# Screening of Proposals for Local Transport Plan of Castlebar Town, Co. Mayo

Screening for Appropriate Assessment

October 2023

Project number: 2021s0862

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# Contract

This report describes work commissioned by Mayo County Council. MCC representative for the contract was James Russell, Mayo County Council. Damien McAndrew of JBA Consulting carried out this work.

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# Abbreviations

| | |
|---|---|
| AA | Appropriate Assessment |
| CIEEM | Chartered Institute of Ecology and Environmental Management |
| DoEHLG | Department of Environment, Heritage and Local Government |
| EC | European Communities |
| EPA | Environmental Protection Agency |
| EU | European Union |
| GSI | Geological Survey Ireland |
| GWB | Groundwater Body |
| GWD | Groundwater Dependant |
| IROPI | Imperative Reasons of Over-riding Public Interest |
| LAP | Local Area Plan |
| LTP | Local Transport Plan |
| NBDC | National Biodiversity Data Centre |
| NORR | Northern Orbital Link Road |
| NOx | Nitrogen Oxides |
| NPWS | National Parks and Wildlife Service |
| OPR | Office of the Planning Regulator |
| QI | Qualifying Interest |
| RBMP | River Basin Management Plan |
| SAC | Special Area of Conservation |
| SCI | Species of Conservation Interests |
| SPA | Special Protection Area |
| WFD | Water Framework Directive |
| WWTP | Wastewater Treatment Plant |
| ZoI | Zone of Influence |

# 1 Introduction

## 1.1 Background

JBA Consulting Engineers and Scientists Ltd. (hereafter JBA) has been commissioned by Mayo County Council to prepare an Appropriate Assessment Screening Report for the Local Transport Plan (LTP) for Castlebar, Co. Mayo, as outlined in Section 2.

The strategic aim of the Castlebar LTP is to provide for the planning and delivery of transport infrastructure and services in Castlebar that will allow for the generation of a sustainable transport network that can cater for demand. It should also be noted that the individual projects will be subjected to public consultation, environmental assessments, heritage studies, relevant statutory procedures, and consultation with the relevant statutory stakeholders.

The refined options for the LTP of Castlebar are prioritised into five proposals with additional auxiliary works, to be implemented in different phases, which will cover the overall development of transport for the town of Castlebar.

Screening for appropriate assessment is intended to be an initial examination which must be carried out by the competent authority. However, this screening is completed on behalf of the plan proposer to show that likely significant effects have been considered in the project development and design, and where necessary progress with further assessment.

## 1.2 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 conservation of an EU-wide network of sites known as Natura 2000 sites. Natura 2000 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 affecting Natura 2000 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/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest 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 States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.*

*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*."

The requirements of Articles 6(3) and 6(4) of the Habitats Directive have been transposed into Irish legislation by means of *inter alia* the European Communities (Birds and Natural Habitats) Regulations 2011-2015 (S.I. No. 477 / 2011) as amended.

## 1.3 Appropriate Assessment Process

Guidance on the Appropriate Assessment (AA) process was produced by the European Commission in 2002, which was subsequently developed into guidance specifically for Ireland by the Department of Environment, Heritage and Local Government (DEHLG) (2009). Office of the Planning Regulator (OPR) produced a Practice Note in 2021, PN01 - Appropriate Assessment Screening for Development Management (OPR 2021). These guidance documents identify a staged approach to conducting an AA, as shown

| | | | |
|---|---|---|---|
| ***Austropotamobius pallipes* (White-clawed Crayfish) [1092]** | **Distribution** | **Occurrence** | **No reduction from baseline.** |
| | Population structure: recruitment | Occurrence of juveniles and females with eggs | Juveniles and/or females with eggs in all occupied tributaries |
| | Negative indicator species | Occurrence | No alien crayfish species |
| | Disease | Occurrence | No instances of disease |
| | Water quality | EPA Q value | At least Q3-4 at all sites sampled by EPA |
| | Habitat quality: heterogeneity | Occurrence of positive habitat features | No decline in heterogeneity or habitat quality |
| *Petromyzon marinus* (Sea Lamprey) [1095] | Distribution: extent of anadromy | Percentage of river accessible | Greater than 75% of main stem length of rivers accessible from estuary |
| | Population structure of juveniles | Number of age/size groups | At least three age/size groups present |
| | Juvenile density in fine sediment | Juveniles/m² | Mean catchment juvenile density at least 1/m² |
| | Extent and distribution of spawning habitat | m² and occurrence | No decline in extent and distribution of spawning beds |
| | Availability of juvenile habitat | Number of positive sites in 3rd order channels (and greater), downstream of spawning areas | More than 50% of sample sites positive |
| *Lampetra planeri* (Brook Lamprey) [1096] | Distribution | Percentage of river accessible | Access to all watercourses down to first order streams |
| | Population structure of juveniles | Number of age/size groups | At least three age/size groups of brook/river lamprey present |
| | Juvenile density in fine sediment | Juveniles/m² | Mean catchment juvenile density of brook/river lamprey at least 2/m² |
| | Extent and distribution of spawning habitat | m² and occurrence | No decline in extent and distribution of spawning beds |
| | Availability of juvenile habitat | Number of positive sites in 2nd order channels (and greater), downstream of spawning areas | More than 50% of sample sites positive |

| | | | |
|---|---|---|---|
| *Salmo salar* (Salmon) [1106] | Distribution: extent of anadromy | Percentage of river accessible | 100% of river channels down to second order accessible from estuary |
| | Adult spawning fish | Number | Conservation Limit (CL) for each system consistently exceeded |
| | Salmon fry abundance | Number of fry/5 minutes electrofishing | Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 minutes sampling |
| | Out-migrating smolt abundance | Number | No significant decline |
| | Number and distribution of redds | Number and occurrence | No decline in number and distribution of spawning redds due to anthropogenic causes |
| | Water quality | EPA Q value | At least Q4 at all sites sampled by EPA |
| *Lutra lutra* (Otter) [1355] | Distribution | Percentage positive survey sites | No significant decline |
| | Extent of terrestrial habitat | Hectares | No significant decline. Area mapped and calculated as 1068.8ha |
| | Extent of freshwater (river) habitat | Kilometres | No significant decline. Length mapped and calculated as 479.4km |
| | Extent of freshwater (lake) habitat | Hectares | No significant decline. Area mapped and calculated as 1248.2ha |
| | Couching sites and holts | Number | No significant decline |
| | Fish biomass available | Kilograms | No significant decline |
| | Barriers to connectivity | Number | No significant increase |

#### 1.3.1.1 Site Vulnerabilities

The River Moy SAC is vulnerable to several potential impacts, including agriculture, invasive non-native species and forestry activities. The negative impacts and activities with high effect on the SAC are listed in Table 6-2 below.

Table 6-2: Threats, pressures, and activities with impacts on the River Moy SAC (NPWS 2022)

| Code | Threats and pressures | Rank | Source |
|---|---|---|---|
| H01.05 | Diffuse pollution to surface waters due to agricultural and forestry activities | H | b |
| D04.02 | Aerodrome, heliport | M | b |
| B01 | Forest planting on open ground | H | b |
| C01.03 | Peat extraction | M | b |
| I01 | Invasive non-native species | H | b |
| B05 | Use of fertilisers (forestry) | H | b |
| A02.01 | Agricultural intensification | H | b |
| Key: H = high; M = Medium; b = both inside and outside | | | |

### 1.3.2 Lough Conn and Lough Cullin SPA [004228]

The River Deel, Addergoole, and Castlehill are the main rivers flowing into Lough Conn with the River Moy outflowing from Lough Cullin. These loughs form part of an important salmonid fishery and an important site for wintering wildfowl. Both loughs are one of only four breeding sites in Ireland for Common Scoter.

#### 1.3.2.1 Qualifying Interests

- Tufted Duck (*Aythya fuligula*) [A061]
- Common Scoter (*Melanitta nigra*) [A065]
- Common Gull (*Larus canus*) [A182]
- Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]
- Wetland and Waterbirds [A999]

A review of the available e I-webs data for sites within the LTP area indicates some crossover in species, especially Tufted Duck.

#### 1.3.2.2 Conservation Objectives

The conservation objective of all the SPA bird species is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA (NPWS, 2022).

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA, as above listed.

Objective: To maintain or restore the favourable conservation condition of the wetland habitat at Lough Conn and Lough Cullin SPA as a resource for the regularly occurring migratory waterbirds that utilise it.

#### 1.3.2.3 Site Vulnerabilities

As part of the Standard Data Form for European sites, the negative impacts and activities with high effect on the SPA are detailed to identify where future Plans, or Projects, could have an impact on a European site if a threat/ pressure is likely to be exaggerated due to the Plan. The threats and pressures upon Lough Conn and Lough Cullin SPA are listed in Table 6-3 below.

Table 6-3: Threats, pressures, and activities with impacts on the Lough Conn and Lough Cullin SPA (NPWS 2022)

| Code | Threats and pressures | Rank | Source |
|---|---|---|---|
| **I01** | **Invasive non-native species** | **L** | **i** |
| A08 | Fertilisation | M | o |
| F02.03 | Leisure fishing | H | i |

| Code | Threats and pressures | Rank | Source |
|---|---|---|---|
| B | Sylviculture, forestry | M | o |
| Key: L = Low; M = Medium; o = outside; I = inside | | | |

## 1.4 Examination of the Source-Pathway-Receptor Model for Impact

Pre-screening completed in Section 4 has summarised two potential pathways for impact to the Natura Network - a hydrological pathway; and ex-situ disturbance pathway to the River Moy SAC; and a weak ex-situ disturbance pathway to Lough Conn and Lough Cullin SPA.

### Surface water pathway to the River Moy SAC:

The River Moy SAC is 6.4km from the LTP area. The distance from the SAC; the dilution rate of any discharges from the LTP area that would be achieved over that distance, including the confluence with other tributaries of the Moy and the nature of the receiving habitats indicate a weak hydrological pathway, and consequently a weak source-pathway-receptor model for impact on the habitats of the River Moy SAC.

As the Castlebar River flows through the centre of Castlebar and there are a number of crossing points as part of the active travel network many of the projects proposed in this plan have the potential for impact on the river quality individually at the local level. Additionally, the cumulative impact of all of the individual proposals which consist of a number of projects within each proposal is taken into account. In combinations impacts with the impact of all developments (e.g. industrial, residential and open space recreation via the zonings within the LAP has been taken into account).

### Disturbance / ex-situ to River Moy SAC and Lough Conn and Lough Cullin SPA

Disturbance to SPA QI bird species is expected to be unlikely. The transport network associated with the LTP is at distance from Lough Cullin. Supporting habitats are present at a number of locations within the LTP area, and some disturbances may be present locally from projects, however significant effects on the SPA populations are unlikely at a plan level due to the distance from to the waterbodies that would be the most significant habitats for the QI species (i.e. the Loughs within the Plan area) - see Figure 3-2. The potential crossing of the NORR within the Castlebar Lough / Lough Lannagh would be assessed at the project level.

Some presence of ex-situ populations of Otter, Lamprey, Crayfish and Salmon have been identified outside of the SAC. It is considered that these populations would be part of the wider populations of Otter, Lamprey and Salmon in the area of the River Moy SAC and its tributaries across the wider region. Some impacts on species may occur locally from projects. Effects (such as instream impacts) could only be assessed at the project level given the potential for small scale habitats of importance e.g. spawning beds, pools etc.

## 1.5 Screening of LTP Objectives

The objectives of the LTP have initially been screened following the methodology set out in DTA Publications Habitats Regulations Assessment Handbook (DTA 2022). Each objective is allocated one or more screening category, shown in Table 6-4 below. The results of the initial screening are shown in Table 6-5. Where several categories to screen out a policy are applicable, the most relevant categories are listed in the table. The screening outcome includes any relevant in-combination assessment outcomes.

Table 6-4: Screening categories for the LTP objectives (adapted from DTA, 2022)

| Screening Category | Description | Screening Outcome |
|---|---|---|
| A | General statement of policy/general aspiration. | Out |

| | | |
|---|---|---|
| B | Policy listing general criteria for testing the acceptability/sustainability of proposals. | Out |
| C | Proposal referred to but not proposed by the plan. | Out |
| D | Environmental Protection/site safeguarding policy. | Out |
| E | Policies or proposals that steer change in such a way as to protect European sites from adverse effects. | Out |
| F | Policy that cannot lead to development or other change. | Out |
| G | Policy or proposal that could not have any conceivable effect on a European site. | Out |
| H | Policy or proposal, the actual or theoretical effects of which cannot undermine the conservation objectives (either alone or in combination with other aspects of this or other plans or projects). | Out |
| I | Policy or proposal with a likely significant effect on a site alone. | In |
| J | Policy or proposal with an effect on a site but not likely to be significant alone, so need to check for likely significant effects in combination. | Dependant on in-combination test |
| K | Policy or proposal not likely to have a significant effect either alone or in combination. | Screened out after in-combination test |
| L | Policy or proposal likely to have a significant effect in combination. | Screened in after in-combination test. |

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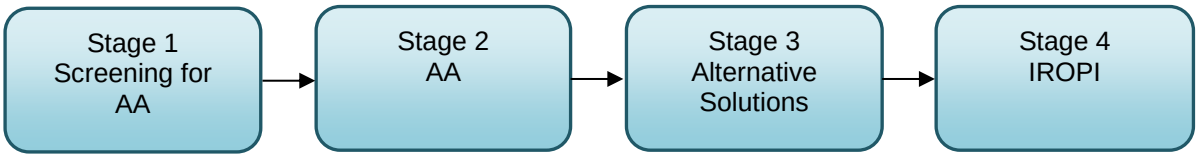



Figure 1-1: The Appropriate Assessment Process (from: Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities, DEHLG, 2009).

### 1.5.1 Stage 1 - Screening for AA

The initial, screening stage of the Appropriate Assessment is to determine:

- whether the proposed plan or project is directly connected with or necessary for the management of the European designated site for nature conservation.
- if it is likely to have a significant adverse effect on the European designated site, either individually or in combination with other plans or projects.

For those sites where, potential adverse impacts are identified, either alone or in combination with other plans or projects, further assessment is necessary to determine if the proposals will have an adverse impact on the integrity of a European designated site, in view of the site's conservation objectives (i.e. the process proceeds to Stage 2).

### 1.5.2 Stage 2 - AA

This stage requires a more in-depth evaluation of the plan or project, and the potential direct and indirect impacts of them on the integrity and interest features of the European designated site(s), alone and in-combination with other plans and projects, taking into account the site's structure, function and conservation objectives. Where required, mitigation or avoidance measures will be suggested.

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 mitigation cannot be achieved, then alternative solutions will need to be considered (i.e., the process proceeds to Stage 3).

### 1.5.3 Stage 3 - Alternative Solutions

Where adverse impacts on the integrity of Natura 2000 sites are identified, and mitigation cannot be satisfactorily implemented, alternative ways of achieving the objectives of the plan or project that avoid adverse impacts need to be considered. If none can be found, the process proceeds to Stage 4.

### 1.5.4 Stage 4 - IROPI

Where adverse impacts of a plan or project on the integrity of Natura 2000 sites are identified and no alternative solutions exist, the plan will only be allowed to progress if imperative reasons of overriding public interest can be demonstrated. In this case compensatory measures will be required.

The process only proceeds through each of the four stages for certain plans or projects. For example, for a plan or project, not connected with management of a site, but where no likely significant impacts are identified, the process stops at stage 1. Throughout the process, the precautionary principle must be applied, so that any uncertainties do not result in adverse impacts on a site.

This report is in support of a Stage 1 Screening for Appropriate Assessment.

## 1.6 Methodology

The Screening for Appropriate Assessment has been prepared having regard to the Birds and Habitats Directives, the European Communities (Birds and Natural Habitats) Regulations 2011-15 as amended and relevant jurisprudence of the EU and Irish courts. The following documents have also been used to provide guidance for the assessment:

- DEHLG (2009 rev 2010) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government (DEHLG, 2009).
- Office of the Planning Regulator (2021) OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management (OPR 2021).
- European Communities (EC) (2018) Managing Natura 2000 Sites: the provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission (European Commission, 2000).
- EC (2002) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission (European Commission et al., 2002).
- EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. European Commission Management (European Commission, 2007).
- CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater and Coastal, Second Ed. (Chartered Institute of Ecology and Environmental, 2018)

### 1.6.1 Desktop study

A desktop study was conducted of available published and unpublished information, along with a review of data available on the National Parks and Wildlife Service (NPWS) and National Biodiversity Data Centre (NBDC) web-based databases, in order to identify key habitats and species (including legally protected and species of conservation concern) that may be present within ecologically relevant distances from the project as explained below. A baseline habitat assessment was performed using satellite imagery of the site. The data sources below (accessed May 2022) were consulted for the desktop study:

- Aerial photography available from www.osi.ie and Esri World Imagery.
- NPWS website (www.npws.ie) where Natura 2000 site synopses, data forms and conservation objectives were obtained along with Annex 1 habitat distribution data and status reports.
- River Basin Management Plans (www.wfdireland.ie)
- NBDC Biodiversity Maps (maps.biodiversityireland.ie)
- Catchments (www.catchments.ie)
- Environmental Protection Agency Maps (https://gis.epa.ie/EPAMaps)
- Geological Survey Ireland (GSI) website (www.gsi.ie)
- GSI - Groundwater data viewer (https://dcenr.maps.arcgis.com)
- Planning Applications (myplan.ie)

### 1.6.2 Likely Significant Effect Test

The test for AA screening is whether the project could have a 'Likely Significant Effect' (LSE) on any Natura 2000 site. A likely significant effect is defined as any effect that could undermine the conservation objectives of a Natura 2000 site, either alone or in combination with other plans or projects. There must be a causal connection between the project and the qualifying interest of the site which could result in possible significant effects on the site. The LSE test is a lower threshold for the screening assessment than 'adverse effect on site integrity' considered at Appropriate Assessment stage (Stage 2) as screening is intended to be a preliminary examination for potential effects.

The Zone of Influence was used to identify Natura 2000 sites that could be impacted by the project. For each of these sites, the Qualifying Interest features and their associated conservation objectives were identified, and the possibility of LSE was determined by a combination of location, ecological and hydrological connectivity, sensitivity of receptor and magnitude of the source of impact.

### 1.6.3 In-combination Screening

The possibility of in-combination effects are considered only at a high level. Where there is no effect at all via a pathway, there is no possibility of in-combination effects. Where an LSE is identified, the in-combination assessment is carried forwards to a Stage 2 Appropriate Assessment.

## 1.7 Limitations and constraints

The screening assessment necessarily relies on some assumptions, and it was inevitably subject to some limitations. These would not affect the conclusion, but the following points are recorded in order to ensure the basis of the assessment is clear:

- Information on the works and conditions are based on current knowledge at the time of writing. However, significant changes to the Castlebar area are unlikely in the time between the delivery date and the likely determination date.
- This assessment is based on the outline plan for proposed works as described in this report. Where changes to methodology occur, an Ecologist will need to be consulted to determine if the changes are likely to alter the ecological impacts and would therefore need reassessment.

# 2 Plan Description

## 2.1 The 'Plan'

The proposed plan consists of developing the transport infrastructure of Castlebar, to identify long-lasting transport improvements to ensure growing use of sustainable travel modes for work, education, business and tourism. The LTP intends to provide recommendations to deliver a high quality, safe, and sustainable transport network. The provision of this infrastructure will provide opportunities to upgrade and enhance the identity of localities within the study area, assisting in providing inherent orientation, and enhancing the physical presentation and appeal of localities, so as to encourage less usage of motor vehicles for trips to destinations. The modal shift from private car to walking or cycling, which is particularly feasible for short distance trips, is linked to a reduction in greenhouse gas emissions. This is a key objective of the Climate Action Plan 2023 which seeks to reduce transport related emissions by 50% by 2030.

