substances into a watercourse upstream of an SAC designated for this QI could have impacts more than 15km away. While protected habitats and QI bird species might be most significantly affected by disturbance within 1km of a development. It is therefore important to

⁷ <https://www.npws.ie/sites/default/files/general/Circular%20NPW1-10%20&%20PSSP2-10%20Final.pdf> (accessed, November 2017)

assess each project on a case-by-case basis by identifying a Zol based on the nature of the development, the works associated with same and the surrounding environment, in particular to assess its potential for supporting QI features. The Zol is identified by looking at potential impact pathways and potential source-pathway-receptors which are discussed further in Section 3.3.1 below.

3.3.1 The Source-Pathway-Receptor Model and Zones of Influence

The 'source-pathway-receptor' conceptual model is a standard tool in environmental assessment. In order for an effect to occur, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism means there is no likelihood for the effect to occur (e.g. no potential for LSE). Potential impact pathways that may arise from a development may include but are not limited to;

- Removal or loss of QI habitat;
- Removal or loss of habitat with which QI species are associated;
- Mortality of QI species;
- Physical disturbance to QI species;
- Risk of pollution/reduction in water quality impacting on QI species; and
- Changes to flow/water level impacting on QI species and their habitats.

An example of the source-pathway-receptor model that could result in a potential impact is provided below;

- Source(s) - Piling;
- Pathway(s) - Vibration; and
- Receptor(s) - Underground otter resting site at risk of collapse resulting in mortality of a QI species.

The 'source-pathway-receptor' model is focused solely on the QIs for which European sites are designated as per the latest Conservation Objectives (COs) from the National Parks and Wildlife Service (NPWS) website.

3.3.2 Zones of Influence

Potential impacts which could potentially have effect on QI species and/or habitats associated with European sites are set out in **Table 3.1**. Includes identification of the "zone of influence" for each effect, i.e. the distance at which an impact could have potential effects, using professional judgement and published guidance.

Table 3.1: Potential Effect and Zone of Influence

Potential Impact and Effect	Zone of Influence – Likely area over which impact could occur
Land-take (present in the footprint of works including temporary access routes) resulting in habitat loss or degradation.	Land within the footprint of the proposed scheme and access routes.
Changes in water quality (e.g. sedimentation from construction works) and quantity/distribution resulting in habitat loss or degradation which could impact on various QI species.	Water bodies hydrologically connected to/or adjacent the site are considered. The Zol of the potential effects will vary depending on the water body in question and the QI for which it is designated.
Direct mortality or injury of QI species during the works (both terrestrial and aquatic habitats).	Land within the proposed scheme footprint. The Zol of the potential effects on aquatic QI species will vary depending on the water body in question and the QI for which it is designated.
Spread of invasive non-native species resulting in habitat degradation and/or a reduction in species diversity.	Land within/adjacent the proposed scheme footprint and access routes.
Noise and vibration resulting in disturbance to QI reducing their ability to forage and/or breed.	Generally assessed within 500m of the proposed scheme (e.g. for wintering birds), but can be significantly lower (e.g.

Potential Impact and Effect	Zone of Influence – Likely area over which impact could occur
	150m for otter underground sites, or further (e.g. hen harriers may take flight when nesting at up to 750m from works ⁸).

The zone of influence of an impact is independent of the 'sensitivity' of QIs of European sites. There is a potential pathway to an effect and therefore LSEs, only if;

- the spatial extent of sensitivity of a QI (i.e. the area within which the QI may be present and therefore could be affected by an impact) overlaps with the zone of influence, and
- the QI is sensitive to that impact.

In many instances QIs will have similar ecological dependencies and sensitivities. For example, pollution may affect two different species (e.g. larvae of brook lamprey *Lampetra planeri* and river lamprey *Lampetra fluviatilis*) over a similar area because they share a similar ecological niche (i.e. silty riverbanks into which larvae burrow).

3.3.3 In-Combination Effects

Where source-pathway-effect linkages are identified between the project or plan and European sites, the potential for in combination effects with other plans or projects is examined. If there are no identified pathways, there is no potential for the proposed scheme to have LSE, and also no potential for in-combination effects.

3.4 Information Informing Baseline Environment

3.4.1 Data Sources Informing the Baseline Description

The baseline environment of the site for the proposed scheme in relation to European sites was analysed using the key sources below;

- Ordnance Survey Ireland mapping and aerial photography available from www.osi.ie;
- Mapping of European site boundaries, Conservation Objectives and habitat/species distributions from NPWS online at www.npws.ie;
- Biodiversity Maps available from <http://maps.biodiversityireland.ie/#/Home>; and
- Information on the conservation status of relevant SAC and SPA species and habitats from NPWS conservation status assessments online.

