

Ratoath Pedestrian & Cycling Scheme

Appropriate Assessment Screening

Meath County Council

21-03-22



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1. Introduction

Meath County Council (MCC) are undertaking a project in partnership with the National Transport Authority (NTA) to deliver a high-quality Pedestrian and Cycle Scheme within Ratoath. Atkins has been commissioned by Meath County Council to conduct a Stage 1 Screening for Appropriate Assessment for the proposed scheme.

Ratoath is situated on the intersection of the R125 and R155 regional roads in the south east of County Meath. The town has developed significantly over the last 20 years and acts as a commuter town with more than three quarters of the population travelling to work in Dublin. In this time the town's population has also grown significantly with a stated population of just over 1,000 inhabitants in 1996, compared to over 9,000 inhabitants per the 2011 census records.

The expansion of both residential and educational developments within Ratoath over this period has coincided with national policy to promote and encourage sustainable travel among all age groups with a particular emphasis on creating a walking and cycling culture among younger generations for the purpose of short local trips. As such, the need has arisen to provide improved pedestrian and cyclist infrastructure to form better connections between residential areas, schools, amenities and the town centre.

The proposed scheme will therefore aim to secure the development of pedestrian and cycle routes that will provide a high quality of service, whilst also ensuring that there remains an optimal balance between the various competing transport modes within the town and its environs.

This report should be read in conjunction with the design pack which accompanies this Part 8 planning application; as well as the accompanying Part 8 Planning Report (Atkins, 2022a) and EIAR Screening Report (Atkins, 2022b) prepared by Atkins. Meath County Council have also prepared an outline Construction and Environmental Management Plan (MCC, 2022).

1.1. Scheme Objectives

The objectives of the proposed Pedestrian and Cycle Scheme are: -

- Provide appropriate pedestrian and cycle facilities within the town centre, along the Broadmeadow River and on all key approach roads;
- To provide safe route link and crossing facilities for pedestrian and cyclists;
- To provide appropriate speed and traffic management within the town centre and on approach roads;
- To facilitate national/county policies/objectives in relation to sustainable transportation;
- To facilitate the development of the Greater Dublin Area Cycle Network Plan; and
- To comply with the design standards and principles advocated within the Design Manual for Urban Roads and Streets and National Cycle Manual.

1.1.1. Proposed Project

The proposed scheme consists of improvements and upgrades to the follow key routes: -

- Town Centre Streets;
- Approach Roads;
- Distributor Roads;
- Greenway; and,

- School Access Roads.

These routes are illustrated in full on Figure 1.1. The Ratoath Pedestrian and Cycle Scheme will result in a high-quality pedestrian and cyclist network within the town of Ratoath that will create safe and comfortable routes between a number of large residential areas and key attractors such as the GAA Club, BMX Club, Soccer Club, Primary Schools, Secondary School and the town centre itself. There are a number of benefits which will be realised by all road users, including pedestrians, cyclists, public transport users and motorists through the implementation of the proposed scheme. These benefits include the following: -

- Provision of a connected, safe, high quality pedestrian and cycle network;
- Provision of key facilities to encourage an uptake in cycling particularly within the school going age group;
- Improved bus facilities within the town centre including upgrades to shelters and the provision of bicycle parking;
- Improved operational safety for all road users at the R155 / R125 junction at Supervalu;
- Implementation of traffic management measures to encourage reduced vehicular speeds thereby improving road safety for all road users; and,
- Provision of pedestrian crossing points at key desire points and facilitating safe crossing locations particularly across side road junction.

The scheme is aligned with National Policy and is in keeping with the objectives of the Meath County Development Plan and Ratoath Local Area Plan.

1.1.2. Approach to the Design

The cycling network in Ratoath consists of a series of links that must form a coherent and safe network that appropriately caters for all types of cyclists, in particular school children and other vulnerable users, whilst taking account of the constraints and opportunities that are evident from an engineering, environmental and land ownership perspective. In this context route options were developed both holistically, considering the entire network, and on a link by link basis.

The cycle network has been designed in accordance with the National Cycle Manual (NCM) and in particular and the Design Manual for Urban Roads and Streets (DMURS). It is also critical that the cycle route requirements are balanced with the needs of pedestrians and that the requirements for vehicular traffic movement and parking is appropriately considered.

There are two key considerations in the development of cycle route options. In the first instance traffic volume and speeds must be fully assessed as these are key characteristics of the road and street network. Traffic volumes and speeds have a direct impact on the second key consideration which is the provision of either an integrated or segregated cycling provision.

Integrated cycling provision requires cyclists interacting directly with vehicular traffic, either sharing the lane with traffic or in a cycle lane. In integrated provision it is critical for vulnerable cyclists that prevailing traffic speeds are low, preferably a maximum of 30kph but integrated provision can be considered up to 50kph. In this context roads and streets should operate as self-regulating environments wherein the layout of the street and the driver's visual and psychological interpretation of the street environment instinctively tell the driver the appropriate speed as opposed to a reliance on legislation and regulation such as posted speed limits.

Segregated cycling provision provides for physical separation of cyclists from motorised traffic and these can be provided in the form of cycle tracks, cycle paths or cycle ways. Depending on the volume of pedestrians and cyclists and available width, these segregated facilities can either be shared use with pedestrian and cycle or segregated from pedestrians. Shared provision is appropriate where the path width can adequately cater for the cyclist and pedestrian volumes and where movements are generally linear in nature i.e. people are generally not crossing and are not congregating on the path. In general these should be a minimum of 3.0m in width, with allowances for pinch points, and there should be no delineation marking between pedestrian and cyclist space.

Whilst segregated provision is most desirable for vulnerable or inexperienced cyclists, experienced cyclists will often choose to cycle in the traffic lane regardless of whether there is a segregated cycle provision along a route. Indeed cyclists who may be travelling into Ratoath along longer distance rural cycle routes would be expected to remain on road and street within the town. Within Ratoath the provision for cyclists to cycle on street throughout the town has been appropriately considered in the context of the prevailing existing 50kph speed limit.

1.2. Part 8 Planning Documentation

This Screening for Appropriate Assessment should be read in conjunction with the following complementary documentation contained under separate report heading: -

- Book of Drawings
 - Drawing 5139451/HW/0000: Cover Sheet
 - Drawing 5139451/HW/0001: Site Location Plan
 - Drawing 5139451/HW/0002: Site Extents Key Plan
 - Drawing 5139451/HW/0003: Site Extents (Sheet 1 of 3)
 - Drawing 5139451/HW/0004: Site Extents (Sheet 2 of 3)
 - Drawing 5139451/HW/0005: Site Extents (Sheet 3 of 3)
 - Drawing 5139451/HW/800: General Layout Key Plan
 - Drawing 5139451/HW/801: Site Layout Plan (Sheet 1 of 17)
 - Drawing 5139451/HW/802: Site Layout Plan (Sheet 2 of 17)
 - Drawing 5139451/HW/803: Site Layout Plan (Sheet 3 of 17)
 - Drawing 5139451/HW/804: Site Layout Plan (Sheet 4 of 17)
 - Drawing 5139451/HW/805: Site Layout Plan (Sheet 5 of 17)
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 - Drawing 5139451/HW/816: Site Layout Plan (Sheet 16 of 17)
 - Drawing 5139451/HW/817: Site Layout Plan (Sheet 17 of 17)
- Part 8 Planning Report
- Ecological Constraints Assessment Report:
- Environmental Impact Assessment Screening Report

As part of this Part 8 Report an Arborist Report, Bat Report and Archaeological Report have also been provided and are presented in Appendices B, C and D respectively of the Part 8 Planning Report (Atkins, 2022a).

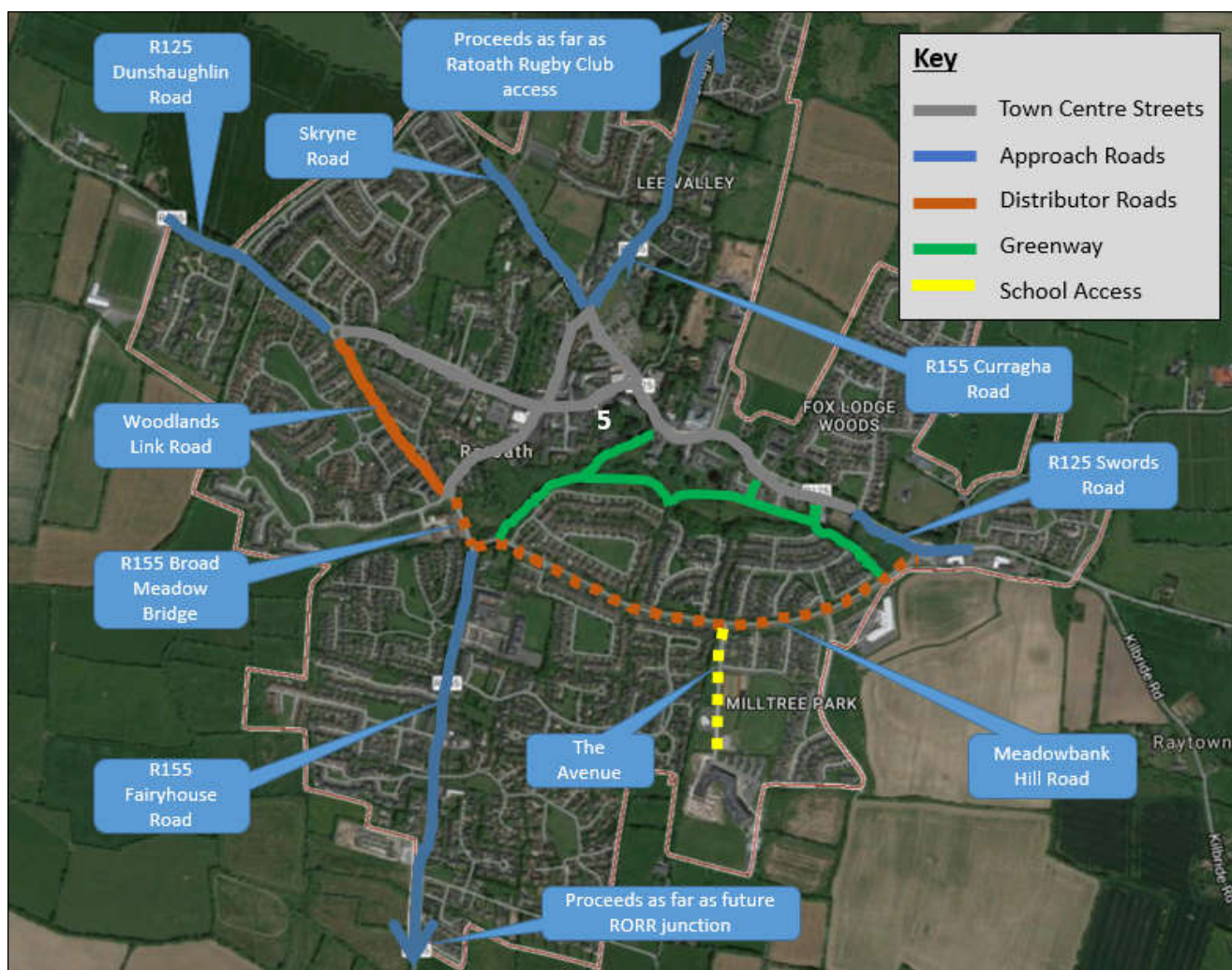


Figure 1.1 Proposed Project Location.

The Broadmeadow Bridge, Meadowbank Hill and The Avenue cycle routes which are indicated with a dashed line as these are already constructed. The remainder of the routes as indicated with a solid line therefore form the proposed Ratoath Pedestrian and Cycle Scheme which are subject of this Planning Report and associated Part 8 planning application.

1.3. Project Description

Ratoath is situated on the intersection of the R125 and R155 regional roads in the south east of County Meath. As noted, the town has developed significantly over the last 20 years and acts as a commuter town with more than three quarters of the population travelling to work in Dublin. The overall development consists of cycleways on existing paths/roadways with a Greenway element adjacent to the Broadmeadow River.