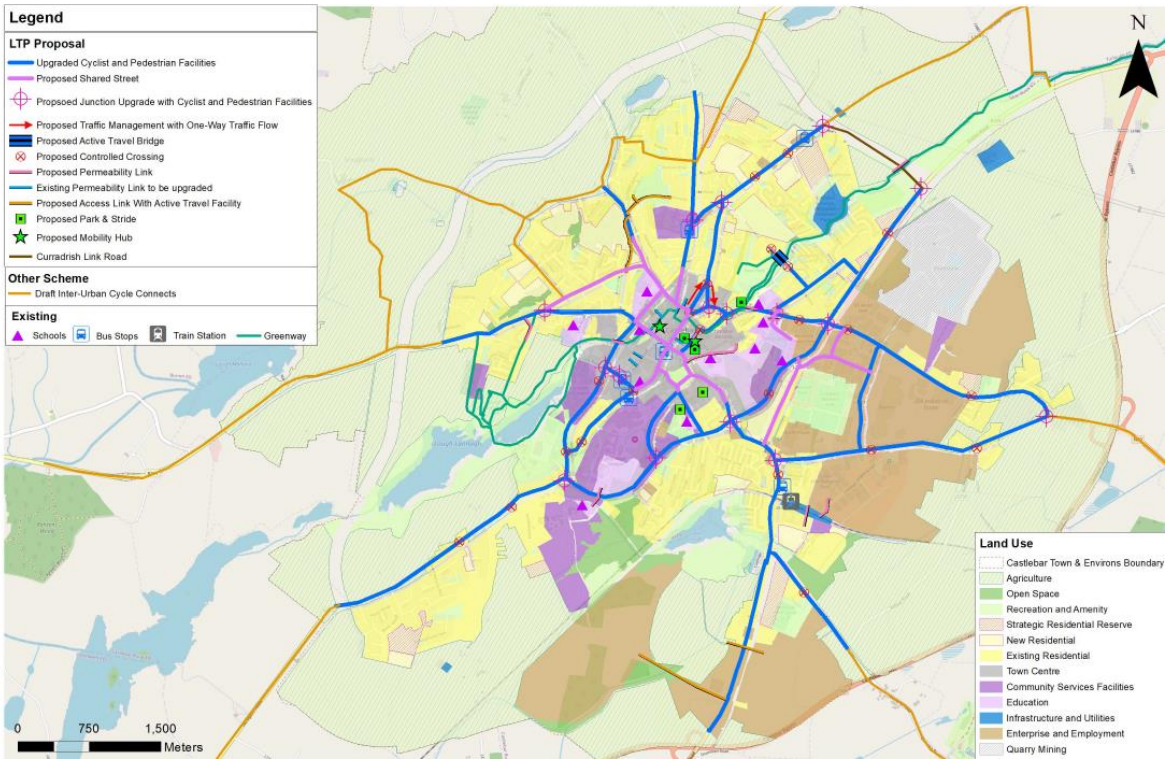



Figure 2-1: Plan Development Concepts: LTP Development In The Context Of LAP Land Use Zones

A demand management design approach to the LTP includes:

- Effective integration of transport and land use through pursing compact growth through the application of the 10-minute town approach;
- Improved accessibility to existing residential areas to encourage and facilitate active mobility;
- Implementation of a suite of measures to encourage sustainable transportation within the Plan area.

It should be noted that there is a clear commitment in the LTP for project level assessments i.e. *"the individual projects will be subjected to public consultation, environmental assessments, heritage studies, relevant statutory procedures, and consultation with the relevant statutory stakeholders".*

#### 2.1.1.1 Alignment with LAP

Based on consultation and the analysis performed to date, the National Transport Authority (NTA) considers that whilst the LTP should continue to be as closely aligned and integrated with the LAP as possible, the LTP should be viewed as a standalone plan, and considered as an input to the LAP.

#### 2.1.1.2 Incorporation of SuDS.

The LTP recommends that an approach towards building Sustainable Drainage Systems (SuDS) is followed while implementing these proposals, at project/design level. Rainwater runoff can be directed towards landscaped areas which, in turn, are specifically designed and constructed to allow that runoff enter the area and percolate through the designed soils prior to entering underground porous pipes which direct the flow back into the existing drainage network. This will help address the negative impacts of urban runoff. Additionally, landscaped areas can provide biodiversity enhancement opportunities.

Recommendations in the LTP include:

- Preference for permeable paving when re-surfacing
- Linking in SuDS features where path widening, or creation of cycle lanes allows the opportunity
- Incorporating SuDS while building new links, mobility hubs, footpaths and cycle lanes

### 2.1.2 Overview of Projects associated with the LTP

Upgrades/and or new routes are planned as part of the LTP. This includes changes to the pedestrian network, the cycle network, the public transport network and the road network.

The LTP consists of a number of smaller projects such as junction redesign to include active travel crossings; introduction of controlled crossing points; provision of dedicated cycle facilities and footpath widening; signage and new lighting; junction upgrades and traffic management. Bigger projects include new footpaths and cycleways or road widening into previously undeveloped land; new park and stride/mobility hub areas; introduction of two new bus routes; new bridges and potential new road routes such as the Northern Orbital Link Road (NORR).

The proposed LTP has been broken down into 6 general proposals which will be carried out in a phased approach over the life-time of the plan (until 2029, and beyond). The LTP outlines short term objectives and longer-term aspiration objectives and each scheme has a delivery timeline associated with it - this is presented in Table 2-1. Proposal maps are present in Appendix A. Detail on each of the proposals is presented in Sections 2.1.2 to Section 2.1.8.

Table 2-1: Overview of the total transport scheme, with associated timelines.

| Infrastructure | Timeline | | | | Total |
|---|---|---|---|---|---|
| | Short Term (Proposals 1 & 2) | Medium Term (Proposals 3 & 4) | Long Term (Proposal 5) | Concurrent/ Parallel (Auxiliary Proposals) | |
| Proposed/Upgraded Cycle Facilities (km per direction) | 27.6km | 13.8km | | 6 km | 47.4km |
| Upgraded Pedestrian Facilities (km) | 25.3km | 12.3km | | 17 km | 54.6km |
| Proposed Pedestrian Facilities (km) | 2.3km | 1.5km | | | 3.8km |
| Proposed Shared Streets (km) | | | | 5.5km | 5.5km |
| Proposed Junction Upgrades | 8 | 7 | | 1 | 16 |
| Proposed Traffic Management with One-Way Traffic Flow | | 2 | | | 2 |
| Proposed Active Travel Bridge | | | | 1 | 1 |
| Proposed Controlled Crossings | 38 | 24 | | 2 | 64 |
| Proposed Permeability Link | 2 | 1 | | 9 | 12 |
| Upgraded Permeability Link | | | | 8 | 8 |
| Proposed Access Links | | | | 4 | 4 |
| Proposed 'Park 'n' Stride' | 5 | | | | 5 |
| Proposed Mobility Hub | 1 | 1 | | | 2 |
| Proposed Road Link (Curradrish Link Road) | | 740m | | | 740m |
| Proposed Potential Route ( Indicative Potential Northern Orbital Ring Road) | | | 6 km | | 6 km |

### 2.1.3 Proposal 1

Proposal 1 map is presented in Appendix A.1. Proposal 1 is a short-term delivery and consists of the following upgrades to the Local Transport Network:

**Upgrades to the Pedestrian Network**

- Upgraded Footpaths: Footpaths up to DMURS standards - 17.8km
- New and continuous Footpaths up to DMURS standards at two locations R309 – Westport Road and Milebush Road. 1.6km.

**Upgrades to the Cycle Network**

- Upgraded Cycle Facilities up to DMURS standards 19.4km

**Upgrades to the Active Travel Network:**

- 2 locations for Park & Stride

**Proposed Junction Upgrades**

- 5 locations
- 24 Proposed Controlled Crossings (including crossing as part of proposed junction upgrades)

### 2.1.4 Proposal 2

Proposal 2 map is presented in Appendix A.2. Proposal 2 is a short-term delivery and consists of the following upgrades to the Local Transport Network:

**Upgrades to the Pedestrian Network**

- Upgraded Footpaths: Footpaths up to DMURS standards - 7.5km
- New and continuous Footpaths up to DMURS standards at two locations R309 – Westport Road and Milebush Road. 0.7km.

**Upgrades to the Cycle Network**

- Upgraded Cycle Facilities up to DMURS standards - 8.2km

**Upgrades to the Active Travel Network**

- 3 locations for Mobility Hubs / Park & Stride

**Proposed Junction Upgrades**

- 3 locations
- 14 Proposed Controlled Crossings (including crossing as part of proposed junction upgrades)

**Proposed permeability Links**

- 2 locations

### 2.1.5 Proposal 3

Proposal 3 map is presented in Appendix A.3. Proposal 3 is a medium-term delivery and consists of the following upgrades to the Local Transport Network:

**Upgrades to the Pedestrian Network**

- Upgraded Footpaths: Footpaths up to DMURS standards - 7.2km

**Upgrades to the Cycle Network**

- Upgraded Cycle Facilities up to DMURS standards - 7.2km

**Proposed Junction Upgrades**

- 3 locations
- 14 Proposed Controlled Crossings (including crossing as part of proposed junction upgrades)

**Upgrades to the Active Travel Network:**

- 1 location for Mobility Hub

### 2.1.6 Proposal 4

Proposed as a medium-term delivery and consists of the following upgrades to the Local Transport Network:

**Upgrades to the Pedestrian Network**

- Upgraded Footpaths: Footpaths up to DMURS standards - 5.1km
- New footpath - 1.5km

**Upgrades to the Cycle Network**

- Upgraded Cycle Facilities up to DMURS standards - 6.6km

**Proposed Junction Upgrades**

- 4 locations
- 10 Proposed Controlled Crossings (including crossing as part of proposed junction upgrades)

**Proposed permeability link**

- 1 new link to Greenway

**Proposed Traffic Management**

- 2 locations with One-Way traffic flow

**Proposed New Road**

- 1 location 0.74km. Requires new crossing of Castlebar River

### 2.1.7 Proposal 5

Proposed as a long-term/aspirational delivery and consists of the following upgrades to the Local Transport Network:

**Proposed New Road**

- 1 location. 7km. Requires new crossing of Castlebar River and one other unnamed river to the north of the study area

### 2.1.8 Proposal 6 (Auxiliary Proposals)

Proposal 6 map is presented in Appendix A.6. Proposal 6 is a medium-term delivery and consists of the following upgrades to the Local Transport Network:

**Upgrades to the Pedestrian Network**

- Upgraded Footpaths: Footpaths up to DMURS standards - 17km

**Upgrades to the Cycle Network**

- Upgraded Cycle Facilities up to DMURS standards - 6km

**Proposed Junction Upgrades**

- 1 location
- 2 Proposed Controlled Crossings (including crossing as part of proposed junction upgrades)

**Proposed permeability link**

- 9 new links
- 8 x Existing Permeability Links to be Upgraded

**Proposed Traffic Management**

- 2 locations with One-Way traffic flow

**Proposed Shared Streets**

- Variety of locations 5.5km

**Proposed Access Links**

- 4 new links

**Proposed New Active Travel Bridge**

- 1 location

## 2.2 Works locations

The proposed works are to take place in Castlebar town, Co. Mayo. This is a predominantly urban region, 22.75-hectares in area. The nearest watercourse is the Castlebar River, which runs along the eastern boundary of the town, with a downstream connection to the River Moy system.

The study area of Castlebar LTP which is in line with the Castlebar and Environs LAP boundary, includes all the key routes and encompasses a predominantly residential area with several

schools, retail outlets, employment centres, healthcare services and sports facilities. Investment in transport infrastructure will facilitate increased pedestrian and cycle movement across the town improving connectivity between businesses, schools, housing, places of worship.

Maps of the proposed works areas are presented in Appendix A. Proposals 1 and 2 are mostly at distance from Castlebar River, and to the SE side of Castlebar. No river crossings form part of these proposals.

Proposal 3 is confined to the built up area of Castlebar along existing routes.

Proposal 4 entails a new link road to the north-east of the town, and would involve a new road bridge crossing Castlebar River.

Proposal 5 is the NORR route - to the NW of Castlebar, and has two river crossings - one at an unnamed river that flows into Mallard Lough, and the other across the Castlebar River as it runs between Castlebar Lough and Lough Lannagh.

Proposal 6 is largely confined to existing streets, and around the town centre both north and south of the river.

# 3 Existing Environment

This section summarises the relevant existing environment within the Plan boundary and its surroundings. All relevant baseline data is information on the conditions necessary for the maintenance of European sites.

## 3.1 Species

Only records relating to the Annex II species of Natura 2000 sites are considered as part of this desktop study, or species that are characteristic or limited to Annex I habitats i.e. species that are intrinsic parts of a Qualifying Interest (QI) Annex I habitat. Only birds that are Species of Conservation Interest for SPAs in the zone of influence are considered in this assessment.

A custom polygon relating to the plan area was utilised to generate records from the National Biodiversity Data Centre (NBDC) database. Two Annex II species were identified within the plan area through this search - Otter *Lutra lutra* and Freshwater Crayfish *Austropotamobius pallipes*.

### 3.1.1 Otter

Otter have been recorded as present just north of the Plan area at Tuckers Lough Otter are also present south of Castlebar, and it should be assumed that they use Castlebar River, and other water features within the Plan area. *(source: NBDC records).*

### 3.1.2 White-clawed Crayfish

Records of White-clawed Crayfish are present from Castlebar River *(NBDC records (EPA dataset))*. Studies of crayfish populations in the River Moy SAC as part of monitoring under the habitats directive indicate population declines in the River Moy SAC at most of the monitoring sites, however sites to the south of the SAC (in Manulla River) hold important populations (Gammell et al. 2021). It is likely that ex-situ populations of crayfish (such as those in the Castlebar River) are important to the resilience of the SAC population of crayfish in the River Moy SAC.

### 3.1.3 Fish

IFI records for Castlebar River (taken at Ballynew in 2008, 2011 and 2016) indicate the presence of Salmon *Salmo salar,* Brown trout *Salmo trutta,* Lamprey species, European eel *Anguilla anguilla* and Roach *Rutilus rutilus* and Perch *Perca fluviatilis* (Inland Fisheries Ireland Data hub). Studies of juvenile lamprey in the Moy system indicate the presence of *Petromyzon marinus* within the Castlebar sub-catchment, although not in the Castlebar River at the time of survey (O'Connor 2004). Of these species Salmon, Lamprey (Sea Lamprey, Brook Lamprey *Lampetra planeri*), are QI species of the River Moy SAC.

### 3.1.4 Lesser Horseshoe Bat

A review of NBDC records and a roost dataset from the NPWS indicate presence of Lesser Horseshoe bats to the east of the plan area, with the nearest roost ~8km from the plan area boundary. Five roosts are recorded and monitored by NPWS/Bat Conservation Ireland within 15km of the plan area. The presence of these roosts is at the northern edge of the species distribution in Ireland. Of these 5 roosts, 3 are maternity roosts (Ballinafad SAC; Towerhill House SAC; Moore Hall (Lough Carra SAC)), 1 is likely disused, 1 is hibernation (also Towerhill House SAC).

### 3.1.5 Birds

I-webs data was examined with reference to QI species of Lough Cullin and Lough Conn SPA, to examine usage of the LTP area by QI birds. I-webs data was supplied by the Irish Wetland Bird Survey (I-WeBS), a scheme coordinated by BirdWatch Ireland under contract to the National Parks and Wildlife Service of the Department of Housing, Local Government and Heritage. There is one I-webs subsite within the plan area - Lough Saleen - and two others immediately adjacent: Lough Mallard and Islandeady Lough (part of the Castlebar Lakes/

Islandeady chain site). Along with other non-QI species, Tufted Duck and Common Gull are utilising the Castlebar Lakes/ Islandeady chain (both are QIs of the Lough Cullin and Lough Conn SPA).

Tufted Duck is recorded with an annual peak of 40 of the last 5 years, at the Islandeady subsite (compared with 600 for the Lough Cullin population). Common Gull are also recorded in low numbers (annual peak of 6 over the past 5 years at Lough Saleen).

It is likely that birds also utilise other waterbodies such as Tuckers Lough, Rathbaun Lough; Black Lough and Lough Lannagh either within or immediately adjacent to the LTP study area, but these are not monitored.

## 3.2 Surface Waterbodies

The main surface waterbody in Castlebar is the Castlebar River. This is part of the Moy and Killala Bay catchment, sub-catchment Castlebar_SC_010, Cod 34_21, (MapID 31_01_06). Part of the south-eastern part of the Plan area drains to the SE in sub-catchment Castlebar_SC_010, Code 34_22 (MapID 31_01_04). Both these are part of the larger River Moy and Killala Bay Catchment. The River Moy itself has an SAC designation, which covers some of its tributaries, although not the Castlebar River. See Figure 3-1.

The Plan area is hydrologically linked to River Moy SAC. From the edge of the Plan area to the SAC is 5.2km over land, and approximately 6.4km hydrologically.

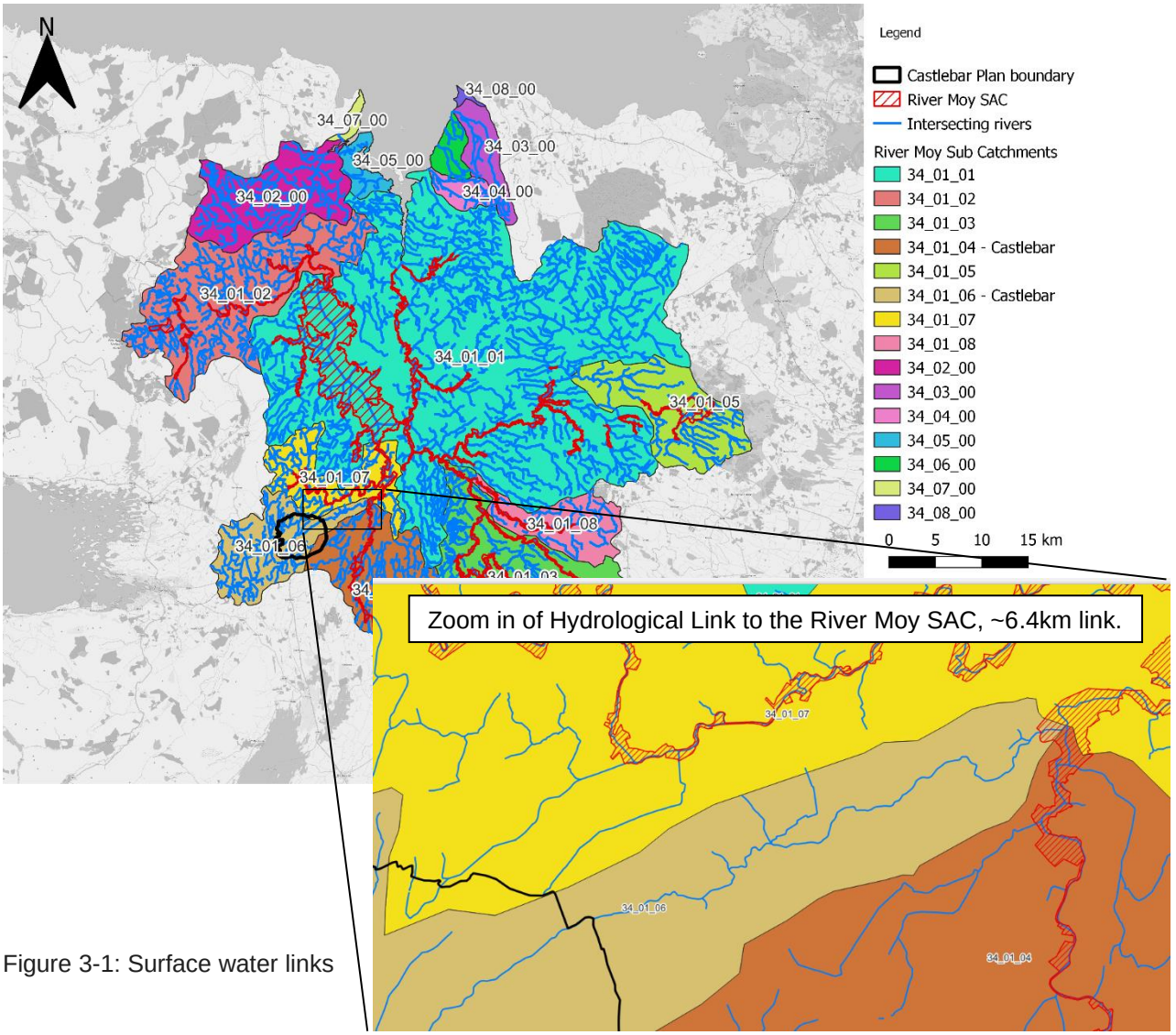



Figure 3-1: Surface water links

Parts of the Castlebar River, as part of the River Moy catchment, is assigned protection under the Salmonid Regulations (S.I. 293) and the stretch of river passing through the town is one of the reaches protected under these regulations. O'Reilly (1998) describes the Castlebar River as holding excellent stock of brown trout, particularly near Turlough Village.

