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# TII Publications

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# Environmental Impact Assessment of Rural Cycleways (Offline & Greenway) – A Practical Guide

**PE-ENV-01109**

**November 2024**

PE Planning & Evaluation

Technical

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Transport Infrastructure Ireland (TII) is responsible for managing and improving the country's national road and light rail networks.

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## TII Publications

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# Abbreviations and Acronyms

| List of Acronyms and Abbreviations | |
|---|---|
| AA | Appropriate Assessment |
| ABP | An Bord Pleanála |
| AIPP | All Ireland Pollinator Plan |
| AFA | Area of Further Assessment |
| APSFR | Areas of Potentially Significant Flood Risk |
| CRO | Constraints, Risks and Opportunities |
| CAF | Common Appraisal Framework |
| CAP | Climate Action Plan |
| CDM | Cycle Design Manual |
| CEMP | Construction Environmental Management Plan |
| CIEEM | Chartered Institute of Ecology and Environmental Management |
| CO | Conservation Objectives |
| CO2 | Carbon Dioxide |
| CPO | Compulsory Purchase Order |
| DECC | Department of the Environment, Climate and Communications |
| DHLGH | Department of Housing, Local Government and Heritage |
| DMURS | Design Manual for Urban Roads and Streets |
| DOH | Department of Health |
| DOT | Department of Transport |
| DPER | Department of Public Expenditure, National Development Plan Delivery and Reform |
| DRCD | Department of Rural and Community Development |
| DTTS | Department of Transport, Tourism and Sport |
| EC | European Commission |
| ECF | European Cycling Federation |
| EcIA | Ecological Impact Assessment |

| List of Acronyms and Abbreviations | |
|---|---|
| ECOW | Ecological Clerk of Works |
| EIA | Environmental Impact Assessment |
| EIAR | Environmental Impact Assessment Report |
| EOP | Environmental Operating Plan |
| EPA | Environmental Protection Agency |
| EU | European Union |
| EV | Electric Vehicles |
| FRA | Flood Risk Assessment |
| FRMP | Flood Risk Management Plan |
| FWPM | Fresh Water Pearl Mussel |
| GDA | Greater Dublin Area |
| GHG | Greenhouse Gas |
| GI | Government of Ireland |
| IAPS | Invasive Alien Plant Species |
| IEMA | Institute of Environmental Management and Assessment |
| IFI | Inland Fisheries Ireland |
| IROPI | Imperative Reason of Overriding Public Interest |
| ISMP | Invasive Species Management Plan |
| LA | Local Authority |
| LCA | Landscape Character Assessment |
| LHB | Lesser Horseshoe Bat |
| LVIA | Landscape and Visual Impact Assessment |
| LUX | Luminous Flux |
| MCA | Multi Criteria Analysis |
| NBAP | National Biodiversity Action Plan |
| NBDC | National Biodiversity Data Centre |
| NBS | Nature Based Solutions |

| List of Acronyms and Abbreviations | |
|---|---|
| NCN | National Cycle Network |
| NCNP | National Cycle Network Plan |
| NDP | National Development Plan |
| NFQ | National Framework of Qualifications |
| NHA | Natural Heritage Area |
| NIAH | National Inventory of Architectural Heritage |
| NIFTI | National Investment Framework for Transport in Ireland |
| NIS/NIR | Natura Impact Statement/Report |
| NMS | Nation Monuments Service |
| NPF | National Planning Framework |
| NPWS | National Parks and Wildlife Service |
| NRA | National Road Authority |
| NSMP | National Sustainable Mobility Policy |
| NSO | National Strategic Outcome |
| NTA | National Transport Authority |
| OTD | Overarching Technical Document |
| OPR | Office of the Planning Regulator |
| OPW | Office of Public Works |
| PAG | Project Appraisal Guidelines |
| PFRA | Preliminary Flood Risk Assessment |
| PMG | Project Management Guidelines |
| PMM | Project Management Manual |
| pNHA | proposed Natural Heritage Area |
| POD | Project/Programme Outline Document |
| POM | Programme of Measures |
| QI | Qualifying Interests |
| RA | Regional Assembly |

| List of Acronyms and Abbreviations | |
|---|---|
| RBMP | River Basin Management Plan |
| RFI | Request for Further Information |
| RMP | Record of Monuments and Places |
| RPS | Record of Protected Structures |
| SAC | Special Area of Conservation |
| SEA | Strategic Environmental Assessment |
| S.I. | Statutory Instrument |
| SIP | Sustainability Implementation Plan |
| SPA | Special Protection Area |
| SPR | Source Pathway Receptor |
| TAF | Transport Appraisal Framework |
| TII | Transport Infrastructure Ireland |
| TMP | Traffic Management Plan |
| UN | United Nations |
| WFD | Water Framework Directive |
| ZOI | Zone of Influence |

# 1. Introduction

This Technical Document **PE-ENV-01109** (referred to as these Guidelines for the remainder of the document), provides practical guidance on the scope and processes underlying Environmental Assessment for Rural Cycleways (Offline and Greenway) Infrastructure Projects.

As outlined in the Transport Infrastructure Ireland (TII) document *Rural Cycleway Design (Offline & Greenway)* (DN-GEO-03047), a cycleway is an offline public road reserved for the exclusive use of people cycling, walking or wheeling. Further definitions and details of the various active travel facility types are provided in DN-GEO-03047.

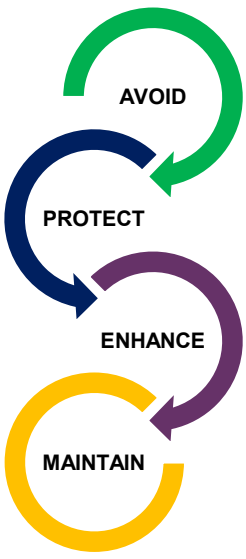
## 1.1 Purpose, Application and Aim of these Guidelines

The purpose of this document is to provide guidance on how the assessment of environmental impacts are considered in the development of Rural Cycleway (Offline and Greenway) Infrastructure Projects (for ease of reference referred to as Greenway(s) for the remainder of the document) during each TII Project Phase. These Guidelines apply to the development and delivery of new or improved Greenways, which are funded through TII and/or when TII is the Approving Authority. These Guidelines provide supplementary, environmentally focused guidance to that laid out TII's *Project Manager's Manual of Greenway Projects* (PE-PMG-02047).

These Guidelines are intended for use by Project Managers and suitably qualified Environmental Specialists, carrying out the Environmental Assessment. These Guidelines are also intended as a reference for those with a direct involvement in the planning, design and evaluation of Greenway projects. This includes the Local Authorities, technical advisors and consulting engineers.

One of the guiding principles outlined in TII's *Sustainability Implementation Plan* (SIP) is to "*Create total value for society - Maintain and enhance the balanced delivery of economic, environmental and social value through robust planning, rigorous appraisal and decisions that prioritise sustainability*." These Guidelines aim to support this principle with the overarching objective of assisting TII Greenway projects to be carried out in such a way as to where possible:

1. **AVOID** - avoid and minimise impact to the environment.
2. **PROTECT** - protect the existing environment through appropriate design and mitigation measures.
3. **ENHANCE** - enhance the environment through, for example, improved community access, biodiversity enhancement, modal shift, etc.
4. **MAINTAIN** - outline during the project planning phases what needs to be considered for the future sustainable management and maintenance of the Greenway in respect to the environment once operational.




Although these Guidelines are not directly targeted at other active travel projects (e.g. online cycle lanes, cycle tracks) some aspects may be of relevance to those projects. Further detail on the application of these Guidelines is provided in Section 3.

These Guidelines are not intended to cover all potential environmental effects that could arise from a Greenway Project but rather provide users with a broad understanding of the scoping and assessment of environmental impacts. The Project Manager and/or Project Teams shall use Professional judgement, taking into account the baseline, scale of the project and the type of impacts being considered when undertaking environmental assessment.

## 1.2 Key Terms and Definitions

Key definitions in relation to active travel infrastructure (such as the infrastructure used on Greenways) are set out in TII's *Rural Cycleway Design (Offline and Greenway)* (DN-GEO-03047). Key terms such as Environmental Impact Assessment (EIA), EIA Report (EIAR) and Appropriate Assessment (AA) are outlined in the Environmental Protection Agency (EPA) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (EPA, 2022). Some other key terms and definitions of relevance to these Guidelines include the following:

- **Natura Impact Statement (NIS) or Report (NIR)** - A report comprising the scientific examination of a plan or project and the relevant European site(s), to identify and characterise any possible implications of the plan or project individually or in combination with other plans or projects in view of the conservation objectives of the site(s), and any further information including, but not limited to, any plans, maps or drawings, scientific information or data required to enable the carrying out of an Appropriate Assessment.
- **Environmental Assessment (non-EIA Directive)** - Relates to the assessment and reporting of potential environment effects that are not considered to be significant.
- **Environmental Factor** - As set out in Article 3(1) of the 2011 Directive as amended by the 2014 Directive and includes Population, Human Health, Biodiversity, Land, Soil, Water, Air, Climate, Material Assets, Cultural Heritage and Landscape. Noise, Vibration, Light and Waste are also considered1.
- **Environmental Specialist** - Suitably qualified competent environmental expert, carrying out Environmental Assessment, see Section 1.3 below.
- **Environmental Coordinator** - The person responsible for the overall coordination of the EIA or other Environmental Assessments. This can be the Project Manager or an additional competent individual depending on the nature and scale of the project.

## 1.3 Project Team

### 1.3.1 Role of the Project Manager under these Guidelines

The term "Project Manager" is used to describe the person or persons undertaking the functions of the Project Manager as described in the TII *Project Management Guidelines* (PE-PMG-02041). The Project Manager will be responsible for the application of these Guidelines. This can include the allocation of tasks outlined in these Guidelines to a dedicated Environmental Coordinator and/or other Environmental Specialists, as appropriate.

[1] 2014/52/EU - A description of the likely significant effects of the project on the environment resulting from, *inter alia*: the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste.

### 1.3.2 Requirements of the Environmental Specialists

Directive 2011/92/EU, as amended by Directive 2014/52/EU commonly referred to as the EIA Directive, stipulates that the EIAR and assessments must be carried out by competent experts, see further detail in TII's *Environmental Planning of National Road and Greenway Projects* (RE-ENV-07008). Therefore, the Environmental Specialists who carry out assessments on TII projects must be expert, qualified and competent. Furthermore, it is the responsibility of the developer (e.g., the local authority) to ensure that this is the case.

The developer must document the criteria (along with the underlying rationale) it has devised to ensure that its Environmental Specialists are qualified, competent and expert.

The developer shall document how these criteria have been applied in the selection of its Environmental Specialists. A non-exhaustive list of example criteria that can be used to demonstrate competency include:

- An honours degree (National Framework of Qualifications (NFQ) Level 8) in environmental science or engineering (or equivalent discipline); or a master's degree NFQ Level 9 (or equivalent level) in environmental science or engineering (or equivalent discipline);
- Membership and/or chartership with a relevant/appropriate professional body; and
- In general, it is recommended that the Environmental Specialist have sufficient relevant post-graduate experience. This should be decided taking into account the nature, scale and complexity of the Greenway project.

Where available, reference should be made to the relevant TII environmental standards and associated technical guidelines in relation to requirements for specialists by Environmental Factor.

### 1.3.3 Requirement for Environmental Specialist Involvement

Greenway projects depending on their scale and/ or complexity, may require multiple design professionals and Environmental Specialist inputs. An important aspect to consider early in any Greenway project development is the requirement to employ specialist such as ecological specialists and/or landscape specialists and/or designers. This can include those with expertise in particular habitats, species (e.g. bats, birds) or landscapes such as peatland, turloughs and urban realm design etc. The Project Manager should, in consultation with Environmental Specialists, consider the need for such requirements at an early stage of the project development, see further details in Section 4.8.

## 1.4 Related TII Documents and Tools

TII has produced a range of standards, guidelines and technical publications related to the planning, design, development and construction/implementation of National Road, Greenway and Light Rail projects in Ireland. A discussion around the main documents that are relevant to greenway projects are outlined below.

### 1.4.1 TII Environmental Standards and Guidance

TII has a suite of standards (and/or associated guidance documents) on topics such as population and human health, air, climate, waste, landscape and visual, Cultural Heritage[2] and invasive alien plant species. These standards and technical guidelines are available on the TII publications website.

[2] See also the Code of Practice for Archaeology agreed between the Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs and Transport Infrastructure Ireland (NMS, 2017).

TII also has a suite of environmental related guidance and research available on the TII website and/or TII publications website. This includes guidance relating to noise assessment, ecological surveys and biodiversity impact assessment, the assessment of geology, hydrology and hydrogeology and construction-related guidelines for a range of environmental receptors. These guidelines are targeted at national road projects but can be relevant to the assessment of Greenway projects. See the full list of documents in Appendix C of these Guidelines (Note: This list is current at the date of publication of this document and is subject to change.).

One TII document of particular relevance to Greenways is the *Environmental Planning of National Road and Greenway Projects* (RE-ENV-07008). The purpose of RE-ENV-07008 is to assist those involved in the planning of national road and Greenway projects to navigate environmental and planning law that is commonly encountered.

TII standards and guidance are periodically updated, and new documents are continually being developed, therefore reference should be made to the most recent set of publications available on the TII publications website.

### 1.4.2 Project Management and Project Appraisal Guidelines

TII has produced Project Management Guidelines (PMG), Manuals (PMM) and Project Appraisal Guidelines (PAG) and reference should made to the full suite of PMG/PMMs and PAGs as required[3]. One document of specific relevance to Greenway projects is the *Project Manager's Manual for Greenway Projects* (PE-PMG-02047) and this manual should be read in conjunction with these Guidelines.

### 1.4.3 TII and Sustainability

TII is committed to providing safe, efficient and sustainable transport infrastructure and services, delivering a better quality of life for all users, supporting economic growth and respecting the environment. To aid the achievement of this, TII's SIP was developed to set out a clear vision and roadmap for embedding sustainability throughout the organisation and its activities. The implementation of TII's SIP is supported by the *Guide to the Implementation of Sustainability for TII Projects* (GE-GEN-01101) which sets out a framework to implement sustainability at a project level. Workflows are provided to guide Project Managers to take meaningful steps towards implementing sustainability into TII projects.

In line with the SIP, TII is working to adopt a circular economy approach in the activities, programmes and projects it delivers and funds. TII's *Circular Economy Policy 2023-2025* and *Circular Economy Strategy 2023-2025* set out TII's ambitions to embed circular economy principles into all TII activities.

TII have also published a *Biodiversity Plan* (TII, 2023) and a *Landscape Plan* (TII, 2023). These two documents outline a series of objectives aimed at delivering on key biodiversity policy areas as outlined in Figure 1.1.

[3] It is highlighted that the Transport Appraisal Framework (TAF) replaced the Common Appraisal Framework (CAF) for transport projects and programme in 2023. Due to this change, there is an ongoing process of updates underway to the TII PAG and TII PMG documents, therefore reference should be made to the most recent set of PAGs and PMG available on the TII publications website.