The proposed scheme has been broken down into general sections (see Figure 1.1). These sections are as follows: -

- Approach Roads;
 - Skryne road
 - Curragha Road
 - Swords Road
 - Fairyhouse Road

- Dunshaughlin Road
- Town Centre Streets;
- Woodlands Link; and,
- Greenway.

The scheme incorporates a linear distance of 16.58km and a total area of 9.49ha.

The works will comprise the retrofitting of the existing road and street layout, to incorporate realignment of kerbs, widening of the pedestrian footpaths, provision of new uncontrolled and controlled pedestrian crossings, retrofitting existing priority, roundabout and traffic signal junction layouts, upgrade of existing bus stops, relocation, upgrade and installation of public lighting, and implementation of speed management measures to create a self-regulating street environment conducive to pedestrian and cyclist safety and comfort.

Certain sections of the works will also include the provision of appropriate street furniture and landscaping, removal of unnecessary street signage and furniture, installation of cycle parking and the resurfacing of road and footway pavements with appropriate materials.

The description of the proposed pedestrian and cycle facilities for each section is as follows.

1.3.1. Approach Roads

Skryne Road: The proposed pedestrian and cycle facilities along this section of the scheme consist of an existing 2.0m wide footpath on the western side of the road which will be re-designated as a shared use pedestrian and cycle path. This width of this combined pathway would be appropriate in this location which serves a limited quantum of residential development. This path will connect with existing pedestrian and cycle facilities at the Silverstream Housing estate and also connect with the facilities proposed on the Curragha Road and the town centre streets. Raised uncontrolled crossings are provided at side roads and a raised controlled crossing is provided to connect with the Pitch and Putt course and Ratoath Harps Soccer club.

R155 Curragha Road: The proposed pedestrian and cycle facilities along this section of the scheme consist of a new 2.0m footpath along the eastern side of the road from the grounds of Ratoath Rugby Club to the traffic signal junction with the Skryne Road. The road will therefore be narrowed to 6.0m and designated as a shared street with a number of traffic management measures implemented. These measures consist of raised junction tables at the entrances to Lee Valley and Glebe Park and recurrent shared street cycle symbols painted onto the carriageway. In addition, a 50kmh driver feedback sign is to be introduced at the approach to the posted 50kmh speed zone.

Minor improvements in the form of kerb realignment, footpath upgrade and tactile paving will be introduced at the Curragha Road / Skryne Road traffic signal junction.

The section from the Lee Valley housing estate to the Ratoath Rugby Club will require some minor realignment of the road on approach to the Rugby Club where the available verge space to accommodate the footpath moves from the eastern side of the existing road carriageway to the western side of the carriageway.

R125 Swords Road: The proposed pedestrian and cycle facilities along this section of the scheme consist of the upgrade of the existing footpath / cycle track located on the southern side of the road from the sewage works access lane to the controlled crossing due east of the junction with the Foxlodge Woods housing estate to a shared path. From this crossing to the roundabout, the existing footpaths and one-way cycle tracks on both sides of the road will be reconstructed to suit proposed alignment. The existing bus lane entry to the roundabout will be removed and associated bus stops on both sides of the road realigned and reconstructed as per the proposed plans. Crossings on the roundabout will be widened to a 4.0m whilst a raised zebra crossing will be introduced on the western arm.

The southern arm of the roundabout will tie in with pedestrian and cycle facilities proposed as part of the Meadowbank Hill upgrade, subject of separate planning approval process. From the roundabout to the Moulden Bridge housing estate a two-way shared pedestrian and cycle path will be introduced on the northern side of the roadway and will gain access to the estate which via a permeability access point through the existing boundary

wall. Pedestrians will cross the Bourne Road via a raised uncontrolled crossing. Existing footpaths and cycle tracks to the south and southwest of the roundabout will be resurfaced and designated as a shared pedestrian and cycle path. Raised tables will be implemented at the junctions of Foxlodge Woods and the access lane to the sewage works.

R155 Fairyhouse Road: The proposed pedestrian and cycle facilities along this section of the scheme consist of a shared pedestrian and cycle path to be developed as a reconstruction of the footpath on the eastern side of the road which will include widening of the path, thereby reducing the carriageway width to 6.0m. The path will extend from the proposed RORR (Ratoath Outer Relief Road) junction north towards Gláscairn Lane directly opposite Ratoath BMX Club at the south of the town, and continue northwards towards Ratoath National School and the traffic signal junction with Meadowbank Hill where it will tie with facilities as part of the proposed Meadowbank Hill upgrade subject to a separate planning permission. The proposed path between Gláscairn Lane and Fairyhouse Lodge housing estate is a minimum of 2.5m wide while the remainder of the path is a minimum of 3.0m. Raised uncontrolled crossings are provided at all side road accesses on both sides of the road.

R125 Dunshaughlin Road: The proposed pedestrian and cycle facilities along this section of the scheme consist of a 3m wide shared use pedestrian and cycle path on the southern side of the roadway from the entrance to Ratoath GAA Club to the south eastern roundabout intersecting with the Woodlands link and providing access to Steeplechase Hill. Kerb lines are slightly modified and raised zebra crossings are provided on all arms of this roundabout whilst raised zebra crossings are provided on the southern and eastern arms only of the Brownstown / Steeplechase Wood roundabout. The proposed crossings will connect to existing pedestrian and cycle facilities on the northern side of this road. The eastern extent of this section includes removal of a certain number of trees and replacement with new tree planting. This proposal is illustrated within the Arborist Report contained under separate cover. The existing bus stop will be retained. The eastern extent of this section will connect with proposals on the Woodlands Link and the Dunshaughlin Road town centre street.

1.3.2. Distributor Road

Woodlands Link: The proposed pedestrian and cycle facilities along this section of the scheme predominantly consist one-way cycle tracks on both sides of the road adjacent to the existing footpaths. The proposed scheme predominantly avoids the removal of trees by utilising the verge to the back edge of the existing footpath to accommodate the proposed footpath provision whilst the existing footpath is to be reallocated as the proposed cycle track. This extends along the western side of the Woodlands link from the Roundabout with the R125 Dunshaughlin Road to the housing access junction into the Woodlands Estate.

The design changes again from this housing estate access to the Somerville Roundabout. A toucan crossing is provided just south of the Woodlands Estate access junction to facilitate the crossing movements onto a shared pedestrian and cyclist path on the eastern side of the Woodlands Link. The existing boundary wall to the Woodlands Park estate on the eastern side of the road is repositioned 1.0m back from its current location and a minimum width 3.0m shared facility is provided along the entire extents of this section to tie in with the proposed upgrades, subject of an approved Section 38 process, to the Somerville Roundabout and the Broadmeadow bridge link. The trees within the verge along this section are full retained.

In total only 5 no. trees are proposed to be removed to accommodate this revised design along Woodlands Link.

1.3.3. Town Centre Streets

The proposed pedestrian and cycle facilities along the town centre streets of the scheme generally incorporate traffic management measures predominantly consisting of raised platforms at uncontrolled and controlled crossings, raised junction tables and revised signage and road markings. The streets which are covered under the town centre designation are as follows and all of these streets will operate within a self-regulating 30kph speed limit: -

- R125 Dunshaughlin Road
- Main Street
- East of Main Street
- Curragha Road / Skryne Road junction to R125 / Skryne Road Junction

- Curragha Road / Skryne Road junction to R125 / R155 junction
- R125 / R155 junction to Somerville junction.

The above measures are proposed to encourage a low speed environment and to deter general eastbound / westbound traffic from the town centre and to encourage such through traffic to utilise the southern distributor route provided by the Meadowbank Hill and Woodlands Link. The proposed measures and resultant potential reduction in traffic speeds and volumes will assist in promoting a shared street mixed traffic cycling regime within the town centre.

1.3.4. Broadmeadow Pathways

The proposals for the riverside greenway are predominantly straightforward. It is proposed to upgrade the existing path to a consistent standard in terms of width (3.0m minimum), surfacing and appropriate public lighting.

It is also proposed to provide an additional path north of the river which will provide access further east towards the Meadowbank Hill, increasing permeability and offering additional walking and cycling amenity within the town.

As part of the options assessed for the Greenway, consideration was given for a formal path through the wooded area to the south of the Broadmeadows River, which would allow for an alternative walking and cycling route to the east. This path would likely consist of either a low boardwalk type facility or 'no dig' bound path construction. However, based on the findings of the Bat Report undertaken during July 2018, it has been determined appropriate not to proceed with this route for the following reasons: -

- Evidence of wooded area being a key location for feeding, roosting and commuting of bats
- Impact on bats due to significant tree removal
- Impact on bats due to Greenway lighting

Development of the route through the wooded area, regardless of construction type would require significant removal of trees. This is considered to have an unreasonable impact on the local bat population and given that an alternative route is already facilitated within proposed Part 8 scheme on the northern side of the Broadmeadow River, it is considered appropriate that the wooded section of the route is not included in this Part 8 application.

Further information on baseline ecology along the Broadmeadow Pathway is included in the accompanying Biodiversity Report (Atkins, 2022c).

1.3.1. Overview of Works Methods

During construction small plant will be used for resurfacing, widening and construction of the new paths. Plant will consist of dumper trucks, pavers and diggers. Access to the works locations will be from the existing entrances.

Works will commence with the clearance and off-site removal of redundant road signage, boundary treatment, surface materials and topsoil. The works will be undertaken using a combination of operatives using hand tools, mechanical excavators and dumper trucks. To facilitate the main works, underground utilities which conflict with the main works will be uncovered using mechanical excavators and hand digging where appropriate. The need for significant utility diversions is not envisaged as part of the works; instead a '*lower and protect*' approach will be favoured. This is likely to be restricted to locations where the walking and cycling facilities cross or interface with public roads.

Following the diversion of utilities, the initial pavement and cycle track construction phase will be undertaken. This will include the excavation and removal of the existing stone, soil, concrete and bitumen materials along the route followed by the installation of new path and track base materials. Excavations will be largely undertaken by mechanical means, with any spoil arisings to be removed off site to a licenced facility or reused locally where testing confirms its suitability. The base layers of the pavement and track are to be made of compacted stone materials. All excavations will be shallow.

Drainage works, likely to run in tandem with the pavement construction phase, are considered to be minimal and restricted to areas where the scheme interfaces with the public road. The drainage works at these locations are likely to be limited to the relocation of existing road gullies. The works will also involve constructing the civil engineering elements required to facilitate the commissioning of the traffic signals and the public lighting elements at the latter stages of construction once all the heavy civil engineering works have been executed. Service chambers and underground duct sets will be laid within trenches and backfilled with granular material. Signal poles and public lighting columns will be erected, and duct connections will be made to the base of each pole unit.

The final pavement surface course will be laid using an asphalt paving machine followed by compaction using a vibrating roller. For the widening and construction of the new paths, shallow excavations of topsoil will be required and then stone will be laid for the sub-base layer. The stone will be compacted and then a paver used to surface the path. 70mm of asphalt concrete base will be installed and 30mm of stone mastic asphalt will provide the surface layer. The site laydown area / site compound will not be located in proximity to the watercourse (see Figure 1.2).

For soft landscaping areas topsoil profiles will be graded to tie into the new pavement levels followed by grass seeding. The top soiling and seeding will be undertaken using a combination of mechanical excavator, tractor unit drawing a rotavator / rake / seed spreader and also operatives using hand tools for areas where machinery access is unavailable.

The project will involve the removal of redundant road signage and some removal and rebuilding of boundary walls.

In order to further enhance ecological pathways within the greenway bat boxes will be erected along the cycleway. Vegetation along the greenway will be managed to promote native species-rich ground flora. Planting will seek to establish and / or maintain ecological connectivity through the site. Vegetation adjacent to the cycleway should not be mown during the summer months (Plantlife, 2021). Long grass and native plants allow insect diversity, which in turn provides food for bats. Where the cycleway runs by the river, the area between the river and the cycleway should not be sprayed or cut. A nature panel can be designed to explain the 'untidy' areas left for insect diversity and bats. All trees along the Cycle Network should be maintained and damage to root zones should be avoided by incorporating small adjustments to the path alignment as needed.