There are a number of lakes within the Plan area - Saleen Lough, Black Lough, Lough Lannagh; Rathbaun Lough and others immediately adjacent - Castlebar Lough, Tuckers Lough and Mallard Lough. These surface water bodies are shown in Figure 3-2.

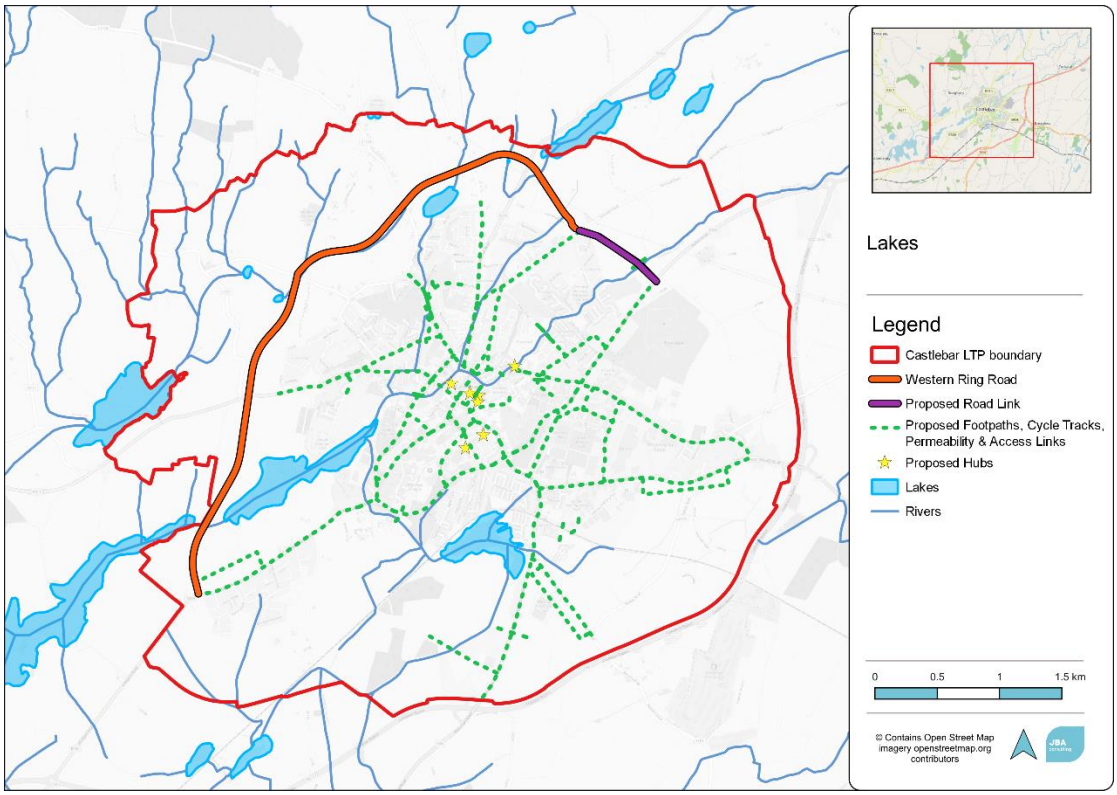



Figure 3-2: Lakes located within and adjacent to the plan boundary, with routes marked.

### 3.2.1 Water Framework Directive:

Under the Water Framework Directive (WFD), the Status of Castlebar Lough (2013 - 2018 ) has been assigned as "Moderate" (EPA 2021), and the Status of Castlebar River (2016-2021) is considered "Poor" (EPA 2021) in the lower half of the Plan area, but of "Moderate" Status towards the NE of the Plan area.

The 3rd Cycle Draft Moy and Killala Bay Catchment Report (HA 34) (Catchments Science & Management Unit 2021) identifies two nutrient sensitive areas (Castlebar River, and Lough Cullin) downstream of the urban area of Castlebar, but notes that objectives are being met through tertiary treatment at Castlebar WWTP.

Invasive species (zebra mussels) have been identified as a significant pressure in two lake waterbodies (Cullin and Castlebar lakes). Urban wastewater is no longer considered a significant pressure in Castlebar, but domestic wastewater remains a significant pressure in Castlebar River. Additionally diffuse urban pressures, caused by misconnections, leaking sewers and runoff from paved and unpaved areas, have been identified as a significant pressure in Castlebar (Catchments Science & Management Unit 2021). Decline in the water quality at Castlebar/Lannagh is a priority area for the Local Authorities Water Programme (LAWPRO) in the third cycle.

Issues related to urban run-off in Castlebar town are also likely to be considered for addressing as part addressing water quality; as well as potential issues related to agriculture, and domestic Wastewater (WFD Cycle 2, 2018: Catchment Moy & Killala Bay Sub-catchment Castlebar_SC_010, Code 34_22, catchments.ie).

## 3.3 Groundwater Bodies

Castlebar's town, and the plan boundary, are in a highly karstic region composed of Dark fine-grained limestone, thick-bedded pale limestone, minor shale and shale bedrock, with regions of red and green sandstone; however, there are no recorded karstic features (e.g. swallow holes/caves) within the Plan boundary.

The Plan area mostly lies on an aquifer with a good recharge coefficient rate that is composed of "Regionally Important Aquifer- Karstified (conduit)", and partially composed of "Locally Important Aquifer" (GSI, 2022). Table 3-1 indicates the types of rocks and soil in the area, and vulnerability mapping is presented in Figure 3-3.

Table 3-1: Features Influencing Aquifer Vulnerability using GSI Datasets

| | Source | Description (N = north of site, S = south of site) Site = Castlebar LTP Boundary |
|---|---|---|
| **Bedrock Geology 100k** | GSI | There are numerous bands of different bedrock types across the site. From south to north, these are:<br>Sandstone, pebbly conglomerate (N)<br>Silica poor, with analcime & olivine (N)<br>Dark limestone & shale, sandy oolite (N)<br>Dark cherty limestone, thin shale (S)<br>Dark fine-grained limestone, shale (S) |
| **Subsoils (Quaternary Sediment)** | GSI | Urban lithology<br>Till derived from limestones<br>Cut over raised peat |
| **Subsoil Permeability** | GSI | Moderate |
| **Teagasc Soils** | GSI | Majority Made ground<br>Deep well drained mineral (Mainly basic)<br>Mineral poorly drained (Mainly basic)<br>Cutover/cutaway peat<br>Shallow well drained mineral (Mainly basic) |

| | Source | Description (N = north of site, S = south of site) Site = Castlebar LTP Boundary |
|---|---|---|
| **Bedrock Aquifer** | GSI / EPA | Regionally Important Aquifer - Karstified (conduit)<br>Locally Important Aquifer - Bedrock which is Generally Moderately Productive (N)<br>Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones (N) |
| **Groundwater Recharge - Recharge Coefficient** | GSI | Majority of Plan Boundary is 20%<br>60 - 85% |
| **Groundwater Vulnerability** | GSI | High to Extreme (Figure 3-3) |
| **WFD Groundwater Body** | EPA | IE_WE_G_0034 - Not at risk (N)<br>IE_WE_G_0033 - Not at risk (S) |

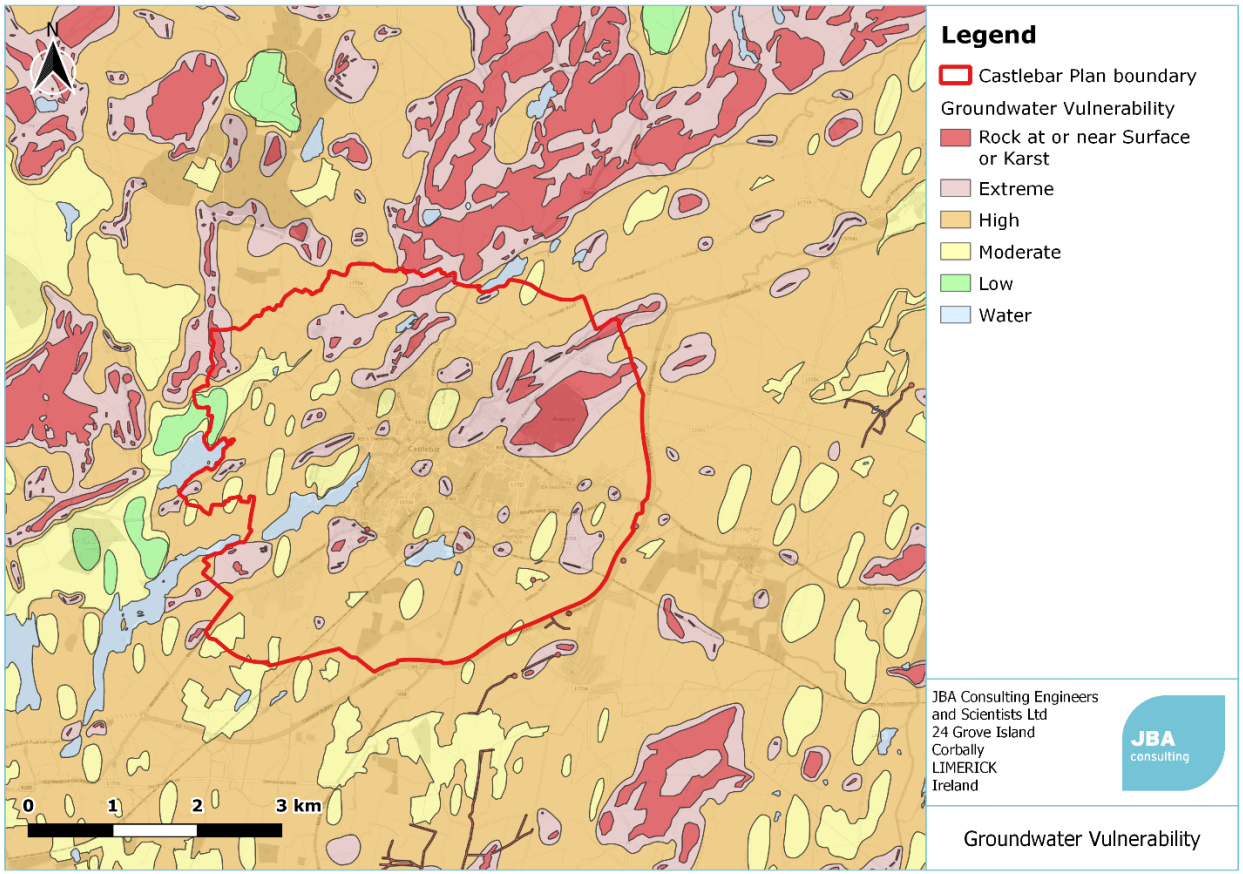



Figure 3-3: Groundwater Vulnerability within the Plan Area

The plan area is largely within the Swinford Groundwater Body (described as karstic bedrock), but the northern part of the plan area is within the Foxford Groundwater Body, which is described as poorly productive bedrock. There are number of karst features noted by the GSI in the south eastern part of the LTP area swallow-holes, turloughs and enclosed depressions.

## 3.4 Air Quality

The Air Quality Index for the area is overall good, with the nearest air quality station being Station 26 (EPA 2022), located at the EPA Office along John Moore Road.

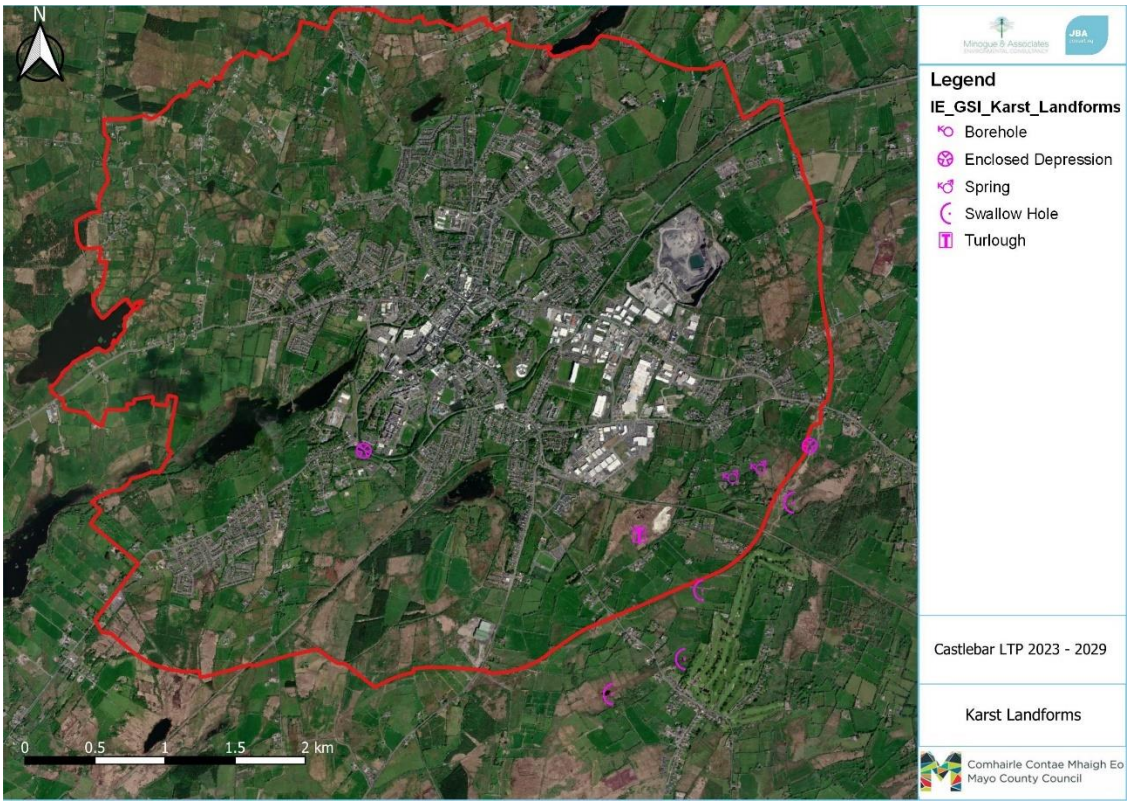



Figure 3-4: Karst Features at the site. Source: GSI

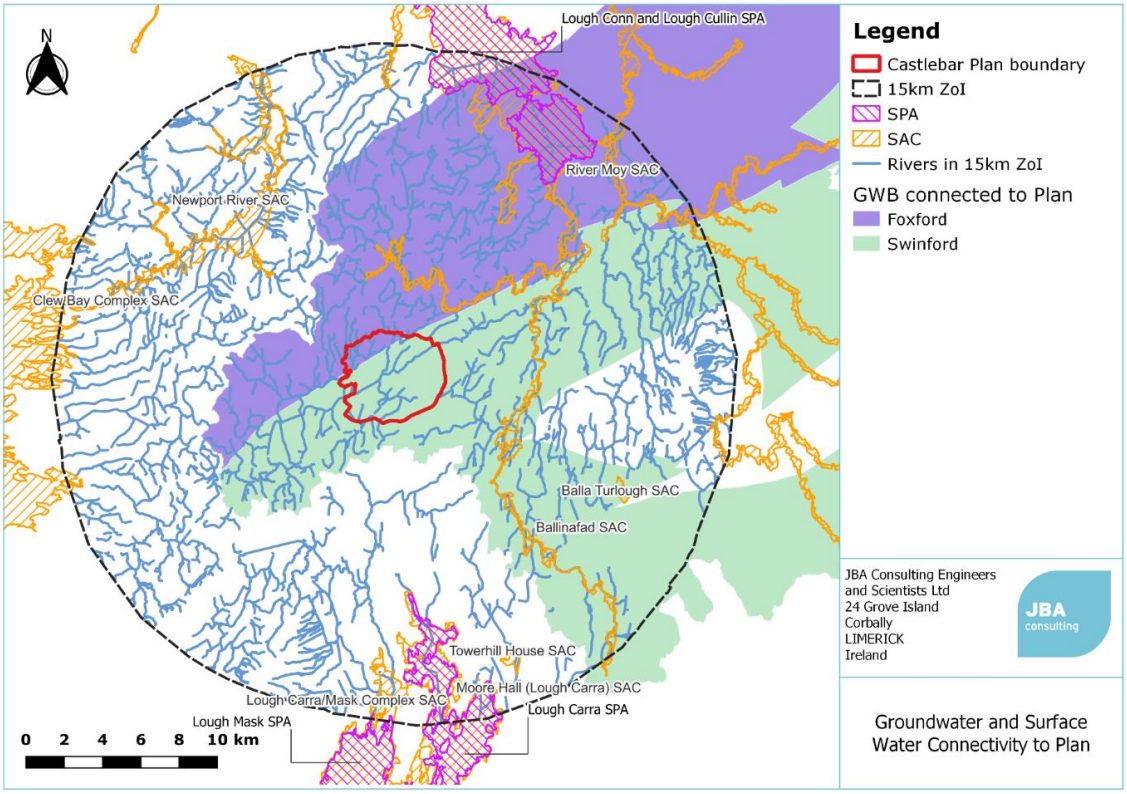



Figure 3-5: Groundwater and Surface Water Bodies connected to the Plan Boundary including the Foxford (north) and Swinford (south) GW Bodies.

# 4 Natura 2000 Sites, Pathways and Potential Impacts

This chapter outlines the zone of influence for the project. It identifies the Natura 2000 sites within the zone of influence and examines pathways to these Natura 2000 sites. It also identifies potential impacts which may arise resulting from the Castlebar LTP. The terms European site and Natura 2000 site are both utilised within this report (dependant on the source of information) - the terms Natura 2000 sites and European Sites are interchangeable within this report.

## 4.1 Zone of Influence

The Zone of Influence (ZoI) within which potential impacts from any proposed project or plan must be considered for significance depends on a variety of factors. This includes the nature, location and extent of the plan or project, the ecological receptors present within the European sites within the area and the potential for in-combination impacts (DoEHLG 2009). The DoEHLG (2009) guidance identifies that Screening for AA of a plan or project should consider the following European sites:

- Any European sites within or adjacent to the plan or project area.
- Any European sites within the likely ZoI of the plan or project. This is dependent on the nature and scale of the plan, with 15km generally recommended for plans, but potentially much less for projects.
- Any European sites that are more than 15km from the plan or project area, but may potentially be impacted upon, for example, through a hydrological connection.