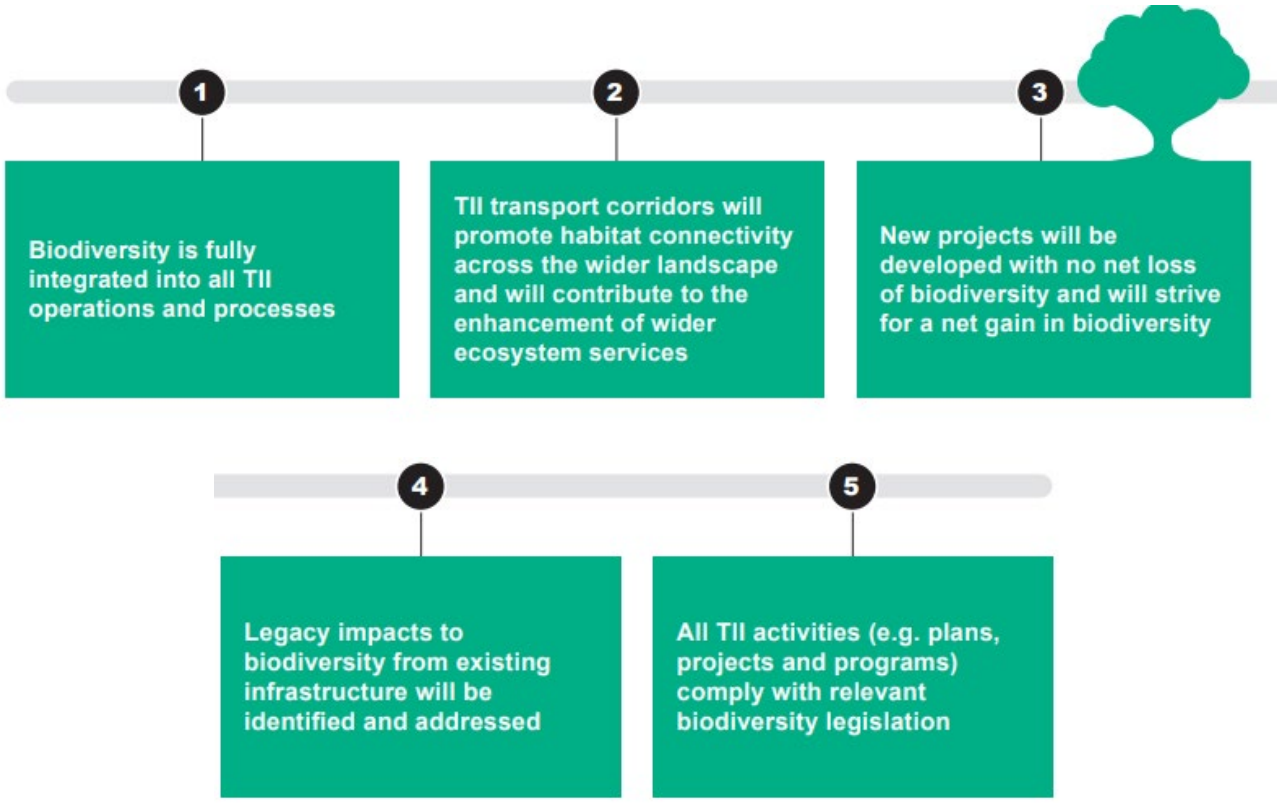



**Figure 1.1 - TII Biodiversity Plan Policies** (taken from the TII Biodiversity Plan, 2023)

### 1.4.4 TII Carbon Assessment Tool

TII has developed a Carbon Assessment Tool which allows for the carbon footprint of Greenway projects to be calculated. A climate specialist can use the tool for the calculation of emissions arising from the construction (e.g. embodied carbon in construction materials, energy, and fuel use) and maintenance emissions. The tool uses a series of calculations, emission factors and assumptions to calculate a carbon footprint for a Greenway project.

Further details on the tool can be found in TII's *Climate Guidance for National Roads, Light Rail, and Rural Cycleways (Offline & Greenways) - Overarching Technical Document* (PE-ENV-01104) and *Transport Infrastructure Ireland Carbon Tool for Road and Light Rail Projects: User Guidance Document* (GE-ENV-01106-02*)*. Please note that in order to get access to the TII Carbon Assessment Tool, prospective users should email climatetools@tii.ie to be set up as an authorised user on the TII Web Application Portal.

### 1.4.5 Summary

Figure 1.2 provides a high-level summary of the relevant standards and guidelines applicable when carrying out management, appraisal, design and Environmental Assessment of TII Greenway projects. Those highlighted in blue are TII standards, guidance and technical documents as outlined in Section 1.4 and others are other relevant standards and guidance which are detailed further in Section 2 and Appendix C.

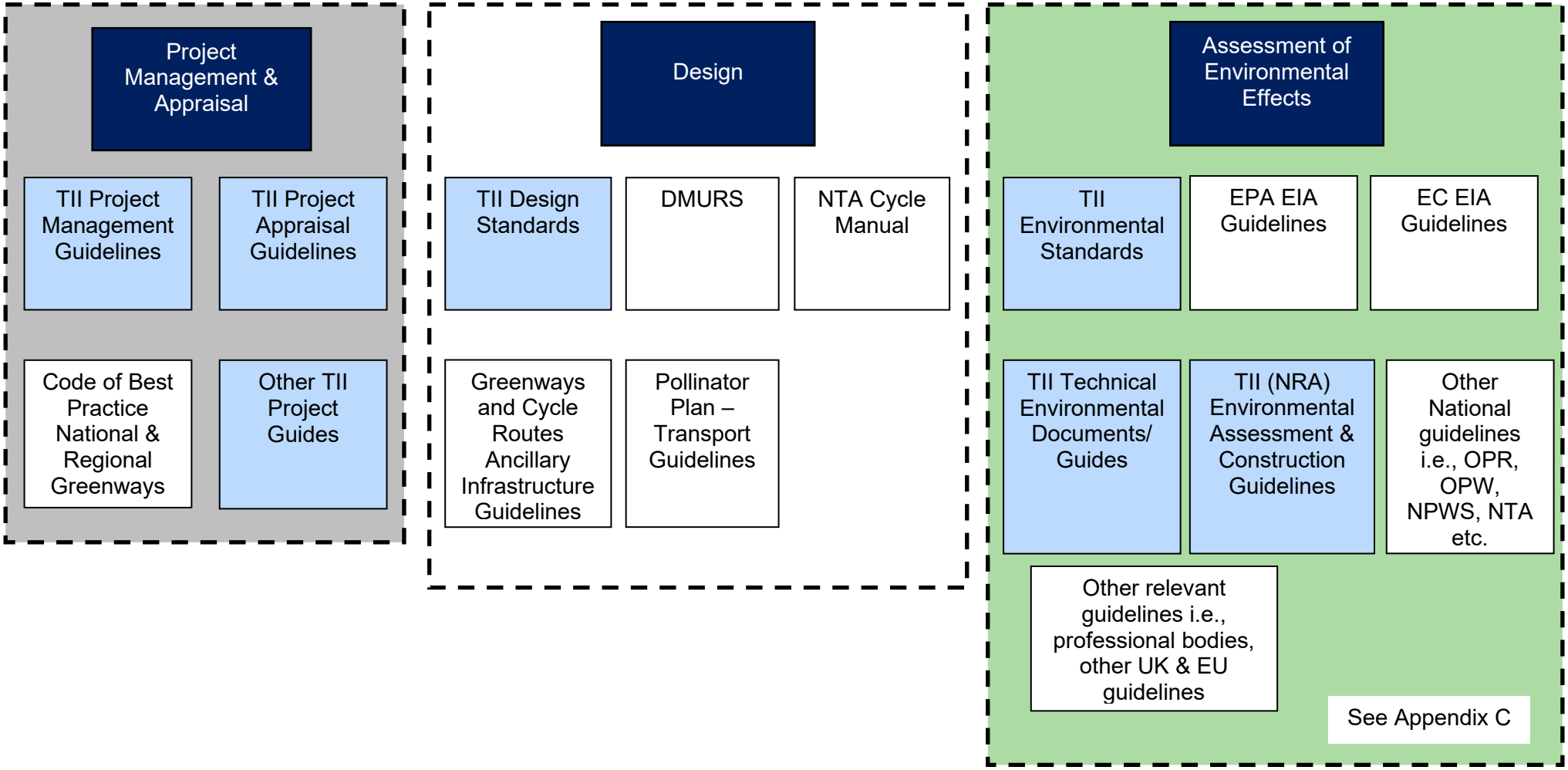



**Figure 1.2 - Overview of Standards and Guidelines applicable on TII Greenway Projects**

(Documents in blue are TII documents)

## 1.5 Organisation of these Guidelines

These Guidelines are organised as follows:

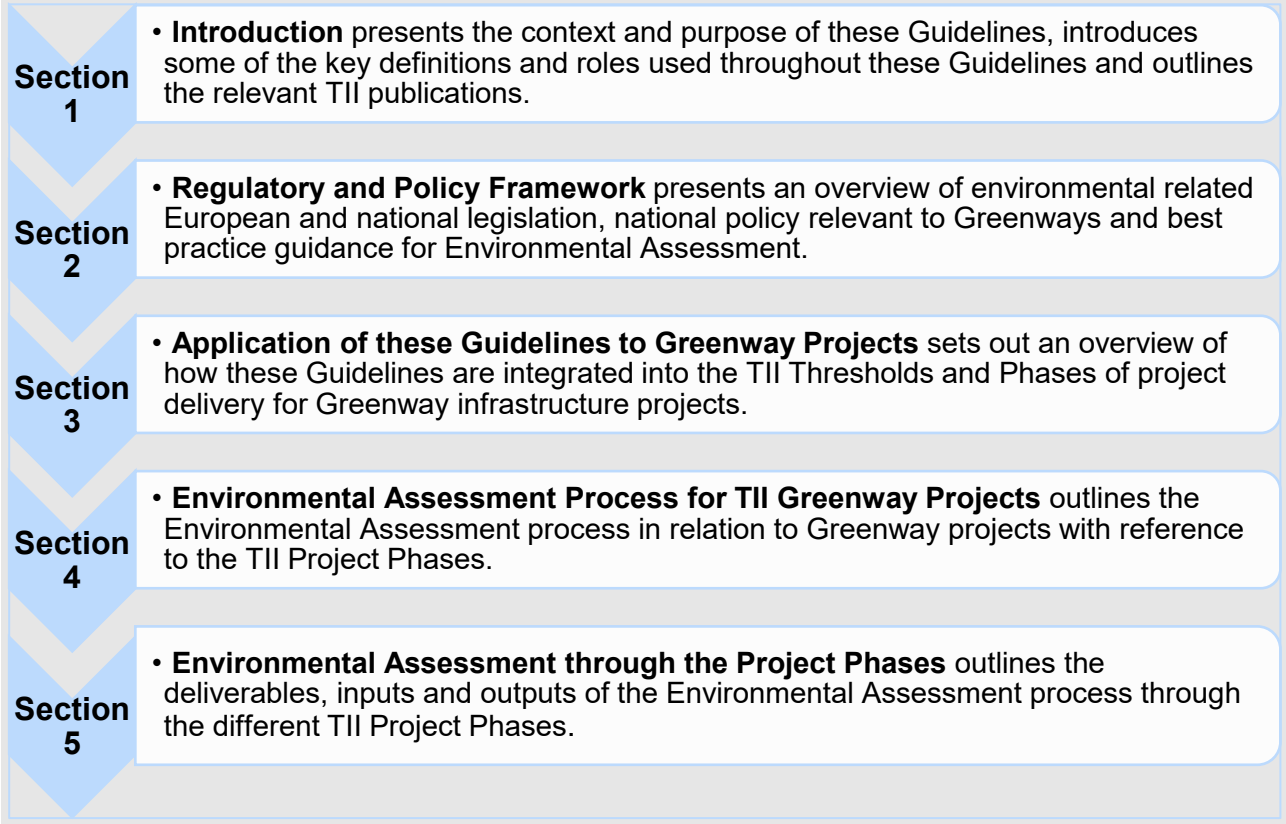



**Figure 1.3 - Organisation of these Guidelines**

# 2. Regulatory and Policy Framework

This section presents an overview of the key environmental legislation and policy relating to the planning, design and implementation of Greenway projects.

Planning and environmental legislation is an evolving area and project teams must be cognisant of the relevant European and national legislation. As outlined in Section 1 a comprehensive guide to environmental and planning law relating to Greenway projects is provided in TII's *Environmental Planning of National Road and Greenway Projects* (RE-ENV-07008).

In the context of project planning and the associated documentation, it is important to clearly set out how the Greenway supports and contributes to national, regional and local policy. Section 2.3 of these Guidelines is by no means an exhaustive list of the planning policy for Greenways, but it does provide a useful snapshot of some of the key current documents, further detail is provided in Appendix B. Again, policy is an evolving area and project teams must be cognisant of policy updates and newly published policy.

## 2.1 Key European Environmental Law

The following sections outline the key pieces of European legislation that are relevant to the planning and design of Greenway projects. Where any doubt remains as to the applicability and interpretation of relevant legislation, it is recommended that professional legal advice be obtained.

### 2.1.1 EU Environmental Impact Assessment (EIA) Directive

Under the European Union's (EU) EIA Directive 2011/92/EU as amended by Directive 2014/52/EU, major building or development projects must be assessed for their impact on the environment. The EIA Directive requires development consent for certain projects can only be granted after an assessment of the likely significant effects on the environment is undertaken.

The EIA assesses the direct and indirect significant impact of a project based on a wide range of Environmental Factors and aspects as follows:

- Population
- Human Health
- Biodiversity
- Land
- Soil
- Water
- Air
- Climate
- Landscape
- Material Assets
- Cultural Heritage
- Noise and Vibration
- Light
- Waste
- Risk of Major Accidents and or Disasters

The projects which mandatorily require EIA are listed in Annex I of the EIA Directive. For projects listed in Annex II of the EIA Directive each Member State decides whether Annex II projects require an EIA. Note thresholds have been set for Annex II projects in Irish legislation. **Projects which do not meet these thresholds may still require an EIA if the project is likely to have significant effects on the environment, case-by-case analysis is required.**

There are a number of guidance documents dealing with the topic of the EIA Directive as outlined in TII's *Environmental Planning of National Road and Greenway Projects* (RE-ENV-07008) and Section 4 of these Guidelines. Section 4 also outlines specific considerations when undertaking an Environmental Assessment for a Greenway project.

### 2.1.2 EU Habitats and Birds Directives

The Birds Directive (2009/147/EC) and Habitats Directive (92/43/EEC) have the potential to significantly influence the planning of a Greenway project. The Habitats Directive contributes to ensuring biodiversity in the EU by conserving natural habitats and wild fauna and flora species. There are two ways in which the Habitats Directive seeks to conserve habitats and wildlife:

- through the establishment, management and protection of the Natura 2000 ecological network of sites i.e. Special Areas of Conservation (SAC) and Special Protection Areas (SPA); and,
- through the establishment of a system of strict protection for the animal and plant species listed in Annex IV to the Directive.

AA is an assessment of the potential adverse effects of a plan or project (in combination with other plans or projects) on European sites (SAC and SPA). AA screening is required to determine if a project is likely to have a significant effect, either individually or in combination with other plans or projects, on European site(s) in view of the site's conservation objectives (CO). Where it has been determined that AA is required in respect of the project then an NIS shall be prepared. The NIS will contain the relevant information or data that will enable the competent authority to determine if the project will adversely affect the integrity of the site.

Further detail on the Habitats Directive can be found in TII's *Environmental Planning of National Road and Greenway Projects* (RE-ENV-07008), along with references to a number of relevant guidance documents. Section 4 of these Guidelines outlines specific considerations when undertaking AA for a Greenway project.

It is noted that following the approval of the Nature Restoration Law by the EU Environment Council, Ireland is now developing a national Nature Restoration Plan which will outline how it will deliver on restoration measures and targets. The Plan must be submitted to the EU Commission by 1 September 2026.

### 2.1.3 EU Water Framework Directive

The EU Water Framework Directive (WFD) (2000/60/EC) requires all Member States to achieve 'good status' in both surface and groundwater bodies, and to prevent deterioration in water bodies that have achieved 'good status'. Good water quality status under the WFD relates to both good ecological quality, along with good quality physical and chemical parameters.

The key objectives of the WFD are set out in Article 4 of the Directive. Member States must prepare River Basin Management Plans (RBMPs) and Programmes of Measures (POM) to protect and, where necessary, restore water bodies in order to reach good status, and to prevent deterioration. Further detail on the WFD in Ireland can be found at catchments.ie.

Greenway projects are likely to be required to demonstrate compliance with the WFD however, it is noted that there are currently no national guidelines in relation to undertaking a WFD compliance assessment. Section 4 of these Guidelines does outline some high-level considerations when undertaking a WFD compliance assessment for a Greenway project.

### 2.1.4 EU Floods Directive

The aim of the EU Floods Directive (2007/60/EC) is to reduce adverse consequences of flooding on human health, the environment, cultural heritage and economic activity. All Member States are required to:

- Assess all areas where significant floods could take place- Preliminary Flood Risk Assessment (PFRA).

