Appropriate Assessment Screening Report

Donacarney Footpath and Cattle Underpass

August 2021

FINAL REPORT

Report Prepared For:

ORS
Block A,
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Mullingar,
Co. Westmeath,
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Project Ref: ECOE19 019

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DOCUMENT CONTROL

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Draft V1	*27/04/2020*	*Initial to Client*	*N/A*	*EC*	*JT*	*MM*
Draft V2	*21/06/2021*	*Incorporation of Tree Survey data and comments from Heritage Officer.*	*N/A*	*EC*		
Final Version	*31/08/2021*	*Final Version*	*N/A*	*EC*		

Field Investigations and Data

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work. Where any data supplied by the client or from other sources have been used it has been assumed that the information is correct. No responsibility can be accepted by EcoÉireann. for inaccuracies in the data supplied by any other party.

Declaration of Compliance

"The information which we have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed within this document are our true and professional bona fide opinions."

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1. Introduction

EcoÉireann was commissioned by ORS to carry out an Appropriate Assessment (AA) screening exercise for the proposed development of pedestrian facilities (a shared 3m wide footpath/ cycle path) and cattle underpass along the R150 south from Réalt na Mara school in Donacarney to Bettystown cross, Bettystown, Co. Meath, central grid reference O 14154 74081.

The purpose of this report is to provide information and appraise the potential for this project to have significant effects, either individually or in combination with other plans or projects, on any relevant Natura 2000 sites (hereafter referred to as 'European sites').

2. Legislation and Background

Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (hereafter 'the Habitats Directive') and EC Directive 2009/147/EC on the Conservation of Wild Birds (the "Birds Directive") requires that, any plan or project not directly connected with or necessary to the management of a European site, but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to an AA of its implications for the site in view of the site's conservation objectives. The requirements of the EC directives set out above are enforced in Ireland through the European Communities (Birds and Natural Habitats Regulations 2011). The possibility of there being a significant effect on a European site will generate the need for an AA to be carried out by the competent authority for the purposes of Article 6(3). Accordingly, a screening for AA in respect of an application for consent for proposed development must be carried out by the competent authority (in this case, the Local Authority) in order to assess, in view of best scientific knowledge, if the proposed project, individually or in combination with another plan or project is likely to have a significant effect on any European site.

A Stage Two AA is required if it cannot be excluded, on the basis of objective information, that a proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site. The Screening (Stage One) operates merely to determine whether an AA (Stage Two) must be undertaken on the implications of the plan or project for the conservation objectives of relevant European sites.

This document comprises sufficient information to enable the competent authority to perform a Stage One Screening for AA. The information in relation to the Screening Stage is presented in Section 4 of this document which comprises the Screening Report.

3. Guidance

This AA screening report has been prepared with reference to the following guidance documents where relevant:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 revision)
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPW 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)
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC Environment Directorate-General, 2000 updated draft April 2015)
- Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC
- Guidelines for Good Practice Appropriate Assessment of Plans under Article 6(3) Habitats Directive. Findings of an international workshop on Appropriate Assessment in Oxford, December 2009

4. Methodology

4.1 Desk Study & Site Visit

The information collected for this report, to assist the competent authority to screen the proposal for AA, was based on a desktop study, with a site visit carried out in line with the associated bat activity survey of the proposed site on 15/06/2020.

Information relied upon included the following information sources, which included maps and ecological data:

- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie
- Online data available on European sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie
- Information on the location and operation of the potential development supplied by the client in the form of their own safety statements, maps and related materials
- Information on the status of EU protected habitats and species in Ireland (National Parks & Wildlife Service)

The following planning and policy documents relevant to this site were consulted with respect to considering in combination effects with other plans and projects;

- National Biodiversity Plan 2017-2021
- Meath County Development Plan 2013 - 2019
- Draft Meath County Development plan 2021 – 2027

4.2 Authors Qualifications & Expertise

This AA Screening has been prepared by Eoin Cussen MSc, Assistant Ecological Consultant, EcoÉireann.

Eoin gained an honours bachelor's degree in Zoology from University College Cork in 2014 and a master's degree in Ecological Assessment from University College Cork in 2016. Eoin is an experienced ecologist, nature conservation and botanical specialist with 2 years professional post-graduate experience. His relevant experience includes planning related casework for state and non-governmental organisations within Ireland, input to, and preparation of, Environmental Impact Statements (EIAs), Appropriate Assessment (AA) screening assessments, preliminary habitat assessments & protected species assessments. He is an experienced mammal ecologist and has extensive knowledge of survey and conservation management of woodland and grassland habitats gained from professional experience. Eoin currently carries out a wide range of relevant work including ecological assessment and advisory works for a diverse group of commercial clients.

The document has been reviewed by John Thompson MCIEEM. John is a practising ecologist with over 20 years of experience. John has lead and input to the Habitats Regulations assessment process extensively throughout the U.K and also reported on the Appropriate Assessment process throughout Ireland in relation an extensive number of projects primarily where potential effects on the aquatic environment or ornithological interest features have been identified.

The document was authorised by Mark Middleton ACIEEM. Mark has over 25 years experience of working in the environmental sector and has a high level of expertise in review and audits, in both reporting and project works.

4.3 Stage 1 - Screening

The above referenced guidance (Section 3) documents set out a staged process for carrying out AA, the first stage of which is referred to as **Screening** and involves the following process:

1. Determining whether a project or plan is directly connected with or necessary to the conservation management of any European sites
2. Describing the details of the project/plan proposals and other plans or projects that may cumulatively affect any European sites
3. Describing the characteristics of relevant European sites, and
4. Appraising likely significant effects of the proposed project on relevant European sites.

4.4 Stage Two – Appropriate Assessment

Appropriate Assessment will only proceed if there is assessed to be a likelihood of significant effects occurring on any European sites, as a result of the proposed project, either alone or in combination with other plans and projects and where there is no requirement to apply the 'precautionary principle'.

5. Overview of Proposed Project & the Receiving Environment

5.1 Description of Proposed Project

The proposed development is located in north-east Co. Meath c. 3km east south-east of Drogheda and approximately 1.5 km north east of Bettystown (Figure 5.1). The development involves a c. 700m pedestrian link of a 3m wide shared footpath and cycle path, from the existing pedestrian facilities at Realt na Mara Bunscoil, Donacarney, south along the eastern side of the R150 to the existing pedestrian facilities at the roundabout at Bettystown cross, see Figure 5.2 & 5.3, below. The development includes a proposed cattle underpass in the southern section of the route, see Figure 5.4, below.

The northern section of the proposed pedestrian facilities will traverse the edge of an agricultural field (c. 120m) to retain the existing roadside hedgerow. From here the shared pedestrian path will traverse the edge of the road, skirting the roadside boundaries of 9 residential properties, south for c. 170m.

In the central part of the proposed scheme, along the southern edge of the residential properties, a bridge crossing of a stream is required. The Bettystown stream (River Waterbody Code: IE_EA_08B330980, Segment Code: 08_206) flows SW – NE across the site for c. 1.6km where to turns to flow south-east. The stream then flows c. 2km joining 3-no. other minor streams and eventually flowing into the Irish Sea at Bettystown, further details on this watercourse are provided in Section 5.2 and Figure 5.6.

The proposed development involves the realignment of the southern section of the R150, with a slight land take (2-3m) from the eastern side of this section (agricultural land use) of

the road, the affected area is c. 800m^2 (0.197 acres). It is also proposed to relocate a seasonally wet agricultural drainage ditch located in this section of the road, to realign it with the new proposed path and road layout.

Within this southern section it is proposed to remove a c.140m stretch of the eastern hedgerow, bounding the road and the agricultural field between the 9-no. existing residential properties and the proposed cattle underpass.

It is proposed to install a new hedge in place of this removed hedgerow along with mammal/ stock-proof fencing along the edge of the new pathway. The cattle underpass proposed to be installed will also act as a new mammal underpass.

A new lighting scheme is being proposed for this stretch of the R150, to enable safe pedestrian and vehicular transit across the proposed development.

An arboricultural survey has been undertaken for the proposed development, a map showing the location of trees assessed and their respective tag numbers is included in Appendix 4.