When determining the ZoI for this Plan, the nature and scale of the proposed policies and objectives are considered in relation to the conservation objectives of the European sites that may be connected to the Plan. For an impact to occur, a Source (potential impacts from the Plan), Pathway (e.g., surface water, groundwater, land or air connectivity) and Receptor (Qualifying Interests (QIs) of the European sites) must be present.

## 4.2 Nature 2000 sites in ZoI

There are no European Sites located within the Plan area, with three SPAs and eight SACs within 15km of the plan area. These European Sites include:

- Lough Carra SPA
- Lough Conn and Lough Cullin SPA
- Lough Mask SPA
- Balla Turlough SAC
- Ballinafad SAC
- Clew Bay Complex SAC
- Lough Carra/Mask Complex SAC
- Moore Hall (Lough Carra) SAC
- Newport River SAC
- River Moy SAC
- Towerhill House SAC

Figure 4-1 displays the European site locations in relation to the Plan area. See Table 4-1 for the Qualifying Features for each European site.

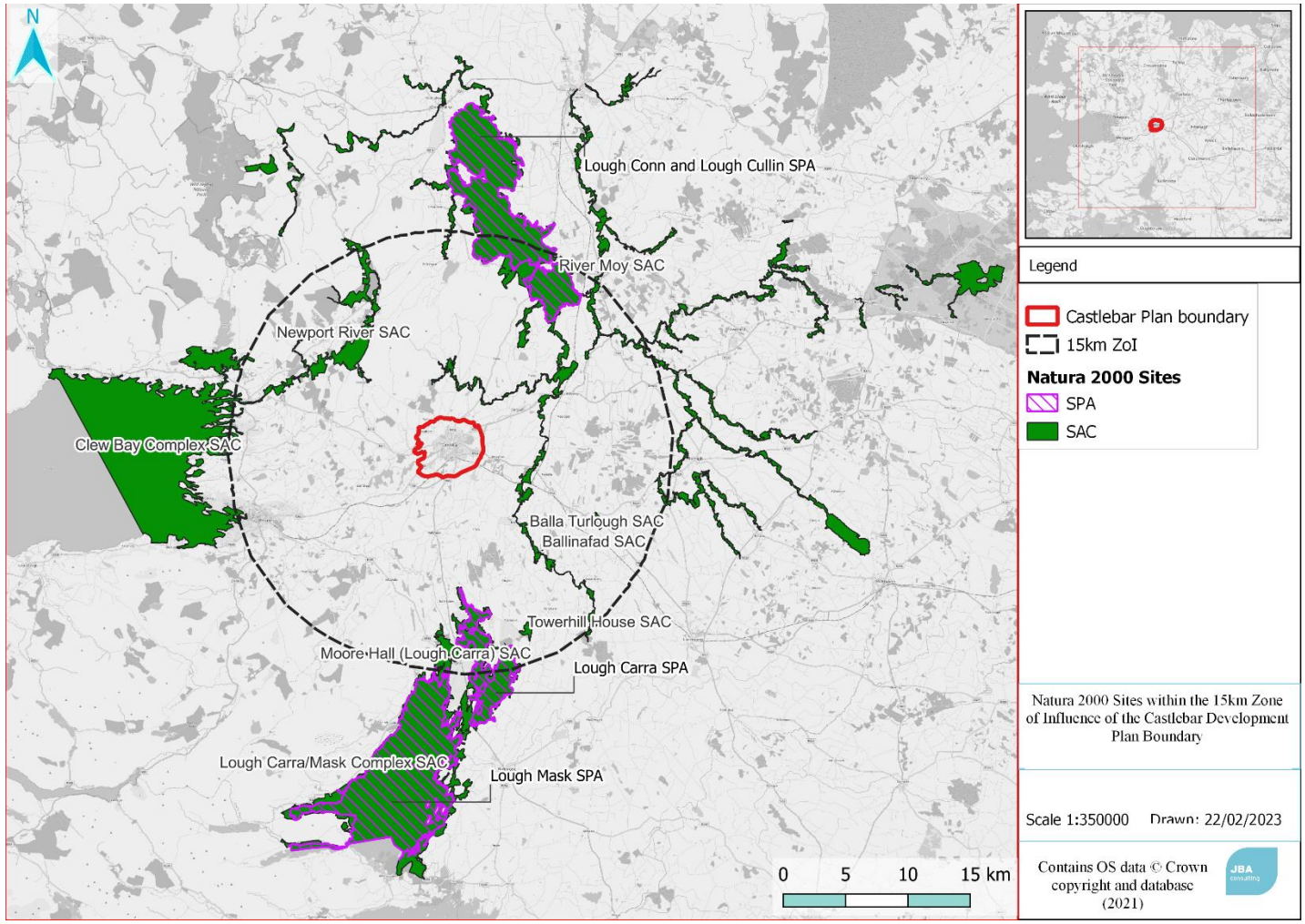



Figure 4-1: European sites located within 15km of the Plan area.

Table 4-1: European sites within 15km of the Plan area

| Site Code | Sites within 15km of Plan area | Distance from Plan | Qualifying Interests | Brief description of site |
|---|---|---|---|---|
| 002298 | River Moy SAC | 1.5km N, 6.4km hydrologically | Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*) [6510]<br>Active raised bogs [7110]<br>Degraded raised bogs still capable of natural regeneration [7120]<br>Depressions on peat substrates of the *Rhynchosporion* [7150]<br>Alkaline fens [7230]<br>Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0]<br>Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]<br>*Austropotamobius pallipes* (White-clawed Crayfish) [1092]<br>*Petromyzon marinus* (Sea Lamprey) [1095]<br>*Lampetra planeri* (Brook Lamprey) [1096]<br>*Salmo salar* (Salmon) [1106]<br>*Lutra lutra* (Otter) [1355] | Alluvial woodland occurs at several locations along the shores of the lakes. Some of the bogs include significant areas of active raised bog habitat. Alkaline fen is considered to be well developed within the site. An extensive stand occurs as part of a wetland complex at Mannin and Island Lakes on the Glore River. The Moy system is one of Ireland's premier Salmon waters, with Sea Lamprey, Brook Lamprey, Otter and White-clawed Crayfish also present. Forestry poses a threat in that sedimentation and acidification can occur. Sedimentation can cover the gravel beds resulting in a loss of suitable spawning grounds. |
| 002144 | Newport River SAC | 5.38km W | *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]<br>*Salmo salar* (Salmon) [1106] | Relatively short, flowing from Beltra Lough to the sea at Newport, Co. Mayo. Flows through wet grassland and wet heath. |
| 000463 | Balla Turlough SAC | 9.9km SW | Turloughs [3180] | Balla Turlough occurs at the northern edge of the main range of turloughs in Mayo and Roscommon and is one of very few within the Moy catchment. Overall, the turlough is of high ecological value for its range of unusual topographical features and vegetation communities. The amount and physical shape of the peat present here is of interest in offering a comparison with other northern turloughs where peat-cutting has been widespread. Turloughs are an increasingly rare habitat in Europe and Ireland, and Balla is important as an excellent example of an unusual turlough in a very natural condition. |
| 004228 | Lough Conn and Lough Cullin SPA | 10km NE | Tufted Duck (*Aythya fuligula*) [A061]<br>Common Scoter (*Melanitta nigra*) [A065]<br>Common Gull (*Larus canus*) [A182]<br>Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]<br>Wetland and Waterbirds [A999] | Situated in north Co. Mayo and are connected by a narrow inlet near Pontoon. Lough Conn is a traditional breeding site for gulls and terns. The site also supports a good diversity of wintering waterfowl species, including Greenland White-fronted Goose and a nationally important population of Tufted Duck. The occurrence of Greenland White-fronted Goose, Whooper Swan and Golden Plover is of note as these species are listed on Annex I of the E.U. Birds Directive. Part of the Lough Conn and Lough Cullin |

| Site Code | Sites within 15km of Plan area | Distance from Plan | Qualifying Interests | Brief description of site |
|---|---|---|---|---|
| | | | | SPA is a Wildfowl Sanctuary. |
| 002081 | Ballinafad SAC | 7.65km SE | *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303] | A breeding site for the Lesser Horseshoe Bat and consists of a large building which was formerly used as an agricultural college. The bats use the roof space which they access through roof hatches. Surrounding woodland provides suitable foraging habitat within a small radius of the day roost site, a feature which is of paramount importance to this species because it avoids flying across open spaces. Although the number of bats at this site is relatively low, the site is important as it is the most northerly point in Europe where this species is known to occur. |
| 001774 | Lough Carra/Mask Complex SAC | 8km S | Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110]<br>Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* [3130]<br>Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp*. [3140]<br>European dry heaths [4030]<br>Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210]<br>Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* [7210]<br>Alkaline fens [7230]<br>Limestone pavements [8240]<br>Alluvial forests with Alnus glutinosa and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* [91E0]<br>*Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303]<br>*Lutra lutra* (Otter) [1355]<br>*Hamatocaulis vernicosus* (Slender Green Feather-moss) [6216] | The underlying geology results in a good diversity of habitats, which support many scarce and rare plants and animals. Curramore House provides a summer breeding site of the Lesser Horseshoe Bat. Suitable features also make the area fit for otter foraging. |
| 004051 | Lough Carra | 8.15km S | Common Gull (*Larus canus*) [A182] | One of the prime examples in Ireland of a hard water marl lake. It is fringed by a diverse complex of limestone and wetland habitats. The wetland habitats include both Great Fen-sedge (*Cladium mariscus*) fen and alkaline fen. In addition to the fen habitats, there are widespread reed swamps, wet grassland and some freshwater marsh communities around the lakeshores. |
| 002179 | Towerhill House SAC | 11.75km S | *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303] | Offers ideal winter hibernation conditions as it is humid and remains at a constant temperature, with very little disturbance from visitors. Notable for being along the northern limit of the distribution of the species in Europe. Commercial tree felling |

| Site Code | Sites within 15km of Plan area | Distance from Plan | Qualifying Interests | Brief description of site |
|---|---|---|---|---|
| | | | | would pose a negative impact on bat roosts. Macro-invertebrate community of the wetland area is also of interest, containing elements characteristic of littoral lacustrine and slow flowing riverine habitats. There is also a high diversity of aquatic beetle species at this site. |
| 000527 | Moore Hall SAC | 12.85km S | *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303] | Three distinct areas used by the bats at this site: a two-storey former dwelling which is used as a summer breeding site; a series of cellars and adjoining underground passage which are used as winter hibernation sites; and an underground passage in a small stone building, bats have uninterrupted access to all sites. |
| 001482 | Clew Bay Complex SAC | 13.76 W | Mudflats and sandflats not covered by seawater at low tide [1140]<br>Coastal lagoons [1150]<br>Large shallow inlets and bays [1160]<br>Annual vegetation of drift lines [1210]<br>Perennial vegetation of stony banks [1220]<br>Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]<br>Embryonic shifting dunes [2110]<br>Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]<br>Machairs (* in Ireland) [21A0]<br>Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]<br>*Vertigo geyeri* (Geyer's Whorl Snail) [1013]<br>*Lutra lutra* (Otter) [1355]<br>*Phoca vitulina* (Harbour Seal) [1365] | Wide, west-facing bay on the west coast of Co. Mayo. The geomorphology of the bay has resulted in a complex series of interlocking bays creating a wide variety of marine and terrestrial habitats. Important populations of Otter and Common (Harbour) Seal are found in Clew Bay, and the snail species *Vertigo geyeri*, which is also listed on Annex II of the E.U. Habitats Directive, has been recorded from this site. |
| 004062 | Lough Mask SPA | 14.55km S | Tufted Duck (*Aythya fuligula*) [A061]<br>Black-headed Gull (*Chroicocephalus ridibundus*) [A179]<br>Common Gull (*Larus canus*) [A182]<br>Lesser Black-backed Gull (*Larus fuscus*) [A183]<br>Common Tern (*Sterna hirundo*) [A193]<br>Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]<br>Wetland and Waterbirds [A999] | The sixth largest lake in the country. Lough Mask is one of the most important inland gull breeding sites in the country, with nationally important populations of three gull species. It also has a nationally important colony of Common Tern. The site supports a good diversity of wintering waterfowl, including a nationally important population of Tufted Duck. The site is also regularly utilised by a proportion of the Erriff/Derrycraff population of Greenland White-fronted Goose. The occurrence of three species, Whooper Swan, Greenland White-fronted Goose and Common Tern is of note as these species are listed on Annex I of the E.U. Birds Directive. Part of Lough Mask SPA is a Wildfowl Sanctuary. |

## 4.3 Potential Impacts on European Sites

While many of the projects associated with the LTP are very small in scale and are likely to have impacts only associated within the footprint of the works, some of the projects such as extension to the road network may have significant effects on the Natura 2000 Network via loss of supporting habitat for Annex II species; changes in emissions (air pollution) from traffic; stormwater run-off via the road drainage network with contaminants such as hydrocarbons.

Works in the road networks can also impact on site, e.g. road widening can involve changes to the storm water drainage network along the road. This can lead to contaminated run-off via the storm water network, which often discharges to local rivers - in this case potentially with a hydrological link to the River Moy SAC. Any changes in services (water mains, foul sewers) associated with changes to the road network can also mean relatively deep excavations which may require dewatering. Dewatering of excavations is frequently a source of contamination, due to construction works utilising the stormwater network to dispose of the dewatered excavations in an uncontrolled manner.

Any works which may require instream works during the construction stage, such as new pedestrian/cycle bridges are also potentially sources of impact. Increased sedimentation from instream works or the release of turbid water via the storm water network can result in habitat degradation e.g. sediments can cover the river bed and directly reduce the levels of oxygen available to fish spawning beds by smothering; sedimentation can result in nutrient enrichment causing an increase in algal growth, which can deplete oxygen and reduce light to the river bed. While outside the SAC network, particularly at a plan level for aquatic species, consideration needs to be given to the presence of ex-situ QI species, as fish and other aquatic QI will utilise the catchment as a whole, and the populations inside and outside the SAC will be linked.

Even outside the Natura 2000 Network effects on linear features such as hedgerows by new lighting or road widening can affect crucial commuting routes to foraging habitat for Annex II species such as Lesser Horseshoe Bat. Additionally, cycleways and walkways which follow natural linear landscape features (hedgerows/rivers) can also result in disturbance to mammals such as otter which may utilise riparian habitat for cover. All routes may result in effects on birds or other receptors sensitive to noise or increased disturbance during construction and or ongoing use of the area by humans/traffic.

Disturbance effects from routes may include long-term effects associated with the operational phase of proposed projects. Short-term effects will also arise from construction phases.

As outlined in the EC guidance on the assessment of plans and projects affecting European sites (European Commission 2021) examples of impacts that could potentially occur through the implementation of Plans are as follows: habitat loss, degradation, disturbance, fragmentation, indirect effects (invasive species; human and animal penetration; additional development). Hazards are described in Table 4-2 below:

Table 4-2: Potential Hazards to European sites

| Potential Hazard | Description |
|---|---|
| Habitat loss | This is a loss of habitat within the designated boundaries of a European site – it is expected that there would be no direct loss resulting from implementation of the LTP, as there is no overlap in plan areas with Natura 2000 Sites. |
| Habitat fragmentation | Change in comparison with the original and desired states (e.g. creation of several small habitat patches instead of one large one, hectares of habitat exposed to the edge effect). Most likely to affect species. |
| Changes in physical regime | These are changes to physical process that will alter the present characteristics of the European site e.g., fluvial, and geomorphological processes, erosion processes, deposition. |
| Physical damage | This includes recreational pressures such as trampling and erosion, and where sites are close to urban areas, other damaging activities may occur such as rubbish tipping, vandalism, arson, and predation, particularly by cats. |
| Habitat/community simplification | Changes to environmental conditions, due to human activities, which result in a reduction and fragmentation of habitats that will reduce biodiversity. |
| Disturbance (noise, visual) | Activities which result in disturbance, causing sensitive birds and mammals to deviate from their normal, preferred behaviour, such as construction, |

| | |
|---|---|
| | recreation, traffic. |
| Competition from invasive non-native species | Activities may cause the introduction or spread of invasive non-native animals and plants, which could result in changes to community composition and even to the complete loss of native communities. |
| Changes in water levels or tables | Activities that may affect surface and groundwater levels, such as land drainage and abstraction, may have adverse impacts on water dependant habitats and species. |
| Changes in water quality | Activities that may impact upon water quality, such as accidental pollution spills, run-off from urban areas, nutrient enrichment from agriculture, and discharge from sewage works, may adversely affect wetland habitats and species. |
| Changes to surface water flooding | Activities that may result in a reduction or increase in the frequency and extent of surface water flooding, which may affect riverine and floodplain habitats |
| Turbidity and siltation | Increases in turbidity within water environments can impact upon aquatic plants, fish and wildfowl due to sedimentation and reduction in penetrable light. |
| Pollution | Activities that may lead to the release of pollutants to the air such as oxides of nitrogen, oxides of sulphur or ammonia, or pollutants deposited on the ground through acidification or terrestrial eutrophication via soil (deposition of nitrogen). |

### 4.3.1 Qualifying Interests and Sensitivity to Hazards

Table 4-3 shows the qualifying features of the European sites within ZoI of the Castlebar Plan area and identifies the hazards to which they are most sensitive.

It must be noted that during the assessment of the likely significant effects of the LTP on a European site, all the potential hazards will be considered.

Table 4-2: Sensitivity of Qualifying Features to Potential Hazards

| European site | Qualifying Interest | Habitat loss | Habitat fragmentation | Changes in physical regime | Physical damage | Habitat/ community simplification | Disturbance (noise/visual) | Competition from invasive non-native species | Changes in water levels or table | Changes in water quality | Changes to surface water flooding | Turbidity and siltation | Pollution |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **River Moy SAC** | Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*) | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | ✓ |
| | Active raised bogs<br>Degraded raised bogs still capable of natural regeneration<br>Depressions on peat substrates of the *Rhynchosporion* | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| | Alkaline fens | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| | Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | | | | ✓ |
| | Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae*) | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| | *Austropotamobius pallipes* (White-clawed Crayfish) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| | *Petromyzon marinus* (Sea Lamprey)<br>*Lampetra planeri* (Brook Lamprey)<br>*Salmo salar* (Salmon) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| | *Lutra lutra* (Otter) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Newport River SAC** | *Margaritifera margaritifera* (Freshwater Pearl Mussel)<br>*Salmo salar* (Salmon) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| **Balla Turlough SAC** | Turloughs | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Lough Conn and Lough Cullin SPA** | Tufted Duck (*Aythya fuligula*)<br>Common Scoter (*Melanitta nigra*)<br>Common Gull (*Larus canus*)<br>Greenland White-fronted Goose (A*nser albifrons flavirostris*) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Wetland and Waterbirds | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Ballinafad SAC** | *Rhinolophus hipposideros* (Lesser Horseshoe Bat) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| **Lough Carra/Mask Complex SAC** | Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)<br>Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea*<br>Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp*. | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| European site | Qualifying Interest | Habitat loss | Habitat fragmentation | Changes in physical regime | Physical damage | Habitat/ community simplification | Disturbance (noise/ visual) | Competition from invasive non-native species | Changes in water levels or table | Changes in water quality | Changes to surface water flooding | Turbidity and siltation | Pollution |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* | ✓ | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | | ✓ |
| | Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) | ✓ | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | | ✓ |
| | Alkaline fens | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| | European dry heaths | | | | | | | | | | | | |
| | Limestone pavements | | | | | | | | | | | | |
| | Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae*) | | | | | | | | | | | | |
| | *Rhinolophus hipposideros* (Lesser Horseshoe Bat) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| | *Lutra lutra* (Otter) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | *Hamatocaulis vernicosus* (Slender Green Feather-moss) | ✓ | ✓ | | ✓ | | | | ✓ | | ✓ | | ✓ |
| **Lough Carra** | Common Gull (*Larus canus*) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Towerhill House SAC** | *Rhinolophus hipposideros* (Lesser Horseshoe Bat) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| **Moore Hall SAC** | *Rhinolophus hipposideros* (Lesser Horseshoe Bat) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| **Clew Bay Complex SAC** | Mudflats and sandflats not covered by seawater at low tide<br>Coastal lagoons<br>Large shallow inlets and bays<br>Embryonic shifting dunes | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Annual vegetation of drift lines<br>Perennial vegetation of stony banks | ✓ | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| | Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)<br>Machairs (* in Ireland) | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| | Old sessile oak woods with Ilex and Blechnum in the British Isles | ✓ | | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ |
| | *Vertigo geyeri* (Geyer's Whorl Snail) | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| | *Lutra lutra* (Otter)<br>*Phoca vitulina* (Harbour Seal) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| European site | Qualifying Interest | Habitat loss | Habitat fragmentation | Changes in physical regime | Physical damage | Habitat/ community simplification | Disturbance (noise/ visual) | Competition from invasive non-native species | Changes in water levels or table | Changes in water quality | Changes to surface water flooding | Turbidity and siltation | Pollution |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lough Mask SPA** | Tufted Duck (*Aythya fuligula*)<br>Black-headed Gull (*Chroicocephalus ridibundus*)<br>Common Gull (*Larus canus*)<br>Lesser Black-backed Gull (*Larus fuscus*)<br>Common Tern (*Sterna hirundo*)<br>Greenland White-fronted Goose (*Anser albifrons flavirostris*) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Wetland and Waterbirds | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

## 4.4 Pre-screening of Natura 2000 sites and Annex II Species within 15km of the Plan area

Ten European sites are located within 15km of the Plan boundary. No further sites are hydrologically linked up to 20km.