- Map the flood extent and assets and humans at risk in these areas- prepare flood hazard and risk maps for Areas of Potentially Significant Flood Risk (APSFR) also referred to as Areas of further Assessment (AFA).
- Take adequate and coordinated measures to reduce this flood risk i.e. prepare Flood Risk Management Plans (FRMPs) which set out the objectives and measures to manage and reduce flood risk within the APSFR.

The 'Floods' Directive is cyclical, requiring a review of the PFRA, the Flood Maps and the FRMPs on a six-yearly cycle. The flood maps and the FRMPs are available on the Office of Public Works (OPW) flood portal - www.floodinfo.ie.

Greenway projects are likely to be required to undertake a project level FRA. Section 4 of these Guidelines outlines the relevant national guidelines for undertaking FRA.

## 2.2 Key National Planning and Environmental Legislation

The main pieces of National legislation in Ireland of relevance to the planning and development of Greenway projects are listed below:

- Roads Acts 1993 as amended;
- Planning and Development Acts 2000 as amended;
- Planning and Development Regulations 2001 as amended;
- European Communities (Birds and Natural Habitats) Regulations 2011 as amended;
- Wildlife Acts 1976 as amended;
- Local Government (Water Pollution) Acts 1977 as amended;
- Inland Fisheries Acts 1959 as amended;
- Waste Management Acts 1996 as amended;
- Maritime Area Planning Act 2021;
- National Monuments Acts 1930 as amended;
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999; and
- Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023.

A guide to the Irish environmental and planning law relating to the planning of Greenway projects is provided in TII's *Environmental Planning of National Road and Greenway Projects* (RE-ENV-07008)[4]. In addition, TII guidelines and standards such as the TII *Guidelines for Cultural Heritage Impact Assessment of TII National Road and Greenway Projects* (PE-ARC-02009) and the TII *Climate Assessment of Proposed National Roads - Standard* (PE-ENV-01105) set out more detail in relation to specialist Environmental Factor legalisation. Where any doubt remains as to the applicability and interpretation of relevant national legislation, it is recommended that professional legal advice be obtained.

[4] It should be noted that the Planning and Development Act 2024 was signed by the President on the 17th of October 2024. When relevant Parts and Sections of this Act are commenced and relevant Parts and Sections of the Planning and Development Act 2000 are repealed, the applicable consent mechanisms will change. A watching brief should be kept on such developments.

## 2.3 National Policy Relevant to Greenways

The development of Greenways in Ireland must have regard to a number of national policies, plans and strategies. Appendix A provides a non-exhaustive list of policy documents that may be relevant to the planning of Greenway projects. Some of the policy documents of significant relevance in relation to Greenways are as follows:

- Project Ireland 2040 - National Planning Framework;
- National Development Plan 2021-2030;
- National Investment Framework for Transport in Ireland;
- National Sustainability Mobility Plan;
- Moving Together: A Strategic Approach to Improving the Efficiency of Ireland's Transport System (DRAFT);
- Strategy for the Future Development of National and Regional Greenways;
- National Cycle Network Plan;
- Cycle Connects;
- National Roads 2040;
- National Biodiversity Action Plan; and
- National Climate Policy.

Appendix B of these Guidelines sets out an overview of the above policy in relation to Greenways and also how this has evolved since 2018 when the Strategy for the Future Development of National and Regional Greenways was published. In 2018 Greenways were initially sponsored by Department of Transport, Tourism and Sport (DTTS) as a tourism and recreation facility. However, Greenways are now also acknowledged as a potential enabler for modal shift and a mechanism for enhancing regional and rural connectivity, as well as forming an asset for tourism and recreation.

It is noted that policy is continuously being updated with new policy also coming online regularly. Therefore, Project Teams should make reference to the most up to date policy documents through for example the relevant department and/or organisation website.

## 2.4 Regional Planning Guidelines, County/Local Development Plans

The Planning and Development Act sets out the requirements for all regional planning guidelines, county development plans and local area plans. Under the Act, these plans shall set out the overall strategy for the proper planning and sustainable development of the area along with the development objectives for the area in question. The objectives of any development plan must take account of wider national, regional planning and infrastructure investment policies and must be influenced by an understanding and analysis of the local context of the area for which it has been prepared.

Development plans will also list specific natural amenities (views, trees, landscapes, proposed Natural Heritage Areas etc.) and/or particular buildings, features, sites of artistic, architectural, historical, archaeological, cultural, scientific, social or technical interest for preservation within their plan areas.

Any proposed Greenway projects must comply with regional and local policy and have regard to the listed features within that plan.

## 2.5 National Guidance Relevant to Greenways

There are a number of national guidelines (non-TII) that are specific to or highly relevant to the development of Greenway projects, some of which are outlined in this Section. In addition, Appendix C provides a non-exhaustive list of other guidelines that are relevant in the planning and Environmental Assessment of Greenway projects.

### 2.5.1 Code of Best Practice – National and Regional Greenways

In 2021 the Department of Trasport (DOT) published the *Code of Best Practice – National and Regional Greenways*.

The code provides information on some of the processes involved with the planning, designing, and constructing of national and regional Greenways along with an overview of the public consultation processes, constraints study, route selection and statutory processes. It also includes information on (and promotes the objective to maximise) the use of State-owned lands and the acquisition of private lands for developing national and regional Greenways.

### 2.5.2 National Cycle Design Manual

The *Cycle Design Manual* (CDM) prepared by the National Transport Authority (NTA) provides guidance on the design of both on-road and off-road cycle facilities for both urban and rural location. The CDM draws on the experience of delivering cycling infrastructure across Ireland and internationally and is guided by the need to deliver safe cycle facilities for people of all ages and abilities (NTA, 2023).

### 2.5.3 Guidance for EIA/AA Screening of Active Travel Projects Funded by the NTA

In 2023, *Guidance for EIA and AA Screening of Active Travel Projects Funded* (NTA, 2023) was published providing a step-by-step guide on how to complete the EIA Screening and the AA Screening process and reporting for NTA funded active travel projects.

### 2.5.4 Design Manual for Urban Roads and Streets

Urban roads and streets i.e. roads with speed limits of 60 km/h or less are designed in accordance with the *Design Manual for Urban Roads and Streets* (DMURS) (DOT, 2019). DMURS sets out an integrated design approach which must:

a) Be influenced by the type of place in which the street is located, and

b) Balance the needs of all users.

A further aim of this Manual is to have well-designed streets within communities, in order to create connected physical, social and transport networks that promote alternatives to car journeys such as walking, cycling or public transport.

### 2.5.5 All-Ireland-Pollinator-Plan - Transport Guidelines

The All-Ireland Pollinator Plan (AIPP) published the *Pollinator-friendly management of: Transport Corridors* (2019) guidelines on how transport corridors can be managed in a pollinator-friendly way. The AIPP transport guidelines outline the potential for linear transport corridors to have a positive impact on biodiversity and contribute to ecological connectivity throughout the Irish countryside.

### 2.5.6 Greenways and Cycle Routes Ancillary Infrastructure Guidelines

In 2018, DTTS in partnership with Sport Ireland published the *Greenways and Cycle Routes Ancillary Infrastructure Guidelines*.

The aim of these Guidelines is to provide advice on the design and installation of ancillary infrastructure that supports users of cycleways such as route furniture, cycle parking, rest areas and trailheads etc.

### 2.5.7 Fáilte Ireland Toolkits for Greenways

In 2021 Fáilte Ireland published their *Greenway Visitor Experience & Interpretation Toolkit* and in 2023 their Visitor Amenity Best Practice Toolkit for Greenways and Blueways.

### 2.5.8 Other Relevant Guidance

It should be noted that there are many sources of relevant environmental related guidelines that could be applicable to Greenways. Figure 1.2 outlines a summary of the primary guidance documents and standards applicable to Greenway projects.

There are also many other sources of guidance from state organisations such as the EPA, Office of the Planning Regulator (OPR), Inland Fisheries Ireland (IFI), National Park and Wildlife Service (NPWS), the OPW and professional bodies such as the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Institute of Environmental Management and Assessment (IEMA). A non-exhaustive list of relevant guidelines by environmental Factor is provided in Appendix C.

# 3. Application of these Guideline to Greenway Projects

TII's PMG/PAG provide a framework for a phased approach to the management of the development and delivery of Greenway Projects. They are applicable to projects which are funded by TII and/or TII is the Approving Authority, unless otherwise agreed by TII.

This Section gives an overview of TII Project Thresholds and Project Phases and describes how they will apply to these Guidelines. More detail on where and how the Environmental Assessment process is applied by TII's Project Phase is provided in Section 4 and 5.

## 3.1 Project Thresholds

TII classifies projects into different value thresholds, as outlined in the PMG/PAG as either minor or major projects. Please refer to the PMG and PAG for the most up to date breakdown of project thresholds. These Guidelines can be applied in full to all proposed Greenway projects where a statutory EIA is required (typically major projects). However, all projects (major and minor) must be screened in terms of possible effects and then should be subject to a robust appraisal of environmental effects at an appropriate level of detail, taking into account their size and complexity. As such, these Guidelines should be applied in a manner proportionate to the likely significant effects of the project. This shall be determined by the Project Manager and, during the relevant later phases, by the environmental specialists.

## 3.2 Project Phases

These Guidelines apply primarily to TII Project Phases 0 to 4, as set out in the TII *Project Managers Manual for Greenway Projects* (PE-PMG-02047) which address the scope, option selection, design, environmental evaluation, and statutory processes. See the Project Phases as set out in Table 3.1.

These Guidelines do not provide detailed advice for the Project Manager or Environmental Specialists on TII Project Phases 5 to 7, which relate to procurement, construction and implementation, closeout and review. However, Phases 5 to 7 may require support from Environmental Specialists to help procure, implement and review mitigation and monitoring measures. See Section 5 for further details on this.

The European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulations 2019 creates a regulatory regime in relation to environmental enforcement authorities. This regime is summarised in section 5.1.6.2 of *Environmental Planning of National Road and Greenway Projects* (TII 2023e (RE-ENV-07008)). Cognisance of these facts is required in Phase 5 and further phases.

## 3.3 Application of these Guidelines to Greenway Projects

Table 3.1 provides a high-level summary of the activities and deliverables at each TII Project Phase in relation to the Environmental Assessment of TII Greenway projects. Further detail on this is provided in both Sections 4 and 5. The below is non-exhaustive summary and it is highlighted that specific project requirements should be developed by the Project Manager/Project Team on a case-by-case basis.

**Table 3.1 - TII Project Phases, Environmental Activities and Greenway Project Deliverables**

| Project Phase | Environmental Activities and Greenway Project Deliverables |
|---|---|
| **Phase 0: Scope & Strategic Assessment** | Environmental Specialist input is not required at Phase 0. The Project Manager when developing the **Project Outline Document** (POD) can include environmental related objectives within the Project Objectives, see PAG Unit 2.2. Project objectives could be based on known environmental constraints, problems, risks and opportunities in the emerging study area. This could include objectives around local issues such as known areas of high noise from traffic, poor air quality due to traffic emission, lack of access to blue or green spaces, areas of social deprivation, known health issues etc. In term of opportunities this could include the provision of biodiversity gain (e.g. providing linking habitats such as hedgerow or treelines). Environmental Specialist input can be sought by the Project Manager if required. |
| **Phase 1: Concept & Feasibility** | Environmental Specialist input is likely to be required to a varying degree during Phase 1 for the development of the **Feasibility Report** to:<br>• Define the project study area and environmental Zones of Influence (ZOI),<br>• Identify, document and map environmental constraints and opportunities;<br>• Identify any environmental related risks to the project; and<br>• Aid the development of the reasonable options to be taken forward to Phase 2 the Option Selection Process.<br>Risks from the environmental constraints and opportunities identification should be considered at Phase 1 when the reasonable options are being developed and/or documented and taken forward for consideration in the option development at Phase 2.<br>If required, the Environmental Specialist(s) can support the Project Manager on any requirement for stakeholder interactions in relation to the environment at Phase 1. |
| **Phase 2: Option Selection Process** | Environmental Specialist input is required during Phase 2 for the development of the **Options Report** to:<br>• Further develop and refine the environmental constraints, risks and opportunities;<br>• Undertake the assessment of the options in terms of the Environmental Factors and document this assessment process in a working paper (if required) and ultimately in the Options Report; and,<br>• Summarise the Environmental Assessment of the Preferred Option in the **Options Report**.<br>As required, the Project Manager can consult with an Environmental Specialist(s) on:<br>• Requirements in relation to stakeholder interactions in relation to the environment at Phase 2;<br>• Requirements in relation to any survey needs at Phase 2;<br>• The requirements in relation to appointment of technical advisors and the Environmental Assessment; and<br>• Ensuring the relevant Plan (and any associated Strategic Environmental Assessment (SEA) and/ or NIS/NIR) is amended if necessary to include the preferred route of the Greenway, see further detail in PE-PMG-02047. |
| **Phase 3: Design & Environmental Evaluation** | Environmental Specialist input is required at Phase 3 as outlined below.<br>Undertake the EIA Screening processes and develop the associated **EIA Screening Report**.<br>Undertake Appropriate Assessment Screening and develop an **AA Screening Report.** |

| Project Phase | Environmental Activities and Greenway Project Deliverables |
|---|---|
| | As outlined in Section 4 the applicable planning route for the Greenway projects is heavily linked to the outcome of the EIA and AA screening processes. It is noted that all Greenway projects must be subject to EIA and AA screening.<br><br>If the project has screened in for EIA, undertake the EIA Scoping exercise and develop the associated **EIA Scoping Report**. A formal EIA scoping can also be undertaken at this point.<br><br>Undertake detailed environmental desk studies and field surveys.<br><br>Environmental Specialists will form part of a muti-disciplinary team to ensure the project maximises all opportunities and is designed in accordance with current best practice. This can include input to the **Design Report** (or project description) as required.<br><br>Undertake the assessment of potential Environmental effects of the project either as:<br><br>• Standalone **Environmental Report(s),** if the project has screened out for EIA, see Section 4.5.<br><br>• Where required in a statutory **Environmental Impact Assessment Report (EIAR)** including description of baseline; assessment of effects, interactions, cumulative effects; detailing of mitigation measures and development of the Schedule of Commitments. etc.<br><br>If AA has screened in, prepare a **Natura Impact Statement.**<br><br>Input into the development of other project plans for example the **Construction Environmental Management Plan** (CEMP), **Environmental Operating Plan** (EOP) and/or **Biodiversity and Landscape Plan**.<br><br>The Environmental Specialist(s) can advise the Project Manager on any requirement in relation to stakeholder interaction at Phase 3. |
| **Phase 4: Statutory Processes** | Environmental Specialist input is likely to be required at Phase 4 depending on the statutory process.<br><br>Respond to queries and submissions, where required.<br><br>If required a) produce **Briefs of Evidence** and b) respond to questions at Oral Hearing.<br><br>Review the An Bord Pleanála (ABP)/Competent Authority decision, where required.<br><br>Update the **Schedule of Environmental Commitments** for inclusion in Phase 5. |
| **Environmental Specialist input from Phase 5 to 7 will be at the request of the Project Manager** | |
| **Phase 5: Enabling & Procurement** | Input into the update of the project **CEMP/EOP.**<br><br>Advise on any environmental enabling works such as environmental surveys.<br><br>Input to Tender documents and process. |
| **Phase 6: Construction & Implementation** | Review the Contractor's project **CEMP/EOP**. |
| **Phase 7: Closeout & Review** | Support the completion of **Landscaping Contract** or any other tasks as required. |

# 4. Environmental Assessment Process for TII Greenway Projects

## 4.1 Introduction

This section describes the processes and considerations necessary when undertaking Environmental Assessment of Greenway projects. These Guidelines promote that the Project Team (specifically the Environmental Specialists) undertake a proportionate level of assessment, taking into consideration the existing environment and the potential for the proposed Greenway project to result in significant effects.

There are a number of European Commission (EC) and National guidelines (such as the EPA 2022 EIA guidelines) available in relation to the EIA (and AA) process. It is not the purpose of these Guidelines to repeat or replace those guidance documents but to support them in terms of TII Greenway projects specifically, and to address the requirements of Environmental Assessment for Greenway projects under the various TII Project Phases.