Figure 5.1. Proposed Development Location

Figure 5.2. Proposed Development Works - Northern Section

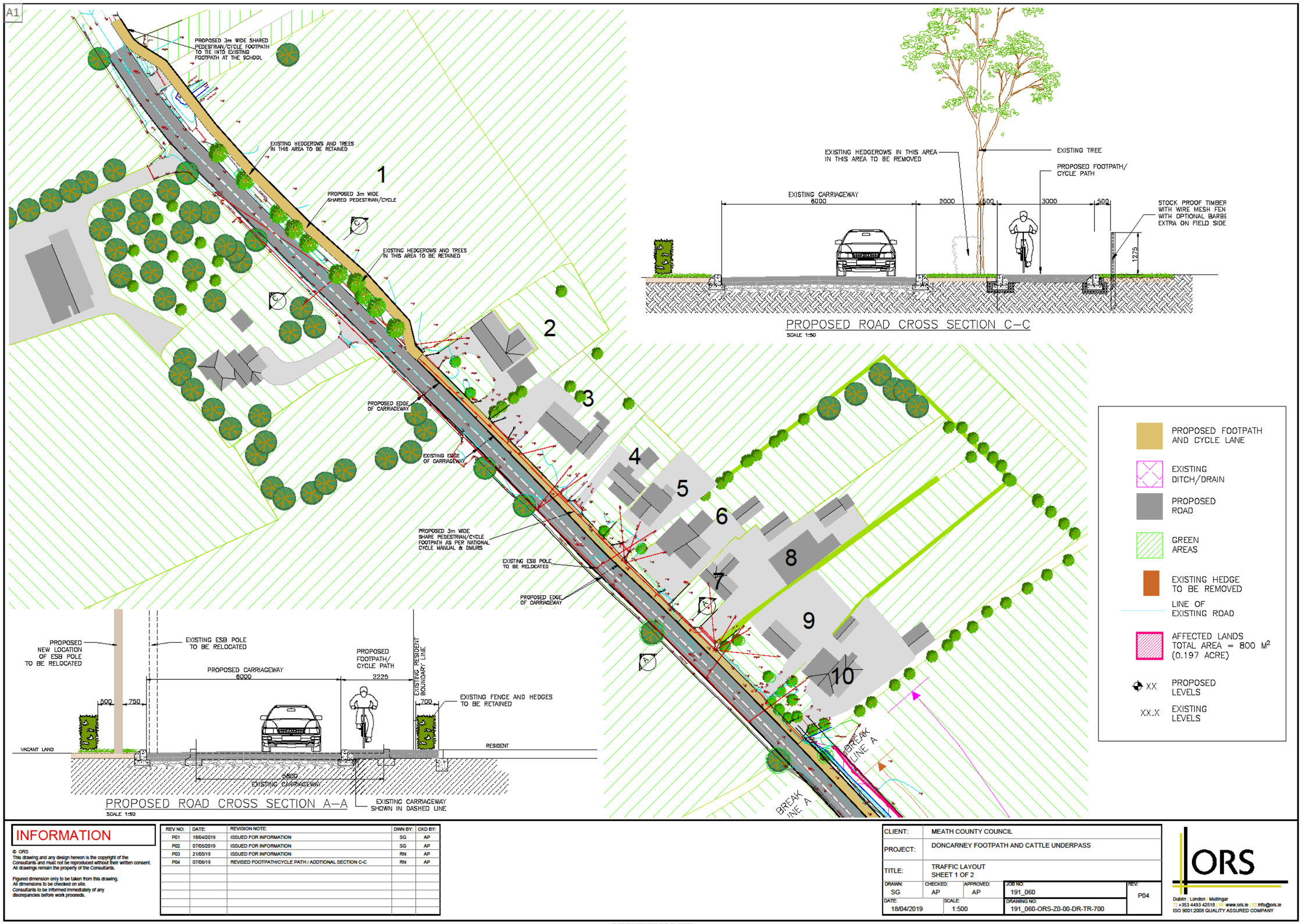
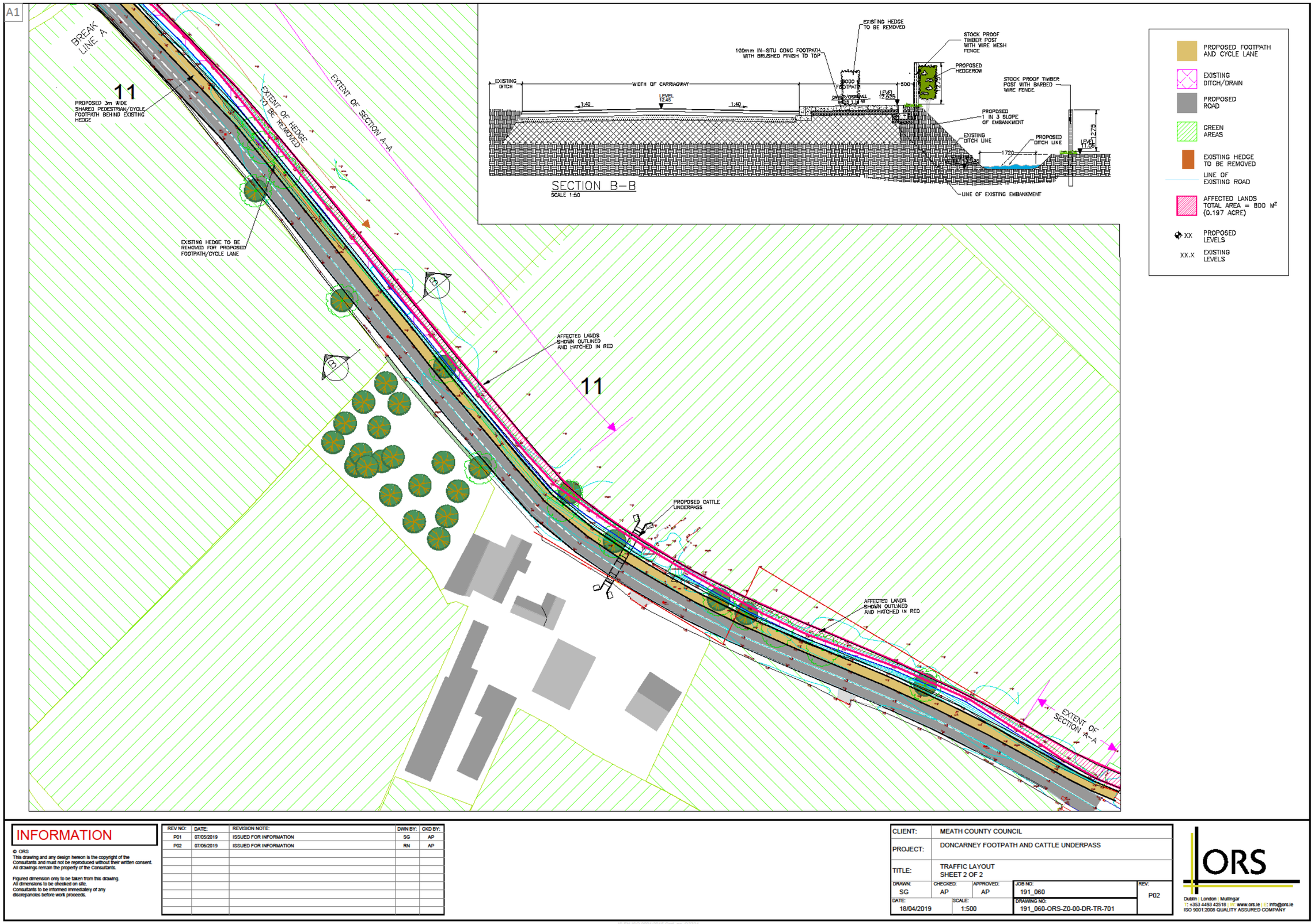


Figure 5.3. Proposed Development Works – Southern Section



INFORMATION

REV NO:	DATE:	REVISION NOTE:	DWN BY:	CKD BY:
P01	07/05/2019	ISSUED FOR INFORMATION	SG	AP
P02	07/06/2019	ISSUED FOR INFORMATION	RN	AP

CLIENT:	MEATH COUNTY COUNCIL			
PROJECT:	DONCARNEY FOOTPATH AND CATTLE UNDERPASS			
TITLE:	TRAFFIC LAYOUT SHEET 2 OF 2			
DRAWN: SG	CHECKED: AP	APPROVED: AP	JOB NO: 191_060	REV: P02
DATE: 18/04/2019	SCALE: 1:500		DRAWING NO: 191_060-ORS-Z0-00-DR-TR-701	