Some of these European Sites can be screened out based on lack of viable impact pathways from the Plan area. In Table 4-4 below, these sites are screened for pathways including surface water, groundwater, and air pathways, as well as disturbance to species if applicable. Natura 2000 sites are screened-in if at least one pathway is identified.

An initial screening of sites within 15km has been retained, but an examination of some species-specific characteristics will also be utilised for screening in/out sites with a designation for a QI species i.e. Lesser Horseshoe Bat. The boundary of these Natura 2000 sites often just protect the roost itself, so protection of foraging area and commuting routes outside of the site intrinsic to the protection of the SAC must be considered at the wider level.

### 4.4.1 Annex II Species - Lesser Horseshoe Bat

The optimal foraging habitats for Lesser Horseshoe Bat are deciduous woodlands, riparian vegetation and mature hedgerows within a few kilometres of a roost. A Core Sustenance Zone of 2.5km has been described as part of the Conservation Objectives for the species (NPWS 2018), and as part of the Species Action Plan (NPWS and Vincent Wildlife Trust 2022).

The nearest known presence of a Lesser Horseshoe Bat roost is ~8km from the Plan area, with four others within the 15km initial zone of influence identified. Four of these five roosts within the 15km buffer are protected via SAC status (See Section 3.1.4).

The distances of 8+km to the SAC sites with Lesser Horseshoe Bat as a QI indicates that it is highly unlikely that there are links between the Plan area and the SACs, even considering the maximum extended foraging range observed in radio-tracking surveys (Bontadina et al. 2002), (Rush and Billington 2014), with a maximum of 4.2km and 4.74km observed in those studies respectively. Given the distance to the SACs; and the Core Sustenance Zone of 2.5km, the potential for significant effects on SAC populations is considered negligible, the zone of influence is kept at 2.5km for the purposes of the assessment.

However, the potential for both previously unknown roosts, or the expansion of the range is not to be discounted. Considerations for protection at the landscape level in terms of lighting design and protection of linear landscape features would be beneficial to the Lesser Horseshoe Bat and other bat species (all of which are Annex IV species), and these are considered in the Strategic Environmental Assessment for the LAP and LTP.

Table 4-3: European Sites Pre-Screening based on ZOI and Potential Pathways

| Site Code | European Sites within 15km of Plan area | Distance from Plan | Surface water pathway | Groundwater pathway | Air Pathway | Disturbance pathway | Potential Pathway? |
|---|---|---|---|---|---|---|---|
| 002298 | River Moy SAC | 1.5km | Yes - 6.4km downstream. | The Plan area is located largely within the Swinford Groundwater Body. The only Natura 2000 Site with a groundwater connection to the LTP area is the River Moy SAC, where a stretch of the river is present in the same groundwater body. No groundwater dependent QI habitats have been identified as being present within the same groundwater body, although it should be noted that alkaline fen habitats are present within the LTP study area. It is likely that the groundwater within the plan area will be largely connected to the surface watercourses in the area (the Castlebar River that flows through the town, and its tributary that runs along the east of the LTP area). Despite the karstic nature of the plan area, upon examination no functional groundwater pathway to the River Moy SAC has been identified. | Possible pathway, due to location (NE, receiving SW winds) and proximity (1.5km).<br><br>An overall improvement is anticipated in the air quality as a result of the project, given the improvement in sustainable transport pathways. Additionally, the modal shift to electric car will reduce emissions, promoted by facilitation of charging points in this plan.<br>Some localised changes in the distribution of settlement of air particles may be anticipated, primarily in terms of ongoing emissions from vehicles on from road routes. The biggest project in the LTP i.e. the NORR route is indicative/aspirational, and options assessment at the project stage will take the vehicle air emissions into account. Some construction related emissions may also occur from dust generated during the construction process but these will be localised and temporary. Overall, given the distance to the Natura Network and the dispersion of particles involved, as well as the lowering of overall of the emissions, no significant impact on the Natura 2000 Network is anticipated (using guidance on sensitive receptors from (IAQM 2014) and (UK Highways Agency 2019)). | Weak pathway for direct disturbance. However, species which utilise the River Moy SAC may also use the Castlebar River (ex-situ habitat for species). | Surface water. weak disturbance |
| 002144 | Newport River SAC | 5.38km | No - Separate surface waterbody | No. Separate GWB (Clifden Castlebar IE_WE_G_0017). | No - Unlikely pathway due to distance and direction (NW) from Plan boundary and air dispersion | No - no direct disturbance pathway between the Plan area and QI species, as there is no hydrological connection | No |
| 002081 | Ballinafad SAC | 7.65km | No - no hydrological connection | No. QI features are not groundwater dependent. | Unlikely pathway due to distance | No - Lesser Horseshoe Bat are a qualifying interest but are not expected to be impacted upon by the LTP. | No |
| 001774 | Lough Carra/Mask Complex | 8km | No - Separate hydrological unit (Corrib) | No - closest Groundwater body to Plan is Ballyhean IE_WE_G_0022 but is outside of the Plan area | Unlikely pathway due to distance | No - Terrestrial and aquatic habitats, as well as limestone features are not expected to be impacted due to the | No |

| Site Code | European Sites within 15km of Plan area | Distance from Plan | Surface water pathway | Groundwater pathway | Air Pathway | Disturbance pathway | Potential Pathway? |
|---|---|---|---|---|---|---|---|
| | SAC | | | | | distance from the Plan boundary.<br>Lesser Horseshoe Bat and Otter are qualifying interests but are not expected to be impacted upon by noise or visual disturbance due to distance from the LTP. | |
| 004051 | Lough Carra SPA | 8.15km | No - Separate hydrological unit (Corrib) | No - closest Groundwater body to Plan is Ballyhean IE_WE_G_0022 but is outside of Plan boundary | Unlikely pathway due to distance | No - Common Gull are a qualifying interest but are not likely to be present in Plan area to be at risk of increased recreational pressures | No |
| 000463 | Balla Turlough SAC | 9.9km | No surface water connection. | QI is groundwater dependent, and in the same GW body. However, the distance and direction of the GW flow, presence of surface water features indicates no connection. No functional pathway identified. | Unlikely pathway due to distance | N/A - No species QI | No |
| 004228 | Lough Conn and Lough Cullin SPA | 10km | Pathway identified. Part of the River Moy Hydrological unit. But >15km downstream. Pathway considered not functional. | Pathway identified. Foxford GWB IE_WE_G_0034 is overlapping with part of the plan area. However, distance, and poorly productive bedrock means pathway is not functional. | Unlikely pathway due to distance | Yes - SPA birds are present within the LTP area. NORR route passes between Lough Lannagh and Castlebar Lough. | Yes - disturbance |
| 002179 | Towerhill House SAC | 11.75km | No - Separate hydrological unit (Corrib) | No. QI features are not groundwater dependent. | Unlikely pathway due to distance | No - Lesser Horseshoe Bat are a qualifying interest but are not expected to be impacted upon by the Plan. | No |
| 000527 | Moore Hall SAC | 12.85km | No - Separate hydrological unit (Corrib) | No. QI features are not groundwater dependent. | Unlikely pathway due to distance | No - Lesser Horseshoe Bat are a qualifying interest but are not expected to be impacted upon by the Plan. | No |
| 001482 | Clew Bay Complex SAC | 13.76km | No - Separate hydrological unit (Errif-Clew Bay) | No. Separate GWB Newport IE_WE_G_0023 | Unlikely pathway due to distance | No - Terrestrial and aquatic habitats, as well as limestone features are not expected to be impacted due to the distance from the Plan boundary.<br>Harbour Seal and Otter are qualifying interests but are not expected to be impacted upon by noise or visual disturbance due to distance from the LTP area. | No |
| 004062 | Lough Mask SPA | 14.55km | No - Separate hydrological unit (Corrib) | No. Separate GWB Killavally IE_WE_G_0018 | Unlikely pathway due to distance | No - distance from Plan area indicates a non-functional pathway. | No |

## 4.5 Summary of Pre-Screening

Due to lack of pathways based on preliminary screening of Sites within the ZoI of 15km (Table 4-4), the following European Sites will not be further assessed for potential impacts:

- Newport River SAC
- Ballinafad SAC
- Lough Carra/Mask Complex SAC
- Lough Carra SPA
- Balla Turlough SAC
- Towerhill House SAC
- Moore Hall SAC
- Clew Bay Complex SAC
- Lough Mask SPA

The European sites that have been identified which contain a pathway-receptor for potential likely significant effects arising from the implementation of the Plan are:

- River Moy SAC - for surface water, groundwater and localised air pathway
- Lough Conn and Lough Cullin SPA - disturbance pathway.

# 5 Other Relevant Plans and Projects

## 5.1 Cumulative Effects

As part of the Screening for an Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region that may induce cumulative impacts must also be considered at this stage.

The following projects or plans were identified as potential sources of cumulative impacts:

## 5.2 Plans

- Draft Castlebar Town & Environs Local Area Plan 2023-2029
- Mayo County Development Plan 2021-2027
- National Planning Framework - Project Ireland 2040
- Mayo County Council Climate Change Adaptation Strategy
- Third Cycle River Basin Management Plan for Ireland (2022-2027)
- Planning Applications (retrieved from Data.gov.ie - Planning Application Sites, December 2022)

### 5.2.1 Draft Castlebar Town & Environs Local Area Plan 2023-2029

This is the draft of latest local area plan for Castlebar, seeking to replace the Castlebar LAP 2008-2014, and has recently gone through a public consultation process.

The Plan was prepared by May County Council to set out the overall strategy for the improvement of the overall plan area. The Plan seeks to promote the social, economic, cultural and physical development of the plan area and create an integrated, vibrant and sustainable living, working and recreational environment.

Where appropriate, policies contained in City/ County Development Plans are developed in more detail at the local level through the preparation of local area plans, area action plans and site development briefs. Under the provisions of the Planning and Development Act & Regulations, 2000/2001 (as amended), a planning authority may at any time and for any particular area within its functional area, prepare a local area plan in respect of that area. Given the importance of Farranferris to the city and the need to identify a future use for the building and associated lands the City Council identified the Farranferris Area as a priority area where more detailed planning and development guidance was required.

The Plan is a statutory Local Area Plan which outlines a vision for the future development and improvement of the Castlebar area. It considers future land use zoning and objectives outlined in the May County Development Plan. The Plan is part of a hierarchy of planning and development guidance from local to national level. The Plan falls within the context of the planning policy as in the Mayo County Development Plan as described below.

**Therefore, provided that any works that may occur as a result of the Plan are assessed for individually or included in the NIS for the Plan, the Plan should not significantly adversely impact on relevant Natura 2000 sites in combination with the proposed LTP.**

### 5.2.2 Mayo County Development Plan 2021-2027

The draft Mayo County Development Plan (MCDP) (2021 - 2027), to replace the MCDP 2014 – 2020, has been prepared in accordance with the Planning and Development Act 2000. The plan was adopted at a Special Planning Meeting on 29 June 2022. The Plan is now in effect as and from 10 August 2022.

The plan sets out the overall strategy for planning and sustainable development for the county. Chapter 10 of the plan outlines the aims of the Mayo County Council to protect and enhance the natural heritage and biodiversity of designated and non-designated ecological sites and sets out the policies and objectives for this. The Castlebar LAP complements the implementation of the current MCDP.

The Natura Impact Report is being produced to assess potential impacts to European Sites as a result of the plan. Actions that may arise from the Mayo CDP will be considered at a project level where appropriate, which will ensure that any cumulative or in-combination impacts are addressed. However,

due to the high-level nature of this Plan, it is not possible to determine with confidence the likely impacts or mitigation measures required yet in detail.

**Therefore, provided that any works that may occur as a result of the Plan are assessed for individually, or included in the NIS for the Plan, the Plan should not significantly adversely affect relevant European Sites in combination with the proposed LTP.**

### 5.2.3 National Planning Framework - Project Ireland 2040

National Planning Framework - Project Ireland 2040 is the government's long-term overarching strategy to make Ireland a better country for all of its people. Alongside the development of physical infrastructure, Project Ireland 2040 supports business and communities across all of Ireland in realising their potential. The National Development Plan and the National Planning Framework combine to form Project Ireland 2040. Development of infrastructure may have localised adverse impacts. Actions that may arise as a result of Project Ireland 2040 will be considered at a project level, which will ensure that any cumulative or in-combination impacts are addressed. Due to the high-level nature of this Plan, it is not possible to determine with confidence the likely impacts or mitigation measures required yet in detail.

**Provided that any works that may occur as a result of the Plan are assessed for individually, or included in the NIS for the Plan, the Plan should not significantly adversely affect relevant European Sites in combination with the proposed LTP.**

### 5.2.4 Third Cycle River Basin Management Plan for Ireland 2022-2027 (DoHPLG, 2022)

The first cycle of River Basin Management Plans included the Eastern River Basin District - River Basin Management Plan (ERBDMP) 2009 – 2015 (WFD (2010). The plans summarised the waterbodies that may not meet the environmental objectives of the WFD by 2015 and identified which pressures are contributing to the environmental objectives not being achieved. The plans described the classification results and identified measures that can be introduced in order to safeguard waters and meet the environmental objectives of the WFD.

- Prevent deterioration of water body status.
- Restore good status to water bodies.
- Achieve protected areas objectives.
- Reduce chemical pollution of water bodies.

The second cycle changed the first to merge and include all River Basin Districts in as one national River Basin District, with planning to provide a more coordinated framework to improve the quality of water for public health, the environment, water amenities and to sustain water-intensive industries which include agri-food and tourism.

The third and current cycle aims to build particularly on the initiatives of the second cycle, particularly the governance and implementation structures, and to improve the establishment of Irish Water, An Forum Uisce, the Local Authority Waters Programme and the Agricultural Sustainability Support and Advisory Programme.

**Therefore, the Plan should not significantly adversely affect relevant European Sites in combination with the proposed LTP.**

### 5.2.5 Mayo County Council Climate Change Adaptation Strategy

Mayo Co. Co. has developed a 5-year Climate Adaptation Strategy – Climate Ready Mayo which sets out a vision for a climate ready County, that understands how climate change will affect their communities and businesses. As well as setting out how the County will work together to reduce the risk and avail of the opportunities that climate change will bring. The strategy has been through a Strategic Environmental Assessment Screening and an AA screening, where the AA concluded that the strategy will have no significant effect on European sites.

**Therefore, the Plan should not significantly adversely affect relevant European Sites in combination with the proposed LTP.**

## 5.3 Summary

The staggered short-to-medium-term deliveries of Schemes 1, 2, 3, and 4 as part of the project do not have the potential for overlapping construction and short-term residual impact phases with the proposed development and therefore these developments will not result in potential in-combination or cumulative impacts with regard to their location to the local Natura 2000 sites.

Scheme 5 of the project has been deemed to pose a potential threat to the quality of the Natura 2000 site as listed in Section 4. Therefore, Scheme 5 of the Local Transport Plan is to be assessed as below.

# 6 Screening Assessment

## 6.1 Introduction

This screening exercise will focus on assessing the likely adverse effects of the Plan on the Natura 2000 site(s) identified in Section 4 above.

This section identifies the potential impacts which may arise as result of the proposed Plan. It then goes on to identify how these impacts could potentially impact on Natura 2000 sites. The significance of potential impacts is also assessed, with any potential in-combination effects also identified.

The Natura 2000 site to be assessed are:

- River Moy SAC [002298]
- Lough Conn and Lough Cullin SPA [004228]

This section aims to identify whether the proposed Plan objectives, or projects associated with it, are likely to have a significant effect, either alone, or in-combination with other projects and plans, on the European Sites within the ZoI.

The 'screening' process addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3) of the Habitats Directive:

- Is the plan or programme directly connected to or necessary for the management of the site; and
- Will the plan or programme, alone or in-combination with other plans and projects, have a significant effect on a European site in view of its conservation objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, then the plan or programme that is under assessment is subject to a Stage 2 Appropriate Assessment, reported in the form of a NIR.

The objectives and associated projects of the Castlebar LTP are not directly connected to the management of any European Sites; however, they could have potential to cause significant effects on European Sites.

## 6.2 Screening methodology

In accordance with DEHLG guidance, the key to determining if an AA is required for a Plan, is in the assessment of whether the plan and its policies and objectives are likely to have a significant effect on a European site.

For this process, the screening of this plan has been broken down into 4 steps.

1. Description of the plan (Section 2);
2. Screening of European sites within the ZoI of the plan dependent on the presence of potential pathways and nature of the qualifying interests.
3. Assessing the objectives and projects to identify potential impacts. Determining the significance of these potential impacts and the requirement for follow up assessments.
4. Screening Statement with conclusions. This is presented in Section 6.5

### 6.2.1 The Precautionary Principle

If there is uncertainty, and it is not possible, based on the information available, to confidently determine no likely significant effects on a site then the precautionary principle will be applied, and the plan will be subject to an AA.

### 6.2.2 Mitigation, Avoidance and Protective Measures

Following the *People over Wind & Sweetman v Coillte Teoranta* Case C-323/17, the assessment does not consider protective, avoidance or mitigation measures for stage 1 Screening.

### 6.2.3 Source-Pathway-Receptor Model

Potential adverse impacts that could cause a likely significant effect on the qualifying interests of the European sites, or the sites as a whole are considered using three main pathways: surface water, groundwater and land and air pathways.

Surface water pathways can result in impacts where material entering the surface water drainage are carried in this water to sites that are connected downstream and can therefore impact surface water bodies themselves, and surface water dependent species and habitats that rely on them.

Groundwater pathways can transmit impacts where there is contamination of water entering the groundwater body which is then discharged (sometimes over periods of several decades) and impacts groundwater dependent habitats and species that rely on them.