The various steps of the statutory EIA process such as screening, scoping and assessment (if required) and the AA process are typically undertaken at TII Phase 3 and 4. However, the consideration of potential environmental effects can commence as early as Phase 0 of the TII Project Phases and in the absence of the need for an EIA/AA, will still need to be considered. Details of the assessment of environmental impacts by TII phase as relevant, are outlined in this section with further detail presented on a phase-by-phase basis in Section 5.

Figure 4.1 outlines some of the key Environmental Assessment concepts and steps, and how these apply to TII Greenway projects. It is assumed that Project Manager and Environmental Specialists using these Guidelines are familiar with the requirements under the EIA Directive (relevant national legislation) and associated EC and EPA guidance and therefore this legislation and guidance has not been quoted extensively in these Guidelines. Guidance on Study Areas, Constraints, Risks and Opportunities (CRO) and Options Assessment is also included in the PMM and PAGs and reference should also be made to these TII publications.

A flow chart outlining the stages of environmental assessment such as identifying constraints, options assessment, screening, scoping and assessment from TII Phase 1 to TII Phase 3.

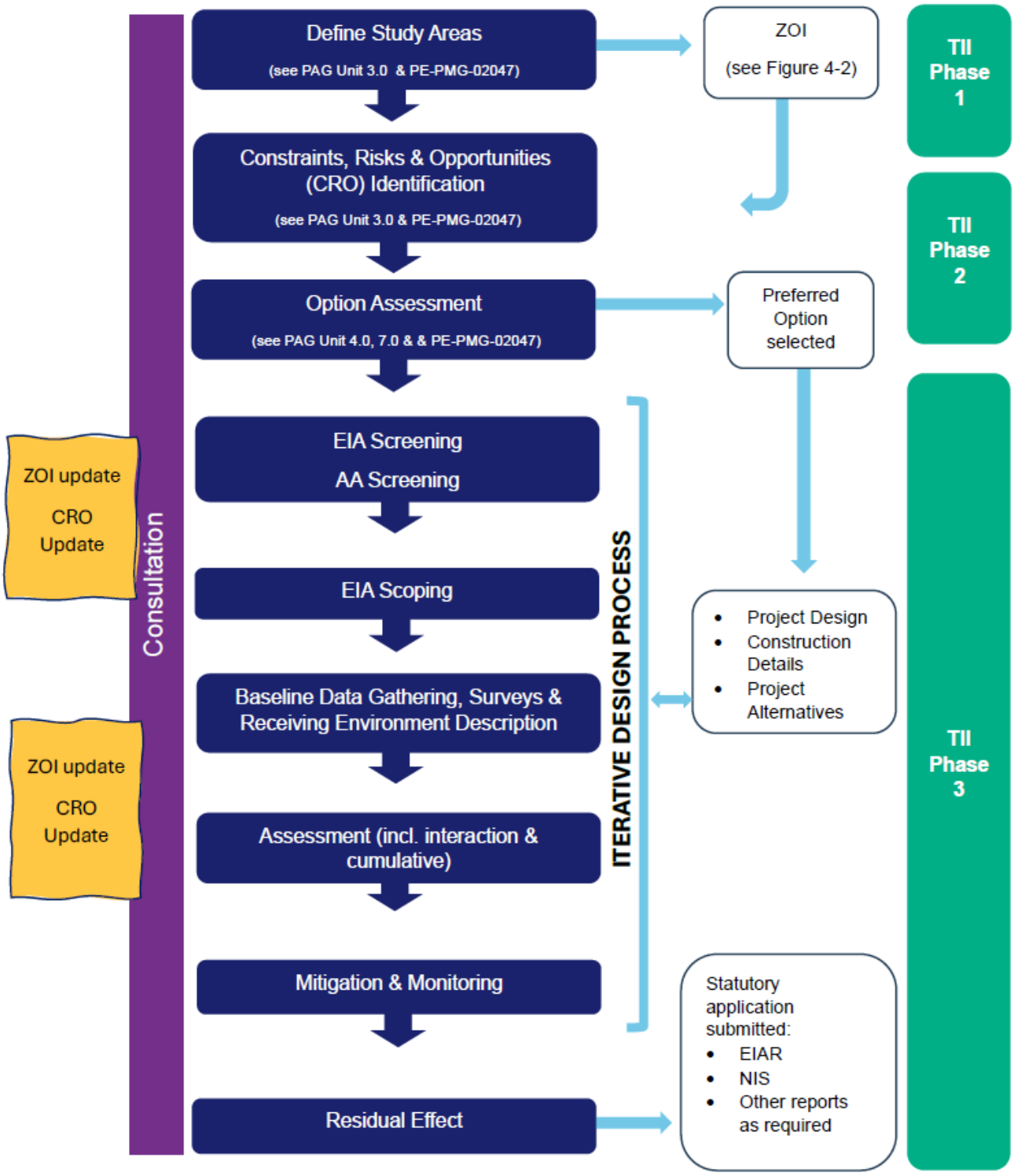



**Figure 4.1 - Environmental Workflow for TII Greenway Projects (Phases 1 - 3)**

## 4.2 Definition of a Project Study Areas and the Zone of Influence

As part of TII Phase 1 and even as early as Phase 0, project related study areas will be defined (appraisal study area and the constraints study area). These project study areas relate to (amongst other things see PAG Unit 3) the area under consideration for the physical location of the project options and eventually the proposed project.

It is expected that the study area will continue to be refined as the project progresses through the TII Project Phases. It is important that the project study area takes account of the environmental constraints for the various environmental factors, as appropriate, throughout each phase. Each environmental factor specialist should review the project study area, the proposed project route(s), design and construction information and from this information ascertain the relevant ZoI, see Figure 4.2.

The ZoI is the zone encompassing all of the potential impacts on the receiving environment associated with the route option/project being evaluated. The ZoI affected by the project can be local, regional, national or even international in the case of transboundary effects. It is likely at Phase 1 that the ZoI will align with the appraisal and constraint study areas, however flexibility is required to allow identification of any potential impacts to receptors further away. Each environmental factor (or a specific receptor within that factor) will have a defined ZoI which will depend on the receptors/baseline and the potential impacts from the project. The ZoI should be established on a case-by-case basis using the Source- Pathway-Receptor model. For example, habitat loss will be typically confined to the footprint of the Greenway project however impacts to water quality could extend some distance downstream from the project footprint. The level of detail including design/construction detail will vary from phase to phase and therefore the ZoI can also be refined as the project progresses through the TII Project Phases (refer to ZoI update in Figure 4.1) and more details become available.

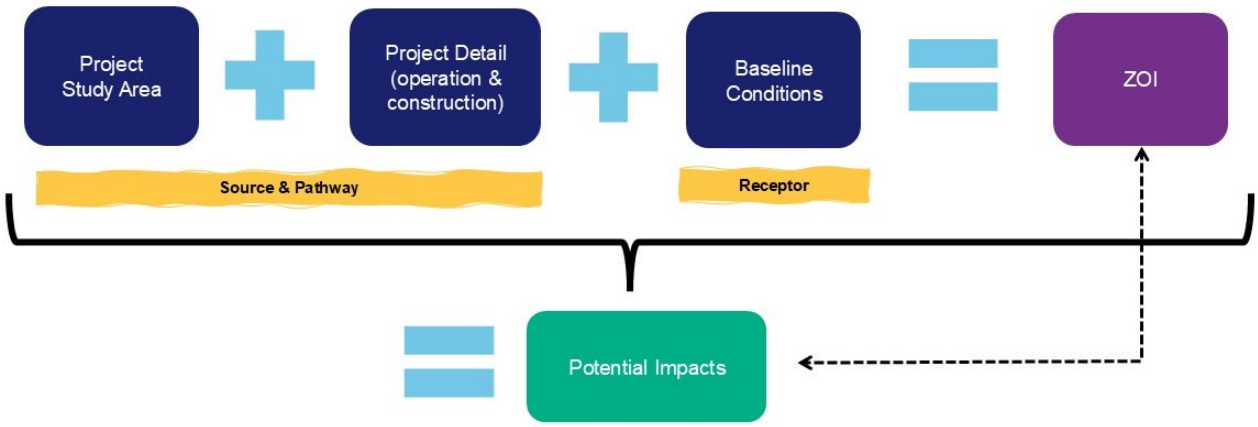



**Figure 4.2 - How the ZoI relates to the Potential Impacts**

It is again highlighted that TII has developed a number of environmental standards and guidelines where detailed guidance is provided on deriving the ZoI for a specific Environmental Factor. In the absence of a TII specific standard or guideline, professional judgement and other relevant guidelines (see Appendix C) should be applied to developing the ZoI for each Environmental Factor.

## 4.3 Constraints, Risk and Opportunities Identification

The identification of environmental constraints, risks and opportunities can commence as early as Phase 0, when environmental related objectives can be defined to form part of the overall Project Objectives.

The data gathering exercise will continue and evolve through Phases 1 to 4 as indicated in Table 4.1. The identification of the constraints, risks and opportunities are developed and documented as part of the Feasibility Report at Phase 1. TII has published and are in the process of developing a number of topic-specific standards/guidance that should be referred to in relation to the development and sources of constraints data. See also Table 4.2 which lists specific examples for Greenway projects.

In the absence of a topic-specific guideline, reference should made to other relevant guidance, see Appendix C.

In terms of the identification of opportunities this could include identifying existing paths, roadways, canals, disused railways and bridges that could be adapted to facilitate the Greenway and depending on the nature of the project, condition of the infrastructure and baseline could avoid potential environmental effects. This approach is in line with the Intervention Hierarchy of the *National Investment Framework for Transport in Ireland* (NIFTI) (see Figure 4.3).

If the Greenway route forms part of the National Cycle Network (NCN), the baseline data, impact assessment and strategic mitigation as outlined in the SEA reporting and the NIS for the NCN Plan (NCNP) should be referred to and considered.

The following sections and Table 4.2 outline some specific consideration and examples of CRO for Greenway projects.


**Figure 4.3 - NIFTI Intervention Hierarchy**

**Table 4.1 - Constraints, Risks and Opportunities progress from TII Phase 0 through 4**

| TII Phase | Progress through Phases |
|---|---|
| **Phase 0** | • Key known environmental constraints and opportunities can feed into the development of Greenway Project Objectives. |
| **Phase 1** | • Detailed identification of the environmental CRO commences to inform the feasible options assessment and further detailed options assessment at Phase 2. |
| **Phase 2** | • Further data gathering including consultation and evaluation and selection of the preferred option in the context of known environmental CRO.<br>• Consideration of the need for targeted surveys. |
| **Phase 3** | • AA/ EIA Screening undertaken based on known constraints.<br>• EIA Scoping undertaken to further gather information on the CRO. |

| TII Phase | Progress through Phases |
|---|---|
| | • Detailed data gathering is undertaken including survey work and consultation which will inform the assessment for the proposed project. |
| **Phase 4** | • Any information received during the statutory process is considered as required. |

### 4.3.1 Consideration of Existing Infrastructure and Landcover

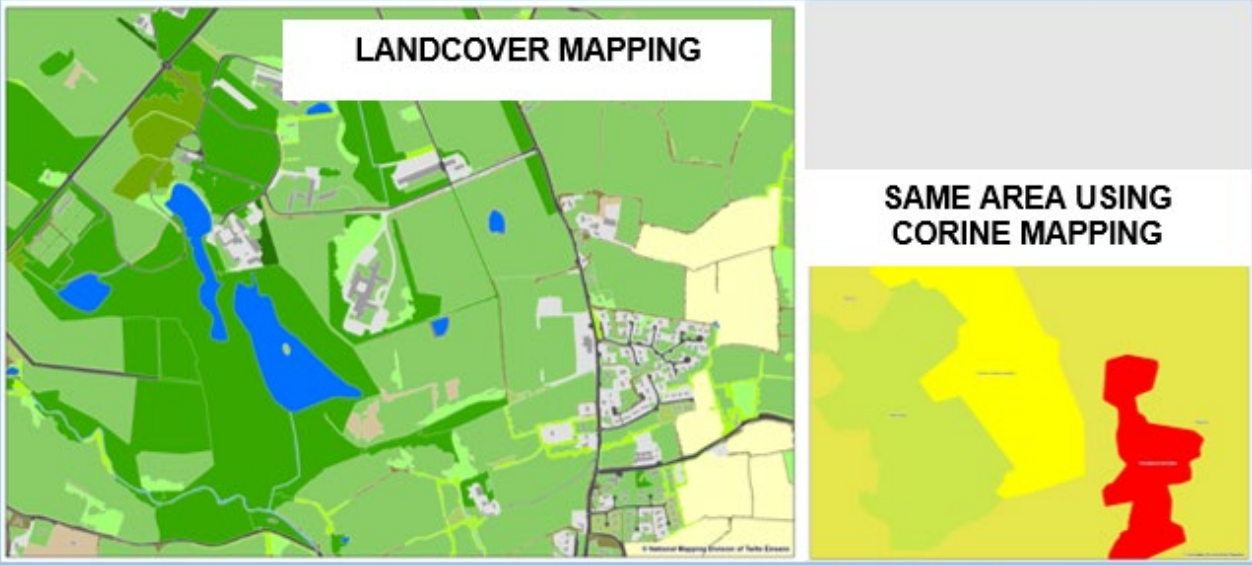
When undertaking the constraints, risk and opportunities assessment an understanding of the existing infrastructure that could potentially be used to facilitate the Greenway is important. The width of the potential Greenway route can vary, along with the requirements for verges. In addition, there may be a requirement to provide ancillary infrastructure such as car parks and/or trail heads. Existing pathways such as canal towpaths, local access roads, disused railway lines, forest trails etc. can vary in width. Therefore, these can present a potential constraint in terms of width and the potential for habitat loss. An understanding of the proposed project requirements versus the "on the ground" existing ground conditions particularly within designated sites (e.g. SAC and SPA) would be advisable at an early stage of the project development. In addition, opportunities to use existing infrastructure such as existing bridge crossing, existing hard stand areas should be identified as part of the constraints and opportunities identification.

It should be noted that Tailte Éireann[5] in partnership with the EPA have produced the National Land Cover Map (Box 1). This mapping is a useful resource when developing the constraints and opportunities at Phase 1 and 2. The National Landcover Map has a resolution of at least 0.1 hectares, making it 250 times more detailed than the previous CORINE landcover mapping. The mapping can be used to identify existing habitat types including peatland, hedgerows and treelines.

[5] Ordnance Survey Ireland, the Property Registration Authority, and the Valuation Office have been amalgamated to establish Tailte Éireann.

**Box 1: National Land Cover and Potential uses on TII Greenways:**

- Can be used to identify and avoid sensitive habitats.
- Can be used at the Options Development and Option Selection Phase to compare options in terms of habitats effected and potentially lost.
- Can inform project ecological survey needs.
- Can be used to identify potential biodiversity/landscape enhancement measures.




Source: EPA website, 2023

### 4.3.2 Consideration of SAC and SPAs

As part of the constraints gathering exercise, the project team should identify all SACs and SPAs within the ZoI of the proposed project. Once the sites are identified, Project Teams should consider the Qualifying Interests (QIs) and the site-specific CO of these European sites. Where and when required, advice should be sought from a competent ecological and/or hydro/hydrogeological expert in the case of surface or groundwater dependent ecosystems.

It is recommended that the following are considered and/or undertaken during the constraints review at Phase 1 and expanded upon during the options selection process at Phase 2:

- Review the CO and conservation status of the QIs for any SAC/SPA within the ZoI of the project. The below examples are by no means an exhaustive list of considerations, but they do give some possible examples of how the CO could be considered:
  i. The CO for the Lesser Horseshoe Bat (LHB) includes no loss of foraging or linear habitat within 2.5 km of the qualifying roost site. Therefore, if LHB is known to be within the ZoI of the project then habitats such as treelines/hedgerows within the project study area are a potential constraint to the project, particularly if there is a likelihood that these habitats may need to be removed to facilitate the Greenway project.
  ii. Alluvial Woodlands have a CO that requires the habitat area to be stable or increasing (subject to natural processes) and a CO that the appropriate hydrological regime necessary for maintenance of alluvial vegetation is in place.