Relevant plans and projects within the ZOI that, where required, will be identified to ensure a robust assessment of in-combination impacts, including:

- Cork County Development Plan 2014;
- Cork City Development Plan 2015-2021; and
- Cork County Council Planning Portal⁹.

3.4.1.1 Surveys Informing the Baseline Description

A full suite of surveys in the wider area to inform the Environmental Impact Assessment (EIA) and NIS for the Dunkettle Interchange Improvement Scheme was completed in 2010/2011. Winter bird surveys were conducted in Cork Harbour as part of this suite of surveys. No further surveys have been undertaken at this location.

⁸ Wintering birds collectively considered at risk of disturbance at up to 500m based on compilation of data from Madsen (1985); Smit & Visser (1993) and Rees et al. (2005). Hen harrier flight initiation distance of 750m from Whitfield et al. (2008). Vibration and human presence effects to otter assessed within 150m in accordance with guidance on road construction-related disturbance of underground sites from the National Roads Authority (NRA, 2006).

⁹ <http://planning.corkcity.ie/SearchTypes> (Accessed November 2017)

3.4.1.2 Consultation

No consultation was undertaken to inform this assessment. Given the location of the works it is unlikely that consultation will be required.

4. Baseline Environment

4.1 Site Description

The Silversprings Junction is located on the N8 Lower Glanmire Road within Cork City at the junction of the N8, R635 North Ring Road and a local access to the Tivoli Docks. The junction is located approximately 900m from the city limits. The proposed scheme is in an urban location and comprises mainly roads and grass verges with some scrub and landscape planted trees (**Figures 1- 4**). The dual carriageway is one of the main arteries into Cork City and in general the area is subject to high volumes of traffic disturbance. To the north of the site there are primarily private residences, hotels and a garage and some areas of mixed woodland interspersed with buildings and grassed areas. Directly to the south is a large area of hard standing associated with a hire company business and an active rail line (**Figure 3**). To the south west is Port of Cork 2000 Garden situated between the rail line and the River Lee. This area comprises manicured lawns, flower beds and mature trees (**Figure 2**) and to the south east of the proposed scheme is the Tivoli Docks and Industrial Estate (**Figure 4**).

4.2 Desktop Summary

4.2.1 Designated Sites

Three European designated sites are located within 15km of the proposed scheme (**Figure 5**), namely the Cork Harbour SPA, Great Island Channel SAC and the Blackwater River (Cork/Waterford) SAC (**Table 6.1**). The nearest site is Cork Harbour SPA which is 1.55km from the proposed scheme (**Figure 1**). There are also three proposed Natural Heritage Areas (pNHA); Glanmire Wood (site code 001054), Douglas River Estuary (site code 001046) and Dunkettle Shore (site code 001082). The latter two pHNA are part of Cork Harbour SPA. Glanmire Wood is on the east bank of Glashnaboy River and the main feature of interest is broad-leaved woodland. None of the features of Glanmire Wood would be impacted by the proposed scheme.

4.2.1.1 Cork Harbour SPA

Of international importance as an important wetland site, Cork Harbour is in the top five sites in the country in terms of wintering waterfowl and regularly supports in excess of 20,000 wintering birds. It has an internationally important population of redshank (*Tringa totanus*) and 15 species of national importance also occur. Regionally important populations of bar-tailed godwit (*Limosa lapponica*) and golden plover (*Pluvialis apricaria*) are also present. Most of the estuarine habitat is good and the site provides roosting and feeding areas for waterfowl species. In winter and autumn, the site is also important for gulls and passage waders are regular visitors.

4.2.1.2 Great Island Channel SAC

The site is an integral component of Cork Harbour and the habitats of conservation interest are sheltered tidal sand and mudflats, and the Atlantic salt meadows. Comprised mainly of soft muds the intertidal flats support a wide range of macro-invertebrates. The site is considered as extremely important for wintering waterfowl and contains the three of the top five areas in Cork Harbour: Belvelly-Marino Port, Harper's Island and North Channel.

4.2.1.3 Blackwater River (Cork/Waterford) SAC

The site is of significant conservation importance due to the presence of good examples of habitats and populations of animal and plant species listed on Annexes I and II of the E.U. Habitats Directive. It is considered of high conservation value due to the populations of bird species the utilise the site.

4.2.2 Invasive Species

A large stand of Japanese knotweed (*Fallopia japonica*) has been recorded at W 71251 72461 to the south of the carriageway and along the verge and within 100m of the western section of the proposed scheme in grid square W703723. No other listed species records have been return.

5. The Proposed Works

The Silversprings Junction is located on the N8 Lower Glanmire Road within Cork City at the junction of the N8 R635 North Ring Road and a local access to the Tivoli Docks. The junction is located approximately 900m from the city limits.