Land pathways are related to physical disturbance of habitats or species and generally only occur over short physical distances (this can also include habitats for aquatic species). Air pathways relate to the transport of material, generally dust and atmospheric pollution, via air movements that are subsequently deposited on habitats and species in or connected to the European sites. Impacts on the presence of populations of species of conservation interest outside of the protected site are also considered here.

Detail on the surface water, groundwater and species (land pathways) in Castlebar are provided in Section 3: Existing Environment.

## 6.3 Screening of European Sites

### 6.3.1 River Moy SAC

The River Moy SAC is located ~1.5km away from the Plan Area, and 6.4km via the Castlebar River, which is a tributary of the River Moy.

It is established that the Castlebar River supports populations of the Annex II species of the SAC: Atlantic Salmon *(Salmo salar).*and lamprey species (likely Brook Lamprey), Otter and White-clawed crayfish (See Section 3.1.2).

This SAC is designated for 14 Annex I habitats and 7 Annex II species, however not all of these Qualifying Interests are present within the Castlebar River.

#### Qualifying Interests

The site is a SAC selected for the following habitats and species listed on Annex I / II of the EU Habitats Directive (* = priority; numbers in brackets are European Site codes):

- *Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis) [6510]*
- *Active raised bogs [7110]*
- *Degraded raised bogs still capable of natural regeneration [7120]*
- *Depressions on peat substrates of the Rhynchosporion [7150]*
- *Alkaline fens [7230]*
- *Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]*
- *Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]*
- *Austropotamobius pallipes (White-clawed Crayfish) [1092]*
- *Petromyzon marinus* (Sea Lamprey) *[1095]*
- *Lampetra planeri (Brook Lamprey) [1096]*
- *Salmo salar (Salmon) [1106]*
- *Lutra lutra (Otter) [1355]*

This SAC is a large site encompassing the main body of the Moy and its route to the sea at Ballina. The mapping of the QIs as part of the conservation objectives (NPWS 2016) indicate that the main areas of woodland are located much further upstream, in proximity to Lough Conn, and the nearest areas of 6510 near Foxford. The areas of bog within the SAC are at distance from the site LTP boundary.

No Alkaline fen is mapped within the conservation objectives, but the detail in the site synopsis focusses on areas along the Glore River at Lough Mannin near Knock, at distance from the LTP. Alkaline fens are present within the plan area at Baloor (alongside the turlough at this location). But, given the distance to the mapped SAC habitats it is unlikely that there much connectivity between the habitats at Baloor and Lough Mannin.

To summarise, based on the available mapping and baseline data, the QI habitats within the River Moy SAC are outside the zone of influence of the project, but the aquatic species associated with the SAC are present within the Plan area, and the populations are likely linked to the SAC populations.

- *Austropotamobius pallipes (White-clawed Crayfish) [1092]*
- *Petromyzon marinus (Sea Lamprey) [1095]*
- *Lampetra planeri (Brook Lamprey) [1096]*
- *Salmo salar (Salmon) [1106]*
- *Lutra lutra (Otter) [1355]*

#### 6.3.1.1 Conservation Objectives

The conservation objectives for the River Moy SAC are to maintain or restore favourable conservation condition of the Qualifying Interest features of the site (NPWS, 2016).

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Table 6-1: Conservation Objectives for the selected Qualifying Interests for the River Moy SAC (NPWS, 2016)

| Qualifying Interest | Attributes | Measure | Target |
|---|---|---|---|
| *Austropotamobius pallipes* (White-clawed Crayfish) [1092] | Distribution | Occurrence | No reduction from baseline. |
| | Population structure: recruitment | Occurrence of juveniles and females with eggs | Juveniles and/or females with eggs in all occupied tributaries |
| | Negative indicator species | Occurrence | No alien crayfish species |
| | Disease | Occurrence | No instances of disease |
| | Water quality | EPA Q value | At least Q3-4 at all sites sampled by EPA |
| | Habitat quality: heterogeneity | Occurrence of positive habitat features | No decline in heterogeneity or habitat quality |
| *Petromyzon marinus* (Sea Lamprey) [1095] | Distribution: extent of anadromy | Percentage of river accessible | Greater than 75% of main stem length of rivers accessible from estuary |
| | Population structure of juveniles | Number of age/size groups | At least three age/size groups present |

| Qualifying Interest | Attributes | Measure | Target |
|---|---|---|---|
| | Juvenile density in fine sediment | Juveniles/m² | Mean catchment juvenile density at least 1/m² |
| | Extent and distribution of spawning habitat | m² and occurrence | No decline in extent and distribution of spawning beds |
| | Availability of juvenile habitat | Number of positive sites in 3rd order channels (and greater), downstream of spawning areas | More than 50% of sample sites positive |
| *Lampetra planeri* (Brook Lamprey) [1096] | Distribution | Percentage of river accessible | Access to all watercourses down to first order streams |
| | Population structure of juveniles | Number of age/size groups | At least three age/size groups of brook/river lamprey present |
| | Juvenile density in fine sediment | Juveniles/m² | Mean catchment juvenile density of brook/river lamprey at least 2/m² |
| | Extent and distribution of spawning habitat | m² and occurrence | No decline in extent and distribution of spawning beds |
| | Availability of juvenile habitat | Number of positive sites in 2nd order channels (and greater), downstream of spawning areas | More than 50% of sample sites positive |
| *Salmo salar* (Salmon) [1106] | Distribution: extent of anadromy | Percentage of river accessible | 100% of river channels down to second order accessible from estuary |
| | Adult spawning fish | Number | Conservation Limit (CL) for each system consistently exceeded |
| | Salmon fry abundance | Number of fry/5 minutes electrofishing | Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 minutes sampling |
| | Out-migrating smolt abundance | Number | No significant decline |
| | Number and distribution of redds | Number and occurrence | No decline in number and distribution of spawning redds due to anthropogenic causes |
| | Water quality | EPA Q value | At least Q4 at all sites sampled by EPA |
| *Lutra lutra* (Otter) [1355] | Distribution | Percentage positive survey sites | No significant decline |
| | Extent of terrestrial habitat | Hectares | No significant decline. Area mapped and calculated as 1068.8ha |
| | Extent of freshwater (river) habitat | Kilometres | No significant decline. Length mapped and calculated as 479.4km |
| | Extent of freshwater (lake) habitat | Hectares | No significant decline. Area mapped and calculated as 1248.2ha |
| | Couching sites and holts | Number | No significant decline |
| | Fish biomass available | Kilograms | No significant decline |
| | Barriers to connectivity | Number | No significant increase |

#### 6.3.1.2 Site Vulnerabilities

The River Moy SAC is vulnerable to several potential impacts, including agriculture, invasive non-native species and forestry activities. The negative impacts and activities with high effect on the SAC are listed in Table 6-2 below.

Table 6-2: Threats, pressures, and activities with impacts on the River Moy SAC (NPWS 2022)

| Code | Threats and pressures | Rank | Source |
|---|---|---|---|
| H01.05 | Diffuse pollution to surface waters due to agricultural and forestry activities | H | b |
| D04.02 | Aerodrome, heliport | M | b |
| B01 | Forest planting on open ground | H | b |
| C01.03 | Peat extraction | M | b |
| I01 | Invasive non-native species | H | b |
| B05 | Use of fertilisers (forestry) | H | b |
| A02.01 | Agricultural intensification | H | b |
| Key: H = high; M = Medium; b = both inside and outside | | | |

### 6.3.2 Lough Conn and Lough Cullin SPA [004228]

The River Deel, Addergoole, and Castlehill are the main rivers flowing into Lough Conn with the River Moy outflowing from Lough Cullin. These loughs form part of an important salmonid fishery and an important site for wintering wildfowl. Both loughs are one of only four breeding sites in Ireland for Common Scoter.

#### 6.3.2.1 Qualifying Interests

- Tufted Duck (*Aythya fuligula*) [A061]
- Common Scoter (*Melanitta nigra*) [A065]
- Common Gull (*Larus canus*) [A182]
- Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]
- Wetland and Waterbirds [A999]

A review of the available e I-webs data for sites within the LTP area indicates some crossover in species, especially Tufted Duck.

#### 6.3.2.2 Conservation Objectives

The conservation objective of all the SPA bird species is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA (NPWS, 2022).

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA, as above listed.

Objective: To maintain or restore the favourable conservation condition of the wetland habitat at Lough Conn and Lough Cullin SPA as a resource for the regularly occurring migratory waterbirds that utilise it.

#### 6.3.2.3 Site Vulnerabilities

As part of the Standard Data Form for European sites, the negative impacts and activities with high effect on the SPA are detailed to identify where future Plans, or Projects, could have an impact on a European site if a threat/ pressure is likely to be exaggerated due to the Plan. The threats and pressures upon Lough Conn and Lough Cullin SPA are listed in Table 6-3 below.

Table 6-3: Threats, pressures, and activities with impacts on the Lough Conn and Lough Cullin SPA (NPWS 2022)

| Code | Threats and pressures | Rank | Source |
|---|---|---|---|
| **I01** | **Invasive non-native species** | **L** | **i** |
| A08 | Fertilisation | M | o |
| F02.03 | Leisure fishing | H | i |
| B | Sylviculture, forestry | M | o |
| Key: L = Low; M = Medium; o = outside; I = inside | | | |

## 6.4 Examination of the Source-Pathway-Receptor Model for Impact

Pre-screening completed in Section 4 has summarised two potential pathways for impact to the Natura Network - a hydrological pathway; and ex-situ disturbance pathway to the River Moy SAC; and a weak ex-situ disturbance pathway to Lough Conn and Lough Cullin SPA.

### Surface water pathway to the River Moy SAC:

The River Moy SAC is 6.4km from the LTP area. The distance from the SAC; the dilution rate of any discharges from the LTP area that would be achieved over that distance, including the confluence with other tributaries of the Moy and the nature of the receiving habitats indicate a weak hydrological pathway, and consequently a weak source-pathway-receptor model for impact on the habitats of the River Moy SAC.

As the Castlebar River flows through the centre of Castlebar and there are a number of crossing points as part of the active travel network many of the projects proposed in this plan have the potential for impact on the river quality individually at the local level. Additionally, the cumulative impact of all of the individual proposals which consist of a number of projects within each proposal is taken into account. In combinations impacts with the impact of all developments (e.g. industrial, residential and open space recreation via the zonings within the LAP has been taken into account).

### Disturbance / ex-situ to River Moy SAC and Lough Conn and Lough Cullin SPA

Disturbance to SPA QI bird species is expected to be unlikely. The transport network associated with the LTP is at distance from Lough Cullin. Supporting habitats are present at a number of locations within the LTP area, and some disturbances may be present locally from projects, however significant effects on the SPA populations are unlikely at a plan level due to the distance from to the waterbodies that would be the most significant habitats for the QI species (i.e. the Loughs within the Plan area) - see Figure 3-2. The potential crossing of the NORR within the Castlebar Lough / Lough Lannagh would be assessed at the project level.

Some presence of ex-situ populations of Otter, Lamprey, Crayfish and Salmon have been identified outside of the SAC. It is considered that these populations would be part of the wider populations of Otter, Lamprey and Salmon in the area of the River Moy SAC and its tributaries across the wider region. Some impacts on species may occur locally from projects. Effects (such as instream impacts) could only be assessed at the project level given the potential for small scale habitats of importance e.g. spawning beds, pools etc.

## 6.5 Screening of LTP Objectives

The objectives of the LTP have initially been screened following the methodology set out in DTA Publications Habitats Regulations Assessment Handbook (DTA 2022). Each objective is allocated one or more screening category, shown in Table 6-4 below. The results of the initial screening are shown in Table 6-5. Where several categories to screen out a policy are applicable, the most relevant categories are listed in the table. The screening outcome includes any relevant in-combination assessment outcomes.

Table 6-4: Screening categories for the LTP objectives (adapted from DTA, 2022)

| Screening Category | Description | Screening Outcome |
|---|---|---|
| A | General statement of policy/general aspiration. | Out |
| B | Policy listing general criteria for testing the acceptability/sustainability of proposals. | Out |
| C | Proposal referred to but not proposed by the plan. | Out |
| D | Environmental Protection/site safeguarding policy. | Out |
| E | Policies or proposals that steer change in such a way as to protect European sites from adverse effects. | Out |
| F | Policy that cannot lead to development or other change. | Out |
| G | Policy or proposal that could not have any conceivable effect on a European site. | Out |
| H | Policy or proposal, the actual or theoretical effects of which cannot undermine the conservation objectives (either alone or in combination with other aspects of this or other plans or projects). | Out |
| I | Policy or proposal with a likely significant effect on a site alone. | In |
| J | Policy or proposal with an effect on a site but not likely to be significant alone, so need to check for likely significant effects in combination. | Dependant on in-combination test |
| K | Policy or proposal not likely to have a significant effect either alone or in combination. | Screened out after in-combination test |
| L | Policy or proposal likely to have a significant effect in combination. | Screened in after in-combination test. |

| Table 6-5: Table of screening of policies and objectives. | | Screening Category | Screening Outcome |
|---|---|---|---|
| ID | Objective | | |
| **P1** | Provide an integrated network for Castlebar Town through the development of a connected and continuous pedestrian network to connect the main origin and destinations via a functional pedestrian network with adequate crossing facilities to make walking the most attractive mode choice. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **P2** | Upgrades and repairs to “day to day” key routes between residential areas and local education, employment and community facilities to include resurfacing, kerb repairs, widening, drainage and landscaping. Where possible, upgrade the footpaths up to DMURS standards, and provide dedicated pedestrian facilities. | Small scale projects, but some upgrades may require deeper excavations and movement of storm drains, which would link hydrologically to the Castlebar River.<br><br>Project level Appropriate Assessment is sufficient to protect Natura 2000 sites. | Out |
| **P3** | Enhance the existing infrastructure through the provision new pedestrian links to overcome severance caused by the R309 and Castlebar River. | New infrastructure (e.g bridges) will require construction with associated impacts if instream works required.<br><br>Project level Appropriate Assessment is sufficient to protect Natura 2000 sites. | Out |
| **P4** | Improved filtered permeability through the use of laneways and the opening up of cul-de-sacs for pedestrians to increase directness and connectivity, to enhance access to homes, jobs, schools, shops, public transport and services. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **P5** | Formalise existing permeability links. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **P6** | Improve safety for pedestrians, by improving crossing points particularly along the R309, R307, Stephen Garvey Way/Hopkins Road, Lannagh Road and Westport Road. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **P7** | Improved accessibility for all within the town centre to include priority parking, handrails at gradients, public seating, footpath widening, public toilets and public bins. | Small scale projects, but some upgrades may require deeper excavations and movement of storm drains, which would link hydrologically to the Castlebar River.<br><br>Project level Appropriate Assessment is sufficient to protect Natura 2000 sites. | Out |

| Table 6-5: Table of screening of policies and objectives. ID | Objective | Screening Category | Screening Outcome |
|---|---|---|---|
| **P8** | New or improved public lighting, security and signage for walking route to enhance visibility of existing links to create a more connected and safer pedestrian network. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **P9** | Engage with schools with the aim of increasing walking mode share and support Safe Routes to Schools (SRTS) | D - General plan-wide environmental protection/ site safeguarding/ threshold polices<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **LTP Objectives - Cycle Network** | | | |
| **C1** | Provide an integrated network for Castlebar Town through the development of a connected and continuous cycle network comprised of greenway, primary, secondary and feeder routes to connect the residential, education, employment, retail, commercial, healthcare and community centres. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **C2** | Upgrades and repairs to “day to day” key routes between residential areas and local education, employment and community facilities to include resurfacing, kerb repairs, widening, drainage and landscaping. The infrastructure required will be determined for a route-by-route basis and depend on existing conditions/constraints and will be delivered to NCM standard for cycle facilities. | Small scale projects, but some upgrades may require deeper excavations and movement of storm drains, which would link hydrologically to the Castlebar River.<br><br>Project level Appropriate Assessment is sufficient to protect Natura 2000 sites. | Out |
| **C3** | Enhance the existing infrastructure through the provision new cycle links to overcome severance caused by the R309 and Castlebar River. | New infrastructure (e.g bridges) will require construction with associated impacts if instream works are required.<br><br>Project level Appropriate Assessment is sufficient to protect Natura 2000 sites. | Out |
| **C4** | Improved filtered permeability for cyclists through the use of laneways and the opening up of cul-de-sacs for cyclists to increase directness and connectivity to enhance access to homes, jobs, schools, shops, public transport and services. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |

| Table 6-5: Table of screening of policies and objectives. ID | Objective | Screening Category | Screening Outcome |
|---|---|---|---|
| **C5** | Formalise existing permeability links. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **C6** | Provision of dedicated cycle facilities at junctions (R309 & Moneen, R309 & Spencer Street, R309 & Lannagh, Stephen Garvey Way & Hopkins Road & Tesco, Hopkins Road & Lannagh Road) | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **C7** | Create a network that can cater for demand from commuter, delivery, leisure and tourist cyclists that is accessible to all population cohorts. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **C8** | Provision of safe and secure covered cycle parking within the town centre and at major trip attractors. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **C9** | Provision of charging infrastructure for electric bikes within the town. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **C10** | Prioritise investment in schemes that will deliver the greatest modal shift potential | D - General plan-wide environmental protection/ site safeguarding/ threshold polices<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **C11** | New or improved public lighting, security and signage for cycling routes. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **C12** | Engage with schools with the aim of increasing cycling mode share. | D - General plan-wide environmental protection/ site safeguarding/ threshold polices<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **LTP Objectives – Public Transport Network** | | | |
| **PT1** | Improve the routing and frequency of existing bus services, including either an expansion of the 'Local Link' bus network to include short distance trips within the Castlebar Town Area or through the provision of a new high frequency local bus service. Co-ordinated timetabling to facilitate quick interchange between local and regional services will also be facilitated. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |

| Table 6-5: Table of screening of policies and objectives. ID | Objective | Screening Category | Screening Outcome |
|---|---|---|---|
| **PT2** | Improve the frequency and connectivity of existing rail services. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **PT3** | Provide bus priority infrastructure in the town centre where required. | New infrastructure will require construction with potential associated impacts.<br><br>Project level Appropriate Assessment is sufficient to protect Natura 2000 sites. | Out |
| **PT4** | Improve public transport stops in respect to location, information, accessibility, infrastructure and visibility | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **PT5** | Ensure convenient access from residential, employment, education, healthcare and retail facilities to public transport stops. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **PT6** | Improve integration between the train station, town centre and local bus routes. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **PT7** | Development of a bus interchange at Stephen Garvey Way with covered and secure waiting area and welfare facilities. | New infrastructure will require construction with associated impacts.<br><br>Project level Appropriate Assessment is sufficient to protect Natura 2000 sites. | Out |
| **PT8** | Enhance connectivity of Castlebar Train Station with the provision of improved active travel connections and 'Park and Ride' infrastructure. | New infrastructure will require construction with associated impacts if instream works are required.<br><br>Project level Appropriate Assessment is sufficient to protect Natura 2000 sites. | Out |
| **LTP Objectives - Road Network** | | | |
| **R1** | Reduce unnecessary vehicular trips (through-traffic trips) passing through Castlebar Town Centre through traffic management measures, transport demand management measures and parking strategies | D - General plan-wide environmental protection/ site safeguarding/ threshold polices<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |

| Table 6-5: Table of screening of policies and objectives. ID | Objective | Screening Category | Screening Outcome |
|---|---|---|---|
| **R2** | Reduce vehicular emissions in town centre by promoting mode transfer to sustainable travel modes. | D - General plan-wide environmental protection/ site safeguarding/ threshold polices<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **R3** | Provide a link road to improve connectivity from the north of the town to the R309 in order to reduce traffic levels in the town centre to enable active travel infrastructure and improved safer junctions. | This project will require statutory environmental assessments. Will require a new crossing over Castlebar River.<br><br>Project level Appropriate Assessment is sufficient to protect Natura 2000 sites. Will likely require significant mitigation and monitoring at the project level. | Out |
| **R4** | Provision of Electric Vehicle charging infrastructure within the town centre. | New infrastructure will require construction with potential associated impacts.<br><br>Project level Appropriate Assessment is sufficient to protect Natura 2000 sites. | Out |
| **R5** | Maintain adequate vehicular capacity and access. | A - General statement of policy/general aspiration<br>K - Policy or proposal unlikely to have a significant effect either alone or in-combination | Out |
| **R6** | Long term objective to evaluate the potential future provision of 'Indicative Potential NORR' to provide an alternative route for bypass through traffic currently going through the town in the context of further development and expansion of the town of Castlebar, and provision of enhanced public realm and active travel infrastructure on town centre streets. | This project would require statutory environmental assessments, including route selection if it were to go ahead.<br><br>Project level Appropriate Assessment is sufficient to protect Natura 2000 sites. Would likely require significant mitigation and monitoring at the project level. | Out |

## 6.6 Screening of the Projects

Individual projects are anticpated from this plan - these projects have been grouped by type and some high level impact identification is provided in the following sections.