Therefore, any potential effects on the extent of a habitat or change to the hydrological regime e.g. from an instream structure could be significant and therefore should be identified as a constraint/risk.

iii. Freshwater Pearl Mussel (FWPM) and salmon will typically have a CO in relation to water quality. Therefore, any potential effects on water quality e.g. from instream works could be significant and therefore this should be identified as a constraint/risk.

iv. The COs for otter includes that there is no significant increase in barriers to connectivity from for example fencing or structures. Otters will utilise freshwater habitats from estuary to headwaters and tend to forage within 80m of the shoreline. Therefore, any potential effects on the extent of freshwater (river and lake) habitat could be significant and therefore should be identified as a constraint/risk.

- Identify any QIs that could be particularly vulnerable to the Greenway project such as bird species highly sensitive to disturbance or habitats at risk from "trampling". Box 2 outlines some typical CO for bird species. QI bird species could be particularly sensitive to disturbance from a Greenway. Where they exist, a review of existing bird records to gain an understanding of site usage in terms of foraging and roosting should be undertaken at Phase 1 and 2 and then supplemented with site specific surveys at Phase 3 or Phase 2 if deemed necessary.

**Box 2: Some Typical Conservation Objectives for SPA Species (adapted from NPWS data):**

- **Disturbance at wintering sites** - The intensity, frequency, timing and duration of disturbance occurs at levels that do not significantly impact the achievement of targets for population trend and spatial distribution.
- **Roost spatial distribution and extent** - Sufficient number of locations, area and availability of suitable roosting habitat to support the population target.
- **Spatial distribution of foraging extent and abundance** - Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target.
- **Barriers to connectivity and site use** - The number, location, shape, and area of barriers do not significantly impact the wintering population's access to the SPA or other ecologically important sites outside the SPA.
- **Supporting habitat: area and quality** - Sufficient area of utilisable habitat available in ecologically important sites outside the SPA.

- Review known threats and pressures to the QI of the designated sites which can include:

i. Sports, tourism and leisure activities.

ii. Modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure/areas (including sea defence or coastal protection works and infrastructure).

iii. Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels).

- Identify existing habitats in relation to screening features e.g. topography/woodland/hedgerows that could provide a natural "barrier" to disturbance.
- Identify areas of concern e.g. could the Greenway project provide easier access to QI or other high value habitats that are currently undisturbed or subject to disturbance levels that could currently be causing an issue?
- Likelihood/potential of people and/or pets leaving the Greenway and accessing adjacent areas e.g., to walk directly along QI or other high value habitats.
- Evaluation of existing disturbance levels along route (e.g. current farming operation, existing pedestrian access including dog walkers).
- Consideration for the need for targeted surveys (earlier than Phase 3) should be considered by the Project Manager in liaison with a competent ecological expert.

Figure 4.4 depicts graphically some potential impacts of a Greenway project as outlined above.

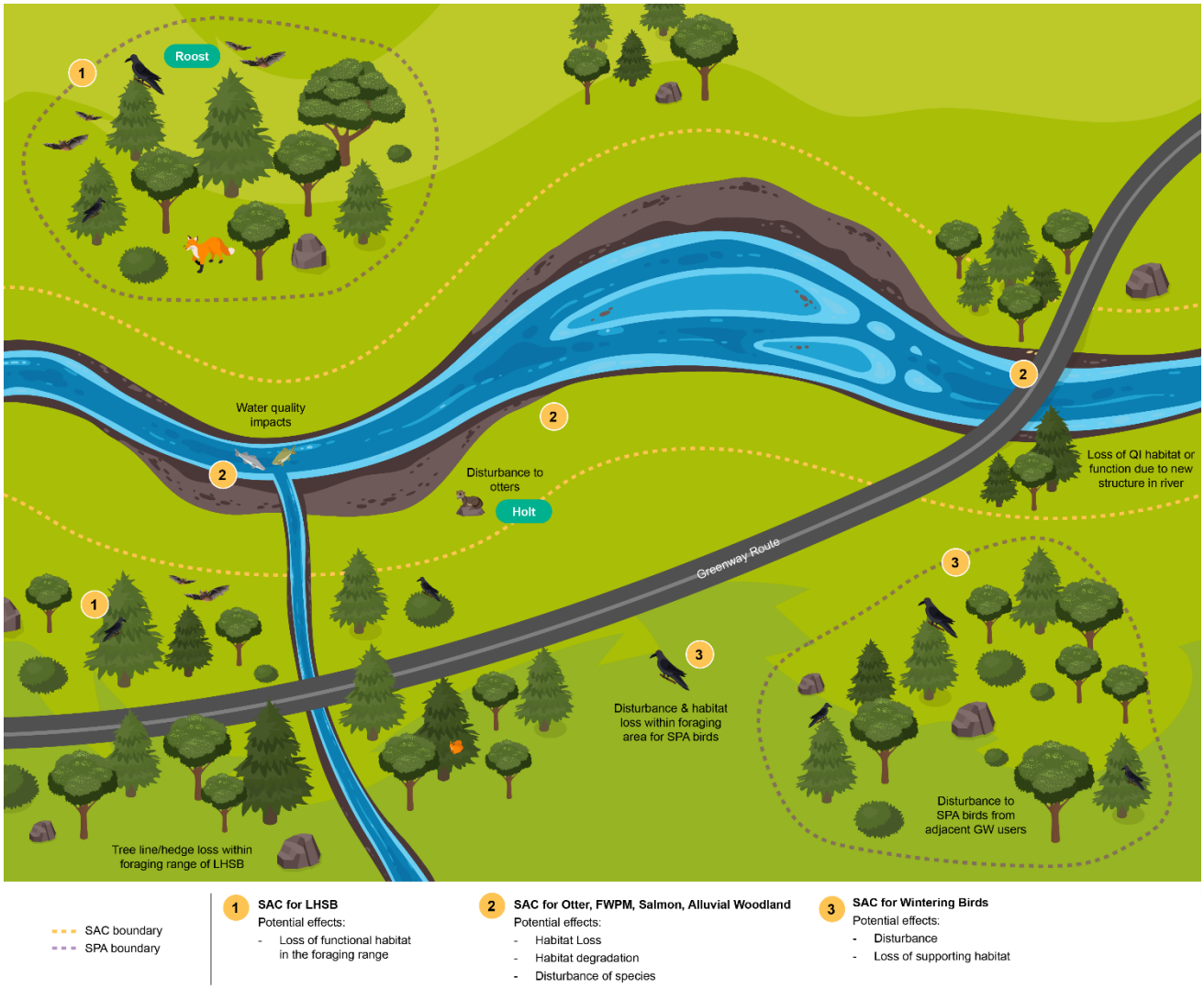



**Figure 4.4 - Illustration of the potential impacts of a Greenway project to an SAC/SPA**

### 4.3.3 Overview of Potential Constraints, Risks & Opportunities

Phase 1 concludes with the development of the Feasibility Report. As part of this report the various environmental constraints and opportunities will be documented and as required mapped. Table 4.2 outlines a number of potential constraints and opportunities by all Environmental Factors which may be relevant to TII Greenway projects. It is noted that a receptor can be both a constraint and an opportunity.

At Phase 1 environmental related risks should also be considered. It is important that the environmental risks are fully developed and documented in the Feasibility Report so that these can be taken into consideration not only for the feasibility assessment of options considered at Phase 1 but also during the development and appraisal of the options at Phase 2.

**Table 4.2 - Potential Constraints, Risks & Opportunities on Greenway Projects**

| Factor | Constraints/Risks | Opportunities |
|---|---|---|
| **Population & Human Health** | • Residential and/or other sensitive receptors such as schools and hospitals.<br>• Residential and/or Community Amenity i.e. the character and attractiveness of the property/area.<br>• Existing land use and accessibility incl. agricultural land use/access.<br>• Commercial receptors and businesses amenity. | • Are there topographical or landscape features that can be used to provide natural screening?<br>• Is there suitable existing infrastructure (such as roads, canal towpaths, bridges) that can be used to limit proximity of new (Greenway) infrastructure to residential dwellings?<br>• Can field boundaries be used to limit severance of land parcels?<br>• Can improvements be made to amenity value for businesses in terms of access and urban realm.<br>• Is there a potential to link community land and properties by improved access (e.g. schools, recreational areas, local amenities, places of worship and places of work) by active modes? Consideration can also be given to the provision of rest areas for all user groups. |
| **Biodiversity** | • European sites - SACs & SPAs and their qualifying interests and conservation objectives.<br>• Natural Heritage Areas (NHA) or proposed NHA (pNHA) and other national or international designated sites.<br>• Rare and/or protected Species – e.g. Bats, Badgers, Otters, Freshwater Pearl Mussel, Kingfisher etc. | • Are there topographical or landscape features that can provide natural screening? E.g. for wintering bird species sensitive to disturbance/noise.<br>• Are there existing waterbody crossings that can be used to limit the need for new infrastructure or instream works?<br>• Is there existing infrastructure that could be used to limit habitat loss e.g. existing hard stand areas that could be used as a trailhead. |

| Factor | Constraints/Risks | Opportunities |
|---|---|---|
| | • Other biodiversity features of value (local level and above[6]) such as hedgerows, treelines.<br>• Known invasive alien plant species (IAPS).<br>• Severance of ecological corridors and/or habitat connectivity. | • Are there opportunities to retain existing planting and/or provide additional planting to enhance biodiversity and maintain or improve wildlife corridors? |
| **Landscape and Visual** | • Landscape Context and Character (particularly when sensitive landscapes).<br>• Protected views and/or other landscape designations.<br>• Residential or other property views.<br>• Existing habitats/vegetation.<br>• See also Biodiversity and Archaeological, Architectural & Cultural Heritage. | • Are there topographical or landscape features that can provide natural screening?<br>• Is there existing infrastructure that can be used to limit the need for vegetation removal and habitat loss?<br>• Are there opportunities to provide additional native planting?<br>• Are there opportunities to improve community amenity areas by improved access or the provision of urban realm measures?<br>• Where there are linkages to existing towns and villages are there opportunities to enhance public realm and use materials appropriate to the local context? |
| **Geology, Land and Soils** | • Geological Heritage features.<br>• Geological and Soil Resources.<br>• Contaminated area (e.g. a historical railway).<br>• Landslides | • Is there existing infrastructure that can be used to limit the need for “new” material use such as soil or rock? |
| **Water (Surface and Ground)** | • Waterbodies (rivers, lakes, canals, coastal and transitional waters).<br>• Flood Risk.<br>• Groundwater Resources.<br>• Groundwater Wells. | • Are there existing waterbody crossings that can be used/adapted to limit instream works or hydromorphological changes?<br>• Are there opportunities to provide nature-based solutions (NBS) when addressing drainage. |
| **Cultural Heritage** | • Protected Sites – Recorded Monuments and Places (RMP), Recorded Protected Structures (RPS), National Inventory of Architectural Heritage (NIAH) etc. | • Whilst being cognisant of potential impacts and access to protected structures, are there existing cultural heritage features that can form part of the Greenway route and/or be enhanced as part of the project e.g. viaduct or bridges. |

[6] In accordance with CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018)

| Factor | Constraints/Risks | Opportunities |
|---|---|---|
| | • Undesignated features of value like railways, canals. | • Are there opportunities for amenity and education in relation to cultural heritage features? |
| **Air, Noise and Vibration** | • Residential and other sensitive receptors.<br>• Ecological receptors. | • Are there topographical or landscape features that can provide natural screening to residential or other receptors? |
| **Climate** | • Climate Change including need for climate adaption measure.<br>• Resource use. | • Is there existing infrastructure that can be used to limit material use?<br>• Is there a potential for modal shift?<br>• Are there public transport connections to potential trail heads?<br>• Is there potential to support circular economy? |
| **Waste** | • Waste Resources/Capacity. | • Is there existing infrastructure that can be used to limit material use and generation of waste? |
| **Material Assets** | • Resource use.<br>• Utilities water supply networks, telecommunications, storm and foul sewers, electricity supply and gas pipelines<br>• Existing infrastructure. | • Is there existing infrastructure that can be used to limit material use?<br>• Have options to avoid/minimise costly infrastructure diversions been considered? |
| **Risk of Major Accident** | • Greenway users.<br>• Sensitive receptors, property, waterbodies etc.<br>• Existing infrastructure. | |

## 4.4 Options Assessment / Consideration of Alternatives

The EIA Directive requires that an EIAR contains:

"*A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects*."

The options selection process is a key step in avoiding and reducing any potential environmental effects associated with the Greenway project. Please note that much of the content of Section 4.3 above is also relevant to the options assessment process when further detail of potential routes is available. The Options assessment process commences in Phase 1 with the identification of reasonable [7] options, taking into account environmental constraints, risks and opportunities. The main route/option assessment work is undertaken in Phase 2 when the preferred option is identified. The assessment of options and alternatives does however continue through to Phase 3 when further refinement of the preferred option (at this phase the proposed project) is undertaken through for example; trail head location and design; cross section design; lighting or drainage design; landscape design; construction techniques proposed etc., see Figure 4.1.

Multi-Criteria Analysis (MCA) establishes preferences between scheme options by reference to an explicit set of criteria and objectives. These should normally reflect policy/programme objectives and other considerations as appropriate, such as value for money, costs, social impacts, **environmental impacts**, equality considerations, etc. -DOT TAF 2023.

Further guidance on the option assessment process is provided within a number of TII PAG and PMG. Specific reference should also be made to Section 3 of RE-ENV-07008.

**Table 4.3 - Options process from TII Phase 1 through 4**

| TII Phase | Progress through Phases |
|---|---|
| **Phase 0** | • Environmental constraints and opportunities can feed into the development of Project Objectives and these Project Objectives, in accordance with the TII PAG, are later used to assess the project options at Phase 1 and Phase 2. |
| **Phase 1** | • Reasonable options are considered in terms of the project objectives and feasibility, and this is documented in the Feasibility Report. |
| **Phase 2** | • Evaluation and selection of the preferred option including the assessment of the Do Nothing and/or the Do Minimum. |
| **Phase 3** | • Further refinement of the proposed project design, construction techniques, layouts, materials used, technologies, mitigation etc. |
| **Phase 4** | • Any amendments made during statutory process are incorporated. |

[7] An alternative is reasonable where it is feasible and meets the project's objectives, see RE-ENV-07008.

### 4.4.1 Consideration of the Scenic Route and the Sensitive Constraints

It is acknowledged that the scenic nature of the Greenway is an important criterion for consideration when developing the project. The *Strategy for the Future Development of National and Regional Greenways* outlines the Five S criteria with scenic being one of those, see Figure 4.5. The TII *Rural Cycleway (Offline & Greenway) Standard DN-GEO-03047* outlines five development principles for Greenways including attractiveness. However, by trying to achieve a more "scenic" route this can bring the project in closer proximity to rivers, lakes and coastal environments which are commonly designated as SAC, SPA or other biodiversity related designations. Species and habitats associated with these sites can often be particularly sensitive to disturbance from the potential human activity associated with Greenways. Therefore, by trying to achieve a scenic route this could introduce risks to the project at a later stage so these risks need to be carefully considered at Phase 1 and 2.