1.3.2. General Measures

All contractors and operatives on site will be advised of the environmental sensitivity of the site and should be fully appraised of this assessment prior to the commencement of works. All personnel will be required to attend a tool box talk prior to works commencing and a record of content and attendance will be kept.

Prior to commencing works on site all overhead & underground services shall be identified and clearly marked on site.

Site compounds will be required for the works. Meath County Council will agree lands with the respective landowners for the location of site compounds. These site compounds shall be located as far from a waterbody as possible, with no site compounds permitted within 20m of a waterbody (IFI, 2016; 2020). Site compounds will not be located within a designated site. A potential compound location has been identified off the R125 Ashbourne Road. This site is currently an unused maintenance depot under the control of Meath County Council. It is currently secured with palisade fencing and is paved fully in hard standing material. Please see site location below (Figure 1.2).

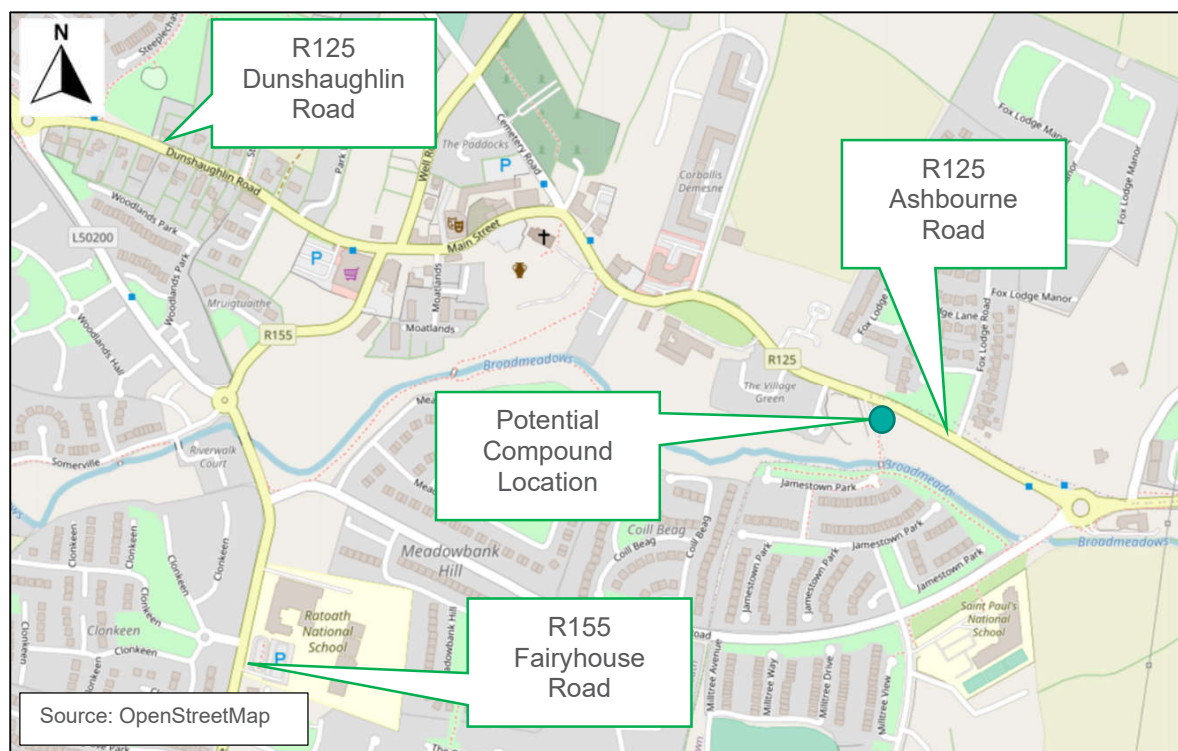


Figure 1.2 Potential Site Compound Location.

All refuelling or servicing of plant / machinery must take place within the site compound; it is not permitted within 20m of any watercourse.

Working hours shall be restricted to daylight hours only and there shall be no overnight artificial lighting of the site.

In the event of a high rainfall period in the proposed works window all operations close to the Broadmeadows Stream will cease and will not recommence until river water levels have dropped to a suitable and safe working level.

No instream works are proposed.

1.3.3. Construction of the Broadmeadows Greenway

The proposals for the riverside greenway within Ratoath are predominantly straightforward. It is proposed to upgrade the existing path to a consistent standard in terms of width, surfacing and appropriate public lighting. It is also proposed to provide an additional path north of the river which will provide access further east towards the Meadowbank Hill, increasing permeability and offering additional walking and cycling amenity within the town.

As part of the options assessed for the Greenway, consideration was given for a formal path through the wooded area to the south of the Broadmeadows River, which would allow for an alternative walking and cycling route to the east. This path would likely consist of either a low boardwalk type facility or 'no dig' bound path construction. However, based on the findings of the Bat Report undertaken during July 2018, it has been determined appropriate not to proceed with this route for the following reasons: -

- Evidence of wooded area being a key location for feeding, roosting and commuting of bats;
- Impact on bats due to significant tree removal; and
- Impact on bats due to Greenway lighting.

Development of the route through the wooded area, regardless of construction type would require significant removal of trees. This is considered to have an unreasonable impact on the local ecology and bat population and given that an alternative route is already facilitated within proposed Part 8 scheme on the northern side of the

Broadmeadow River, it is considered appropriate that the wooded section of the route is not included in this Part 8 application.

The following paragraphs describe the typical construction methodology to be employed for the works along the Greenway. Works will commence with the clearance and off-site removal of redundant road signage, boundary treatment, surface materials and topsoil. The works will be undertaken using a combination of operatives using hand tools, mechanical excavators and dumper trucks. To facilitate the main works, underground utilities which conflict with the main works will be uncovered using mechanical excavators and hand digging where appropriate. The need for significant utility diversions is not envisaged as part of the works; instead a 'lower and protect' approach will be favoured. This is likely to be restricted to locations where the walking and cycling facilities cross or interface with public roads.

Following the diversion of utilities, the initial pavement and cycle track construction phase will be undertaken. This will include the excavation and removal of the existing stone, soil, concrete and bitumen materials along the route followed by the installation of new path and track base materials. Shallow excavations will be largely undertaken by mechanical means, with any spoil arisings to be removed off site or reused locally where testing confirms its suitability. The base layers of the pavement and track are to be made of compacted stone materials.

Drainage works, likely to run in tandem with the pavement construction phase, are considered to be minimal and restricted to areas where the scheme interfaces with the public road. The drainage works at these locations are to be limited to the relocation of existing road gullies to take account of adjusted levels. The works will also involve constructing the civil engineering elements required to facilitate the commissioning of the traffic signals and the public lighting elements at the latter stages of construction once all the heavy civil engineering works have been executed. Service chambers and underground duct sets will be laid within trenches and backfilled with granular material. Signal poles and public lighting columns will be erected, and duct connections will be made to the base of each pole unit. The final pavement surface course will be laid using an asphalt paving machine followed by compaction using a vibrating roller.

For soft landscaping areas topsoil profiles will be graded to tie into the new pavement levels followed by grass seeding. The top soiling and seeding will be undertaken using a combination of mechanical excavator, tractor unit drawing a rotavator / rake / seed spreader and also operatives using hand tools for areas where machinery access is unavailable. There will be no instream works.

The project will involve the removal of redundant road signage. There will be no additional demolition works associated with this project. It is estimated that works would be undertaken over a three to four years period over a number of contracts. Specifically, the works along the Broadmeadow Pathway would take approximately one year to complete.

1.3.4. Works Phasing

At this preliminary juncture, it is not possible to determine the potential phasing of the project as this will be subject to available funding streams at the time. However, it is certain that the works will be split up into manageable packages of works which would seek to lessen the disturbance to the traffic operation of the local road network in Ratoath. These packages of work would most likely be as follows: -

- Town Centre streets
- Woodlands Link
- Greenway
- Approach Roads
 - Dunshaughlin Road
 - Fairyhouse Road
 - Swords Road
 - Curragha Road
 - Skryne road

As the greenway works will not impact on the traffic of the local network there is potential that this element could be packaged in with other work packages. In addition, the works along the Skryne Road are minor and these could be amalgamated with the Town Centre package of works.

1.3.5. Biosecurity protocols

Biosecurity protocols will be implemented during the construction phase of the proposed project to prevent the introduction of invasive species listed on the third schedule of the EC (Birds and Natural Habitats) Regulations 2011, as amended, to site.

All equipment intended to be used at the site shall be dry, clean and free from debris prior to being brought to site.

If drying out of equipment is not feasible, equipment should be either: -

- i. power steam washed at a suitably high temperature or at least 65 degrees, or
- ii. disinfected with an approved disinfectant, e.g. Virkon or an iodine-based product. It is important that the manufacturer's instructions are followed and if required, the correct contact times are allowed for during the disinfection process. Items that are difficult to soak should be sprayed or wiped down with disinfectant.

During the duration of the proposed project, if equipment is removed off-site to be used elsewhere, the said equipment shall be cleaned and disinfected prior to being brought back to the works area of the proposed project.

Appropriate facilities shall be used for the containment, collection and disposal of material and/or water resulting from washing facilities of vehicles, equipment and personnel.

Importation of materials shall comply with Regulation 49 of the EC (Birds and Natural Habitats) Regulations 2011. In relation to 3rd Schedule species, but notably Japanese knotweed (*Reynoutria japonica*) and Himalayan balsam (*Impatiens glandulifera*), the following general biosecurity and containment measures shall be undertaken during the construction phase of the project: -

- Identify and mark out areas of infestation;

- Fence off areas of infestation in advance of and during construction works;
- Erect signage identifying restricted areas;
- Avoid, where possible, using plant and machinery in areas of invasive species infestation;
- Plant and equipment used within areas of invasive species infestation should be inspected post works and washed down in a contained area;
- Site staff should be aware that root zones / control zones for knotweed species extend a minimum of 7m from the extent of the invasive species' surface vegetation.

2. Scope of Study

The aim of this report is to provide supporting information to assist the competent authority to carry out an AA determination with respect to the proposed project.

2.1. Legislative Context

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora, known as the ‘Habitats Directive’ provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 – 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservations of an EU-wide network of sites known as European sites. European sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC).

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans or projects that could potentially affect European sites. Article 6(3) establishes the requirement for Appropriate Assessment: -

“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) deals with the steps that should be taken when it is determined, as a result of Appropriate Assessment, that a plan or project will adversely affect a European site. Alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures need to be addressed in this case. Article 6(4) states: -

“If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”

2.2. Appropriate Assessment Process

Guidance on the AA process was produced by the European Commission (EC, 2001; 2018), which was subsequently used to develop guidance for Ireland by the Department of Environment, Heritage and Local Government in 2009 (DEHLG, 2009) and also by the National Parks and Wildlife Service in 2018¹ (NPWS 2018). These guidance documents set out a staged approach to complete the AA process and outlines the issues and tests at each stage. The stages outlined below are taken from the guidance document *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities* (DEHLG, 2009) and Office of the Planning Regulator; *Appropriate Assessment Screening for Development Management* (2021).

¹ <https://www.npws.ie/development-consultations>

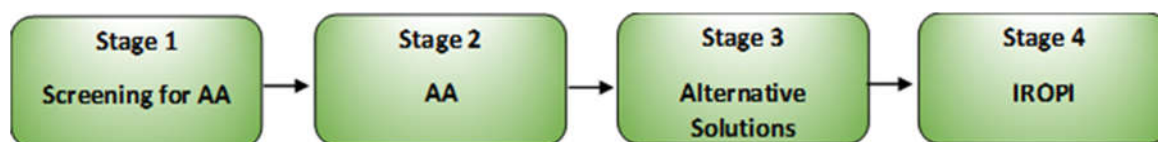


Figure 2.1 Appropriate Assessment Process (Source: DEHLG, 2009)

2.2.1. Screening for Appropriate Assessment

Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3): -

- i. Whether a plan or project is directly connected to or necessary for the management of the site, and
- ii. Whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a European site in view of its conservation objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, then the process must proceed to Appropriate Assessment.