The proposed scheme comprises the reconfiguration of approximately 950m of the N8 Lower Glanmire Road and the junction slip roads including;

- 390m of raised central reserve to be installed on the N8 Lower Glanmire Road;
- Reconfiguration of the N8 westbound carriageway and diverge slip to extend the existing dual carriageway by 450m with a new lane drop diverge configuration and including 880m of pavement works;
- Reconfiguration of the N8 eastbound carriageway and merge/diverge slip to a lane drop/lane gain arrangement including the extension of the existing splitter island and 535m of pavement works;
- Approximately 220m of new shared pedestrian/cyclist facilities adjacent to the westbound carriageway;
- Provision of a new signalised crossing of the N8 Lower Glanmire Road;
- Provision of new zebra crossings on the westbound merge and diverge slips;
- Various road marking and signage across the extent of the scheme;
- Relocation of existing street lighting and drainage gullies; and
- New boundary wall to the former HSS hire building.

All works to the eastbound carriageway including the reconfiguration of the existing eastbound diverge/merge slips roads are fully contained within the existing road-cross section with no additional land required.

The modifications to the westbound carriageway including the new shared pedestrian/cyclist facilities are predominantly within the existing road cross-section with the exception of the works adjacent to the former HSS hire building which requires a 170m strip of land to be purchased from the landowner. The strip of land to be obtained is concrete hardstanding and is approximately 170m long.

5.1 Programme and Timing of Works

The proposed scheme is expected to be published in November 2017. Subject to a success outcome of the statutory processes, a Contractor will be appointed to undertake the works in early 2018. Site works are likely to commence in Q3 2017 and should be completed within 12 weeks. Works shall be carried out in daylight hours. However, some pavement tie-in works may be required in the evening under low flow traffic conditions.

5.2 Inherent Mitigation

Although guidelines on AA from the EC (2000a) and the DoEHLG (2010) state that mitigation should not be considered during screening for AA, “unless potential impacts clearly can be avoided through the modification or redesign of the plan or project” (DoEHLG, 2010), subsequent rulings in several jurisdictions¹⁰ have permitted mitigation at screening stage subject to certain criteria. The mitigation considered in this screening for AA will satisfy these criteria as follows;

¹⁰ E.g. R (Hart District Council) v Secretary of State for Communities and Local Government [2008]; R(On the application of Champion) v North Norfolk District Council [2013]; Rossmore Properties Ltd. and Killross Properties Ltd. v ABP and Others [2014]; Ratheniska Timahoe and Spink (RTS) Substation Action Group & Anor. v An Bord Pleanála & Anor [2015]. Rulings in the UK are reviewed by Simpson in 2014.

- Mitigation is inherent in the design;
- Mitigation measures will be an “intrinsic part of the work carried out”¹¹, by virtue of their inclusion first in contract documents, and secondly in the Contractor’s method statements (MSs);
- Mitigation will be proven to be efficient, and non-contentious, with reference to technical standards and best scientific knowledge; and
- Mitigation will be monitored during implementation to assess whether any amendments are needed to address unforeseen conditions.

For the avoidance of any doubt, if the competent authority is not satisfied that mitigation will avoid LSE, a request that an AA be carried out can be made.

5.2.1 Mitigation Inherent in the Design

The proposed scheme has been designed to ensure that there are minimal impacts on the surrounding environment in particular Cork Harbour SPA. Mitigation inherent in the design;

- Minimising the footprint of the works to minimise land take for the proposed scheme;
- Avoidance of areas known to contain invasive species; and
- Where land-take is required this will be limited to brownfield sites which is hard standing.

5.2.2 Contract Mitigation

The text in Section 5.2.1 will be incorporated into the procurement contract documents for the proposed scheme.

The mitigation outlined below (Section 5.2.2.1, 5.2.2.2 and 5.2.2.3) will also be included within the contract documentation for the proposed scheme, will be binding upon the Contractor and therefore all proposed mitigation is considered an intrinsic part of the work to be carried out for the proposed scheme.

5.2.2.1 Ecological Clerk of Works

A suitably qualified member of the appointed Contractor’s staff will be responsible for overseeing the implementation of the mitigation measures outlined below and ensuring that the appropriate environmental protection measures are in place. Where expert environmental advice and/or supervision is required (e.g. in relation to protected species, invasive species etc.) the contractor will appoint an Ecological Clerk of Works (ECoW).

5.2.2.2 Principles of Environmental Mitigation

The appointed Contractor will adhere to the following key principles of environmental mitigation;

- The appointed Contractor shall take all necessary precautions to prevent the pollution or silting of any waterbody during the proposed works. Site-specific Method Statements (MSs) shall be compiled, in consultation with technical experts where required, to demonstrate adherence to specific, tried-and-tested environmental protection measures that have a high confidence of success;
- The works area, shall be kept to the minimum area required to carry out the proposed works and shall be clearly marked out in advance of the proposed works;
- Vegetation should be retained where possible and replanted as appropriate as quickly as possible on completion of works. Where clearance of trees or dense woody vegetation such as bramble or gorse is required; where feasible, it will be undertaken outside of the period March 1st to August 31st in order to avoid impacts to breeding birds; and

¹¹ Rossmore Properties Ltd. and Killross Properties Ltd. v ABP and Others [2014]; (Para 6, p. 8).