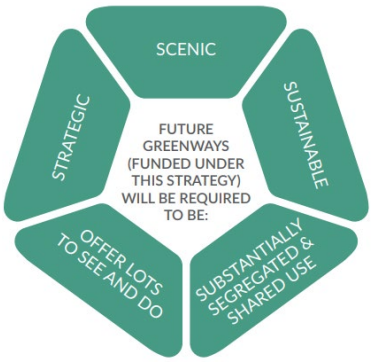


**Figure 4.5 - The 5s Criteria**

As outlined in Section 4.3.2 the identification, consideration and understanding of habitats and/or species that may potentially be affected is important when routing the infrastructure at Phase 1, 2 and 3. The chosen option should avoid a Greenway project that could result in impacts (such as levels of disturbance and fragmentation) which may cause an adverse effect on the integrity of a European site(s). In the event of a Greenway project being in proximity to an SAC and/or SPA, the need for surveys at Phase 2 should be considered by the Project Manager pre-confirmation of the preferred option in order to reduce risk to the project at a later stage. Mitigation in the form screening could be considered but this may in turn limit the scenic nature of the Greenway. Such mitigation measures may also have significant effects on other Environmental Factors such as landscape and visual and therefore need to be considered carefully as the project develops. **Where and when required, advice should always be sought from a competent ecological and/or landscape specialist.**

### 4.4.2 Preferred Option Selection and Environmental Effects

As part of the options assessment process the project team will develop a series of Project Objectives as outlined in PAG Unit 2.1 and Unit 3.0. Options will be developed initially on their ability to achieve these Project Objectives and their feasibility, see PAG Unit 3.0. Thereafter, there are a number of criteria (and associated sub-criteria) which are taken into account when undertaking the option assessment process namely, accessibility, social, land use, safety, climate change and local environment (see PAG Unit 7.0). The approach to avoiding and reducing potential environmental effects is promoted by TII throughout all phases of the project development however, in the context of meeting the project objectives and the overall option process (i.e. assessment against a range of criteria/sub-criteria) it is acknowledged that the option with the least environmental effect (either overall or on a particular sub-criteria) may not be selected as the preferred option. For example, to achieve a higher modal shift and/or encourage users to the Greenway may require selecting an option which has a higher degree of environmental effects than another option.

**Box 3: Note on Feasibility at Phase 1**

Options will be identified which satisfy the project objectives and are feasible in terms of technical, economic, political and other relevant criteria. For example, an option that has the potential to adversely effect the site integrity of a European site may not be feasible.

## 4.5 EIA Screening

TII's *Environmental Planning of National Road and Greenway Projects* (RE-ENV-07008) outlines the EIA screening process specifically for Greenway projects. There are a number of other established guidelines which outline the requirements of the EIA screening stage as follows:

- EC - Environmental Impact Assessment of Projects - Guidance on Screening (2017).
- EPA - Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022).
- OPR - Practice Note 02 Environmental Impact Assessment Screening (2021).
- NTA - Guidance for EIA and AA Screening of Active Travel Projects Funded by the NTA (2023).

**Box 4: Greenway EIA Screening - Key Points**

- Refer to TII document RE-ENV-07008 and NTA guidance on EIA screening.
- Refer to the Roads Acts mandatory requirements for EIA.
- If the Greenway project contains non-road related aspects refer also to Section 175 of P&D Act.
- If no mandatory thresholds are reached screen the Greenway project for EIA using the EIA Directive Annex III Screening Criteria.
- Utilise the EC EIA screening check list (EC, 2017a).
- Seek legal/planning advice as required.

It is recommended that advice is sought from a qualified planner and/or legal professional when undertaking EIA screening. Table 4.4 of these Guidelines sets out some specific considerations by Environmental Factor when undertaking Scoping for Greenways and may also be useful when undertaking EIA screening.

### 4.5.1 Assessment Under the EIA Directive

Where EIA screening concludes that an EIA **is required** for a Greenway project, this should be undertaken as outlined in the EPA (2022) and EC Guidelines and the TII PMM and topic specific standards /overarching technical documents (OTD).

### 4.5.2 Assessment Not under EIA Directive

Where the EIA screening process concludes that an EIA **is not required** for the project, a proportionate level of Environmental Assessment should be undertaken to inform any non-statutory reporting.

In the absence of the need for a statutory EIA and EIAR, there may be a requirement to demonstrate the potential effects or particular details from a project and this could include an Ecological Impact Assessment Report (EcIA), a Landscape (management/maintenance) Plan, and arboriculturist assessment report, photomontages, CEMP, etc. Any reporting should be proportionate, and requirements will depend on the specific Greenway project and the baseline environment.

Some considerations when scoping and undertaking assessment of non-EIA Greenway projects:

- Are there ecological areas/species of interest/value along the Greenway project and has the need for an ecological survey and impacts assessment been considered?

Areas of ecological interest could include canals, hedgerows, treelines, badgers, birds etc. Has a EcIA been undertaken and has a Greenway Biodiversity and Landscape Plan been developed (see Section 4.8.4)?

- Have IAPS been detected in the project study area – consider the need for an IAPS Management Plan (see GE-ENV-01104-01 and GE-ENV-01105-01).
- As required under the PMG, has a CEMP been undertaken for the project?
- Are there temporary construction traffic arrangements required- is there a need for a construction traffic management plan?
- Does the Greenway project have the potential to impact existing trees – is there a requirement for an arboricultural survey and assessment?
- Are there archaeological, architectural and/or cultural heritage features potentially affected and is there a requirement to undertake an assessment of the same?

See Section 4.16 for more detail on Environmental Related Deliverables by Planning Route.

## 4.6 Environmental Assessment Scoping

Once the requirement for an EIA is established, the EIA scoping step commences. Scoping is a process of deciding what information should be contained in an EIAR and what methods should be used to gather and assess that information. In practice, a 20 km Greenway project may require the same level of assessment as a 50 km project depending on the environmental constraints within the study area. Therefore, the level of Environmental Assessment undertaken, and any associated reporting should not only be proportionate to the scale of the Greenway project but also to the nature of that project and the existing environment within the project study area. Again, there are a number of established guidelines which outline the requirement of EIA scoping including:

- EC – Environmental Impact Assessment of Projects – Guidance on Scoping (2017); and
- EPA – Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022).

Scoping may be conducted formally through An Bord Pleanála and/or informally by consulting directly with relevant bodies- see EPA EIA Guideline (EPA, 2022) and TII RE-ENV-07008. The output of the EIA Scoping is typically documented in the EIA Scoping Report. However, the scoping process does not end with the production of the EIA Scoping Report. There is potential for the scope to be altered during the Greenway design development and the preparation of EIAR. This can arise due to design reviews as a result of new environmental sensitivities coming to light during the preparation of specialist studies or through ongoing surveys and consultation.

Table 4.4 sets out specific considerations by Environmental Factor when undertaking an EIA Scoping for Greenway Projects. Table 4.4 may also be useful during the EIA Screening process when considering the potential for significant effects. However, when undertaking EIA Screening reference should always be made to the EIA Directive requirements and associated Irish regulations and national guidance in the first instance. Table 4.4 is by no means exhaustive and consideration of the proposed Greenway location, design and the environmental constraints on a case-by-case basis is required.

**Table 4.4 - Environmental Scoping Consideration for Greenway by Environmental Factor**

| Factor | Scoping Considerations |
|---|---|
| **Population** (incl. material assets - non-agricultural lands) | Will the Greenway have the potential to significantly impact on the residential amenity (both positive and negatively) of the residents along the Greenway?<br>What are the potential economic benefits of the project in terms of tourism, jobs etc?<br>What will be the interaction/integration of the project with existing amenities and community facilities both during construction and operation?<br>What construction related impacts are anticipated such as air, noise and/or traffic disruption?<br>Is severance and/or disruption likely to be an impact on community amenity areas or residential properties during construction and operation?<br>What is the potential land take (non-agricultural) requirements of the project?<br>Will the project result in the changes to traffic and/or access during construction or operation?<br>What consultation needs to be undertaken with affected landowners/ businesses? |
| **Material Assets** (Land use incl. agronomy) | What are the potential agricultural land take requirements associated with the project?<br>Is severance and/or disruption likely to be an impact on farm/land holdings both during construction and operation?<br>What type of farming enterprises (including equine) are within the study area and could be potentially affected?<br>What consultation needs to be undertaken with affected landowners see also Code of Best Practice – National and Regional Greenways. |
| **Material Assets** (non-property or land related) | What are the known utilities in the area that could be affected by the Greenway project?<br>What other transport infrastructure is within the study area- heavy or light rail, road, canal, other? |
| **Human Health** | Will the project facilitate the modal shift to more active travel modes such as cycling and walking?<br>Reference should be made as a minimum to the population, air and noise scoping exercises. |
| **Biodiversity-** (terrestrial and aquatic) | What designated sites are in the ZoI of the project including any potential ancillary infrastructure elements?<br>Will the project require vegetation removal and habitat loss? What is the anticipated cross section of the Greenway including verges and earthworks?<br>Are there opportunities for biodiversity enhancement?<br>Is there a potential for disturbance to protected species including birds during both construction and operation of the Greenway?<br>What ecological surveys are anticipated to be required?<br>Reference should be made as a minimum to the water, landscape, land, soil and geology, air and noise scoping exercise. |

| Factor | Scoping Considerations |
|---|---|
| **Landscape & Visual** | Is there a potential for impact on protected landscape and/or views during both construction and operation?<br>What are the anticipated changes to landscape character from the project?<br>Will there be a visual impact on residential properties, amenity areas or commercial properties during both construction and operation?<br>Reference should be made as a minimum to Population, Biodiversity and Cultural Heritage scoping exercise. |
| **Geology, Land and Soils** | Is there a potential impact on Geological Heritage, soil resources, peatland and/or Karst?<br>Are cuttings or embankments likely to be required?<br>Will there be a requirement to work in areas of peat or karst?<br>Are there any known areas of potential land contamination? |
| **Water (surface & groundwater)** | Will the project require waterbody crossings and instream works or works to riparian areas e.g., river, lake or canal bank?<br>What sensitivities are associated with waterbodies in the study area? E.g. salmonid, drinking water, designated sites connections (SAC, SPA, NHA etc.).<br>What are the existing and known future flood conditions?<br>Will there be a requirement for temporary or permanent structures/works in the waterbody including groundwater e.g. piling? |
| **Cultural Heritage** | Is there a potential for impact on protected architectural/archaeological and other cultural heritage receptors?<br>Is there an opportunity to provide increased visibility and access to cultural heritage features to the extent that this is appropriate under the scheme objectives and / or on a practical basis.<br>Reference should be made as a minimum to Landscape and Visual and Noise and Vibration scoping exercise. |
| **Air** | Is there a potential for significant construction related impact such as dust emissions?<br>Will the project require ancillary infrastructure such as car parks i.e. source of air emissions?<br>Will the project result in the redistribution of existing traffic that could increase or cause changes to existing air quality? |
| **Noise & Vibration** | Is there a potential for significant construction related noise impacts?<br>Will the project have ancillary infrastructure such as car parks i.e. source of noise emissions?<br>Will the project result in the redistribution of traffic that could increase or cause changes to existing noise levels? |
| **Climate** | What are the likely material requirements of the project?<br>Will there be a modal shift associated with the project?<br>Will the project cause disturbance to peat areas?<br>Are there opportunities for carbon offsetting? |

| Factor | Scoping Considerations |
|---|---|
| **Material Assets** (waste) | What are the likely waste types associated with the project?<br>Is there a potential for hazardous waste?<br>Are there any known areas of potential land contamination?<br>Potential for use of Article 27 material locally. |
| **Risk of Major Accident** | Are there Seveso Sites within the ZOI?<br>What are the potential design risks? |
| **Interactions & Cumulative** | Interaction should be considered with some indication given here in Table 4.4.<br>What other projects are known to be occurring within the study area? |

## 4.7 Detailed Baseline Data Gathering, Surveys and Receiving Environment Description

An accurate description of the existing environment (i.e. the baseline) is necessary to predict the likely significant effects of a proposed Greenway project. It is important that the methodology used in describing the existing or baseline environment is clearly outlined to facilitate an understanding of the information, and any assumptions made. Full guidance on baseline data gathering is contained in the TII topic-specific standards/OTDs and other relevant guidance, see Appendix C. Some specific examples of baseline considerations or aspects relevant to Greenways are listed below:

- How many and at what proximity are residential, commercial or other community receptors from the proposed Greenways project;
- In relation to residential receptors an understanding of the property and its boundary with the proposed Greenway i.e. is there is an existing natural or artificial boundary between the property and the Greenway and what is its condition, can it provide screening;
- What is the existing and future land use along the route;
- If utilising existing infrastructure or trails such as roads, disused railway, bridges, canal towpaths, forest trails etc., what habitat types bound this existing infrastructure and what is the condition of that habitat;
- Particularly if in proximity or within a designated site, dedicated species surveys such as habitat, otter, breeding or winter birds, bat and any other are required. Surveys should be scoped and undertaken by a competent ecological specialist or specialist when there is a potential for multiple species or habitat to be affected;
- An understanding of the existing disturbance levels along the proposed Greenway route (e.g. traffic, farming operation, existing pedestrian access including dog walkers);
- What is the existing habitat in relation to its ability to provide natural screening of the Greenway e.g. topography/woodland/hedgerows;
- What is the landscape character along the length of the Greenway and are there significant changes in context along the route from coastal to mountains for example; and
- What is the known existing flood risk along the Greenway.

See also Table 4.4 which sets out specific considerations by Environmental Factor when undertaking EIA Scoping.

In terms of surveys for SAC/SPA sites, the potential effects on each European site should be addressed and a survey approach outlined for the specific conditions of the project in these areas. A targeted survey programme can then be devised based on an assessment of likely impacts from the project. The survey can be tailored for each European site and project in that location with an appropriate ZoI identified.

## 4.8 Project Description and Design

The EIA Directive requires that the EIAR includes '*a description of the project comprising information on the site, design, size and other relevant features of the project'*. Whether EIA or not, the Greenway project description should be sufficiently developed in order to identify and assess the potential effects and determination of the necessary land take. This includes details of the Greenway ancillary infrastructure such as car parks, trail heads, rest stops etc. Details of the operation of the Greenway such as predicted user numbers should also be provided. Some of the key design information that should be presented and is needed to inform the Environmental Assessment includes:

- Land take (permanent & temporary) including any ancillary Greenway infrastructure such as trail heads or car parks and requirements for construction such as compounds, haul routes etc;
- Project design detail including:
  i. Layout and cross sections;
  ii. Drainage proposals including and provision of nature-based solutions;
  iii. Earthworks;
  iv. Landscape design - hard and soft landscape including materials and planting strategy appropriate for the local context and future landscape management aims;
  v. Boundary treatments i.e. fencing, walls, planting etc;
  vi. Signage requirements including heritage signage;
  vii. Structures design including any new structure and/or updates to existing structures;
  viii. Lighting design and potentially associated LUX levels;
  ix. Ancillary infrastructure such as trail heads, location and design details such as drainage, layout etc;
  x. Material quantities – steel, concrete, asphalt etc.;
  xi. Traffic details- changes such as traffic diversion, changes to existing road layouts or any other measure that could cause traffic redistribution/changes; and
  xii. Utilities- location of existing and proposals for new and/or diversions.
- Operation and Maintenance - details such as predicted Greenway user numbers, any user restrictions and long-term management aims and day to day/long term maintenance requirements.

### 4.8.1 Construction Approach and Details

In addition to the project design information, details of the construction phase and associated works are required in order to undertake the impact assessment.

In the context of an EIAR, the description of the construction of the project may be a standalone chapter or contained within the project description. Either way it should be sufficiently detailed in order to identify and assess the potential environmental effects from the construction of the project. As outlined in TII's PMM for Greenways a CEMP should also be developed at Phase 3. The key construction details needed to inform the Environmental Assessment include as relevant:

- Methods of construction particularly if instream or close to waterbodies, piling, rock breaking;
- Measures to control and prevent water pollution from sediment and anthropogenic sources;
- Protection of existing habitats or landscape feature e.g. retained trees or hedgerows;
- Protection of Cultural Heritage (including upstanding architectural heritage) in proximity to the project and other related mitigations;
- Compound locations, size and anticipated layouts;
- Borrow pits, material storage and/or deposition areas;
- Proposed haul roads;
- Plant to be used - type and quantity;
- Opportunities for the use of plant and equipment with less noise, vibration and air quality emissions;
- Construction traffic management measures;
- Waste quantities and management options– the anticipated waste quantities arising from the construction of the Greenway and the anticipated management of this waste;
- Programme and phasing of construction works; and
- Any other information as requested by Environmental Specialists to complete the assessment.

### 4.8.2 Environmental Input into the Greenway Design Process

The Environmental Assessment process should be fully integrated into the development and design of the Greenway project. Section 4.3 and 4.4 outlines the input in the context of Phase 2 (the option selection process) where avoidance of impact and/or receptors is the key mitigation principle that is be applied.