2.2.2. Appropriate Assessment

Appropriate Assessment considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a European site, and includes any necessary mitigation measures.

The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where sufficient mitigation cannot be achieved, the alternative solutions need to be considered and the process proceeds to the consideration of alternative solutions.

2.2.3. Alternative Solutions

This examines any alternative solutions or options that could enable the plan or project to proceed without adverse effects on the integrity of a European site. The process must return to AA as alternatives will require assessment in order to proceed. Demonstrating that all reasonable alternatives have been considered and assessed, and that the least damaging option has been selected, it is necessary to examine whether there are imperative reasons of overriding interest (IROPI).

2.2.4. IROPI

This examines whether there are imperative reasons of overriding public interest for allowing a plan or project that will have adverse effects on the integrity of a European site to proceed in cases where it has been established that no less damaging alternative solution exists. Compensatory measures must be proposed and assessed, of which the Commission must be informed.

The AA process only progresses through the full process for certain plans and projects. For example, for a project not connected with the management of a European site and where no likely significant effects on a European site in view of its conservation objectives are identified, the process stops at Screening for AA. Throughout the process the precautionary principle must be applied, which requires that the conservation objectives of European should prevail where there is uncertainty (EC, 2001; 2018).

3. Methods

3.1. Legislation & Guidance Documents

This report was prepared with reference and due consideration to the following documents and due regard for relevant case law, including but not limited to: -

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna (Habitats Directive);
- Statutory Instrument No. 477/2011 — European Communities (Birds and Natural Habitats) Regulations 2011;
- National Parks and Wildlife Service - Development Consultations² (NPWS 2018)
- European Commission (2018). Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC;
- European Commission (2001). Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC;
- Department of the Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities;
- Office of the Planning Regulator (2021). Appropriate Assessment Screening for Development Management. OPR Practice Note PN01; and,
- Case C-323/17 People Over Wind & anor. V. Coillte.

3.2. Desk Study

A desk study was carried out to collate information available on European sites in the vicinity of the proposed project. These areas were viewed using Google Earth, Google maps³ and Bing maps⁴ (last accessed on 04/03/2022).

The National Parks and Wildlife Service (NPWS) and National Biodiversity Data Centre (NBDC) online databases were reviewed concerning European sites and their features of interest in the vicinity of the proposed project.

The Environmental Protection Agency (EPA) mapping⁵ system was used to identify any hydrological connection between the proposed project and European sites.

Locations and boundaries of all European sites within 15km of the proposed project were identified and reviewed using the NPWS online map viewer. Boundary shapefiles were also downloaded from this site to facilitate the preparation of project graphics.

Desktop information on relevant European sites were reviewed on the NPWS website, including the site synopsis for each SAC/SPA, the conservation objectives, the site boundaries as shown on the NPWS online map viewer, the standard European Data Form for the SAC/SPA which details

² <https://www.npws.ie/development-consultations>

³ <https://www.google.ie/maps>

⁴ <http://www.bing.com/maps/>

⁵ <https://gis.epa.ie/EPAMaps/>

conditions and threats of the sites, and published information and unpublished reports on the relevant European sites.

Relevant planning information for the surrounding area was reviewed using the planning enquiry systems of Meath County Council. Search criteria were implemented to determine whether such projects or plans that would not be relevant to this study. This information was used to determine potential cumulative impacts from other plans / projects with the proposed works.

3.3. Statement of Authority

The current Screening for Appropriate Assessment report was prepared by Emma Nickelsen and Paul O'Donoghue and reviewed by Colin Wilson. Field survey work for the accompanying Ecology Report was undertaken by Caroline Shiel.

Paul O'Donoghue has a BSc (Zoology), MSc (Behavioural Ecology) and a PhD in avian ecology and genetics. He is a chartered member of the Society for the Environment (CEnv) and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Paul has over 20 years' experience in ecology; including extensive experience in the preparation of Habitat Directive Assessments / Natura Impact Statements (i.e. Appropriate Assessment under Article 6(3) of the EU Habitats Directive).

Emma Nickelsen has a BSc (Hons) in Environmental Biology and an MSc in Marine Biology. Emma has worked in ecological and environmental consultancy since 2017, working on a wide range of projects including bridge works, road construction, local amenity development and renewable energy. A focus of Emma's work to date has been on conducting Appropriate Assessment screenings, ecological appraisals and supporting the preparation of Natura Impact Statements and Ecological Impact Statements.

Caroline Sheil (BSc, PhD) has 30 years' experience in the field of bat research and in conducting bat surveys. My B.Sc. thesis was an investigation of the diet of four species of Irish bat. She has extensive experience in carrying out bat surveys for building, road construction (M11 Gorey bypass, M11 Arklow bypass, M11 Enniscorthy bypass, M18 Gort bypass, N6 Galway City Transport Project and Tobercurry bypass) and windfarm construction work on behalf of many private companies.

4. Existing Environment

4.1. Proposed Development

While, the majority of the proposed pedestrian and cycle scheme would be located on made ground, the greenway adjacent to the Broadmeadow River consists of some existing informal paths, through grassland, which will require re-surfacing. The ecology of the area is described in full in the accompanying Ecology Report (Atkins, 2022c)

The proposed scheme is within the Nanny-Delvin Water Framework Directive (WFD) Catchment area and the Broadmeadow sub-catchment area. There is 1 no. watercourse (The Broadmeadow River) (EPA Code: IE_EA_08B020400) within the vicinity of the proposed project which appears to travel in an eastern direction to discharge to the Irish Sea ca. 23km from the proposed project. It should be noted the Broadmeadow River is also named as the Ratoath Stream (EPA Seg Code: 08_577) on the EPA River Network dataset.

The Broadmeadow River has been assigned 'poor' water quality status under the WFD for the period of 2013-2018; and is 'at risk' of failing to meet the relevant WFD objectives. Both upstream and downstream stretches of the watercourse are 'at risk' of failing to meet the relevant WFD objectives.

The proposed project lies within the Swords groundwater body (GWB) (EPA Code: IE_EA_G_011) which has a 'good' water quality status for the period of 2013-2018 (EPA, 2022) and is currently 'Not at Risk' of failing to meet relevant WFD objectives.

4.1.1. Broadmeadow Pathway

There are a number of existing routes which extend along the Broadmeadow River in a west to east orientation. At the western extent of these paths, an existing path commences at the Meadowbank Hill in vicinity of its junction with the R155 Fairyhouse Road. The path proceeds along the southern river bank adjacent the back of the Meadowbank Hill housing estate, for approximately 150m where intersects with an alternative path choice. This alternative path crosses the river via a small masonry bridge and proceeds northeast uphill for approximately 250m before terminating at footpaths associated with the R125 Main Street. The original path (as per Plate 4.1 below) proceeds past the bridge for approximately 280m along the river before coming upon another small masonry bridge. At this point the formal path ends.



Plate 4.1 Existing Path adjacent to the Broadmeadow River.

These existing paths are of varying surfacing, width and gradients. The Broadmeadow River itself is modest in channel width and the overall topography of the surrounding area slopes noticeably downwards to the river banks from the north and south.

There are two informal paths which proceed east from where the formal path ends. One proceeds south of the river through a wooded area for approximately 200m (as per Figure below) before joining

up with the footpath network associated with the Jamestown Park housing estate with a route available through the the estate to gain access back out onto Meadowbank Hill, in vicinity of its roundabout junction with the R125 Swords Road.

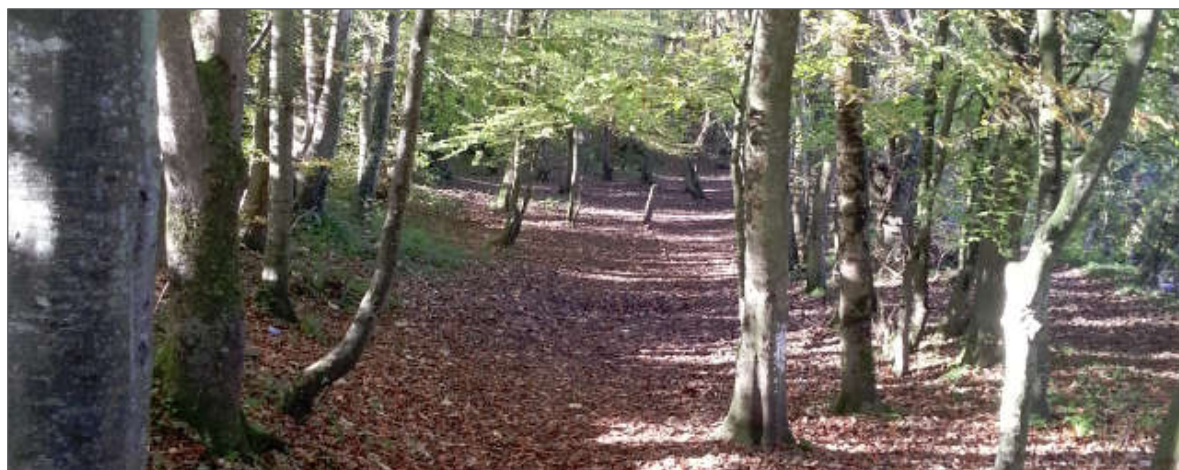


Plate 4.2 **Route through Woodland Area.**

The other path crosses onto the northern bank of the river via the masonry bridge and proceeds east towards a laneway which provides access between the Sewage Treatment Works and the R125 Swords Road. At this point the path user can access onto the R125 or cross over the river on to its southern bank via a wooden pedestrian bridge and out onto Meadowbank Hill via the footpaths associated with the Jamestown Park housing estate.

The ecological context to works area are discussed in full in the accompanying Ecology Report (Atkins, 2022c).

5. Appropriate Assessment Screening

5.1. Connectivity to European Sites

The ‘*zone of influence*’ (Zol) for a project is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2018).

A distance of 15km is recommended in the case of plans, as a potential zone of influence and this distance is derived from UK guidance (Scott Wilson *et al.*, 2006). However, for projects the distance could be much less, and in some cases less than 100m. National Parks and Wildlife Service guidance⁶ in addition to recent guidance published by the Office of Planning Regulation (OPR, 2021) advises that this must 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.

Thus, given the nature, scale and extent of the proposed project, the potential zone of influence will consider European sites with regard to the location of a European site, the QIs of the site and their potential mobility outside that European site, the Cause-Pathway-Effect model and potential environment effects of the proposed project.

Due to the nature, scale and extent of the proposed project, sources of potential effect during the construction and operational phases include noise, vibration, human presence, surface water runoff, distribution of invasive species and direct removal of habitat in the vicinity of the bridge. Thus, the potential zone of influence is considered to be 500m for birds and other mobile species, and receptors with hydrological connectivity to the proposed project.

5.1.1. European Sites

There is one European site located within 15km of the works areas: - Rye Water Valley Carton SAC (site code 001398) is located ca. 14km to the south of the proposed development. Rye Water Valley Carton SAC is designated for: -

- Petrifying springs with tufa formation (Cratoneurion) [7220]
- *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014]
- *Vertigo moulinsiana* (Desmoulin's Whorl Snail) [1016].

However, there is no hydrological or ecological connectivity between the proposed development and this SAC. This site is not therefore considered within the zone of influence.

The Broadmeadow River, however, is hydrologically linked to Malahide Estuary SAC (site code 000205) and Malahide Estuary SPA (site code 004025), which are located ca. 19.5km & 20.6km downstream, respectively, of the proposed scheme. Figure 5.1 illustrates the location of European sites in relation to the proposed development.