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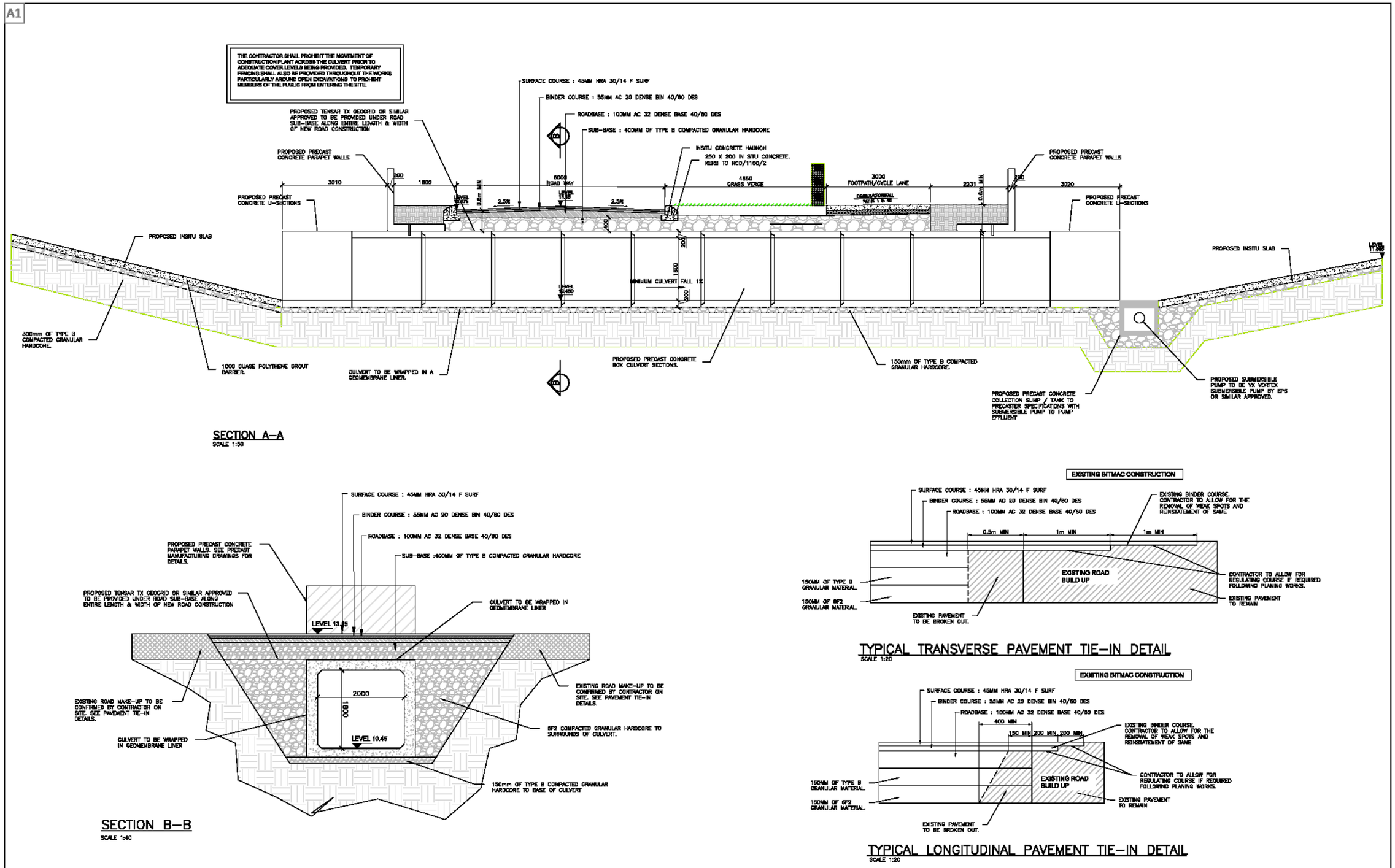
Figure 5.4. Proposed Cattle Underpass



5.2 Description of Receiving Environment

Figures 5.1, above & 5.5, below, outline the proposed development location and surrounding habitats. The location of the proposed development site in proximity to designated site boundaries is outlined in Appendix 2.

The proposed development runs along the eastern side of the R150 south from Realt na Mara Bunscoil, Donacarney to the roundabout at Bettystown cross.

The surrounding habitats are improved pastoral and arable agricultural fields, bounded by hedgerows together with hardstanding of residential and educational buildings. The roadside hedgerow along the proposed section for removal is intensively managed (c.1.25m high) comprised primarily of stands of bramble *Rubus fruticosus* with occasional elder *Sambucus nigra*, sycamore *Acer psuedoplatanus,* nettle *Urtica dioica,* creeping buttercup *ranunculus repens* and wild angelica *Angelica sylvestris.*

The proposed footpath and cycle path crosses the Bettystown stream (River Waterbody Code: IE_EA_08B330980, Segment Code: 08_206) at the southern edge of a series of residential properties (see Figure 5.5 & 5.6, below).

The stream rises c.3.3km west of the proposed development it flows in a SW – NE direction across the site. The stream continues in this direction for c. 1.6km, where to turns to flow south-east. The stream then flows c. 2km joining 3-no. other minor streams and eventually flowing into the Irish Sea at Bettystown.

This watercourse is located within the northern section of the Nanny-Devlin Catchment (ID No.: 08), just to the south of the boundary with the Boyne Catchment (ID No.: 07) within its own River Sub-basin (Betaghstown_010). The watercourse does not enter the SAC River Sub-basins of the River Boyne or River Nanny at any stage before entering the Irish Sea 2.3 km North of the Nanny Estuary and 2.4 km South of the Boyne Estuary (see Figure 5.6, below). The Bettystown Stream is located within its own River Sub-basin (Betaghstown_010) which discharges directly into the Irish Sea.

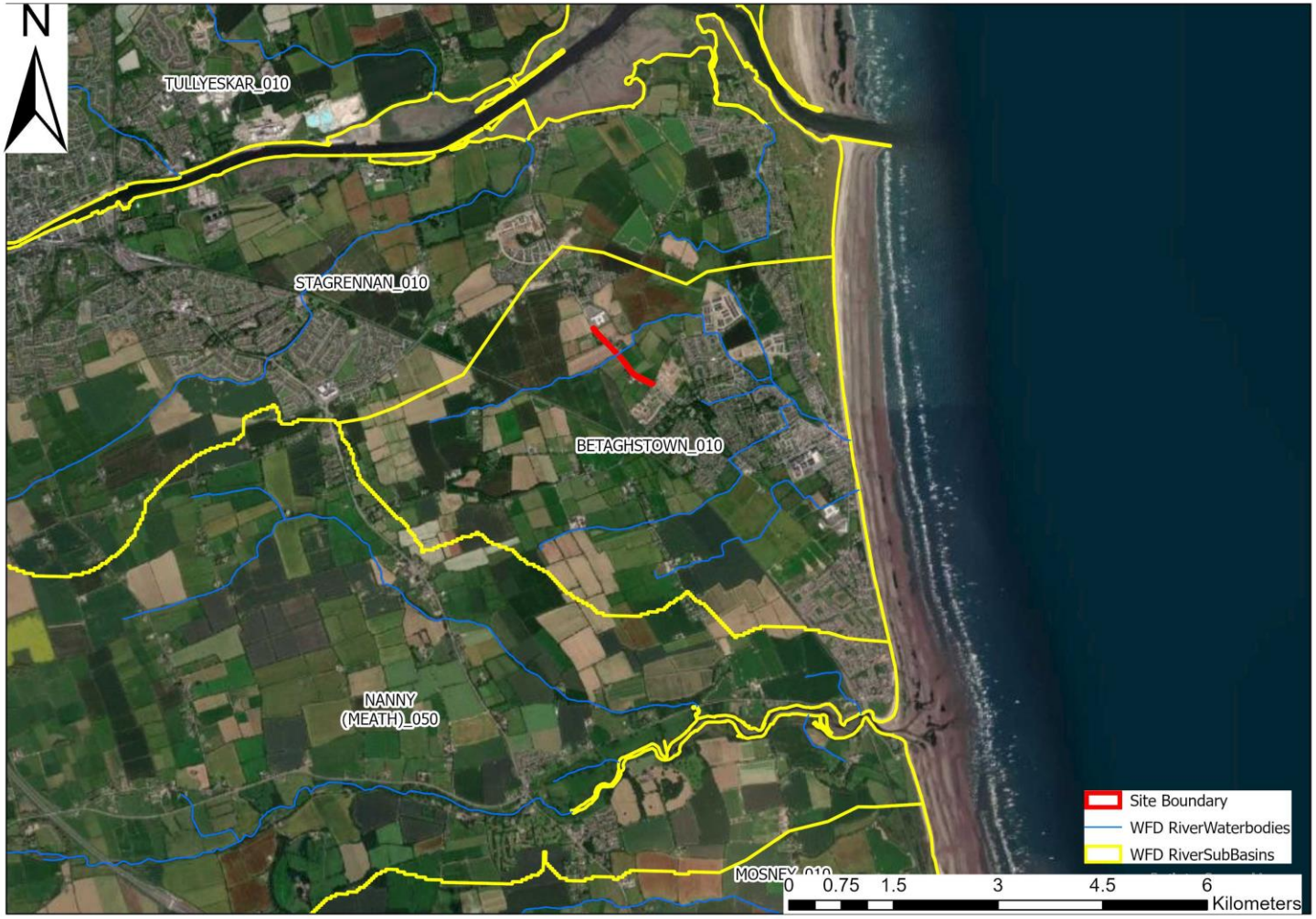
The nature of the watercourse crossed by the proposed scheme is a lowland watercourse rising and flowing through agricultural land and residential areas prior to reaching the sea. Habitats within the stream do not have the required variation or suitable spawning areas for the completion of the life cycle of protected migratory fish species, including salmon *Salmo salar* and river lamprey *Lampetra fluviatilis* and has a limited capacity to support other aquatic species.