- Where possible the site compound, if required, will be set out on an area of existing hardstanding to reduce temporary loss of habitat and/or potential for pollution from the compound area.

5.2.2.3 Invasive Species

Prior to commencements of the works, a survey for invasive species will be undertaken by a suitably experienced Ecologist to confirm the presence/extent of invasive species. The Ecologist for the appointed Contractor will advise the Contractor on what mitigation measures may be required to avoid spreading invasive species, including but not limited to;

- Moving works locations and/or fencing away from invasive vegetation under the instruction of the Ecologist;
- Mechanical/chemical control of invasive and/or removal of invasive;
- Ensuring tyres and tracks of plant machinery and construction related vehicles will be power washed and checked for the presence of plant material e.g. leaves, roots and rhizomes from non-native invasive species prior to arrival on-site, and after works are completed;
- The use of persistent herbicides, pesticides or artificial fertilisers in reseeding or non-native invasive species control (if required) will need to be addressed on a case by case basis but should be prohibited within 3m of a watercourse; and
- Where herbicide treatment is not practical next to a watercourse physical or mechanical control measures will be employed (if required).

5.3 Potential Effects remaining after Inherent Mitigation

Based on the description of the proposed works and mitigation above, no effects with the potential for LSEs were identified as remaining.

6. Screening Assessment

Following the methodology described in Section 3, the screening assessment comprised determining whether there were any 'Relevant' European sites (and 'Relevant' QIs therein). 'Relevant' European sites/QIs are those potentially linked to the proposed works by a source-pathway-receptor link. If identified, such sites/QIs would require further analysis to determine if the identified link(s) could result in LSEs.

6.1 Proximity of European Sites and their Qualifying Interests

Only three European sites are located within 15km of the proposed works, namely Cork Harbour SPA, Great Island Channel SAC and the Blackwater River (Cork/Waterford) SAC. European sites in the vicinity of the proposed works are shown in **Figure 5**. Detail on the QI species/habitats for which these sites are designated are presented in **Table 6.1** below.

Table 6.1: European sites within 15km of the proposed scheme

European Sites	Site Code	Distance from Proposed Scheme	QI
Cork Harbour SPA	004030	1km	<p>Annex I habitats:</p> <ul style="list-style-type: none"> Wetlands [A999] <p>Annex II species:</p> <ul style="list-style-type: none"> Little grebe (<i>Tachybaptus ruficollis</i>) [A004] Great crested grebe (<i>Podiceps cristatus</i>) [A005] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Grey heron (<i>Ardea cinerea</i>) [A028] Shelduck (<i>Tadorna tadorna</i>) [A048] Wigeon (<i>Anas penelope</i>) [A050] Teal (<i>Anas crecca</i>) [A052] Pintail (<i>Anas acuta</i>) [A054] Shoveler (<i>Anas clypeata</i>) [A056] Red-breasted merganser (<i>Mergus serrator</i>) [A069] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Golden plover (<i>Pluvialis apricaria</i>) [A140] Grey plover (<i>Pluvialis squatarola</i>) [A141] Lapwing (<i>Vanellus vanellus</i>) [A142] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed godwit (<i>Limosa limosa</i>) [A156] Bar-tailed godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Redshank (<i>Tringa totanus</i>) [A162] Black-headed gull (<i>Chroicocephalus ridibundus</i>) [A179] Common gull (<i>Larus canus</i>) [A182] Lesser black-backed gull (<i>Larus fuscus</i>) [A183] Common tern (<i>Sterna hirundo</i>) [A193]
Great Island Channel SAC	001058	5km	<p>Annex I habitats:</p> <ul style="list-style-type: none"> Mudflats and sandflats not covered by seawater at low tide [1140] Atlantic salt meadows [1330]

European Sites	Site Code	Distance from Proposed Scheme	QI
Blackwater River (Cork/Waterford) SAC	002170	14.1km	<p>Annex I habitats:</p> <ul style="list-style-type: none"> • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Perennial vegetation of stony banks [1220] • <i>Salicornia</i> and other annuals [1310] • Atlantic salt meadows [1330] • Water courses of plain to montane levels [3260] • Old oak woodlands [91A0] • Alluvial forests [91E0] • <i>Taxus baccata</i> woods [91J0] <p>Annex II species:</p> <ul style="list-style-type: none"> • Freshwater pearl mussel (<i>Margaritifera margaritifera</i>) [1029] • White-clawed crayfish (<i>Austropotamobius pallipes</i>) [1092] • Sea lamprey (<i>Petromyzon marinus</i>) [1095] • Brook lamprey (<i>Lampetra planeri</i>) [1096] • River lamprey (<i>Lampetra fluviatilis</i>) [1099] • Twaite shad (<i>Alosa fallax</i>) [1103] • Atlantic salmon (<i>Salmo salar</i>) [1106] • Otter (<i>Lutra lutra</i>) [1355] • Killarney fern (<i>Trichomanes speciosum</i>) [1421]