⁶ DoEHLG (2009). *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*. Department of Environment, Heritage and Local Government, Dublin, Ireland.

Table 5.1 SACs within 15km of the proposed project.

Site Name	Approximate distance	Features of Interest	Within ZOI
Rye Water Valley Carton SAC (001398) ⁷	14km to the south	<ul style="list-style-type: none"> Petrifying springs with tufa formation (Cratoneurion) [7220] <i>Vertigo angustior</i> (Narrow-mouthed Whorl Snail) [1014] <i>Vertigo moulinsiana</i> (Desmoulin's Whorl Snail) [1016] 	No
Malahide Estuary SAC (000205) ⁸	ca. 19.5km downstream	<ul style="list-style-type: none"> Mudflats and sandflats not covered by seawater at low tide [1140] <i>Salicornia</i> and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] 	Yes

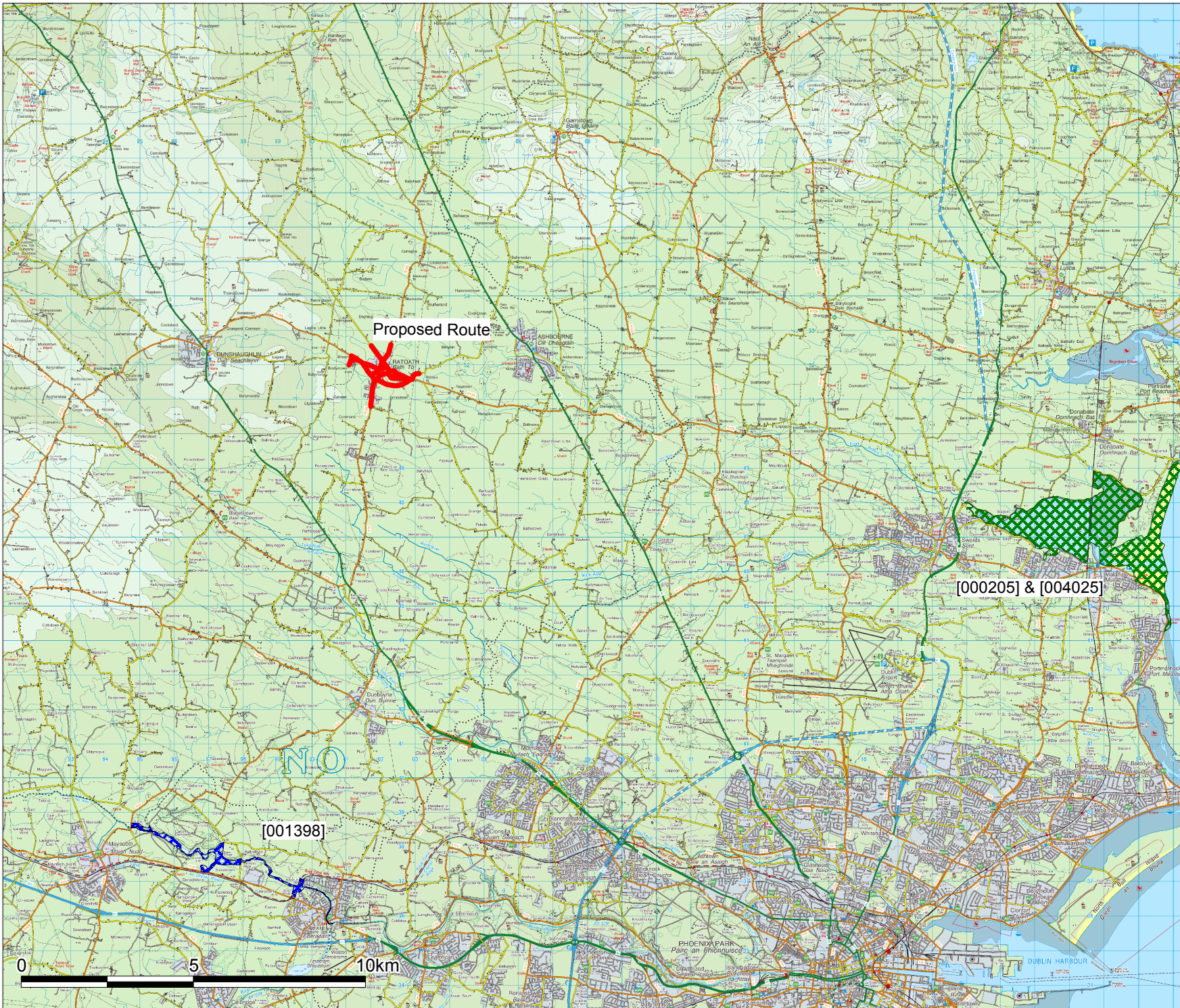
Table 5.2 SPAs within 15km of the proposed project.

Site Name	Approximate distance	Features of Interest	Within ZOI
Malahide Estuary SPA (004025) ⁹	19.8km downstream	<ul style="list-style-type: none"> Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Pintail (<i>Anas acuta</i>) [A054] Goldeneye (<i>Bucephala clangula</i>) [A067] 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] Knot (<i>Calidris canutus</i>) [A143] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Redshank (<i>Tringa totanus</i>) [A162] Wetland and Waterbirds [A999] 	Yes

⁷ NPWS (2021). *Conservation Objectives: Rye Water Valley/Carton SAC 001398. Version 1.* National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

⁸ NPWS (2013). *Conservation Objectives: Malahide Estuary SAC 000205. Version 1.* National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.


⁹ NPWS (2013). *Conservation Objectives: Malahide Estuary SPA 004025. Version 1.* National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.




Legend

 Proposed Route

Designated Sites

 Rye Water Valley Carton SAC

 Malahide Estuary SAC & Broadmeadow/Swords SPA

Proposed Route

[000205] & [004025]

[001398]



Client:		Meath County Council	
Project:		Ratoath Pedestrian & Cycling Scheme	
Title:		Natura 2000 Sites	
Designed/Drawn:	Checked:	OT/PO'D	Authorised:
OT	OT/PO'D		PO'D
Date: 04/03/2022	Date: 04/03/2022	Date: 04/03/2022	
Drawing No:	5.1	Rev:	1.0

ATKINS Dublin - Tel: 353 - 1 - 890 9000
Cork - Tel: 353 - 21 - 429 0300
Galway - Tel: 353 - 91 786050

5.2. Brief Description of European sites

5.2.1. Malahide Estuary SAC (000205)

The site synopsis states¹⁰: -

*“The outer part of the estuary is mostly cut off from the sea by a large sand spit, known as ‘the island’. The outer estuary drains almost completely at low tide, exposing sand and mud flats. There is a large bed of Eelgrass (Dwarf Eelgrass, *Zostera noltii*, and Narrow-leaved Eelgrass, *Z. angustifolia*) in the north section of the outer estuary, along with Beaked Tasselweed (*Ruppia maritima*) and extensive mats of green algae (*Enteromorpha* spp., *Ulva lactuca*). Common Cord-grass (*Spartina anglica*) is also widespread in this sheltered part of the estuary.*

*The dune spit has a well-developed outer dune ridge dominated by Marram Grass (*Ammophila arenaria*). The dry areas of the stabilised dunes have a dense covering of Burnet Rose (*Rosa pimpinellifolia*), Red Fescue (*Festuca rubra*) and species such as Yellow-wort (*Blackstonia perfoliata*), Autumn Gentian (*Gentianella amarella*), Hound's-tongue (*Cynoglossum officinale*), Carlina Thistle (*Carlina vulgaris*) and Pyramidal Orchid (*Anacamptis pyramidalis*). Much of the interior of the spit is taken up by a golf course. The inner stony shore has frequent Sea-holly (*Eryngium maritimum*). Well-developed saltmarshes occur at the tip of the spit. Atlantic salt meadow is the principle type and is characterised by species such as Sea-purslane (*Halimolobos portulacoides*), Sea Aster (*Aster tripolium*), Thrift (*Armeria maritima*), Sea Arrowgrass (*Triglochin maritima*) and Common Saltmarsh-grass (*Puccinellia maritima*). Elsewhere in the outer estuary, a small area of Mediterranean salt meadow occurs which is characterised by the presence of Sea Rush (*Juncus maritimus*). Below the salt marshes there are good examples of pioneering glasswort (*Salicornia* spp.) swards and other annual species, typified by *S. dolichostachya* and Annual Sea-blite (*Suaeda maritima*).*

*The inner estuary does not drain at low tide apart from the extreme inner part. Here, patches of saltmarsh and salt meadows occur, with Sea Aster, Sea Plantain (*Plantago maritima*) and Sea Club-rush (*Scirpus maritimus*). Beaked Tasselweed occurs in one of the channels.*

The site includes a fine area of rocky shore south-east of Malahide and extending towards Portmarnock. This represents the only continuous section through the fossiliferous Lower Carboniferous rocks in the Dublin Basin, and is the type locality for several species of fossil coral.

The estuary is an important wintering bird site and holds an internationally important population of Brent Goose and nationally important populations of a further 15 species. Average maximum counts during the 1995/96-1997/98 period were: Brent Goose 1217; Great Crested Grebe 52; Mute Swan 106; Shelduck 471; Pochard 200; Goldeneye 333; Red-breasted Merganser 116; Oystercatcher 1228; Golden Plover 2123; Grey Plover 190; Redshank 454; Wigeon 50; Teal 78; Ringed Plover 106; Knot 858; Dunlin 1474; Greenshank 38; Pintail 53; Black-tailed Godwit 345; Bar-tailed Godwit 99. The high numbers of diving birds reflects the lagoon-type nature of the inner estuary.

The estuary also attracts migrant species such as Ruff, Curlew Sandpiper, Spotted Redshank and Little Stint. Breeding birds of the site include Ringed Plover, Shelduck and Mallard. Up to the 1950s there was a major tern colony at the southern end of the island and the habitat remains suitable for these birds.

The inner part of the estuary is heavily used for water sports. A section of the outer estuary has recently been infilled for a marina and housing development.

¹⁰ NPWS (2013). *Malahide Estuary SAC 000205. Site Synopsis [001398_Rev13.Doc]*. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

This site is a fine example of an estuarine system with all the main habitats represented. The site is important ornithologically, with a population of Brent Goose of international significance.”

5.2.1.1. Qualifying Interests

Taken from the Conservation Objectives document *NPWS (2013)¹¹ Conservation Objectives: Malahide Estuary SAC 000205. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht*, the qualifying interests of Malahide Estuary SAC are as follows: -

- 1140 Mudflats and sandflats not covered by seawater at low tide (M);
- 1310 *Salicornia* and other annuals colonising mud and sand (M);
- 1320 *Spartina* swards (*Spartinion maritimae*) – no conservation objective for this site and not required to be included in AA (NPWS, 2013)¹²;
- 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) (R);
- 1410 Mediterranean salt meadows (M);
- 2120 Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) (R);
- 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* (R);

*denotes priority habitat

There are detailed conservation objectives for this site which attributes and targets for each qualifying interests. The overall objective, however, is to either restore or maintain the favourable conservation condition of each qualifying interest (this is denoted by R / M in the list above).

5.2.1.2. Threats and Pressures

Threats and pressures to the site were derived from the Natura 2000 Standard Data form for the site and are detailed in Table 5.3.

Table 5.3 Threats and Pressures – Malahide Estuary SAC.