The realignment of the road and construction of the shared pedestrian and cycle path in the southern section of the proposed development, will require the realignment of an existing seasonally wet agricultural drain which at times of high rainfall drains through a

highly vegetated channel into the stream traversing the site. This drain is currently situated on the eastern side of the roadside hedge, which is proposed to be removed.

Figure 5.5 Proposed Development Receiving Environment

Figure 5.6 Adjacent Watercourse Extent



6. Provision of Information for Stage One Screening

6.1 Zone of Influence of the Proposed Project

While there is no recommended distance from a proposal for which European sites are considered as being relevant for AA, the guidance (NPWS, 2010) recommends that 'the distance should be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in combination effects'.

As a general rule, it is often considered appropriate to look at Natura sites which fall within 15km of the project, however, those which might introduce significant ecological or environmental factors such as significant traffic or pollution risk for example, may require sites to be examined at greater distance through potential catchment effects. Similarly, where large scale territories or ranging of important birds may take them beyond the boundaries of a designated site then a development in excess of 15km may have the potential to impact upon qualifying interests of a European site.

When analysing potential ecological impacts source-receptor-pathway connectivity is considered. For significant effects to arise, there must be:

1. A risk from a 'source' such as construction works at a site
2. A 'receptor' comprising a Natura site or its qualifying interests
3. A pathway between the source and the receptor such as a blockage obstructing a flightpath to or from a Natura site or a hydrological link.

It must be noted, however, that the presence of a pathway does not necessarily mean that likely significant effects will arise. The likelihood for significant effects will depend upon the characteristics of the source (e.g. duration of construction works), the characteristics of the pathway (e.g. water quality status of a watercourse receiving run-off from construction) and the characteristics of the receptor (e.g. the sensitivities of the European site and its qualifying interests).

6.2 Relevant European Sites and Qualifying Interests

The works will take place outwith of designated sites and the predicted works and working practices are considered to be low impact, therefore a 10km radius was considered to be appropriate to assess the impacts of the proposed development on surrounding designated sites. There are 6-no. European Sites located within 10km of the development site (all distances are approximate) (Appendix 2). The relevant sites, their interest features, distance and direction from the proposed development are presented in Table 6.1.

Table 6.1 European Sites within 10km and Qualifying Interest Features

Site name	Qualifying Features and Relevant Background*	Distance	Direction
1. Boyne Coast and Estuary SAC (Site Code: 001957)	*The site is a Special Area of Conservation (SAC) selected for the following habitats listed on Annex I / II of the E.U. Habitats Directive; Estuaries [1130], Tidal Mudflats and Sandflats [1140], Annual Vegetation of Drift Lines [1210], Salicornia Mud [1310], Atlantic Salt Meadows [1330], Embryonic Shifting Dunes [2110], Marram Dunes (White Dunes)[2120], and Fixed Dunes (Grey Dunes) [2130]** *Boyne Coast and Estuary SAC is a coastal site which includes most of the tidal sections of the River Boyne, intertidal sand- and mudflats, saltmarshes, marginal grassland, and the stretch of coast from Bettystown to Termonfeckin that includes the Mornington and Baltray sand dune systems.*	*1.57 km & 1.69 km*	*East & north respectively*
2. Boyne Estuary SPA (Site Code: 004080)	*The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Shelduck, Oystercatcher, Golden Plover, Grey Plover, Lapwing, Knot, Sanderling, Black-tailed Godwit, Redshank, Turnstone and Little Tern. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.* *The Boyne Estuary is the second most important estuary for wintering birds on the Louth-Meath coastline. Black-tailed Godwit occurs here in internationally important numbers (471). A further nine species of wintering waterbirds have populations of national importance, i.e. Shelduck (218), Oystercatcher (1,179), Golden Plover (6,070), Grey Plover (146), Lapwing (4,771), Knot (1,944), Sanderling (81), Redshank (583) and Turnstone (221) - all figures are mean peaks for the 5 year period 1995/96-1999/2000.* *Of particular significance is that three species that regularly occur, Golden Plover, Bar-tailed Godwit and Little Tern are listed on Annex I of the E.U. Birds Directive.*	*1.69 km at the nearest point*	*North*
3. River Boyne and River Blackwater SAC (Site Code: 002299)	*The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive; Alkaline Fens [7230], Alluvial Forests [91E0], River Lamprey [1099], Atlantic Salmon [1106], and Otter [1355].* *This site comprises the freshwater element of the River Boyne as far as the Boyne Aqueduct, the Blackwater as far*	*2.45 km at the nearest point*	*North-west*

	as Lough Ramor and the Boyne tributaries including the Deel, Stoneyford and Tremblestown Rivers. These riverine stretches drain a considerable area of Meath and Westmeath, and smaller areas of Cavan and Louth.		

4. River nanny Estuary and Shore SPA (Site Code: 004158)	*The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Oystercatcher, Ringed Plover, Golden Plover, Knot, Sanderling and Herring Gull. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.* *The site comprises the estuary of the River Nanny and sections of the shoreline to the north and south of the estuary (c. 3 km in length). This is an important site for wintering waders, with nationally important populations of Golden Plover (1,759), Oystercatcher (1,014), Ringed Plover (185), Knot (1,140) and Sanderling (240) present (all figures are mean peaks for the 5 year period 1995/96-1999/2000). The site is of most importance as a roost area for the birds but the intertidal flats also provide feeding habitat.*	*2.47 km at the nearest point*	*South-east*
5. River Boyne and River Blackwater SPA (Site Code: 004232)	*The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Kingfisher. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.* *The River Boyne and River Blackwater Special Protection Area is of high ornithological importance as it supports a nationally important population of Kingfisher (with 19 pairs recorded in 2010), a species that is listed on Annex I of the E.U. Birds Directive. The site includes the river channel and marginal vegetation.*	*8.1 km at the nearest point*	*West*
6. Clogher Head SAC (Site Code: 001459)	*The site is a Special Area of Conservation (SAC) selected for the following habitats listed on Annex I of the E.U. Habitats Directive; Vegetated Sea Cliffs [1230] and Dry Heath [4030].* *The rocks of Clogher head are covered with a thin layer of soil that, in places, supports a coastal heath community. Areas of sea cliff, bedrock shore and dry grassland also occur within the site. This headland supports one of the best-known examples of coastal heath in Co. Louth and supports a good diversity of coastal heath plants.*	*9.61 km at the nearest point*	*North-east*
** Extracted from the relevant NPWS site synopsis and conservation objectives for each site*			

6.3 Identifying Potential Effect Pathways

Given the nature of the proposed development and the range of qualifying habitats associated with the Natura 2000 designations listed in Table 6.1 consideration of the following potential effect pathways are contained within this screening assessment.