Phase 3 of the project will include further detailed baseline data gathering and surveys information. In addition, consultation will continue on the proposed project and the design of same. Findings of the surveys, baseline data gathering and consultation should inform the project design at Phase 3 and the principle of avoidance in the first instance should remain applicable. Other elements of the design which can be informed by the Environmental Assessment or specialist input include the drainage design, construction methods, compound locations, boundary types, landscape design and environmental enhancement measures such as planting.

TII has also developed a *Guide to the Implementation of Sustainability for TII Projects* (GE-GEN-01101). This guide sets out six sustainability workflows as follows:

- Active Travel Infrastructure and Greenways;
- Biodiversity;
- Circular Economy;
- Net Zero;
- Social Value; and
- Sustainability in Practice.

These workflows provide guidance to the project team on how to employ sustainability on TII projects from Phase 0 right through to Phase 7.

As outlined in Section 1, specialist input should be considered by the Project Manager as early as possible, particularly on large and/or complex Greenway projects. A non-exhaustive list of examples in relation to this consideration are outlined below:

- Does the Greenway traverse or pass in close proximity to designated sites? If yes, has specialist input been sought from a biodiversity specialist?
- Does the Greenway traverse or pass in close proximity to cultural heritage receptors? If yes, has specialist input been sought from cultural heritage specialist and/or the Project Archaeologist?
- Does the Greenway traverse areas of peat, karst or turloughs? If yes, has specialist hydrological/hydrogeological expertise been sought?
- Does the Greenway interface with urban areas cities/towns villages? If yes, has/can consideration been given to use of urban realm design expertise in these areas? [8]
- Does the Greenway traverse different landscape character types? If yes, has consideration been given to using the input of a landscape designer?

### 4.8.3 Environmental Opportunities in the Design Process

A Greenway project, and the places and spaces along them, can have different habitats and landscape characteristics. From urban settlements to remote uplands, coastal shores to inland waterways. Each landscape can require a different set of design solutions and landscape treatments to make the most of all the environmental opportunities available. A context-sensitive design incorporating biodiversity objectives has the potential to mitigate other impacts and enhance the Greenway across multiple aspects. Appropriate landscape treatments and biodiversity enhancement measures can perform multiple functions and deliver value if considered early in the design process such as:

- Aiding climate resilience and inclusion of nature based solutions[9];
- Achieving biodiversity net gain;
- Enriching the sense of place and its characteristics;

[8] See also TIIs *Design and Delivery of Soft Landscape Treatments in Urban Transport Environments OTD* (GE-ENV-03002)
[9] See *Greening and Nature-based SuDS for Active Travel Schemes (NTA, 2023)*

- Providing social value by building stronger communities through improved interaction with nature;
- The protection of existing vegetation and provision of new native planting such as hedgerows and trees can provide screening to properties and livestock from the Greenway; and
- Using locally sourced and appropriate materials to support the circular economy.

Figure 4.6 depicts some potential opportunities and consideration at the design phase however reference should always be made to the appropriate TII design standards/guides. In addition, the following guideline document offers advice on landscape design for Greenways in the urban environment TII's *Design and Delivery of Soft Landscape Treatments in Urban Transport Environments Overarching Technical Document* (GE-ENV-03002).

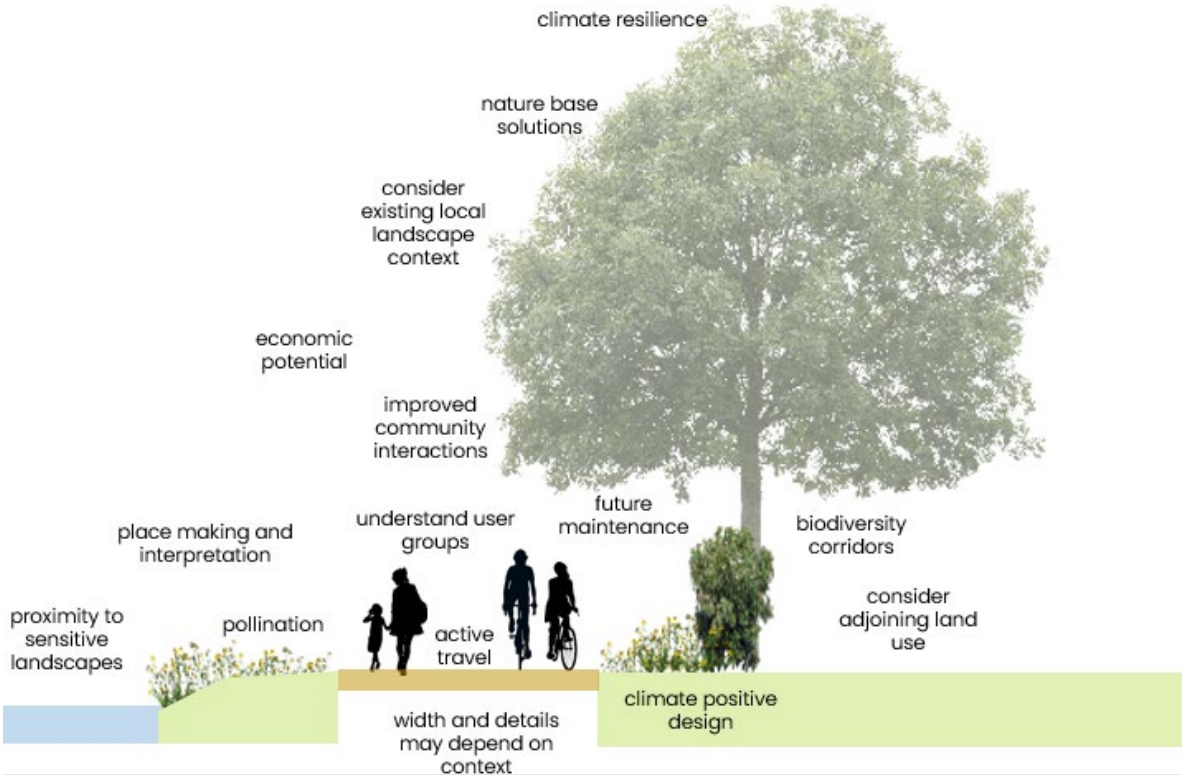



**Figure 4.6 - Potential Opportunities and Consideration in Design**

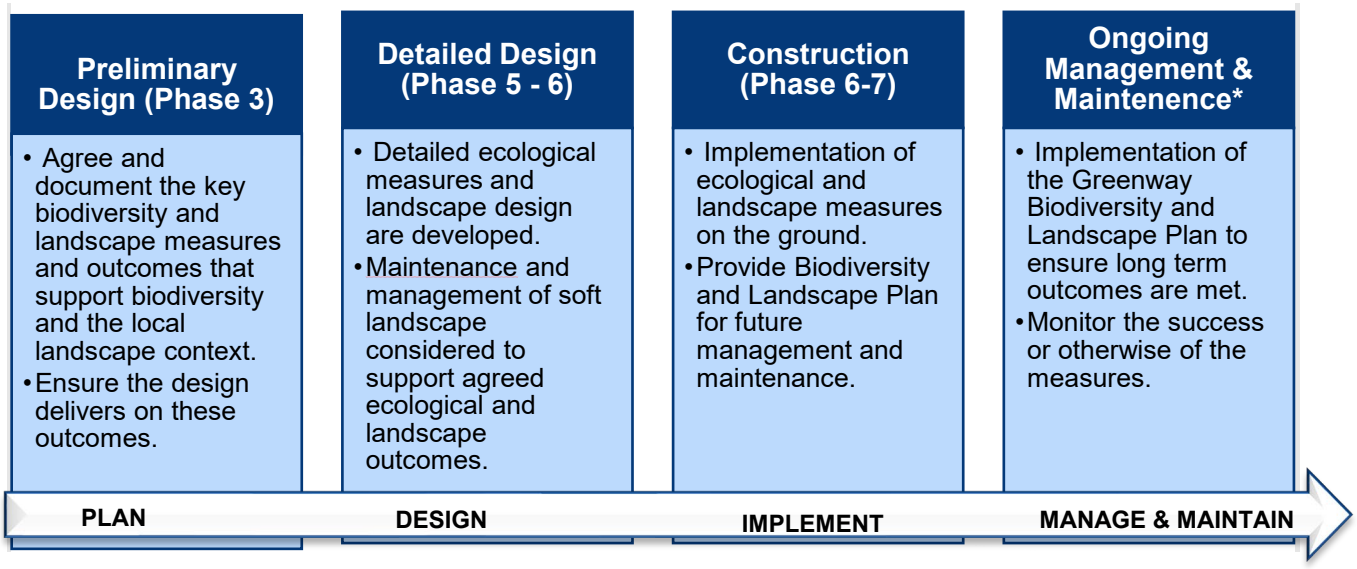
### 4.8.4 Greenway Biodiversity and Landscape Planning

Consideration of the protection, restoration, potential enhancement and ongoing management and maintenance of the Greenway in the context of the landscaping and biodiversity measures is an important part of the design process and should therefore be considered from an early stage in the project design. This process can be documented in a Biodiversity and Landscape Plan with Figure 4.7 outlining the development of that Plan by TII Phase.

Having defined the key biodiversity and landscape outcomes at the earlier stages of the project (Phase 3) and ensured that the preliminary design delivers on these outcomes, it is important to ensure these environmental outcomes are supported by future management and maintenance of the Greenway. During Phases 5 and 6, the Plan can be further developed to outline the detail of the protection, restoration, management and maintenance requirements. Phase 6 is the on-the-ground implementation of the plan by the appointed contractor. Once the Greenway is operational there is a need to manage, maintain and monitor it.

Appendix D outlines some high-level general principles around protection, restoration, management and maintenance that can be considered when developing the plan.

Further detail of maintenance and management in the context of landscape and biodiversity are outlined in TII's *Design and Delivery of Soft Landscape Treatments in Urban Transport Environments Overarching Technical Document* (GE-ENV-03002) and TII's *Guide for the Implementation of Soft Landscape in Towns and Villages on National Roads* (GE-ENV-03001).




***TII currently do not have remit in this area and is therefore the responsibility of the Implementation Authority to deliver this.**

**Figure 4.7 - The development of a Greenway Biodiversity and Landscape Plan by TII Phase**

### 4.8.5 Climate Consideration on Greenways

There is a suite of TII documents available in relation to the assessment of climate on TII projects in terms of both GHG emissions and climate resilience see Section 1.4. In addition, there are two TII tools applicable to the assessment of climate on Greenway projects. These are the TII Carbon Assessment Tool and the PAG Unit 13: TEAM Tool. PE-ENV-01104 sets out the GHG Emission Mitigation Hierarchy which has been adapted in Figure 4.8 of these guidelines to include some examples that can be considered for Greenway projects specifically.

**TII Carbon Tool** – TII has developed a carbon tool with the aim of reducing the amount of embodied carbon generated during the construction phase of transport projects.

CARBON TOOL
Transport Infrastructure Ireland

**TII TEAM Tool** –" provides an estimate of the total tonnes of $CO_2$ avoided by the scheme, based on the **estimated shift from private cars to walking/cycling.** It also shows the 'Cost per tonne of $CO_2$ avoided' which is an indicator of the cost effectiveness of the scheme in terms of reducing carbon emissions."- *PE-PAG-02036.*

PE–ENV-01104 describes the methodology that should use when carrying out a Climate Change Risk (CCR) assessment. As outlined in PE–ENV-01104 the CCR assessment "*Identifies the impact of a changing climate on a project and receiving environment. The assessment considers a project's vulnerability to climate change and identifies adaptation measures to accommodate climate change impacts.*"

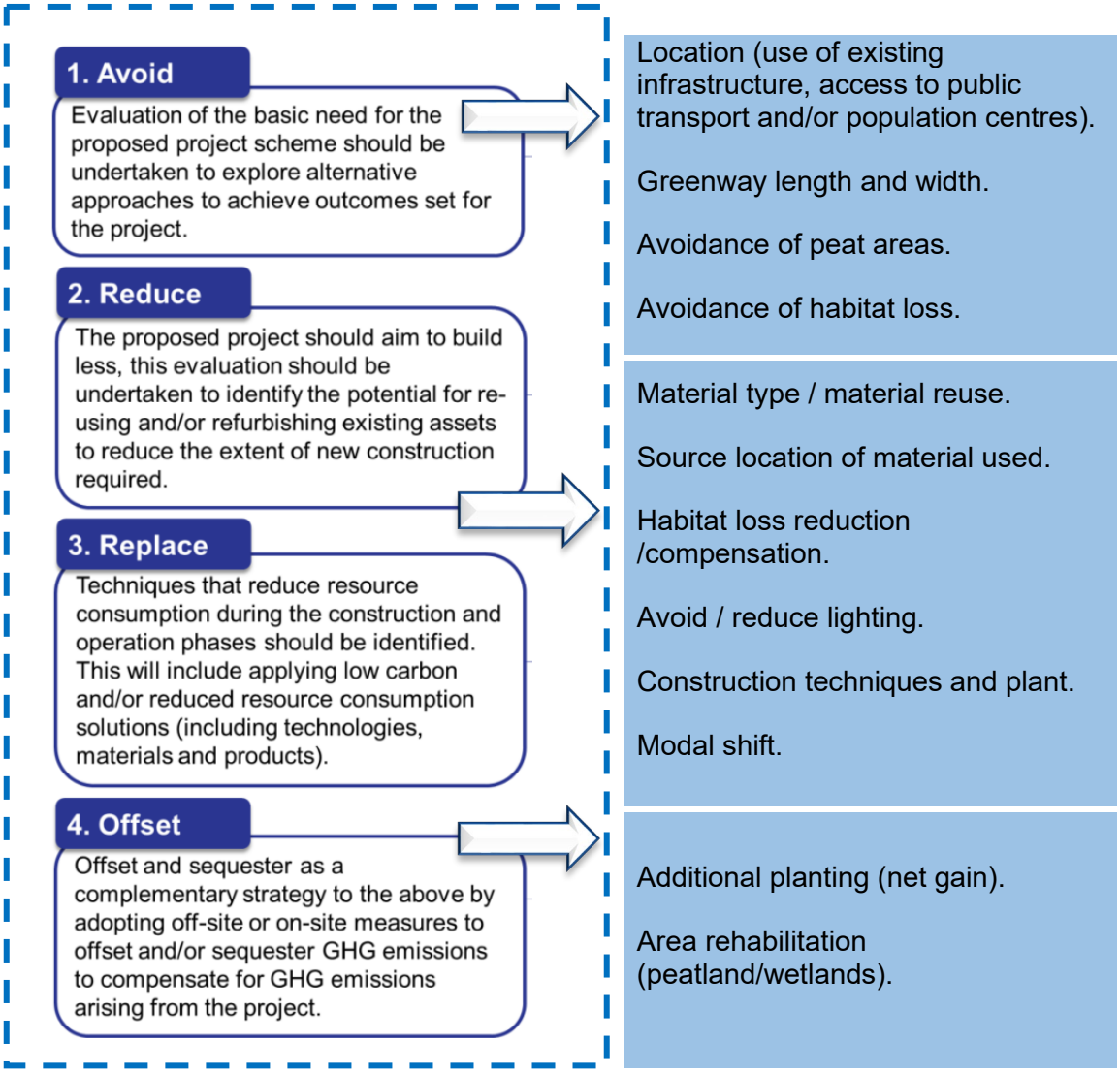



**Figure 4.8 - Greenway Carbon Considerations** (adapted from PE-ENV-01104 Figure 6.3 GHG Emissions Mitigation Hierarchy)

## 4.9 Assessments of Effects

There are a number of established guidelines which outline the requirement of the assessment stage of the EIA including:

- EC - Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report (2017); and
- EPA - Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022).

As outlined in Section 1 there is also a suite of TII standards and guideline documents which outline the assessment process by specific Environmental Factors. Regardless of the assessment methodology applied, the assessment reporting should clearly set out the receptor sensitivity, potential effect rating in terms of magnitude and significance on that receptor, the proposed mitigation applicable to the significant effect and then the final residual impact on the receptor post mitigation and any monitoring requirements, see Figure 4.9.