Code	Threats / Pressures	Inside/Outside	Rank (High/Medium/Low)
F03.01	Hunting	Inside	L
A08	Fertilisation	Outside	M
D01.02	Roads, motorways	Outside	M
D01.05	Bridge, viaduct	Inside	H
J02.01.02	Reclamation of land from sea, estuary or marsh	Both	H
G02.01	Golf course	Outside	M
G01.02	Walking, horse-riding and non-motorised vehicles	Inside	H
E01	Urbanised areas, human habitation	Outside	M

¹¹ NPWS (2013). *Conservation Objectives: Malahide Estuary SAC 000205. Version 1.* National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

¹² *Spartina* beds in Ireland are not now viewed as equivalent to the annexed habitat 1320 *Spartina* swards (*Spartinion maritimae*)

Code	Threats / Pressures	Inside/Outside	Rank (High/Medium/Low)
I01	Invasive non-native species	Inside	M
G01.01	Nautical sports	Inside	H
G01.03	Motorised vehicles	Inside	H

5.2.2. Malahide Estuary SPA (004025)

The site synopsis states¹³: -

*“Malahide Estuary is situated in north Co. Dublin, between the towns of Malahide and Swords. The site encompasses the estuary, saltmarsh habitats and shallow subtidal areas at the mouth of the estuary. A railway viaduct, built in the 1800s, crosses the site and has led to the inner estuary becoming lagoonal in character and only partly tidal. Much of the outer part of the estuary is well-sheltered from the sea by a large sand spit, known as “The Island”. This spit is now mostly converted to golf-course. The outer part empties almost completely at low tide and there are extensive intertidal flats exposed. Substantial stands of eelgrass (both *Zostera noltii* and *Z. angustifolia*) occur in the sheltered part of the outer estuary, along with Tasselweed (*Ruppia maritima*). Green algae, mostly *Ulva* spp., are frequent on the sheltered flats. Common Cord-grass (*Spartina anglica*) is well established in the outer estuary and also in the innermost part of the site. The intertidal flats support a typical macroinvertebrate fauna, with polychaete worms (*Arenicola marina* and *Hediste diversicolor*), bivalves such as *Cerastoderma edule*, *Macoma balthica* and *Scrobicularia plana*, the small gastropod *Hydrobia ulvae* and the crustacean *Corophium volutator*. Salt marshes, which provide important roosts during high tide, occur in parts of the outer estuary and in the extreme inner part of the inner estuary. These are characterised by such species as Sea Purslane (*Halimione portulacoides*), Sea Aster (*Aster tripolium*), Thrift (*Armeria maritima*), Sea Arrowgrass (*Triglochin maritima*) and Common Saltmarsh-grass (*Puccinellia maritima*).*

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Great Crested Grebe, Light-bellied Brent Goose, Shelduck, Pintail, Goldeneye, Red-breasted Merganser, Oystercatcher, Golden Plover, Grey Plover, Knot, Dunlin, Black-tailed Godwit, Bar-tailed Godwit and Redshank. 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.

This site is of high importance for wintering waterfowl and supports a particularly good diversity of species. It has internationally important populations of Light-bellied Brent Goose (1,104 individuals or 5% of the all-Ireland total) and Black-tailed Godwit (409 individuals or 2.9% of the all-Ireland total) - figures given here and below are mean peaks for the five winters 1995/96-1999/2000. Furthermore, the site supports nationally important populations of an additional 12 species: Great Crested Grebe (63), Shelduck (439), Pintail (58), Goldeneye (215), Red-breasted Merganser (99), Oystercatcher (1,360), Golden Plover (1,843), Grey Plover (201), Knot (915), Dunlin (1,594), Bar-tailed Godwit (156) and Redshank (581). The high numbers of diving ducks reflects the lagoon-type nature of the inner estuary, and this is one of the few sites in eastern Ireland where substantial numbers of Goldeneye can be found.

A range of other species occurs, including Mute Swan (37), Pochard (36), Ringed Plover (86), Lapwing (1,542), Curlew (548), Greenshank (38) and Turnstone (112).

The estuary also attracts other migrant wader species such as Ruff, Curlew Sandpiper, Spotted Redshank and Little Stint. These occur mainly in autumn, though occasionally in spring and winter.

¹³ NPWS (2013). *Malahide Estuary SPA 004025. Site Synopsis*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Breeding birds of the site include Ringed Plover, Shelduck and Mallard. Up to the 1950s there was a major tern colony at the southern end of Malahide Island. Grey Herons breed nearby and feed regularly within the site.

Malahide Estuary SPA is a fine example of an estuarine system, providing both feeding and roosting areas for a range of wintering waterfowl. The lagoonal nature of the inner estuary is of particular value as it increases the diversity of birds which occur. The site is of high conservation importance, with internationally important populations of Light-bellied Brent Goose and Black-tailed Godwit, and nationally important populations of a further 12 species. Two of the species which occur regularly (Golden Plover and Bar-tailed Godwit) are listed on Annex I of the E.U. Birds Directive. Malahide Estuary (also known as Broadmeadow Estuary) is a Ramsar Convention site.”

5.2.2.1. Qualifying Interests

Taken from the Conservation Objectives document NPWS (2013)¹⁴ Conservation Objectives: Malahide Estuary SPA¹⁵ 004025. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, the Special Conservation Interests of the SPA area as follows:-

- A005 Great Crested Grebe (*Podiceps cristatus*) (M)
- A046 Brent Goose (*Branta bernicla hrota*) (M)
- A048 Shelduck (*Tadorna tadorna*) (M)
- A054 Pintail (*Anas acuta*) (M)
- A067 Goldeneye (*Bucephala clangula*) (M)
- A069 Red-breasted Merganser (*Mergus serrator*) (M)
- A130 Oystercatcher (*Haematopus ostralegus*) (M)
- A140 Golden Plover (*Pluvialis apricaria*) (M)
- A141 Grey Plover (*Pluvialis squatarola*) (M)
- A143 Knot (*Calidris canutus*) (M)
- A149 Dunlin (*Calidris alpina alpina*) (M)
- A156 Black-tailed Godwit (*Limosa limosa*) (M)
- A157 Bar-tailed Godwit (*Limosa lapponica*) (M)
- A162 Redshank (*Tringa totanus*) (M)
- A999 Wetlands (M)

There are detailed conservation objectives for this SPA which detail attributes and targets for each species. The overall conservation objective is to maintain the conservation condition of each Special Conservation Interest.

¹⁴ NPWS (2013). Conservation Objectives: Malahide Estuary SPA 004025. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

¹⁵ This site is also often known as Broadmeadow or Swords Estuary.

5.2.2.2. Threats and Pressures

Threats and pressures to the site, as detailed in the Natura 2000 Standard Data form for the SPA are detailed in Table 5.4.

Table 5.4 Threats and Pressures – Malahide Estuary SPA.

Code	Threats / Pressures	Inside/Outside/Both	Rank (High/Medium/Low)
E01	Urbanised areas, human habitation	Outside	H
J02.01.02	Reclamation of land from sea, estuary or marsh	Inside	H
D01.05	Bridge, viaduct	Outside	M
D01.04	Railway lines, TGV	Outside	M
J02.01.02	Reclamation of land from sea, estuary or marsh	Outside	H
D01.01	Paths, tracks, cycling tracks	Inside	H
D01.04	Railway lines, TGV	Inside	M
E02	Industrial or commercial areas	Outside	M
G01.02	Walking, horse-riding and non-motorised vehicles	Inside	M
G01.01	Nautical sports	Inside	H
A08	Fertilisation	Outside	M
I01	Invasive non-native species	Inside	M

5.3. Likelihood of Potential Impacts on European sites

The available information on European sites was reviewed to establish whether or not the proposed works are likely to have a significant effect on the conservation objectives of the designated sites. The likelihood of impacts on the qualifying interests of the European sites identified in this report is based on information collated from the desk study, site plans and other available existing information.

The likelihood of impacts occurring are established in light of the type and scale of the proposed works, the location of the proposed works with respect to European sites and the features of interest and conservation objectives of the European sites.

This report is prepared following the Cause – Pathway – Effect model. The potential impacts are summarised into the following categories for screening purposes.

- Direct impacts refer to habitat loss or fragmentation arising from land-take requirements for development or agricultural purposes. Direct impacts can be as a result of a change in land use or management, such as the removal of agricultural practices that prevent scrub encroachment.
- Indirect and secondary impacts do not have a straight-line route between cause and effect. It is potentially more challenging to ensure that all the possible indirect impacts of the project – in combination with other plans and projects - have been established. These can arise, for example, when a development alters the hydrology of a catchment area, which in turn affects the movement of groundwater to a site and the qualifying interests that rely on the maintenance of water levels. Deterioration in water quality can occur as an indirect consequence of development, which in turn changes the aquatic environment and reduces its capacity to support certain plants and animals. The introduction of invasive species can also be defined as an indirect impact. Disturbance to fauna can arise directly through the loss of habitat (e.g. displacement of roosting bats) or indirectly through noise, vibration and increased activity associated with construction and operation.

The proposed project is located approximately 20km upstream of the Malahide Estuary SAC and SPA on the Broadmeadow River.

The proposed project is not directly connected with or necessary to the management of the SAC or SPA. Therefore, it is necessary for the competent authority to assess whether the proposed project, either individually or in combination with other plans or projects, would be likely to have significant effects on the European sites.

5.3.1. Identification of potential impacts on Malahide Estuary SAC and SPA

The proposed works area is not located within a European site. The only site within 15km is Rye Water Valley Carton SAC (site code 001398) which is located ca. 14km to the south of the proposed scheme. There is no hydrological connection between the works area and Rye Water Valley Carton SAC. *Vertigo angustior* and *V. moulinsiana* have not been recorded from the environs of Ratoath (Source: NBDC). There is no risk to the qualifying interests of this European site from the proposed works.

There is no Special Protection Area of birds within or close to (or within 15km) the proposed works area.

As noted, the works area is connected hydrologically, via the Broadmeadow River to Malahide Estuary. Ratoath is located on the upper reaches of the Broadmeadow River; after Ratoath the river flows through Ashbourne before entering Broadmeadow / Swords Estuary – the inner part of Malahide Estuary (to the northeast of Swords). The distance to Malahide Estuary is 19.5km to Malahide Estuary SAC and 19.8km to Malahide Estuary SPA.

While the exact site compound location is not known at this time, a potential compound location has been identified off the R125 Ashbourne Road. This site is currently an unused maintenance depot under the control of Meath County Council. It is currently secured with palisade fencing and is paved fully in hard standing material (see site location - Figure 1.2). This site can be used for parking, welfare facilities, storing of material and refuelling. In this way no negative impacts are anticipated to water quality of the Broadmeadow River.

Thus, in turn, no negative impacts to Malahide Estuary SAC is anticipated. If an alternate site is to be used, it is not permitted to locate the site compound within 20m of a watercourse

The main area of risk is along the proposed Broadmeadow Pathway, due to its proximity to the Broadmeadow River. However, no instream works are proposed and no river crossings or culverting are proposed. Furthermore, it is not permitted to discharge waters arising from the works area to any watercourse (including the Broadmeadow River) from any of the proposed works. In general, the proposals for the riverside greenway are straightforward and do not incorporate any significant earth works or tree removal (see also the works as described in Chapter 1.0). Furthermore, the existing road network includes a drainage system, which it must be assumed includes connections ultimately to the Broadmeadow River. The full extent of such connections from the local road network in Ratoath is not known, but it is assumed that such connections exist within the works area. Where any such connection are identified during works, these will be isolated from the works area for the duration of any tasks that might result in silt laden waters to enter such drains.

Malahide Estuary SAC is designated for both estuarine and coastal habitats. These include a number of terrestrial dune habitats (2120 / 2130); given the ca. 20km distance it is not predicted that these habitats would be impacted in any way by proposed works. Furthermore, Malahide Estuary SAC is designated for a range of estuarine habitats including mudflats, saltmarshes and pioneer Salicornia beds (1140; 1310; 1320; 1330 and 1410). While any pollutants entering the Broadmeadow River could in turn potentially impact on such water dependant habitats with the SAC, as noted the nature of the works (i.e. no in-stream works along the Broadmeadow River); the distance to this European site, as well as the extent and duration of the proposed works is such that no negative impacts to such habitats within the SAC are anticipated. Even in a worst case scenario where silt laden wates might enter the Broadmeadows River, the dilution offered by the distance along the Broadmeadow River to Malahide Estuary is such that negative impacts to Malahide Estuary are not anticipated. All proposed excavations are shallow in nature, and predominantly in areas of made ground; negative impacts to groundwater are not anticipated.