- Pollution/ sedimentation events during works, including GI and construction phase.

Table 6.2, below, provides a screening analysis to identify SAC / SPA qualifying features and identifies "Likely Significant Effects" (LSE) of impacts upon each Natura 2000 site based on current development proposals.

The following effect pathways are eliminated from consideration based on the distance of the proposed works from the relevant sites.

- Direct habitat loss
- Indirect habitat loss
- Construction stage disturbance of interest features due to noise / visual pathways
- Changes in river morphology influencing sediment transport.

Similarly, in the operational phase pollution related inputs associated with a footpath and cycle path are considered to be negligible and not likely to result in likely significant effects on any downstream Natura 200 sites or their interest features.

Table 6.2 Analysis of Relevant European Sites/Qualifying Interests

Boyne Coast and Estuary SAC (Site Code: 001957)			
Qualifying Interest or feature	***Receptor/pathway***	***Analysis of likelihood of impact***	***LSE***
Estuaries [1130]	The realignment of the drainage ditch and construction of the stream crossing has the potential to release unconsolidated sediments and pollutants into the Bettystown stream which flows 2.7km to drain into the Irish sea.	The Boyne estuary lies 2.8km North from where the Bettystown stream drains into the sea. It is considered that given the scale of construction operations, the mixed agricultural nature of the surrounding landscape, the nature of the aquatic environment in dispersing any potential sediment which is displaced into the water column and the short-term nature of construction works that the risk of pollutants or sediment entering the system would be minimal and therefore no likely significant effects are predicted. As the drainage ditch is temporarily wet in nature, with continuous flow only evident during times of high rainfall, it is considered that realignment of this drainage ditch within the summer months during periods of low rainfall would minimise any potential for sediment discharges into the adjacent watercourse (Bettystown Stream). It is considered that following the incorporation of a single span design option for the pedestrian watercourse crossing the construction of the bridge will require no instream works and will minimise the potential for the release of unconsolidated materials and sediments into the watercourse.	No
Mudflats and sandflats not covered by seawater at low tide [1140]		The designated Mudflats and sandflats are c. 300m north of where the Bettystown stream enters the Irish Sea. See Appendix 3, Figures 2.1 & 2.2. It is considered that due to the temporal nature of the drainage ditch that realignment of this drainage ditch within the summer months during periods of low rainfall would minimise any potential	No

		for sediment discharges into the adjacent watercourse (Bettystown Stream). It is considered that following the incorporation of a single span design option for the pedestrian watercourse crossing the construction of the of the bridge will require no instream works and that the risk of pollutants or sediments entering the system would be minimal and short term and therefore no likely significant effects are predicted. With the implementation of these measures it can be shown that the potential of sediment loading to the stream would be minimal.	
Salicornia and other annuals colonising mud and sand [1310] Atlantic Salt Meadows (Glauco-puccinellietalia maritimae) [1330] Mediterranean Salt Meadows (Juncetalia maritimi) [1410]		These habitats are located within the Boyne estuary, 2.8km north of where the Bettystown stream enters the Sea. It is considered that given the scale of construction operations, the mixed agricultural nature of the surrounding landscape, short-term nature of construction works and considering the nature of Irish Sea as a dispersal mechanism that the risk of pollutants or sediment entering the Boyne Estuary system would be minimal and therefore no likely significant effects are predicted.	No
Embryonic Shifting Dunes [2110] Shifting Dunes with Ammophila Arenaria ('White Dunes') [2120] *Fixed Coastal Dunes with Herbaceous Vegetation ('Grey Dunes') [2130]	None	No perceived pathway or likely significant effects due to the distance from site and the nature of the works. None of these habitats have been recorded within the bounds of the site. See Appendix 3, Figure 2.3.	No

Boyne Estuary SPA (Site Code: 004080)			
Qualifying Interest or feature	***Receptor/pathway***	***Analysis of likelihood of impact***	***LSE***
Shelduck Tadorna tadorna [A098]	The realignment of the drainage ditch and construction of the stream crossing has the potential to release unconsolidated sediments and pollutants into the Bettystown stream which flows 2.7km to drain into the Irish sea, 2.4km south of the SPAs Southern Boundary	As the drainage ditch is temporarily wet in nature, with continuous flow only evident during times of high rainfall, it is considered that realignment of this drainage ditch within the summer months during periods of low rainfall would minimise any potential for sediment discharges into the adjacent watercourse (Bettystown Stream). It is considered that following the incorporation of a single span design option for the pedestrian watercourse crossing the construction of the bridge will require no instream works and will minimise the potential for the release of unconsolidated materials and sediments into the watercourse. Due to the nature of the works, the distance between the source (i.e. the site excavations and works) and the receptor (i.e. the SPA Special Conservation Interests) and the nature of the aquatic environment in dispersing any potential sediment which is displaced into the water column, it is considered that there will be no likely significant effects from the development. As noted in Section 6.3 above effects of habitat loss, construction or operational disturbance are not considered given the distances between supporting habitats and proposed works.	No
Oystercatcher Haematopus ostralegus [A130]			
Golden Plover Pluvialis apricaria [A140]			
Grey Plover Pluvialis squatarola [A141]			
Lapwing Vanellus vanellus [A142]			
Knot Calidris canutus [A143]			
Sanderling Calidris alba [A144]			
Black-tailed Godwit Limosa limosa [A156]			
Redshank Tringa totanus [A162]			
Turnstone Arenaria interpres [A169]			
Little Tern Sterna albifrons [A195]			
Wetlands [A999]			
River Boyne and River Blackwater SAC (Site Code: 002299)			
Qualifying Interest or feature	***Receptor/pathway***	***Analysis of likelihood of impact***	***LSE***
Alkaline Fens [7230]	None	No perceived pathway or likely significant effects due to the distance from site and the nature of the works	No
Alluvial Forests with Alnus glutinosa and Fraxinus excelsior [91E0]*			

River Lamprey Lampetra fluviatilis [1099] *Salmon Salmo salar [1106]* *Otter Lutra lutra* [1355]	None.	The stream which may be potentially affected by the construction work is not directly connected to the River Boyne and River Blackwater SAC apart from via the Irish Sea, to which they both discharge. The potential for any detectible effects within the SAC is therefore minimal. The nature of the watercourse is a minor lowland stream which does not have the varied habitats required to support the lifecycle (including spawning and other important habitat) of the Atlantic Salmon or River Lamprey. It is also considered unlikely due to the scale and nature of the watercourse that it would have any significant value to otter due to the lack of suitable habitat for essential food resources and the high suitability of adjacent riverine and estuarine habitats. The closest records from the NBDC which exist of Otter are located within the estuaries of the adjacent protected areas the River Nanny and River Boyne, No records exist within the watercourse which the proposed project is situated on. As with all protected species however a precautionary approach should be undertaken, and pre-construction surveys included. Given the level of separation between the proposed works and the SAC it is considered that there will be no likely significant effects from the development upon the SACs Qualifying Interests.	No
River nanny Estuary and Shore SPA (Site Code: 004158)			
Qualifying Interest or feature	***Receptor/pathway***	***Analysis of likelihood of impact***	***LSE***
Oystercatcher Haematopus ostralegus [A130]	The realignment of the drainage ditch and construction of the stream	As the drainage ditch is temporarily wet in nature, with continuous flow only evident during times of high rainfall, it is considered that realignment of this drainage ditch within the summer months	No