### 6.6.1 Upgrades to the Pedestrian Network

- 54.6km of pedestrian footpath upgrades
- 3.8km of new footpaths

The main potential impact from this type of project is re-routing of the surface water drain to accommodate an upgraded pathway. The requirement for rerouting of a surface-water drain to facilitate cycleways; and the presence/absence of hydrocarbon interceptors within the route; and the type of outfalls e.g. to a local watercourse or if the drains link into the combined sewer system. Where linked to the WWTP this would break the pathway to the Natura 2000 network. At a plan level, no likely significant impacts on the Natura 2000 network are predicted from the upgrading or new paths.

Consideration should be given to SUDS type solutions for drainage at the project level e.g. permeable surfaces; tree pits, rain gardens etc to help manage run-off due on artificial surfaces.

### 6.6.2 Upgrades to the Cycle Network

- 47.7km of cycle path upgrades on existing routes

This will overlap with the pedestrian network for much of the routes i.e. pathway and cycleway side by side. The requirement for rerouting of a surface-water drain to facilitate cycleways; and the presence/absence of hydrocarbon interceptors within the route; and the type of outfalls e.g. to a local watercourse or if the drains link into the combined sewer system. Where linked to the WWTP this would break the pathway to the Natura 2000 network. At a plan level, no likely significant impacts on the Natura 2000 network are predicted from the upgrading or new paths.

Consideration should be given to SUDS type solutions for drainage at the project level e.g. permeable surfaces; tree pits, rain gardens etc to help manage run-off due on artificial surfaces.

### 6.6.3 Upgrades to the Active Travel Network:

- 7 locations for Park & Stride / Mobility Hubs

Construction related impacts are the most impactful activity associated with these projects. Individual assessments should take into excavations, drainage. Locations are on already developed land. Consideration should be given to SUDS type solutions for drainage at the project level e.g. permeable surfaces; tree pits, rain gardens etc to help control any increased run-off due to artificial surfaces.

### 6.6.4 Proposed Junction Upgrades and Controlled Crossings

- 16 locations

Potential for some construction related impacts. But given the distance to the SAC, and the lack of connectivity between the types of works involved and the hydrological pathway (i.e. rerouting of drains unlikely). No likely significant effects from the junction upgrades are anticipated.

### 6.6.5 Controlled Crossings, Proposed Traffic Management with One-Way Traffic Flow, Proposed Shared Streets

- 64 No. Proposed Controlled Crossings (including crossing as part of proposed junction upgrades)
- 2 No. Proposed Traffic Management with One-Way Traffic Flow
- 5 No. Shared Streets

Small scale work with minimal links to a hydrological pathway. No likely significant effects are anticipated.

### 6.6.6 Active Travel Bridge

The plan proposes 1 no. Active Travel Bridge over the Castlebar River. This has the potential for instream impacts and mitigation would likely be required. This is a potentially a substantial project and

project level assessment will have provision for an AA Screening and likely a Natura Impact Statement to assess the potential for any impact on the European sites, if instream work is required. Mitigation at the project level will be sufficient to protect the Natura 2000 network, given the hydrological distance involved.

### 6.6.7 Permeability Links (new), Access Links.

- 12. No Permeability Links, 8 Upgraded Permeability Links
- 4 No. Access Links

Some new routes may be required here, with variability between the projects from more filtered access to short new access roads proposed. Filtered access on existing streets is unlikely to have any significant effects.

New access links should be considered at the project level, and are dependent on the development of ancillary facilities such as linking to zoned industrial/residential areas to the south which are at present undeveloped, or through undeveloped land to at the back of houses to the northwest. Should be assessed alongside or in conjunction with those developments, if and when they go ahead. At a plan level no likely significant effect is anticipated from the access links.

### 6.6.8 Proposed Road Link, Proposed NORR Potential Route, Road Bridge over Castlebar River,

This are substantial projects and project level assessment will have provision for an AA Screening and likely a Natura Impact Statement to assess the potential for any impact on the European sites, if instream work is required. Mitigation at the project level will be sufficient to protect the Natura 2000 network, given the hydrological distance involved. No likely significant effects are predicted at a Plan level.

### 6.6.9 Cumulative Plan Assessment

The volume of footpaths and cycleways to be developed within the plan add up quickly. However, the work on footpaths/cycleways will overlap significantly, and will take place for the most part on already existing pathways. While some re-routing of surface water pathways will be required, in many cases the drainage pathways will already be sufficient and in the right location to allow only surface level work to be undertaken for cycleways and footpaths. Additionally, the works will be spread over the lifetime of the plan (5 years or more) with periods where no work or low levels of work would be anticipated. SUDs measures may also be utilised at the project level to avoid re-routing of stormwater drains.

As such no likely significant effect from the cumulative work is anticipated at this time, given the commitment to project level assessments which will provide protection to the Natura 2000 sites.

# 7 Screening Statement and Conclusions

### 7.1.1 Existing Environment and Pathways

In conducting this screening a 15km buffer was applied to the Plan Area and all SACs and SPAs that intersected with that buffer were examined, and a catalogue of Qualifying Interests of the Natura 2000 sites was drawn up.

A desktop review of the existing environment in Castlebar was undertaken, with specific reference to Annex II species listed as Qualifying Interests of the surrounding Natura 2000 sites. Aquatic QI species Salmon, Lamprey species, White-clawed Crayfish and Otter were noted to be present within the Plan area. Additionally, an assessment of Annex I habitats as mapped within the conservation objective maps of the sites was undertaken to check proximity to the LTP area. Many of the QIs of these sites were found to be outside the 15km buffer applied. Any Annex I habitats within the plan area were not considered to be functionally linked to the QI habitats within the SAC network. Low levels of SPA bird QI e.g. Tufted Duck were found to be utilising waterbodies within the LTP area. No Lesser Horseshoe bat roosts have been recorded within ~8km of the LTP boundary, indicating that all roosts are outside of the zone of influence for this species. This study of the existing ecological baseline helped to inform the examination of pathways for likely significant effects on the Natura 2000 Network.

The examination of pathways to the Natura 2000 sites was undertaken using three main pathways - groundwater; surface water; and land pathways. These were examined with particular reference to the objectives of the Local Transport Plan, and with the knowledge of the species within the zone of influence of the Plan Area.

Surface-water: A weak hydrological pathway is present to the River Moy SAC (6.4km hydrologically).

Groundwater: Despite the semi-karst nature of the area, the groundwater pathway for impact was not considered functional, given the distance to groundwater dependent habitats within the River Moy SAC.

Land: The air pathway was considered to very local, as the plan is likely to lead to an improvement in air quality. A disturbance pathway is present for ex-situ aquatic species of the River Moy SAC - Salmon, Lamprey species, Otter and White-clawed Crayfish. A weak disturbance pathway is also present for bird populations of the Lough Conn and Cullin SPA with as the routes are at distance from the the wetlands within the plan area.

### 7.1.2 Assessment of Proposed Projects

Castlebar LTP presents a comprehensive suite of measures to provide for a more sustainable travel network in Castlebar, in line with targeting a reduction in air emissions as per climate change objectives.

Many of the proposed projects are small in scale and are likely to have impacts only associated within the footprint of the works e.g. junction upgrades, footpath upgrades, cycle path upgrades.

In general, these works are small scale and unlikely to have significant effects on the Natura 2000 Network, however even minor works which require movement of services or drains have the potential for impact through works with the stormwater system, which may lead to local rivers. A commitment is present within the LTP for appropriate environmental assessments, so projects will be assessed on a case-by-case basis.

In general, the cycleways and paths stick to already established routes and avoid routes along the Castlebar River, which is already bounded by the Castlebar Greenway and by urban built land. Permeability onto the greenway; improved safety; lighting; mobility access; and an improved infrastructure to promote walking and cycling are some of the core objectives of the LTP.

Additional small-scale works include shared pedestrian spaces; controlled crossings, improved public transport service for bus and train; and improved traffic management and signalling. These have low potential for impacts.

Mobility hubs are also proposed, on already developed land, as well as improved bus infrastructure facilities, car and electric bicycle charging stations. These have the potential for impact via excavation and construction. These construction projects are small scale and located at distance from the main hydrological pathway to the river, and so likely significant effects are not anticipated, but the individual characteristics of the projects would need to be assessed.

Some bigger projects are also present e.g. proposed bridge crossings for active travel and a new link road are proposed. Additionally, a large aspirational/long term project is presented via the new orbital road to the north of Castlebar (NORR project).

These projects with more potential for impacts such as bridge crossings (potential for in-streams works) would likely require mitigation to protect ex-situ species. This protection of species will be done more effectively at project level/during route selection given the small-scale of the relevant habitats involved e.g. spawning beds.

### 7.1.3 Conclusion

The works are presented in schemes/proposals, with the majority of short-term schemes/proposals being small in scale and low impact - See all proposals in Section 2.1.2 to 2.1.8 and Appendix A. Inherent in the planning process is the requirement to provide project level screening for the works that may have an impact on the Natura 2000 Network. Combining or bundling the smaller projects could allow for cumulative impacts along a route or in an area to be determined via appropriate assessment screenings. No likely significant effects are anticipated from these small-scale projects, but project level assessments will be required to determine the exact characteristics of each proposal/scheme/project. Significant effects from larger projects are not anticipated as these projects will fulfil the statutory environmental assessment obligations, which will protect the Natura 2000 Network.

No plan level mitigation is suggested as part of this project - objectives in both the LAP and the County Development plan to protect the Natura 2000 Network are sufficient to mitigate against impact at a Plan Level e.g.

- Policy NEP1: In seeking to protect and enhance the natural environment, Mayo County Council will seek to:
    - Protect, conserve and enhance the natural heritage of Castlebar, including the protection of the integrity of European sites, that form part of the Natura 2000 network.
    - Protect and conserve non-designated habitats and species; and
    - Protect and incorporate existing biodiversity features into the design and construction of new development and public realm and enhancing the biodiversity value of existing open spaces.
    - Where development proposals are made along a riparian corridor, ensure that a vegetated strip along the river in consultation with the National Parks and Wildlife Service.

- Policy NEP2:
    - Seek to ensure that new plans or projects would not result in significant climatic impacts on European sites because of their scale, resource or transportation requirements, operation or emissions, either cumulatively or in combination with other development.

Additionally, the LTP itself recommends utilisation of SuDS measures which can provide range of measures that emulate a natural drainage process to reduce the concentration of pollutants and reduce the rate and volume of urban run-off into natural water systems (and thus the pollutants it carries), and has recommendations for SuDS to be incorporated at the project level.

The projects are largely small scale and low impact. The distance from the SAC networks also provides protection from the projects proposed as part of this Plan.

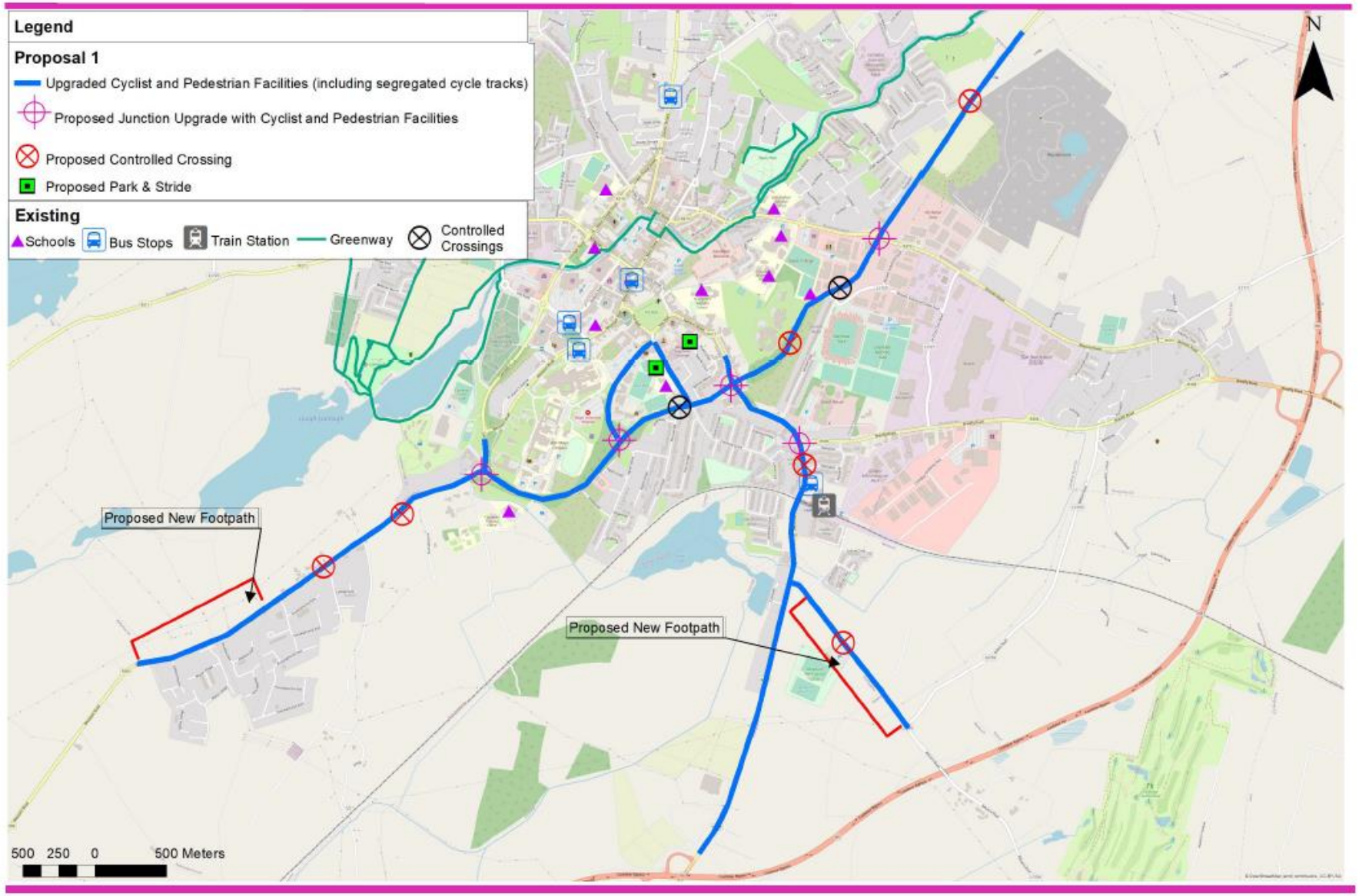
At a plan level, none of the projects and objectives outlined within the LTP are of the scale, or of a nature, which could have significant adverse impacts on the European sites within the Zone of Influence. Project level assessments will still need to be carried out to examine the individual circumstances of each project, as part of the inherent planning consent process.

It is concluded that the Draft Plan will not result in any significant effects on Natura 2000 sites, alone or in combination with other plans or projects.