Malahide Estuary SPA is designated for a number of wintering waterbirds. As noted, there is no overlap with the SPA. While several species for which the SPA has been designated to feed in fields outside of the SPA (e.g. Light-bellied Brent Goose; Oystercatcher, Golden Plover and Black-tailed Godwit) the proposed works area does not support suitable habitat for these species. The proposed works are sufficiently remote from the SPA that waterbirds within the SPA will not be impacted / disturbed by proposed works. The SPA is also designated for Wetland and Waterbirds [A999]; however, as noted above for Malahide Estuary SAC no impact to wetland habitats within the SPA are anticipated.

It will be a requirement of the contract that the appointed Contractor will be required to update the outline Construction and Environmental Management Plan (oCEMP) which is included in the Part 8 Planning Report. This will focus in particular on the protection of general ecology. For example, the Contractor will be required to demonstrate how impacts on vegetation will be minimised on the Dunshaughlin Road, Curragha Road, Woodland Links Road and Broadmeadow Pathway. The CEMP must be prepared with the input of a suitably qualified ecologist. The final design will also be required to identify areas of biodiversity gain within the final design; including identification of where trees can be planted (number equalling or greater than the number removed) (see accompanying Ecology Report).

The majority of tree loss will be confined to semimature landscaped areas along the Woodland Links Road and trees in the proposed stepped access paths leading to the woodland along the Broadmeadow River.

No impacts are anticipated during the operational phase of the proposed project as this will not significantly affect the hydrological regime of the Broadmeadow River. There will be a small scale increase in hard standing areas which could result in a small scale increase in surface water emissions to the drainage network. Otherwise, there will be no further emissions to the river will be generated as a result of this project.

In summary, due to the nature of proposed works; i.e. no in-stream works along the Broadmeadow River; the distance to this European site, as well as the extent and duration of the proposed works; no negative impacts to Malahide Estuary SAC or Malahide Estuary SPA are anticipated.

5.4. Cumulative impacts

Cumulative impacts with the following plans and projects were considered during the preparation of this report. The search of Meath County Council was based on a map-based search (MyPlan.ie).

Meath County Development Plan 2021 – 2027 sets out strategies and objectives to provide sustainable development within Co. Meath. The Plan contains a number of Biodiversity objectives. The plan is available online at - <https://consult.meath.ie/en/consultation/meath-adopted-county-development-plan>. A Natura Impact Report was prepared for the Plan, which assessed the Plan regarding its potential to adversely affect the integrity of European sites (see Volume 4 of the County Plan)¹⁶. The findings of the AA were integrated into the Plan, ensuring that potential adverse effects have been and will be avoided, reduced or offset. Thus, an AA determination was made by Meath County Council that the Plan is not foreseen to have any likely significant effects on the ecological integrity of any European Site. As outlined in the Plan, this NIS is being prepared to ensure that the proposed works will not have an adverse impact on European sites. Given the elements outlined above, the Meath County Development Plan 2021 – 2027 is not anticipated to act in-combination with the proposed project.

There are 6 no. project / committed developments, which have not yet been built and have been further evaluated with respect to cumulative impacts with the proposed Ratoath Pedestrian and Cycling Scheme, as follows: -

Toby Developments Ltd. Construction of 2 no. dwellings and associated works (RA170575). Granted October 2017.

The development will consist of (1) the demolition of the existing pitched roof, single storey, 2 bedroom bungalow on the site. (2) Construction of 2 no. 4 bedroom two storey dwellings with rooflights. (3) Closing up of the existing vehicular access from Dunshaughlin Road, new boundary walls and 2 no. separate vehicular entrances off Dunshaughlin Road, with all necessary landscaping, drainage and ancillary works to facilitate the development. Significant further information/revised plans submitted on this application. There may be a cumulative impact on traffic, dust and noise; however due to the nature and scale of the project it is not anticipated that these impacts will be significant. No significant cumulative impacts are anticipated.

Jenny Chen . Change of use to 3 bed apartment and associated works (RA180174). Granted July 2018.

Change of use of 2nd floor unit from an existing office into a 3 bed apartment and associated site works . There may be a cumulative impact on traffic, dust and noise; however due to the nature and scale of the project it is not anticipated that these impacts will be significant. No significant cumulative impacts are anticipated.

Gas Networks Ireland. District Regulator Installation and associated works (RA180781) Granted September 2018.

The development will consist of a safety enhancement to the existing gas mains network comprising a District Regulator Installation (DRI) made up of a pressure relief unit (cabinet c. 1.8m in height) and associated vent flue (c. 3.5m in height) as well as site development works. There may be a cumulative impact on traffic, dust and noise; however due to the nature and scale of the project it is not anticipated that these impacts will be significant. No significant cumulative impacts are anticipated.

Colm Mac Daibhéid. Construction of 7 no. new home and associated site development works (RA180448) Granted February 2019.

A revised design for 7 new homes comprising 4 no. 4 bed semi-detached houses over 2 storeys and 3 no. 4 bed detached houses over 2 storeys and associated site development works, further to Condition No. 3 of An Bord Pleanála's Order (PL17.247993) on 6th July 2017. Significant further information/revised plans submitted on this application. There may be a cumulative impact on traffic, dust and noise; however due to the nature and scale of the project it is not anticipated that these impacts will be significant. No significant cumulative impacts are anticipated.

¹⁶ Meath County Council (2021). Strategic Environmental Assessment, Appropriate Assessment & Strategic Flood Risk Assessment.

David Maher. Construction of detached dwelling house and associated works (RA190682). Granted October 2019.

The demolition of existing garage and shed, the construction of 2 No. storey and a half dwellings and associated site works. The site works will include alteration of existing site entrance, foul and surface water connections to the public network and the installation of a surface water soak away serving one of the proposed dwellings. There may be a cumulative impact on traffic, dust and noise; however due to the nature and scale of the project it is not anticipated that these impacts will be significant. No significant cumulative impacts are anticipated.

Silverstream Healthcare Limited. Extension of duration of Nursing Home Extension (RA201041) Granted September 2020.

Extension of Duration of Planning Permission RA150870 - 2 storey extension to existing Nursing Home to provide 27 ensuite bedrooms, lounges, bathrooms, Treatment Room and additional parking (amended design from previously granted Permission). There may be a cumulative impact on traffic, dust and noise; however due to the nature and scale of the project it is not anticipated that these impacts will be significant. No significant cumulative impacts are anticipated.

Farmers and landowners may also undertake general agricultural operations in areas adjacent to the proposed works and along the river, which could potentially give rise to impacts of a similar nature to those arising from the proposed works. This could potentially result in additional an increased risk to water quality. Many agricultural operations are periodic, not continuous in nature, and qualify as a Notifiable Action that requires consultation with National Parks and Wildlife Service in advance of the works e.g. reclamation, infilling or land drainage within 30m of the river, removal of trees or any aquatic vegetation within 30m of the river, and harvesting or burning of reed or willow (NPWS, 2018). Agricultural operations must also comply with the EC (Environmental Impact Assessment) (Agriculture) Regulations 2011 and amendment 2017 S.I. No. 456/2011 and 407/2017 in relation to activities covered by the regulations;

- restructuring of rural land holdings,
- commencing use of uncultivated land or semi-natural areas for intensive,
- land drainage works on lands used for agriculture.

A Natura Impact Statement (NIS) is required under Regulation 9 if it is likely to have a significant effect on a European designated site. The drainage or reclamation of wetlands is controlled under the Planning and Development (Amendment) (No. 2) Regulations 2011 and the European Communities (Amendment to Planning and Development) Regulations 2011. Therefore, the in-combination effects of agricultural operations and the proposed works along the River Blackwater are not likely to be significant.

Given the nature, scale and location of these granted developments and the proposed project no significant impacts are anticipated to European sites. It is considered the proposed Ratoath Pedestrian and Cycle Scheme will not act in combination to give rise to any cumulative impacts.

5.5. Likelihood of Significant Effects on European Sites

As noted, the proposed project facilitates the implementation of improvements to pedestrian and cycle facilities and general traffic management within the town centre itself, along the Broadmeadow River and along the major approach roads to Ratoath.

Considering the proposed design, scale and duration of proposed works, is not considered that the proposed works would give rise to significant effects, alone or in combination with other works, on features of interest of European sites, including Malahide Estuary SAC and Malahide Estuary SPA.

5.6. Consideration of Findings

This screening report for Appropriate Assessment is based on the best available scientific information. It is concluded by the authors of this report that the proposed project poses no likely significant effects on any European sites, including Malahide Estuary SAC and Malahide Estuary SPA. Thus, it is recommended that it is not necessary for the proposed project to proceed to stage 2 of the Appropriate Assessment process.

Should the scope of the proposed project change, a new screening report for Appropriate Assessment shall be required.

6. Appropriate Assessment Screening Matrix

6.1. Matrix

Presented below is a summary screening matrix for the proposed bridge works at Ratoath, Co. Meath. As discussed above this summarises the assessment of potential for impacts on Malahide Estuary SAC and SPA. All other sites have been screened out in Tables 5.1-5.2, above.

1. Description of the project or plan	
<i>Location</i>	Ratoath, Co. Meath
<i>Distance from designated site</i>	14km from the Rye Water Valley / Carton SAC – to which there is no hydrological link. Works are hydrologically linked to Malahide Estuary SAC (19.5km) and Malahide Estuary SPA (19.8km). See Figures 1.1 & 5.1 for location of works & European sites.
<i>Brief Description of the project or plan</i>	See Chapter 1.0
<i>Is the plan directly connected with or necessary to the site management for nature conservation?</i>	No

2. Brief Description of the Natura 2000 site(s)	
<i>Name</i>	Malahide Estuary SAC (000205) Malahide Estuary SPA (004025) (for other sites within 15km see Tables 5.1-5.2)
<i>Site designation status</i>	SAC / SPA
<i>Qualifying interests</i>	Refer to Tables 5.1 & 5.2
<i>Unit size</i>	Malahide Estuary SAC (000205) – Area: 788ha; of which marine: 89.8% Malahide Estuary SPA (004025) – Area: 764.64ha; of which marine: 90.95%

3. Assessment Criteria	
<i>Other plans or projects which may have a cumulative impact</i>	A planning search was conducted on the Meath County Council websites to determine if there were any projects which could interact with the proposed works. The search revealed planning applications / permissions for a range of small scale and / or historic developments, in the wider environs, but no current applications directly relevant to the proposed works areas (refer to Section 5.4). There are no plans and projects identified in the immediate environs of the proposed works areas that could provide a pathway for other plans and projects to act in-combination and to give rise to cumulative impacts on the Malahide Estuary SAC and SPA.
<i>Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites.</i>	See Chapter 1.0 & Tables 5.1 – 5.2.