Ringed Plover *Charadrius hiaticula* [A1317] Golden Plover *Pluvialis apricaria* [140] Knot *Calidris canutus* [143] Sanderling *Calidris alba* [144] Herring Gul *Larus argentatus* [A184] Wetlands [A999}	crossing has the potential to release unconsolidated sediments and pollutants into the Bettystown stream which flows 2.7km to drain into the Irish sea, 1.2km north of the SPAs northern Boundary	during periods of low rainfall would minimise any potential for sediment discharges into the adjacent watercourse (Bettystown Stream). It is considered that following the incorporation of a single span design option for the pedestrian watercourse crossing the construction of the bridge will require no instream works and will minimise the potential for the release of unconsolidated materials and sediments into the watercourse. Due to the nature of the works, the distance between the source (i.e. the site excavations and works) and the receptor (i.e. the SPA Special Conservation Interests) and the nature of the aquatic environment in dispersing any potential sediment which is displaced into the water column, it is considered that there will be no likely significant effects from the development. As noted in Section 6.3 above effects of habitat loss, construction or operational disturbance are not considered given the distances between supporting habitats and proposed works.	
***River Boyne and River Blackwater SPA* (Site Code: 004232)**			
Qualifying Interest or feature	***Receptor/pathway***	***Analysis of likelihood of impact***	***LSE***
Kingfisher *Alcedo atthis* [A229]	None	No perceived pathway or likely significant effects due to the distance from site and the nature of the works	No
Clogher Head SAC (Site Code: 001459)			
Qualifying Interest or feature	***Receptor/pathway***	***Analysis of likelihood of impact***	***LSE***
Vegetated Sea Cliffs [1230] European Dry Heaths [4030]	None	No perceived pathway or likely significant effects due to the distance from site and the nature of the works	No

7. Effect of the Project in Combination with Other Plans or Projects

A search of the Meath County Council e-planning database of proposed, conditional and accepted planning applications in the last 5 years was carried out for the Donacarney region. There were a number of developments within the listed applications which could impact / cause cumulative effects with the proposed development based on information available at the time of writing. These included the following developments:

1/ A conditional approved development for Donacarney Celtic Football Club in 2018 (Planning No.: LB180706), which consisted of the relocation of the stoned parking area and portacabin style clubhouse to the north of their site, which brings it in close proximity to the Bettystown Stream, which flows along the Clubs northern boundary. This permission was granted with 2-no. conditions relating to surface water run-off, 'All surface water run-off from roofs, entrances and parking areas shall be collected and disposed of within site to the surface water drainage system. It shall not be discharged to the mains' and 'The surface water run-off shall not exceed the pre-development 'green field' run-off rate. With these conditions in place for this development it is considered that there will be no cumulative impacts, with the proposed development.

2/ The extension (2016, Planning No.: LB161084) of a, 2011, granted planning permission (Planning No.: SA110828) of a residential development comprising 95-no. 2-storey houses, which forms Phase 2 of the permitted Dún Eimear Development. With all major ground works complete and surface water run-off to be collected and treated in accordance with SUDS and the specifications of the Meath County Council Water Services Department before discharge at Greenfield Rates, it is considered that there will be no cumulative effects from this development upon the Bettystown stream.

3/ 2-no. conditionally approved housing developments one consisting of 65-no. residential units, 2017, (Planning No.: LB170428, revised as LB190333) the other 63-no. residential units, 2019 (Planning No.: LB190816), are located c. 1.4km downstream of the proposed development, just north of where the Bettystown stream flows into the Mornington Stream.

Sedimentation/ pollution management measures including surface water run-off during and post construction, have been implemented within these developments as outlined within their respective Construction Management Plans. With these measures in place to protect the Bettystown stream from potential impacts it is considered that there will be no cumulative impact with the proposed development.

8. Conclusions on Information Provided for Stage One Screening Assessment

Determination of whether a project or plan is directly connected with or necessary to the conservation management of any European sites

This project is not connected with the conservation management of any European site.

Appraising likely significant effects of the proposed project on relevant European sites

This document sets out a screening process undertaken to refine the requirement for AA undertaken thereafter. This screening process eliminated risk of likely significant effect on the six European Sites within 10km of the proposed development site. However, a series of **standard construction management practices outlined in Appendix 1 should be adhered to for all stages of work to minimise all effects on the aquatic environment**.

An analysis of the development and its potential to interact with or impact upon the relevant SACs and SPAs qualifying interests is provided in Table 6.3. Based on the analysis provided, using currently available information it is considered that the **proposed development will not incur any Likely Significant Effect (LSE) on any of the surrounding designated sites.**

9. General Ecological Recommendations

All vegetation/ hedgerow clearance will be carried out outside the main bird breeding season which runs from March 1st – August 31st, inclusive. If any additional vegetation clearance is required within this timeframe a Suitably Qualified Ecologist (SQE) will be required to carry out breeding bird checks prior to clearance.

Any hedgerow to be cleared/ removed will be replaced with suitable native hedgerow species, replicating what already exists in the surrounding areas.

It is noted that a bat survey was requested in line with this Appropriate Assessment screening and although this is outside the scope of the AA process as there are no designated sites for the presence of bats in the surrounding area. Nocturnal mammals are impacted by artificial light. Therefore, it is important that lighting used within the proposed development site is installed with sensitivity for local wildlife, while still providing the necessary lighting for human usage.

Luminaire design is extremely important to achieve an appropriate lighting regime. Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following will be considered when choosing luminaires. This is taken from the most recent BCT Lighting Guidelines (BCT, 2018).

- All luminaires used will lack UV/IR elements to reduce impact
- LED luminaires will be used due to the fact that they are highly directional, lower intensity, good colour rendition and dimming capability
- A warm white spectrum (<2700 Kelvins) is achieved to reduce the blue light component of the LED spectrum
- Luminaires will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats
- The use of specialist bollard or low-level downward directional luminaires should be considered in bat sensitive areas to retain darkness above
- Column heights will be carefully considered to minimise light spill. The shortest column height allowed should be used where possible
- Only luminaires with an upward light ratio of 0% and with good optical control will be used
- Luminaires will always be mounted on the horizontal, i.e. no upward tilt
- Any external security lighting will be set on motion-sensors and short (1min) timers
- As a last resort, accessories such as baffles, hoods or louvres will be used to reduce light spill and direct it only to where it is needed.

Lighting should not spill onto important commuting and foraging areas identified for local bat populations.

While it is not considered likely that otter will be present given the scale of the watercourse crossed by the scheme it is recommended that a pre-construction survey for otter is undertaken prior to works affecting areas within 100m of the Bettystown stream are undertaken.

10. References

BCT (2018). Guidance Note 08/18 - Bats and Artificial Lighting in the UK: Bats in the Built Environment series. Bat Conservation Trust, Quadrant House, 250 Kenington Lane, London & Institution of Lighting Professionals, Reagent House, Reagent Place, Rugby, Warwickshire.

NPWS (2018a) Conservation objectives: River Boyne and River Blackwater SAC [002299]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.

NPWS (2018b) Conservation objectives: River Boyne and River Blackwater SPA [004232]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.

NPWS (2017) Conservation Objectives: Clogher Head SAC [001459]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

NPWS (2016) Site Synopsis: Boyne Coast and Estuary SAC [001957]. Revision 16. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2015a) Site Synopsis: Boyne Estuary SPA [004080]. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2015b) Site Synopsis: River Nanny Estuary and Shore SPA [004158]. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2014a) Site Synopsis: River Boyne and River Blackwater SAC [002299]. Revision 13. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2014b) Site Synopsis: Clogher Head SAC [001459]. Revision 13. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013) Conservation Objectives: Boyne Estuary SPA [004080]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2012a) Conservation Objectives: Boyne Coast and Estuary SAC [001957]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2012b) Conservation Objectives: River Nanny Estuary and Shore SPA [004158]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2010) Site Synopsis: River Boyne and River Blackwater SPA [004232]. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