6.2 Source-Pathway-Receptor Links

Based on the findings of the desk bashed review and details of the proposed scheme including the inherent mitigation (mitigation by design) no source-pathway-receptor links have been identified between the proposed scheme and the European designated sites in the vicinity of the proposed scheme. No potential for LSE were identified. This is discussed further below and summarised in **Table 6.2**.

6.3 European Sites and Qualifying Interests

Having identified a list of European sites the source-pathway-receptor conceptual model was applied, given the characteristics of the proposed works to identify which designated sites, and specific features within sites, may be scoped out from requiring further assessment. No source-pathway receptor links with the potential for LSE were identified as such no sites required further assessment.

6.3.1.1 Cork Harbour SPA

No potential source-pathway-receptor link was identified. This European site is not located in close proximity to the proposed scheme (circa 1km away) and thus none of the proposed works could result in effects such as disturbance, habitat loss, changes in water quality or mortality to QI species. The SPA is shielded from the proposed scheme by the Tivoli Docks and wooded areas to the west and north. None of the QI species would be affected from the proposed scheme and the conservation objectives of the SPA will not be compromised.

6.3.1.2 Great Island Channel SAC

No potential source-pathway-receptor link was identified. This European site is located 5km from the proposed scheme. The site is designated for marine and coastal QI habitats mudflats and salt meadows. No works are

proposed in the vicinity of these habitats. Following completion of the proposed scheme there will be no hydrological link between the SAC and the proposed scheme.

6.3.1.3 Blackwater River (Cork/Waterford) SAC

No potential source-pathway-receptor link was identified. This European site is located 14.1km from the Proposed Scheme. It is designated for a number of aquatic QI species and habitats. However, there is no hydrological link between the site and the proposed scheme.

Table 6.2: QIs of the European sites, potential impact pathway and potential for LSE

European Sites	Distance of site from Proposed Scheme	QI	Potential Impact Pathway (Source-pathway-receptor Link)	Potential for Likely Significant Effect
Cork Harbour SPA (Site code: 004030)	1km	Annex I habitats: Wetlands [A999] Annex II species: Little grebe [A004] Great crested grebe [A005] Cormorant [A017] Grey heron [A028] Shelduck [A048] Wigeon [A050] Teal [A052] Pintail [A054] Shoveler [A056] Red-breasted merganser [A069] Oystercatcher [A130] Golden plover [A140] Grey plover [A141] Lapwing [A142] Dunlin [A149] Black-tailed godwit [A156] Bar-tailed godwit [A157] Curlew [A160] Redshank [A162] Black-headed gull [A179] Common gull [A182] Lesser black-backed gull [A183] Common tern [A193]	No source-pathway-receptor linkages and no risk of LSE identified, based on the location, nature and scale of the proposed scheme and inherent design.	No
Great Island Channel SAC (Site Code: 001058)	5km	Mudflats and sandflats not covered by seawater at low tide [1140] Atlantic salt meadows [1330]	No source-pathway-receptor linkages and no risk of LSE identified, based on the location, nature and scale of the proposed scheme and inherent design.	No

European Sites	Distance of site from Proposed Scheme	QI	Potential Impact Pathway (Source-pathway-receptor Link)	Potential for Likely Significant Effect
			No hydrological link and no potential for loss of QI habitats associated with the SAC.	
Blackwater River (Cork/Waterford) SAC (Site Code: 002170)	14.1km	<p>Annex I habitats:</p> <p>Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Perrenial vegetation of stony banks [1220] <i>Salicornia</i> and other annuals [1310] Atlantic salt meadows [1330] Water courses of plain to montane levels [3260] Old oak woodlands [91A0] Alluvial forests [91E0] <i>Taxus baccata</i> woods [91J0]</p> <p>Annex II species:</p> <p>Freshwater pearl mussel [1029] White-clawed crayfish [1092] Sea lamprey [1095] Brook lamprey [1096] River lamprey [1099] Twaite shad [1103] Atlantic salmon [1106] Otter [1355] Killarney fern [1421]</p>	No source-pathway-receptor linkages and no risk of LSE identified. Given there is no hydrological link between the SAC and the proposed scheme and no potential for loss of QI habitats associated with the SAC.	No

6.3.1.4 In-combination Effects

Only 'Relevant' sites and QIs potentially linked to the proposed works by a source-pathway-receptor link require further analysis to determine if the identified link could result in LSE. Where source-pathway-effect linkages are identified between the proposed works and European sites, the potential for in-combination effects with other plans and projects has to be examined. No source-pathway-receptor links were identified for the proposed works as outlined in **Table 6.2** above and therefore there is no potential for in-combination effects.