# Appendices

# A Local Transport Plans - Proposals

## A.1 Proposal 1

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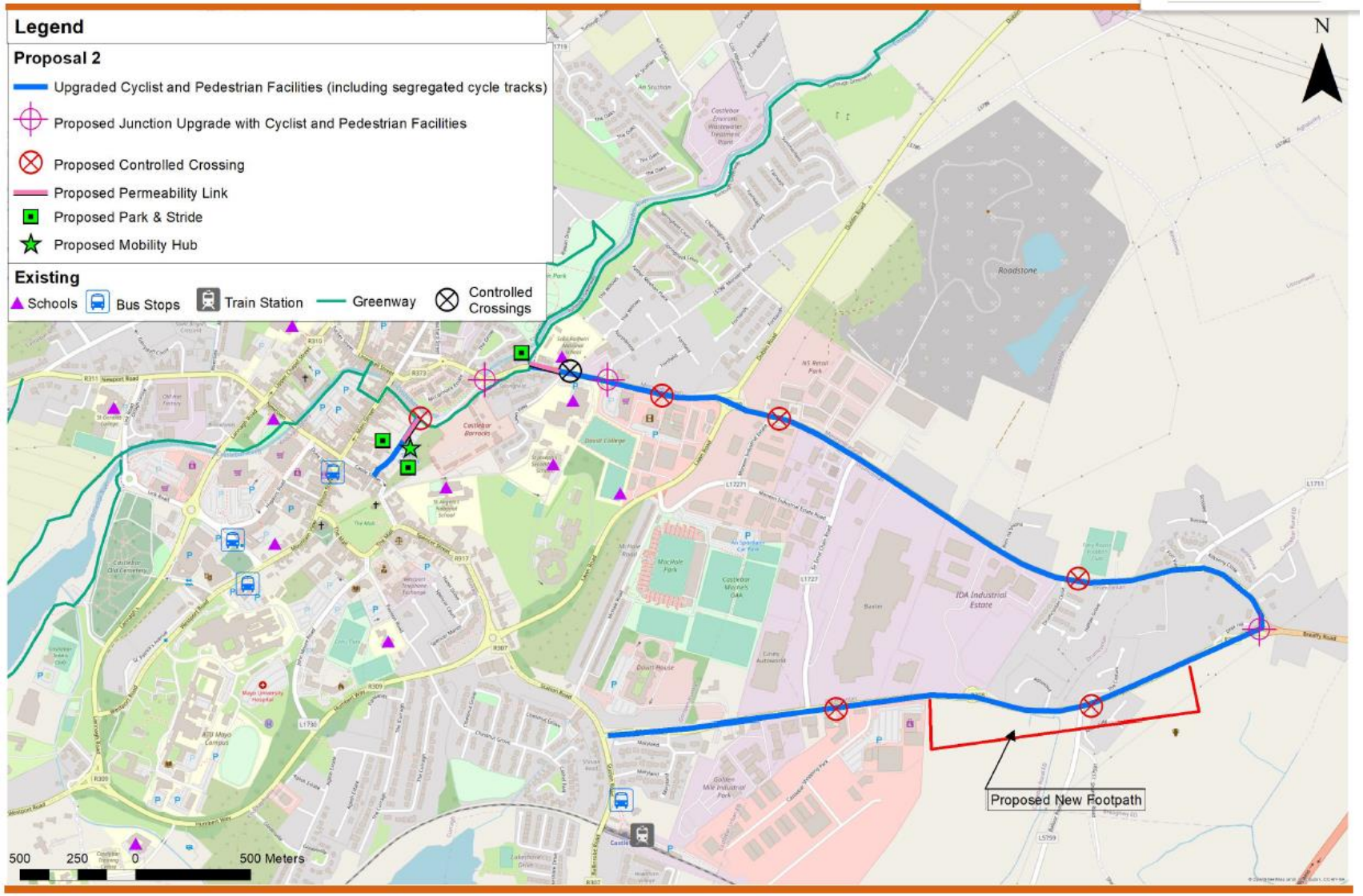
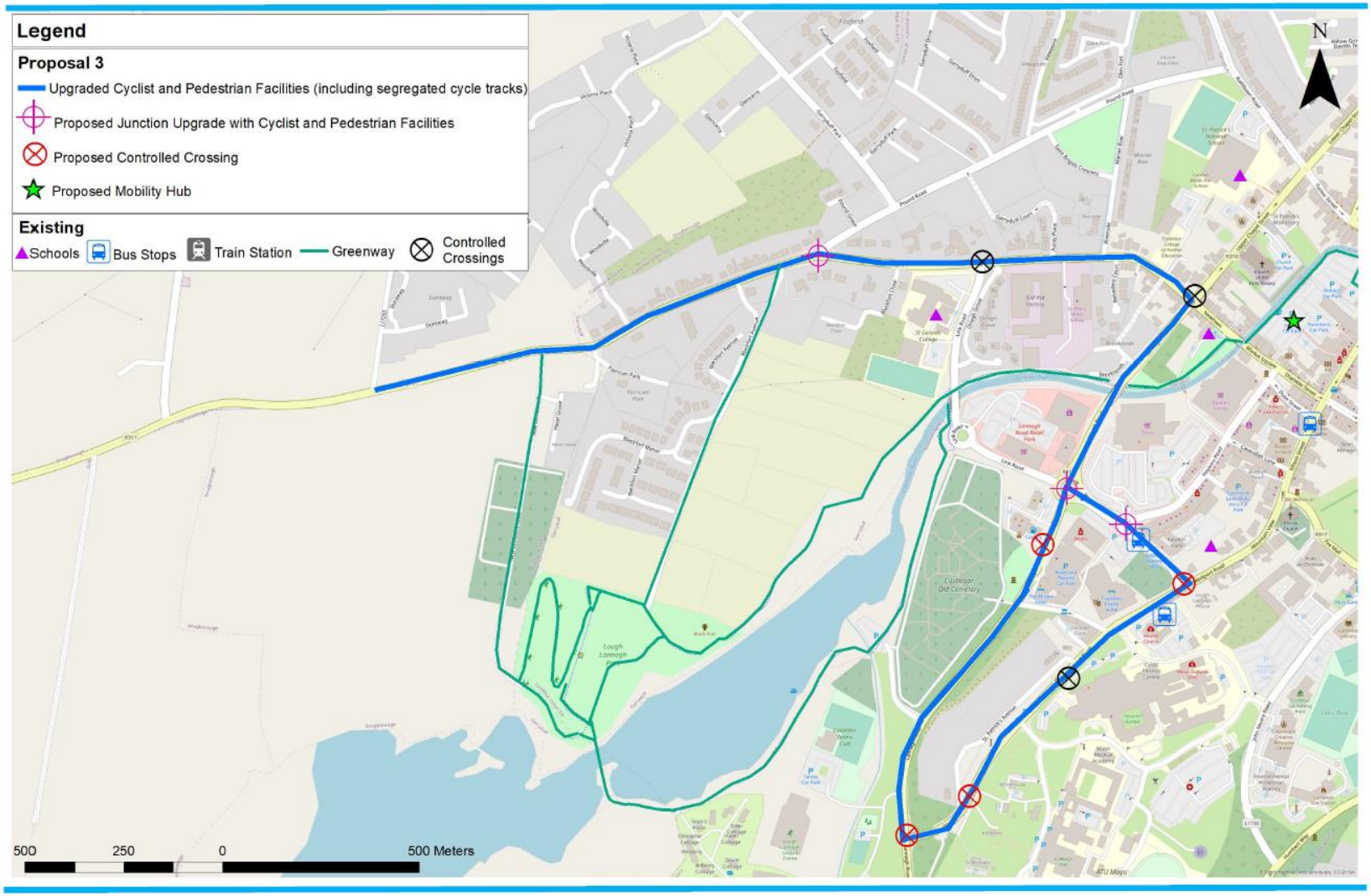
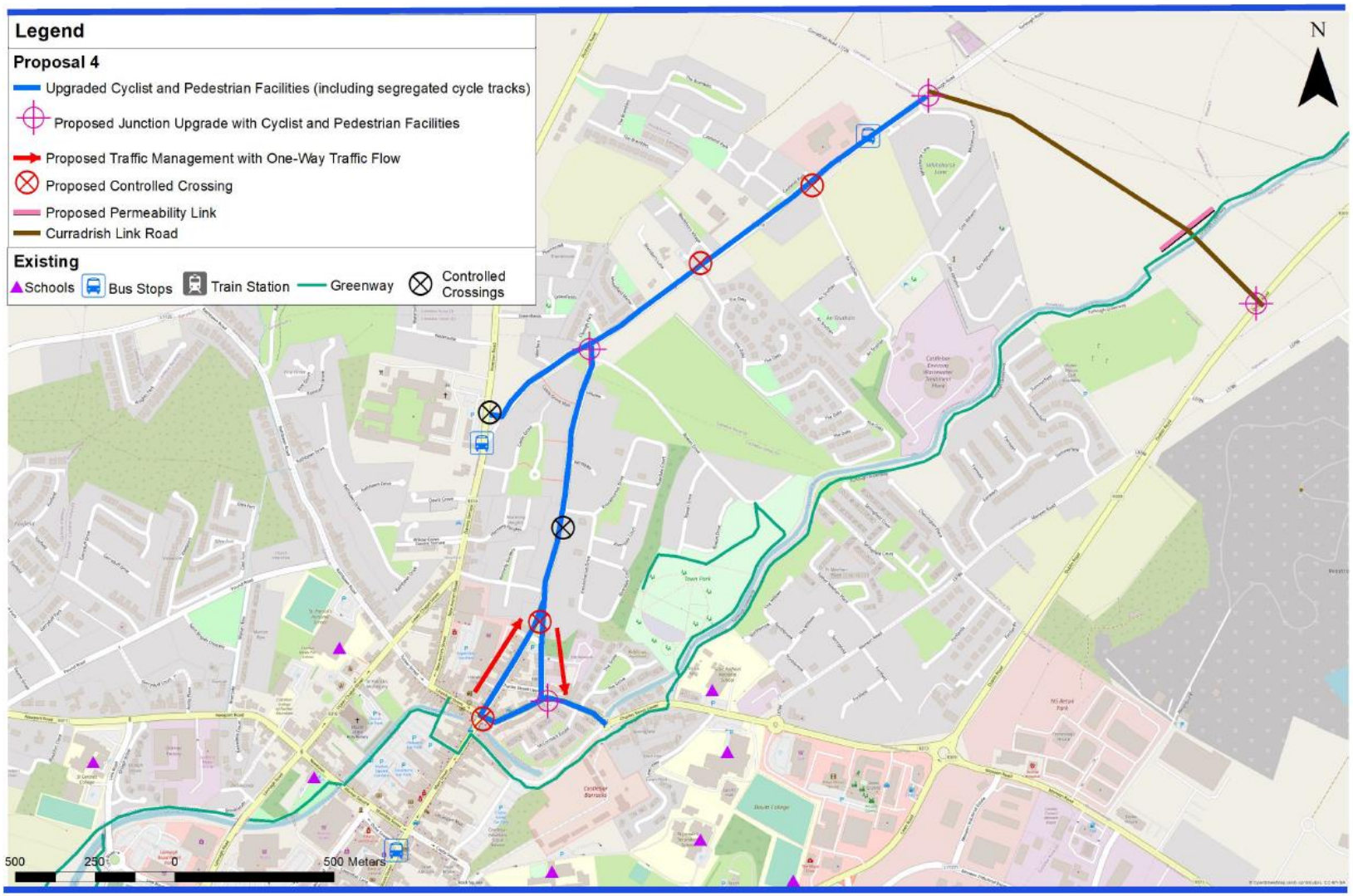
## A.2 Proposal 2



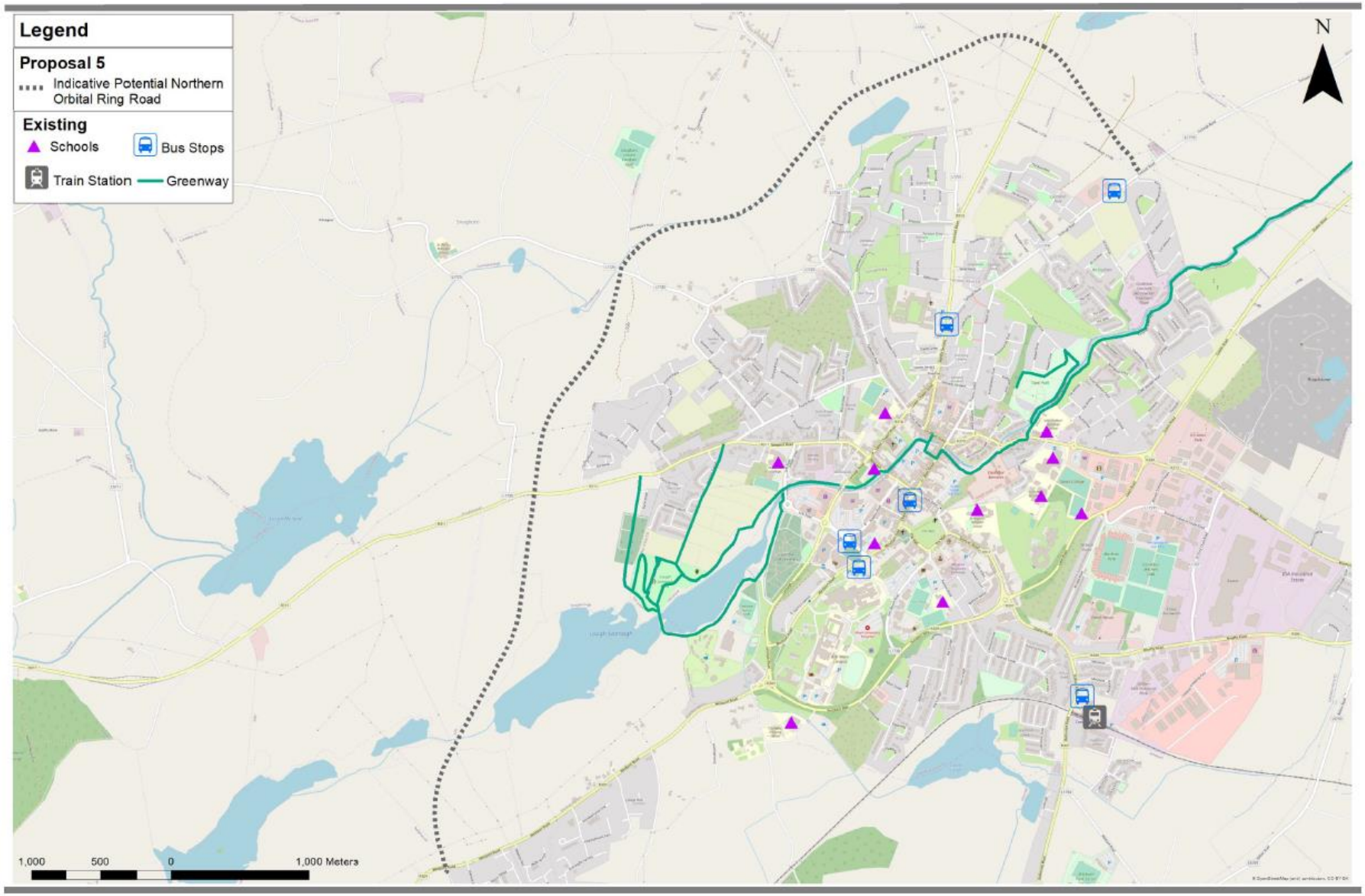
## A.3 Proposal 3



## A.4 Proposal 4



## A.5 Proposal 5

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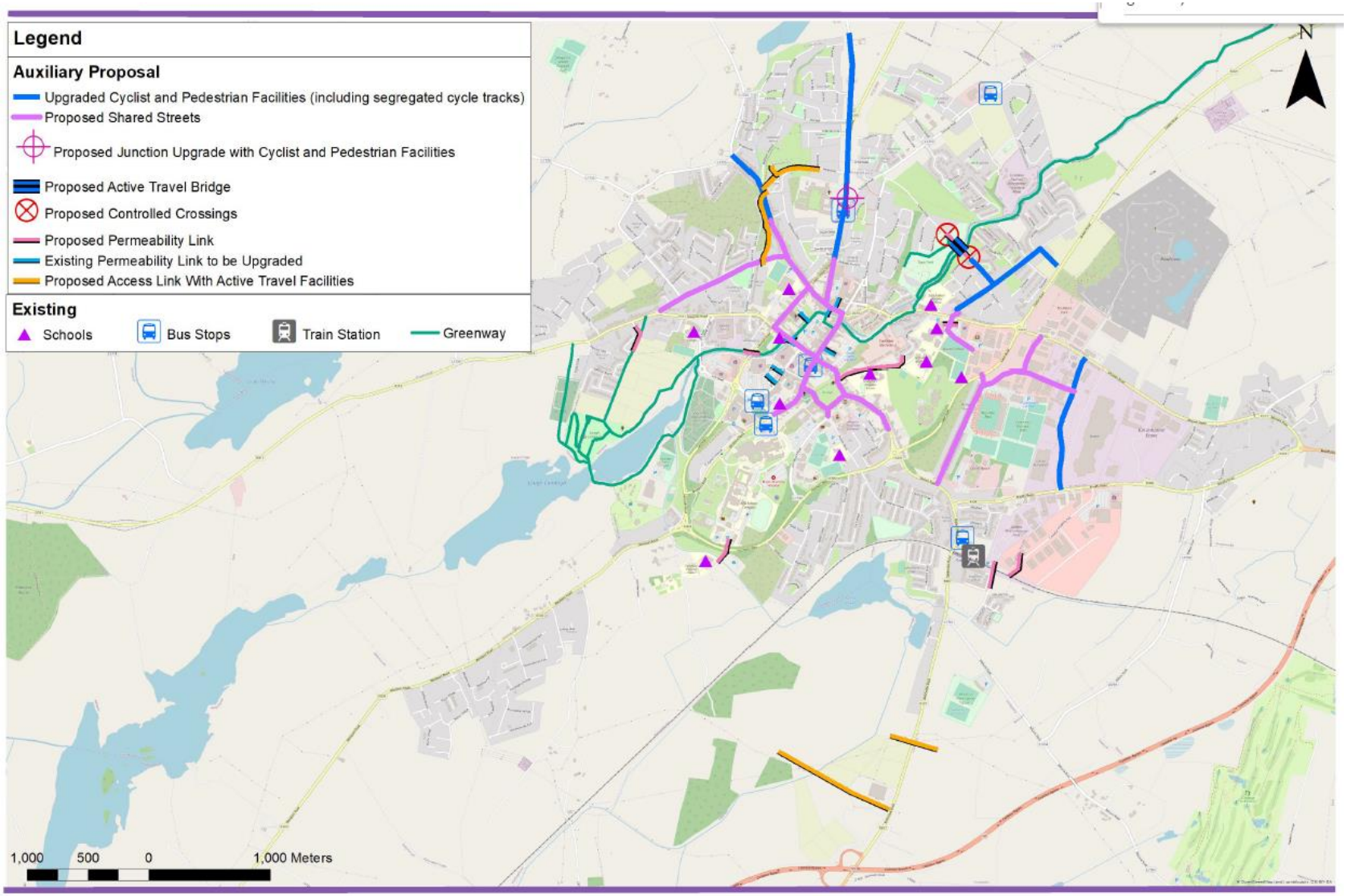
## A.6 Proposal 6




GED-JBAI-XX-XX-RP-BD-0001-A3-C01_Castlebar_LTP_AA

# B NBDC Protected Species recorded within a 5km radius of the site over the last 5 years

| Species Name | Date of last record | Title of dataset | Designation |
|---|---|---|---|
| **Amphibian** | | | |
| Common Frog (*Rana temporaria*) | 11/10/2020 | Amphibians and reptiles of Ireland | Protected Species: EU Habitats Directive \|\| Protected Species: EU Habitats Directive >> Annex V \|\| Protected Species: Wildlife Acts |
| Smooth Newt (*Lissotriton vulgaris*) | 24/03/2020 | Amphibians and reptiles of Ireland | Protected Species: Wildlife Acts |
| **Bird** | | | |
| Barn Swallow (*Hirundo rustica*) | 03/04/2021 | Birds of Ireland | Protected Species: Wildlife Acts \|\| Threatened Species: Birds of Conservation Concern \|\| Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List |
| Common Kestrel (*Falco tinnunculus*) | 12/06/2021 | Birds of Ireland | Protected Species: Wildlife Acts \|\| Threatened Species: Birds of Conservation Concern \|\| Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List |
| Common Pheasant (*Phasianus colchicus*) | 10/05/2020 | Birds of Ireland | Protected Species: Wildlife Acts \|\| Protected Species: EU Birds Directive \|\| Protected Species: EU Birds Directive >> Annex II, Section I Bird Species \|\| Protected Species: EU Birds Directive >> Annex III, Section I Bird Species |
| Common Snipe (*Gallinago gallinago*) | 14/08/2017 | Birds of Ireland | Protected Species: Wildlife Acts \|\| Protected Species: EU Birds Directive \|\| Protected Species: EU Birds Directive >> Annex II, Section I Bird Species \|\| Protected Species: EU Birds Directive >> Annex III, Section III Bird Species \|\| Threatened Species: Birds of Conservation Concern \|\| Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List |
| Common Swift (*Apus apus*) | 26/04/2021 | Swifts of Ireland | Protected Species: Wildlife Acts \|\| Threatened Species: Birds of Conservation Concern \|\| Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List |
| Eurasian Curlew (*Numenius arquata*) | 30/12/2017 | Birds of Ireland | Protected Species: Wildlife Acts \|\| Protected Species: EU Birds Directive \|\| Protected Species: EU Birds Directive >> Annex II, Section II Bird Species \|\| Threatened Species: Birds of Conservation Concern \|\| Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List |
| Spotted Flycatcher (*Muscicapa striata*) | 06/06/2021 | Birds of Ireland | Protected Species: Wildlife Acts \|\| Threatened Species: Birds of Conservation Concern \|\| Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List |
| Whooper Swan (*Cygnus cygnus*) | 13/11/2020 | Birds of Ireland | Protected Species: Wildlife Acts \|\| Protected Species: EU Birds Directive \|\| Protected Species: EU Birds Directive >> Annex I Bird Species \|\| Threatened Species: Birds of Conservation Concern \|\| Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List |
| **Mammals** | | | |
| Eurasian Pygmy Shrew (*Sorex minutus*) | 19/12/2017 | Mammals of Ireland 2016-2025 | Protected Species: Wildlife Acts |
| European Otter (*Lutra lutra*) | 30/12/2017 | Mammals of Ireland 2016-2025 | Protected Species: EU Habitats Directive \|\| Protected Species: EU Habitats Directive >> Annex II \|\| Protected Species: EU Habitats Directive >> Annex IV \|\| Protected Species: Wildlife Acts |
| Pine Marten (*Martes martes*) | 10/07/2021 | Mammals of Ireland 2016-2025 | Protected Species: EU Habitats Directive \|\| Protected Species: EU Habitats Directive >> Annex V \|\| Protected Species: Wildlife Acts |
| West European Hedgehog (*Erinaceus europaeus*) | 25/04/2021 | Hedgehogs of Ireland | Protected Species: Wildlife Acts |

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