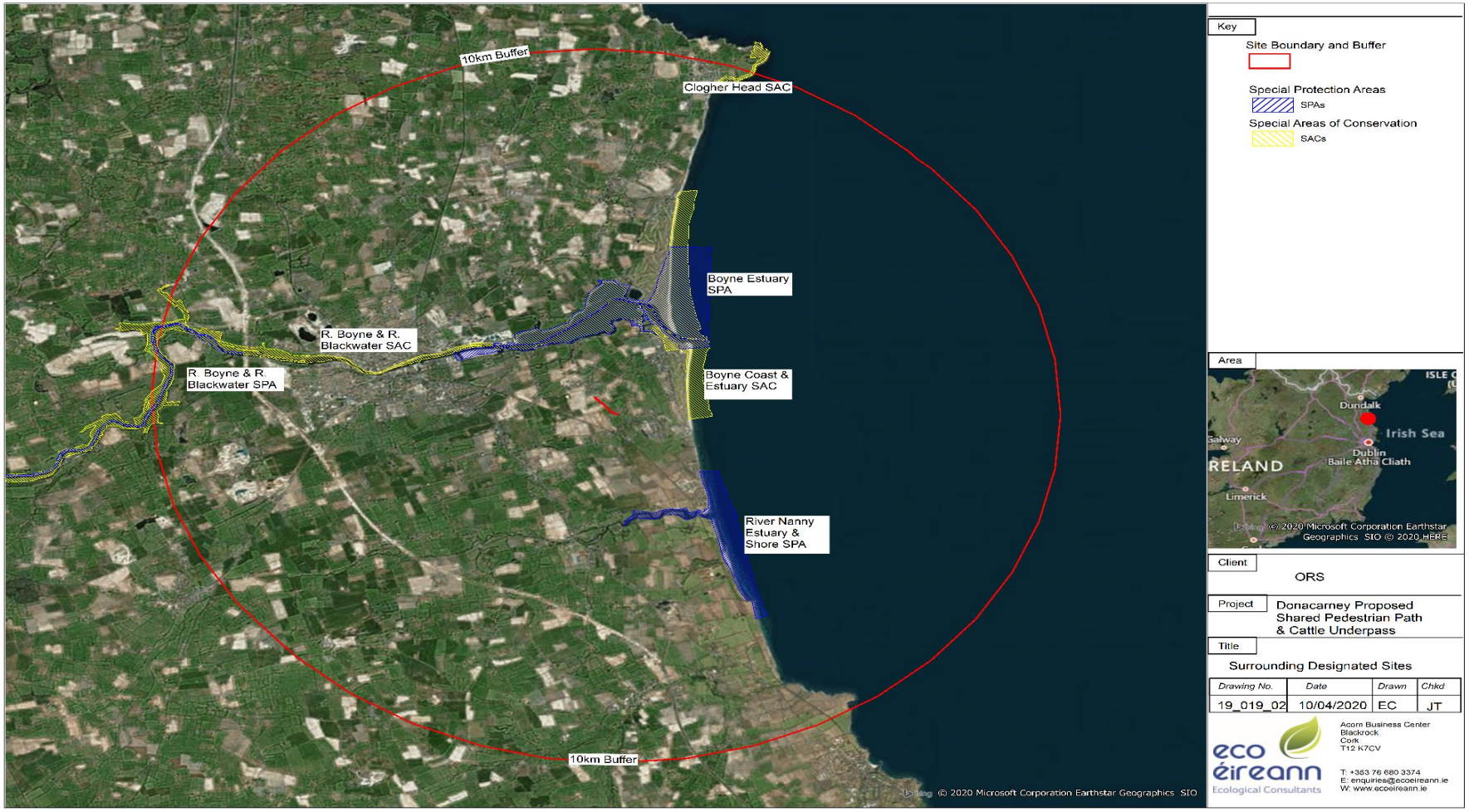
NRA (2008). Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes. National Roads Authority, St. Martins House, Waterloo Road, Dublin 4.

Appendix 1 – Standard Watercourse Protection Measures

The following non-exhaustive list contains measures comprising a range of controls which form typical practices while working near water and excavations (NRA, 2008), which will be applied to all stages of development:

- No instream works are to take place without prior consent of the relevant authorities, i.e. Inland Fisheries Ireland, NPWS, Local Authority, and measures put in place to ensure the ecological viability and water quality of the stream is retained
- All fuel, oils and chemicals required onsite, will be stored in bunded containers with a specific fuelling station appointed on site. The fuelling station must be bunded, at least 10m from the watercourse and not be uphill from the stream. Spill kits will be available in the immediate vicinity of the fuelling area, with these replaced immediately subsequent to use
- All vehicles to be used on site will carry a spill kit specific to their specification
- A designated material storage area (including contrate, aggregates, wash stations) will be identified within the site away from the stream (buffer of 10m and not uphill from the stream). Materials within this compound will be kept within covered containers to reduce potential for run off during bad weather
- Materials will be stored securely (to avoid accidental overflows / spillages when site is unmanned) overnight and when not in use
- All excavated materials will be stored in a suitable designated location away from the watercourses (at least 10m). All such materials should be covered with polythene sheeting to reduce the likelihood of erosion and movement of such material by wind/ rain
- Any concrete mixing or washout will take place in designated areas, away from the watercourses, only with these areas prepared to prevent the spread of these products to the watercourses. The wastes from this wash out area should be disposed of properly offsite
- Bank-side clearance of vegetation should be kept to a minimum
- No water abstraction should occur from the Bettystown Stream.

Appendix 2 – European Sites within 10km



Appendix 3: Boyne Coast and Estuary SAC Protected Habitat Areas

Figure 2.1 Mudflat and Sandflat not covered by low tide [1140] extent within the Boyne Coast and Estuary SAC

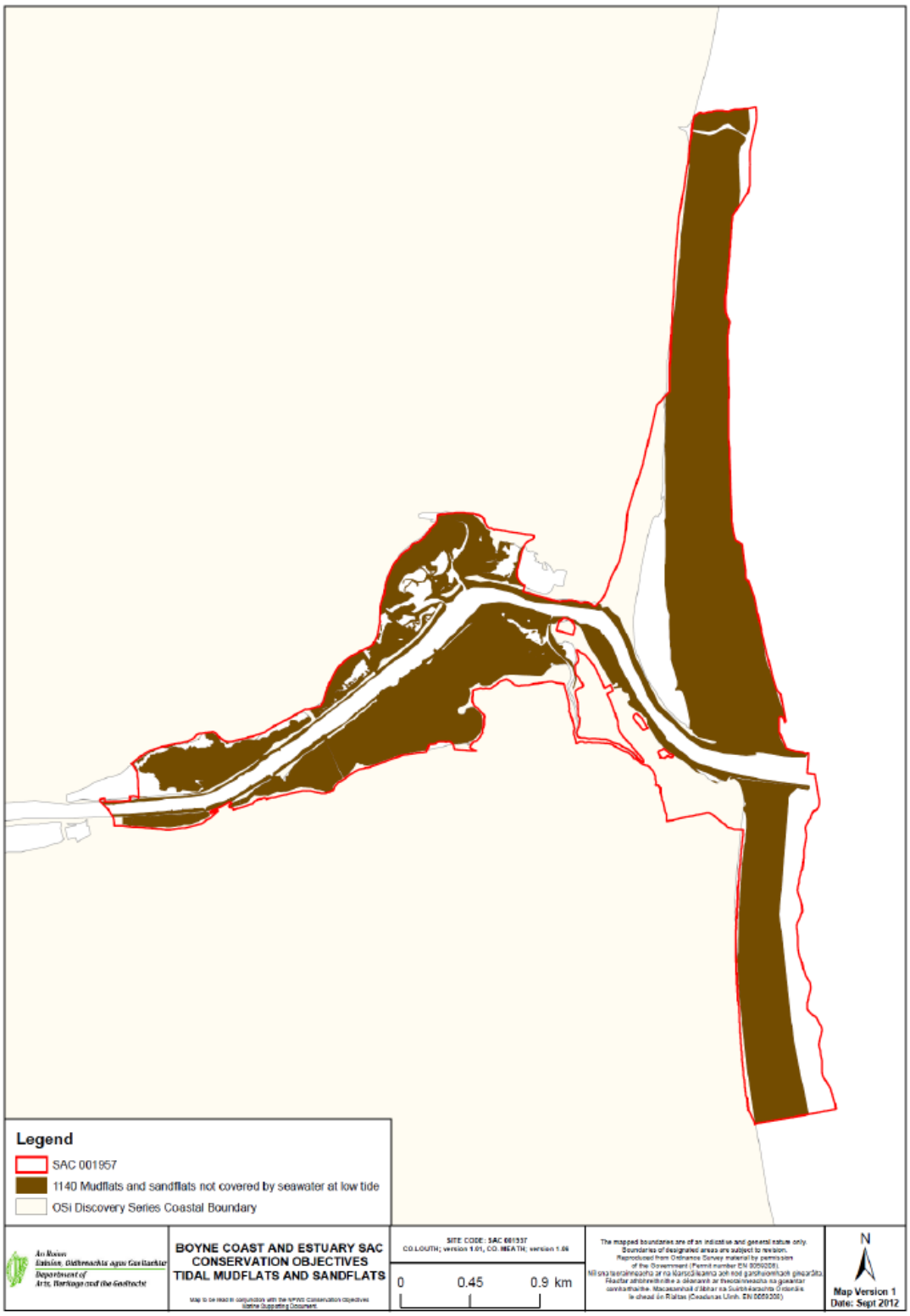


Figure 2.2 Constituent Communities within the Boyne Coast and Estuary SAC and SPA