7. Screening Conclusion Statement

The proposed works are not connected with or necessary to the management of any European sites.

An Appropriate Assessment of the proposed works is not required as it can be excluded, on the basis of objective scientific information, and in light of the conservation objectives of relevant sites, that the proposed works, either individually or in combination with other plans or projects, would not have likely significant effects on any European site.

8. References

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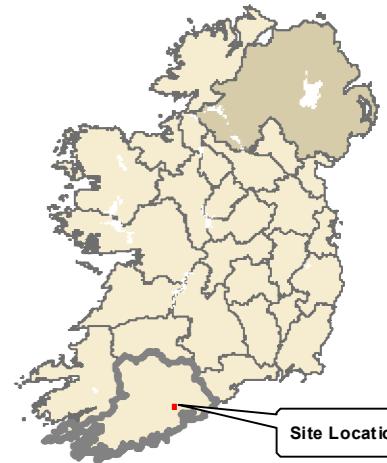
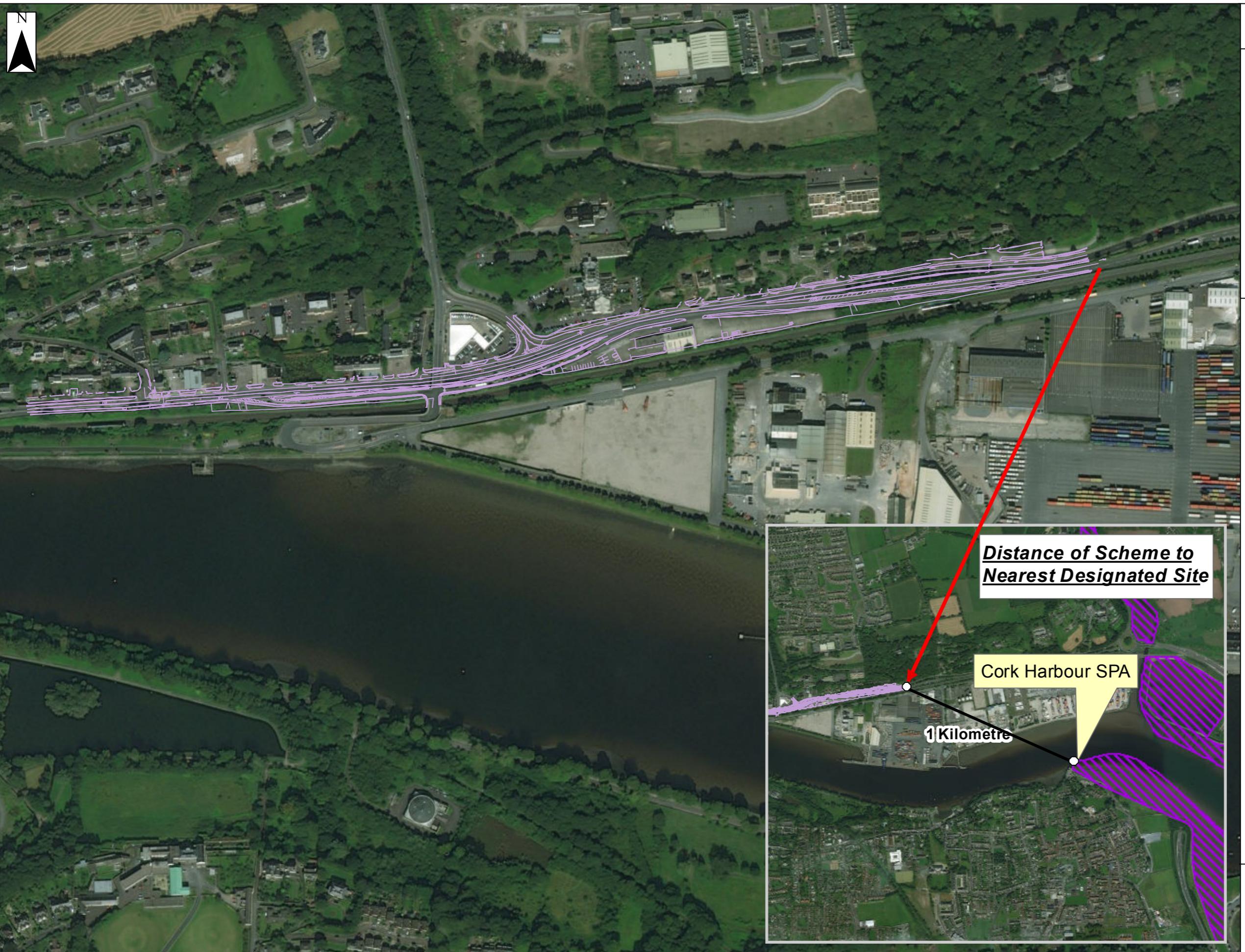
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Appendix A. Additional Information