3. Assessment Criteria	
<p><i>Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site by virtue of:</i></p> <ul style="list-style-type: none"> - Size and scale - Land-take - Distance from Natura 2000 site or key features of the site - Resource requirements - Emissions - Excavation requirements - Transportation requirements - Duration of construction, operation etc. - Others 	<p>There are no likely changes to the European sites as a result of the proposed works.</p> <p>All works are at a significant distance from European sites. No land-take of the SAC or SPA is required for the proposed project. No habitats for which Malahide Estuary SAC/SPA have been designated are located within the works areas.</p> <p>There are no water abstraction requirements for the proposed project and there shall be no emissions during the operational phase of the project.</p> <p>No instream works or access to the stream are proposed. The potential for polluting material to enter the watercourse is low.</p> <p>It is estimated that works would be undertaken over a three to four years period over a number of contracts. Specifically, the works along the Broadmeadow Pathway would take approximately one year to complete.</p>
<p><i>Describe any likely changes to the site arising as a result of:</i></p> <ul style="list-style-type: none"> - Reduction of habitat area - Disturbance of key species - Habitat or species fragmentation - Reduction in species density - Changes in key indicators of conservation value - Climate change 	<p>There are no likely changes to the sites as a result of the proposed works.</p> <p>There shall be no reduction of habitat area as a result of the proposed project.</p> <p>As noted no instream works or access to the stream are proposed. All works will be undertaken during daylight hours, with no overnight lighting on site. The proposed project does not pose a barrier to movement of any species (including fish passage) and connectivity within the Broadmeadows River.</p> <p>There shall be no habitat or species fragmentation or reduction in species density as a result of the works.</p> <p>Given the nature, scale and location of works negative impacts are not anticipated.</p>
<p><i>Describe any likely impacts on the Natura 2000 site as a whole in terms of:</i></p> <ul style="list-style-type: none"> - Interference with the key relationships that define the structure of the site - Interference with key relationships that define the function of the site. 	<p>There are no likely changes to the sites as a result of the proposed works with respect to the key relationships that define the structure or function of the SAC/SPA.</p>
<p><i>Provide indicators of significance as a result of the identification of effects set out above in terms of:</i></p> <ul style="list-style-type: none"> - Loss - Fragmentation - Disruption - Disturbance - Change to key elements of the site 	<p>There are no likely changes to the sites as a result of the proposed works.</p> <p>As noted no instream works or access to the stream are proposed. All works will be undertaken during daylight hours, with no overnight lighting on site. The proposed project does not pose a barrier to movement of any species (including fish passage) and connectivity within the Broadmeadows River.</p> <p>Given the nature, scale and location of works negative impacts are not anticipated.</p>
<p><i>Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale of magnitude of impacts is not known.</i></p>	<p>There are no likely changes to the sites as a result of the proposed works.</p>

Data collected to carry out the assessment			
<i>Who carried out the assessment</i>	<i>Sources of data</i>	<i>Level of assessment completed</i>	<i>Where can the full results of the assessments be accessed and viewed?</i>
Atkins Unit 2B 2200 Cork Airport Business Park, Cork	Desktop data derived from the NPWS – Natura 2000 form, site synopsis, SAC reports etc. National Biodiversity Data Centre online data. EPA Envision Mapping system; Google maps; Bing Maps etc. Laois County Council Planning Enquiry System	Screening	Atkins, Unit 2B 2200 Cork Airport Business Park, Cork

6.2. Finding of No Significant Effects

Finding of No Significant Effects	
<i>Name and location of Natura site(s)</i>	Malahide Estuary SAC (000205) Malahide Estuary SPA (004025) (for other sites within 15km see Tables 5.1-5.2)
<i>Brief description of the project or plan</i>	See Section 1.
<i>Is the project or plan directly connected with or necessary to the site management for nature conservation?</i>	No
<i>Are there other projects or plans that together with the project or plan being assessed could affect the site?</i>	No

Assessment of significance of effects	
<i>Describe how the project (either alone or in combination with other plans or projects) is likely to affect the Natura 2000 site.</i>	There are no likely changes to the European sites as a result of the proposed works. All works are at a significant distance from European sites. No land-take of the SAC or SPA is required for the proposed project. No habitats for which Malahide Estuary SAC/SPA have been designated are located within the works areas. There are no water abstraction requirements for the proposed project and there shall be no emissions during the operational phase of the project. No instream works or access to the stream are proposed. The potential for polluting material to enter the watercourse is low. It is estimated that works would be undertaken over a three to four years period over a number of contracts. Specifically, the works along the Broadmeadow Pathway would take approximately one year to complete.
<i>Explain why the effects are not considered significant</i>	Refer to Section 5.4 and explanations presented above.
<i>List the Agencies consulted</i>	Formal consultation with NPWS via the Development Applications Unit has not been under taken at this time.
<i>Response to Consultation</i>	N/A

7. References

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Appendix A. Site Synopses



Site Name: Malahide Estuary SAC

Site Code: 000205

Malahide Estuary is situated immediately north of Malahide and east of Swords in Co. Dublin. It is the estuary of the River Broadmeadow. The site is divided by a railway viaduct which was built in the 1800s.

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 (* = priority; numbers in brackets are Natura 2000 codes):

- | |
|-------------------------------------|
| [1140] Tidal Mudflats and Sandflats |
| [1310] <i>Salicornia</i> Mud |
| [1330] Atlantic Salt Meadows |
| [1410] Mediterranean Salt Meadows |
| [2120] Marram Dunes (White Dunes) |
| [2130] Fixed Dunes (Grey Dunes)* |

The outer part of the estuary is mostly cut off from the sea by a large sand spit, known as 'the island'. The outer estuary drains almost completely at low tide, exposing sand and mud flats. There is a large bed of Eelgrass (Dwarf Eelgrass, *Zostera noltii*, and Narrow-leaved Eelgrass, *Z. angustifolia*) in the north section of the outer estuary, along with Beaked Tasselweed (*Ruppia maritima*) and extensive mats of green algae (*Enteromorpha* spp., *Ulva lactuca*). Common Cord-grass (*Spartina anglica*) is also widespread in this sheltered part of the estuary.

The dune spit has a well developed outer dune ridge dominated by Marram Grass (*Ammophila arenaria*). The dry areas of the stabilised dunes have a dense covering of Burnet Rose (*Rosa pimpinellifolia*), Red Fescue (*Festuca rubra*) and species such as Yellow-wort (*Blackstonia perfoliata*), Autumn Gentian (*Gentianella amarella*), Hound's-tongue (*Cynoglossum officinale*), Carlina Thistle (*Carlina vulgaris*) and Pyramidal Orchid (*Anacamptis pyramidalis*). Much of the interior of the spit is taken up by a golf course. The inner stony shore has frequent Sea-holly (*Eryngium maritimum*). Well-developed saltmarshes occur at the tip of the spit. Atlantic salt meadow is the principle type and is characterised by species such as Sea-purslane (*Halimolobos portulacoides*), Sea Aster (*Aster tripolium*), Thrift (*Armeria maritima*), Sea Arrowgrass (*Triglochin maritima*) and Common Saltmarsh-grass (*Puccinellia maritima*). Elsewhere in the outer estuary, a small area of Mediterranean salt meadow occurs which is characterised by the presence of Sea Rush (*Juncus maritimus*). Below the salt marshes there are good examples of pioneering glasswort (*Salicornia* spp.) swards and other annual species, typified by *S. dolichostachya* and Annual Sea-blite (*Suaeda maritima*).

The inner estuary does not drain at low tide apart from the extreme inner part. Here, patches of saltmarsh and salt meadows occur, with Sea Aster, Sea Plantain (*Plantago maritima*) and Sea Club-rush (*Scirpus maritimus*). Beaked Tasselweed occurs in one of the channels.

The site includes a fine area of rocky shore south-east of Malahide and extending towards Portmarnock. This represents the only continuous section through the fossiliferous Lower Carboniferous rocks in the Dublin Basin, and is the type locality for several species of fossil coral.

The estuary is an important wintering bird site and holds an internationally important population of Brent Goose and nationally important populations of a further 15 species. Average maximum counts during the 1995/96-1997/98 period were: Brent Goose 1217; Great Crested Grebe 52; Mute Swan 106; Shelduck 471; Pochard 200; Goldeneye 333; Red-breasted Merganser 116; Oystercatcher 1228; Golden Plover 2123; Grey Plover 190; Redshank 454; Wigeon 50; Teal 78; Ringed Plover 106; Knot 858; Dunlin 1474; Greenshank 38; Pintail 53; Black-tailed Godwit 345; Bar-tailed Godwit 99. The high numbers of diving birds reflects the lagoon-type nature of the inner estuary.

The estuary also attracts migrant species such as Ruff, Curlew Sandpiper, Spotted Redshank and Little Stint. Breeding birds of the site include Ringed Plover, Shelduck and Mallard. Up to the 1950s there was a major tern colony at the southern end of the island and the habitat remains suitable for these birds.

The inner part of the estuary is heavily used for water sports. A section of the outer estuary has recently been infilled for a marina and housing development.

This site is a fine example of an estuarine system with all the main habitats represented. The site is important ornithologically, with a population of Brent Goose of international significance.

SITE SYNOPSIS

SITE NAME: MALAHIDE ESTUARY SPA

SITE CODE: 004025

Malahide Estuary is situated in north Co. Dublin, between the towns of Malahide and Swords. The site encompasses the estuary, saltmarsh habitats and shallow subtidal areas at the mouth of the estuary. A railway viaduct, built in the 1800s, crosses the site and has led to the inner estuary becoming lagoonal in character and only partly tidal. Much of the outer part of the estuary is well-sheltered from the sea by a large sand spit, known as "The Island". This spit is now mostly converted to golf-course. The outer part empties almost completely at low tide and there are extensive intertidal flats exposed. Substantial stands of eelgrass (both *Zostera noltii* and *Z. angustifolia*) occur in the sheltered part of the outer estuary, along with Tasselweed (*Ruppia maritima*). Green algae, mostly *Ulva* spp., are frequent on the sheltered flats. Common Cord-grass (*Spartina anglica*) is well established in the outer estuary and also in the innermost part of the site. The intertidal flats support a typical macro-invertebrate fauna, with polychaete worms (*Arenicola marina* and *Hediste diversicolor*), bivalves such as *Cerastoderma edule*, *Macoma balthica* and *Scrobicularia plana*, the small gastropod *Hydrobia ulvae* and the crustacean *Corophium volutator*. Salt marshes, which provide important roosts during high tide, occur in parts of the outer estuary and in the extreme inner part of the inner estuary. These are characterised by such species as Sea Purslane (*Halimione portulacoides*), Sea Aster (*Aster tripolium*), Thrift (*Armeria maritima*), Sea Arrowgrass (*Triglochin maritima*) and Common Saltmarsh-grass (*Puccinellia maritima*).

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Great Crested Grebe, Light-bellied Brent Goose, Shelduck, Pintail, Goldeneye, Red-breasted Merganser, Oystercatcher, Golden Plover, Grey Plover, Knot, Dunlin, Black-tailed Godwit, Bar-tailed Godwit and Redshank. 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.

This site is of high importance for wintering waterfowl and supports a particularly good diversity of species. It has internationally important populations of Light-bellied Brent Goose (1,104 individuals or 5% of the all-Ireland total) and Black-tailed Godwit (409 individuals or 2.9% of the all-Ireland total) - figures given here and below are mean peaks for the five winters 1995/96-1999/2000. Furthermore, the site supports nationally important populations of an additional 12 species: Great Crested Grebe (63), Shelduck (439), Pintail (58), Goldeneye (215), Red-breasted Merganser (99), Oystercatcher (1,360), Golden Plover (1,843), Grey Plover (201), Knot (915), Dunlin (1,594), Bar-tailed Godwit (156) and Redshank (581). The high numbers of diving ducks reflects the lagoon-type nature of the inner estuary, and this is one of the few sites in eastern Ireland where substantial numbers of Goldeneye can be found.

A range of other species occurs, including Mute Swan (37), Pochard (36), Ringed Plover (86), Lapwing (1,542), Curlew (548), Greenshank (38) and Turnstone (112).

The estuary also attracts other migrant wader species such as Ruff, Curlew Sandpiper, Spotted Redshank and Little Stint. These occur mainly in autumn, though occasionally in spring and winter.

Breeding birds of the site include Ringed Plover, Shelduck and Mallard. Up to the 1950s there was a major tern colony at the southern end of Malahide Island. Grey Herons breed nearby and feed regularly within the site.

Malahide Estuary SPA is a fine example of an estuarine system, providing both feeding and roosting areas for a range of wintering waterfowl. The lagoonal nature of the inner estuary is of particular value as it increases the diversity of birds which occur. The site is of high conservation importance, with internationally important populations of Light-bellied Brent Goose and Black-tailed Godwit, and nationally important populations of a further 12 species. Two of the species which occur regularly (Golden Plover and Bar-tailed Godwit) are listed on Annex I of the E.U. Birds Directive. Malahide Estuary (also known as Broadmeadow Estuary) is a Ramsar Convention site.

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