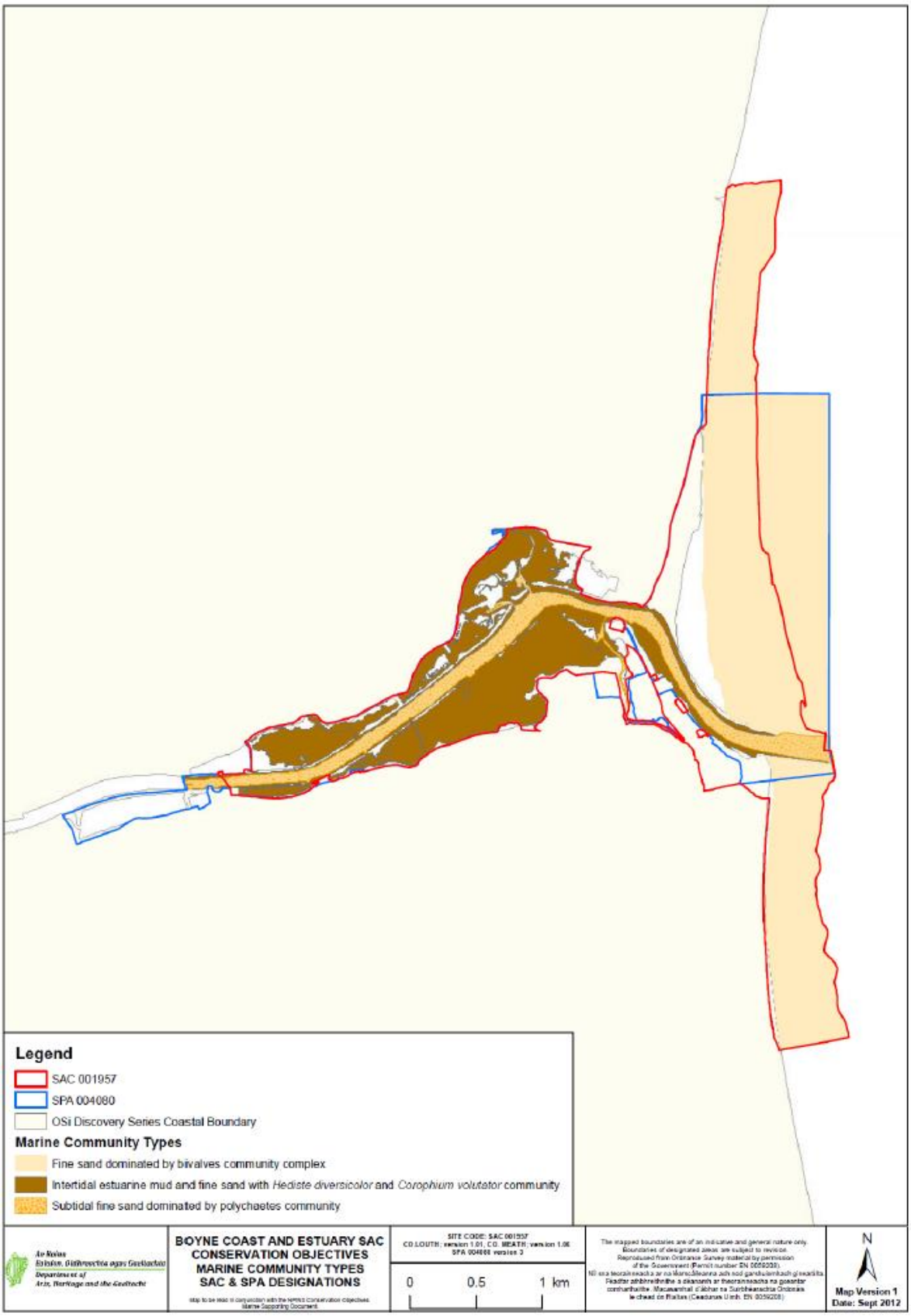
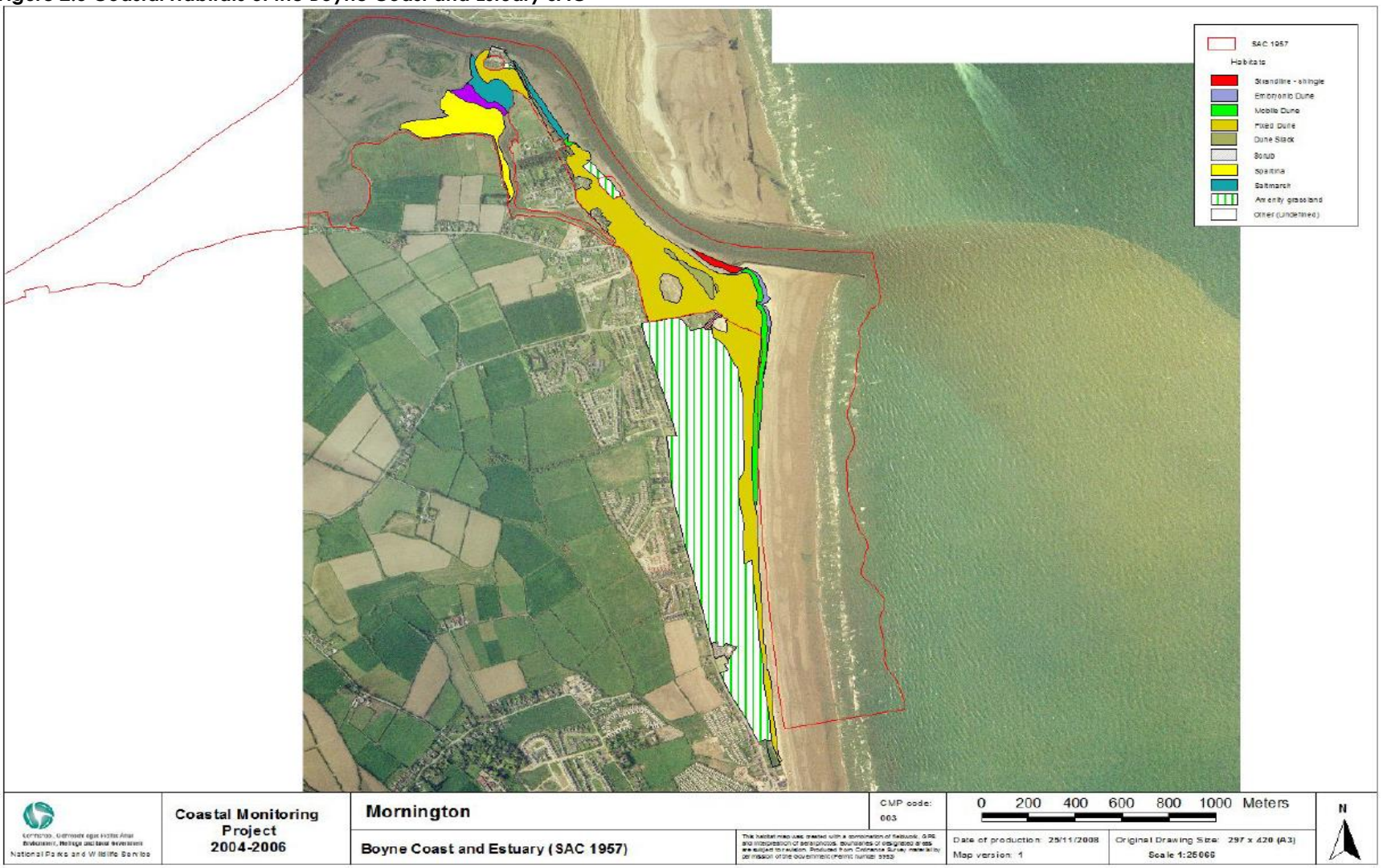


Figure 2.3 Coastal Habitats of the Boyne Coast and Estuary SAC



Appendix 4: Arboricultural Survey Map of the Proposed Project