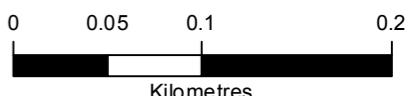
FIGURE 1 -
Scheme Overview



Legend

— Silversprings Scheme

▨ Special Protection Area (SPA)



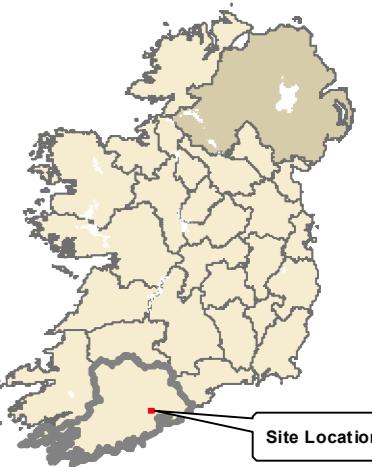
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0	AC	22/08/2017	Draft Issue
1	RG	13/11/2017	Draft Issue

Silversprings Scheme			
SCREENING FOR APPROPRIATE ASSESSMENT			
Overview of Silversprings Proposed Scheme			
Drawn:	RG	File Name:	32107200/AA/DPT/001
Checked:	PW	Original Scale:	1: 4,000
Reviewed:	SC	Date:	20/11/2017

FIGURE 2 -
Western Scheme Overview



Legend

— Silversprings Scheme

0 25 50
Meters

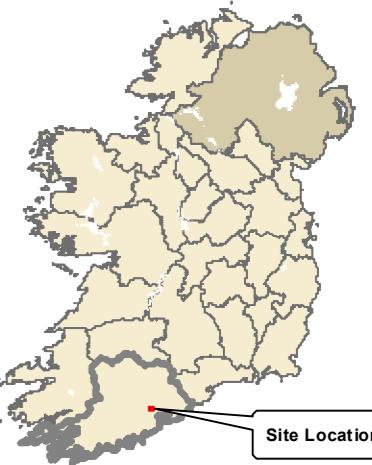
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0	RG	13/11/2017	Draft Issue

Silversprings Scheme			
SCREENING FOR APPROPRIATE ASSESSMENT			
Proposed Scheme - Western Scheme			
Title:	RG	File Name:	32107200/AA/DPT/002
Drawn:	RG	Original Scale:	1: 1,200
Checked:	PW	Reviewed:	SC
Reviewed:	SC	Date:	20/11/2017

FIGURE 3 -
Middle Scheme Overview



Legend

— Silversprings Scheme

0 25 50
Meters

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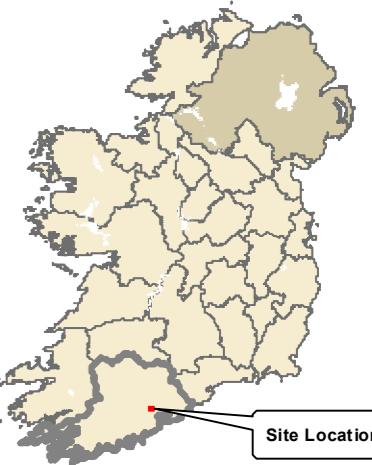


Rev.	By	Date	Description
0	RG	13/11/2017	Draft Issue

Silversprings Scheme			
SCREENING FOR APPROPRIATE ASSESSMENT			
Proposed Scheme - Middle Section			
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FIGURE 4 -
Eastern Scheme Overview



Legend

— Silversprings Scheme

0 25 50
Meters

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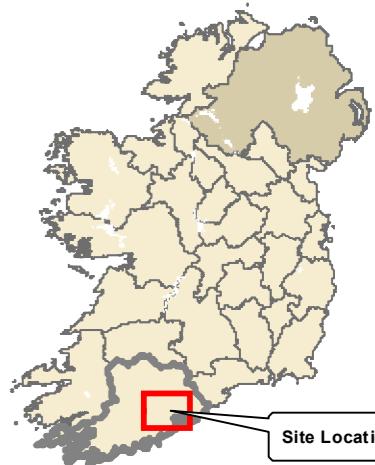


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0	RG	13/11/2017	Draft Issue

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SCREENING FOR APPROPRIATE ASSESSMENT			
Proposed Scheme - Eastern Scheme			
Drawn:	RG	File Name:	http://www.esri.com
Checked:	PW	Original Scale:	1: 1,200
Reviewed:	SC	Date:	20/11/2017
		Drawing No.:	32107200/AA/DPT/004

**FIGURE 5 -
EUROPEAN DESIGNATED SITES**

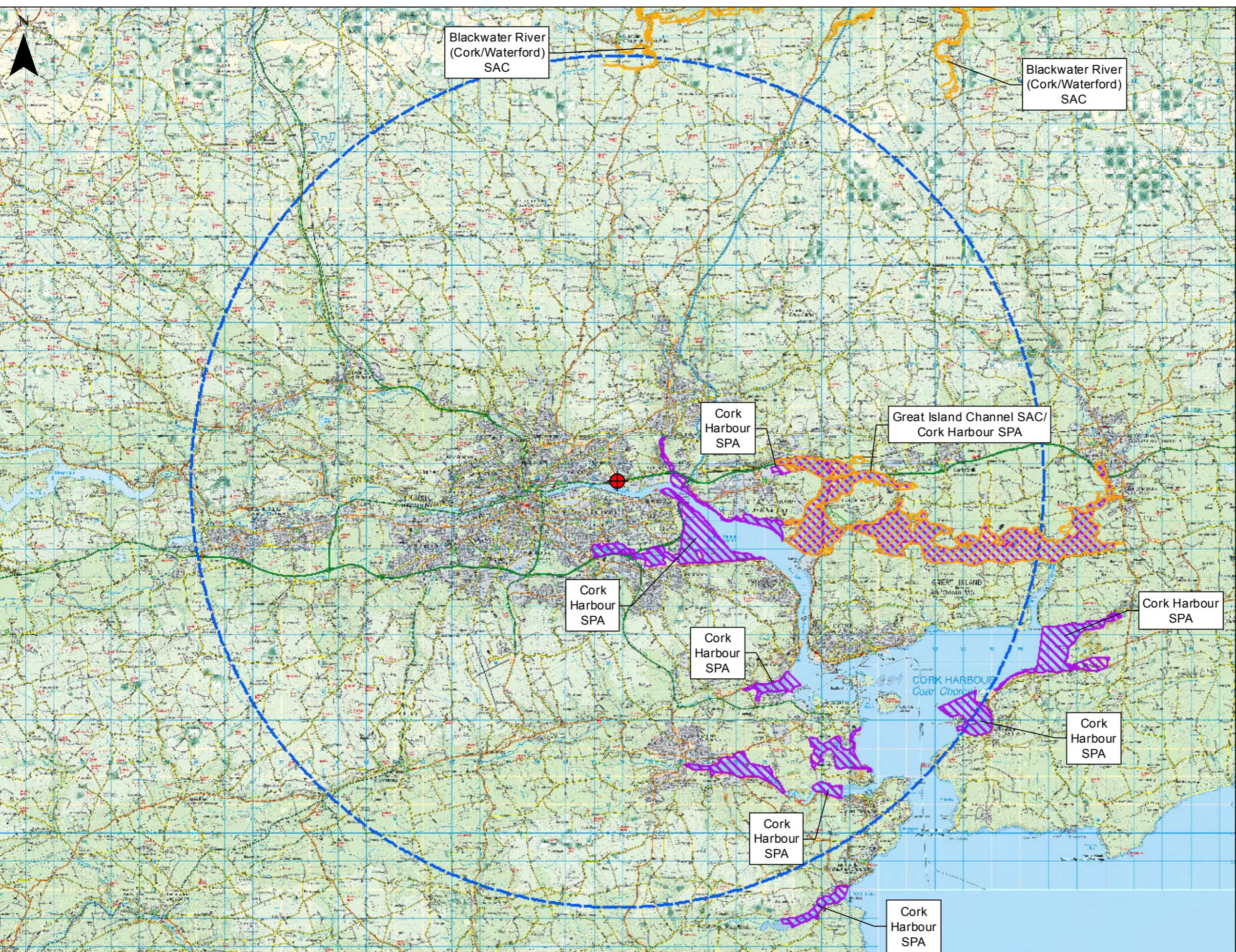


Legend

- Site Location (Red dot)
- Special Area of Conservation (SAC) (Orange diagonal lines)
- Special Protection Area (SPA) (Purple diagonal lines)
- 15km Buffer of Site (Blue dashed line)

0 0.75 1.5 3 4.5 6 7.5
Kilometres

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0	AC	22/08/2017	Draft Issue
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SCREENING FOR APPROPRIATE ASSESSMENT			
Title: European Designated Sites in the Vicinity of Proposed Scheme			
Drawn:	RG	File Name:	1.128000
Checked:	CC	Original Scale:	1: 128000
Reviewed:	SK	Date:	20/11/2017
		Drawing No.:	32107200/AA/DPT/005