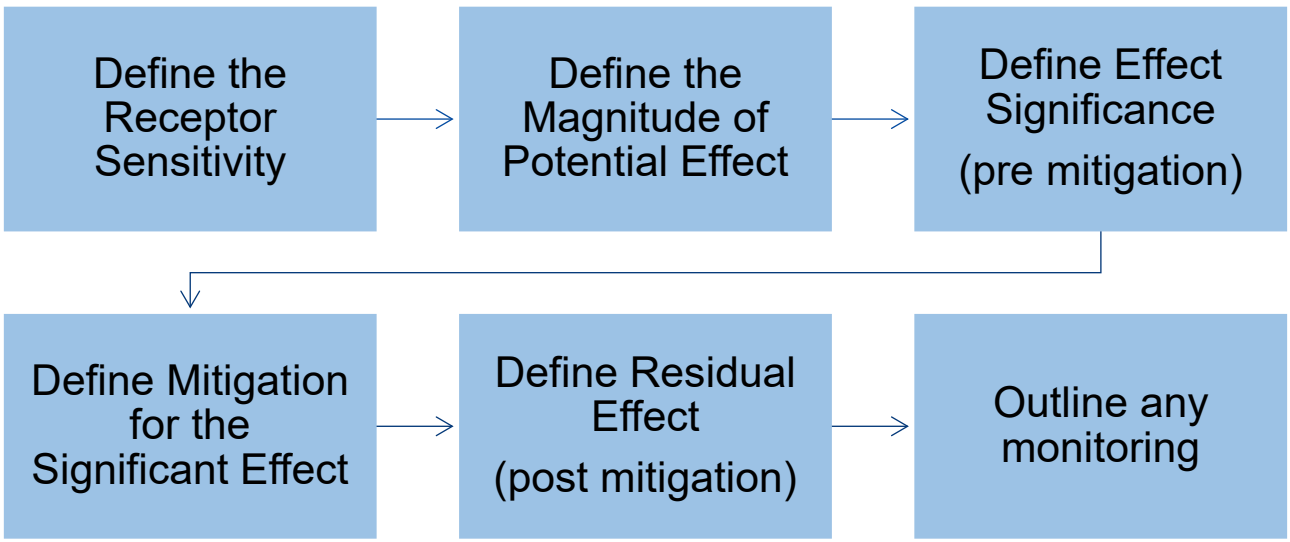



**Figure 4.9 - Reporting Environmental Effect**

When reporting the potential effects of the project in the EIAR or equivalent, consideration should be given to mitigation by design, and it may be prudent that the reporting of effects is undertaken with the assumption that these measures are in place as long as it is clearly set out in the project description and outlined within each Environmental Factor chapter as appropriate. This approach helps to demonstrate the iterative design process and how environmental considerations have been accounted for in the final design as presented for consent. For example, the project drainage or landscape design would be an integral part to the design and the assessment should not be undertaken in the absence of these design elements. Where the assessment concludes that impacts remain which are deemed to be significant, further mitigation may be required.

The source-pathway-receptor (SPR) relationship should be used when undertaking the impact assessment. Some high-level non exhaustive examples of the SPR model in relation to Greenways are outlined in Figure 4.10.

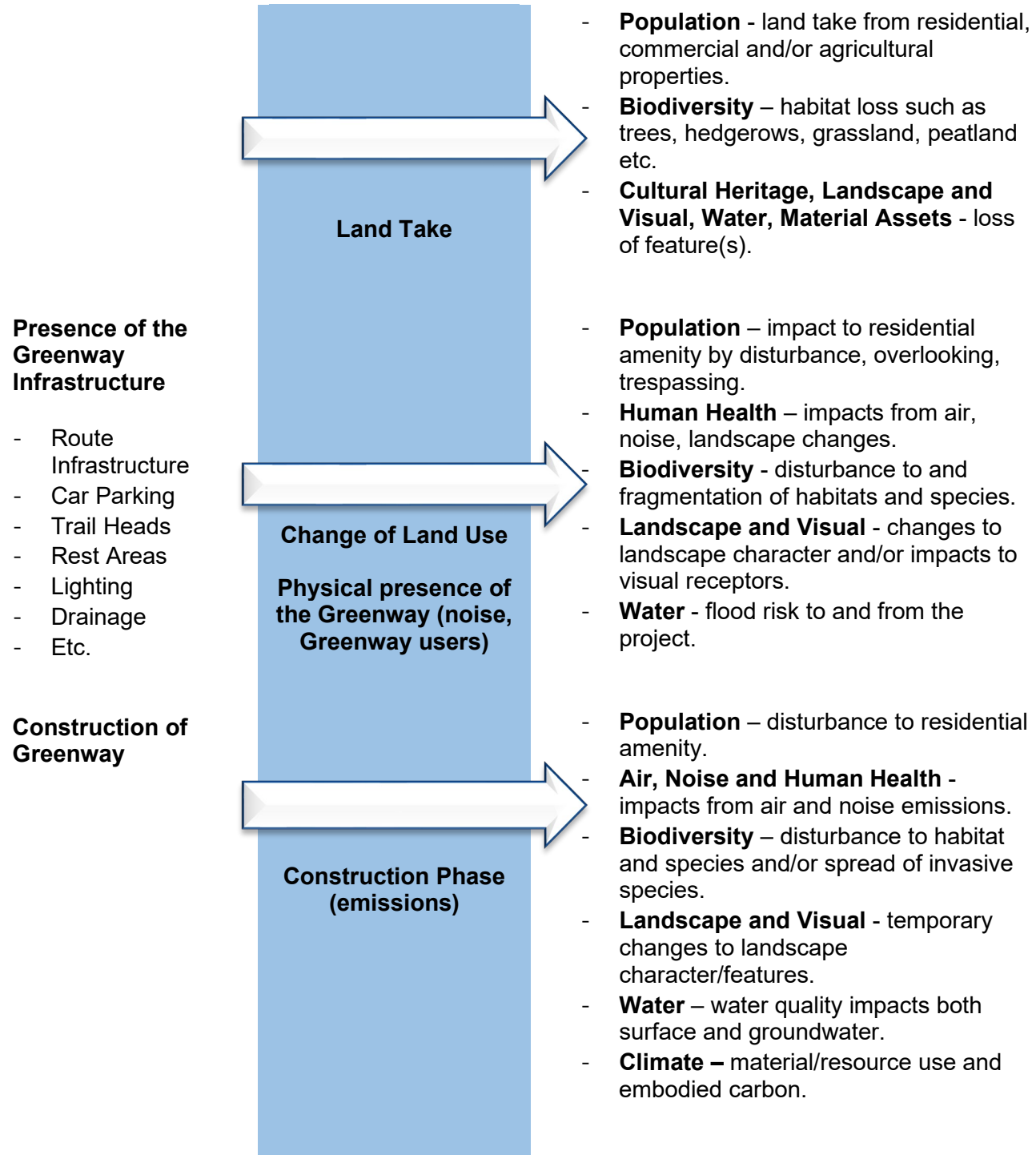



**Figure 4.10 - Source-Pathway-Receptor Model Examples**

## 4.10 Interaction between effects

The EIA Directive requires the consideration of the interaction between Environmental Factors. Therefore, collaborative working amongst the competent Environmental Specialists and between the design team is required when undertaking Environmental Assessment at all phases. Further details of this are outlined in the EPA EIA guidance. Cross-discipline cooperation is essential during all project phases but in particular at Phase 3 to ensure consistency in the presentation of receptors, effects and mitigation measures.

## 4.11 Cumulative Effects

Cumulative impact assessment in EIA requires that the impact from a project is assessed cumulatively with other projects being brought forward in a defined geographical and temporal boundary. Key sources of information on "other" projects include:

- Project Ireland (including its interactive online map);
- An Bord Pleanála;
- Local Authority Planning Portals;
- EIA Portal; and
- Other large infrastructure developers such as NTA, Irish Rail, Uisce Eireann, Eirgrid.

Further details of the cumulative assessment process are outlined in the EPA and EC guidance, see Appendix C.

## 4.12 Mitigation & Monitoring

Mitigation and monitoring requirements will be set out in the EIAR, NIS or any other non-statutory planning documentation. Throughout the development of the project the mitigation hierarchy should be applied as outlined in Figure 4.11. This process commences at the early phases of the project when the preferred option is being developed and at this stage the potential effects can be avoided by the option selection process. As the design progresses, further avoidance and minimisation can be achieved by the design process by the selection of design elements or processes.

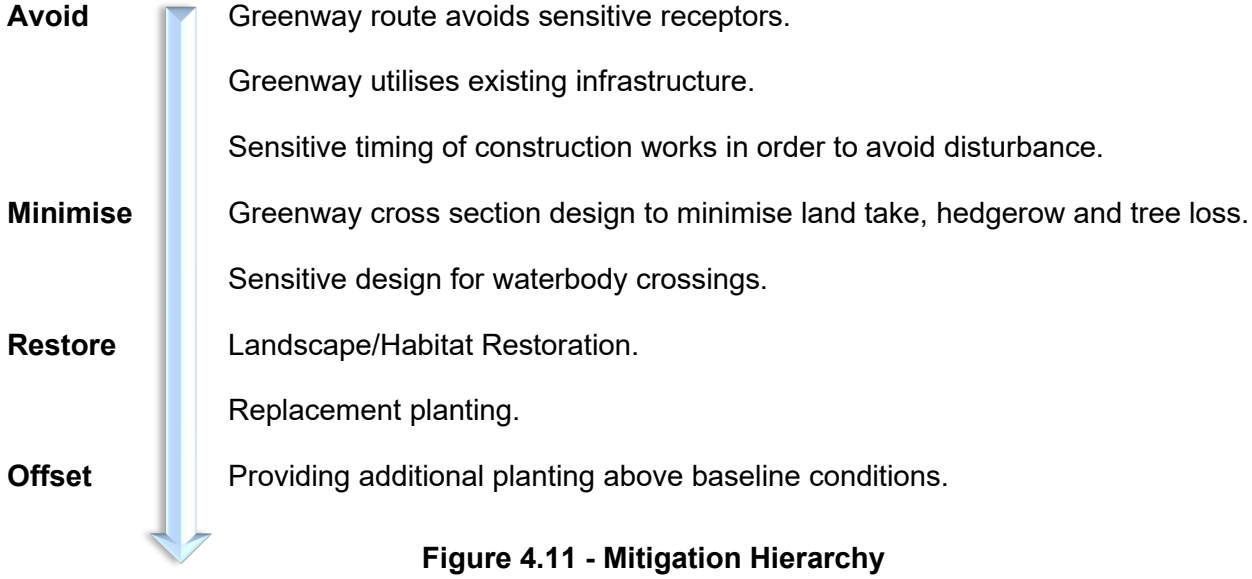



**Figure 4.11 - Mitigation Hierarchy**

## 4.13 Residual Effects

It will not always be possible or practical to mitigate all impacts. Where this is the case, then the residual impacts should clearly be described within the EIAR.

## 4.14 Environmental Impact Assessment Report

General guidance on the scope and detail of an EIAR is available in *Guidelines on the information to be contained in Environmental Impact Assessment Reports* (EPA, 2022) and due regard should be given to the guidance. Appendix E sets out a sample content for a Greenway EIAR. The output of the EIA scoping, consultation, baseline data-gathering and the iterative design process should feed into the development of the final EIAR.

## 4.15 Other Related Assessments (to be undertaken at Phase 3)

### 4.15.1 Appropriate Assessment

An AA is an assessment of the potential adverse effects of a plan or project (in combination with other plans or projects) on SAC and SPAs[10]. These sites are protected by national and European law (EPA, 2022).

AA is a separate process to EIA and significant effects can be identified at the AA Screening stage without the need to undertake an EIA. In this instance applications can be made under Section 177AE of the Planning and Development Act, 2000, as amended. For further details see RE-ENV-07008.

AA phases are well understood and documented, including AA screening and if required, the development of a NIS and the assessment of alternatives and compensation if effects remain after mitigation and Imperative Reason of Overriding Public Interest (IROPI)[11]. Further information on these stages can be found in the relevant NPWS and EC guidelines and are not set out in detail here.

Table 4.5 outlines some considerations in relation to Greenway projects and AA screening and the subsequent requirement for an NIS. This list is by no means exhaustive and consideration of the proposed Greenway location, design and the specific European site and their QI and site-specific COs on a case-by-case basis is required, see also Section 4.3.2. Advice should be sought from a competent ecological and/or hydro/hydrogeological expert in the case of surface or groundwater dependent ecosystems.

[10] Candidate sites (i.e. a cSAC or cSPA) have the same level of protection as fully designated sites under Irish Law.
[11] The Habitats Directive (and Irish legislation) does provide for very limited circumstances where, 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 proceed for IROPI (Article 6(4)). IROPI and remains rare in Ireland although it is more common in other member states (OPR, 2021).

**Table 4.5 - Considerations for AA Screening and NIS on Greenway Projects**

| Source | Pathway | Receptor | Typical Design/Mitigation |
|---|---|---|---|
| **Construction Works and Construction Plant** | • Noise emissions.<br>• Dust and other air emissions.<br>• Runoff (e.g., containing silt, oils and/or chemical).<br>• Accidental spillages (e.g. oils and/or chemical).<br>• Construction lighting emissions<br>• Spread of IAPS. | • QI Habitats: loss, degradation.<br>• QI Species: mortality, disturbance to or displacement of.<br>• Non-QI habitats loss where this habitat is a dependency of a QI habitat or species. | • Avoidance of the SAC/SPA.<br>• Use of existing infrastructure.<br>• Selection of construction plant/methods.<br>• Timing of the construction works.<br>• Temporary screening.<br>• Measures to protect water quality outlined in a CEMP, EOP.<br>• An IAPS Management Plan.<br>• Monitoring during construction.<br>• Use of an Ecological Clerk of Works (ECOW) or equivalent. |
| **Physical Footprint of Project**<br>(incl. the Greenway route, the associated ancillary infrastructure and any temporary land take) | • Removal of vegetation.<br>• Provision of boundaries such as walls and/or fencing.<br>• Changes to the hydrological/morpholo gical regime due to for example new instream structures and/or runoff.<br>• Changes to the hydrogeological regim e due to for example pilling/cuttings. | • QI and Non-QI Habitat: loss, degradation, fragmentation and/or severance.<br>• Species dependent on lost habitat: bats, otter, bird, FWPM – for example lesser horseshoe bat foraging areas, , water quality for fish, or FWPM habitat. | • Avoidance of the SAC/SPA.<br>• Boundary choices and design.<br>• Raised boardwalk style pathway.<br>• Sensitive design of structures/ construction works.<br>• Provision of mammal underpasses, ledges etc along the route. |
| **Presence of Project and Associated Users** | • Noise emissions.<br>• Lighting emissions.<br>• Increased human activity: trampling, litter, presence of and fouling by dogs. | • QI Species: disturbance to or displacement of species such as, birds, bats, otters etc.<br>• QI Habitats: Habitat Degradation. | • Avoidance of the SAC/SPA.<br>• Use of existing infrastructure<br>• Sensitive lighting design. |

| Source | Pathway | Receptor | Typical Design/Mitigation |
|---|---|---|---|
| | • Traffic from new carparks or traffic redistribution. | | • Sensitive boundary choices.<br>• Signage. |

### 4.15.2 Water Framework Directive Assessment

A WFD compliance assessment is undertaken to demonstrate that, for all WFD waterbodies where there is the potential for impacts, the Greenway project will not result in:

- Failure to achieve good WFD groundwater status, good ecological status or, where relevant, good ecological potential; and
- The deterioration in the status of a body of surface water or groundwater.

It is noted that there are currently no national guidelines in relation to undertaking a WFD compliance assessment and when required specialist support should be sought to undertake this assessment.

### 4.15.3 Flood Risk Assessment

When undertaking a project regard should be given to the OPW The Planning System and Flood Risk Management Guidelines for Planning Authorities (OPW, 2009) and TII Road Drainage and the Water Environment (including Amendment No. 1 dated June 2015) DN-DNG-03065 although the later deals specifically with road projects.

### 4.15.4 Strategic Environmental Assessment

SEA under the SEA regulations[12] requires the assessment of plans and programmes so that the consideration of environmental issues associated with the plan can be undertaken within a recognised strategic framework. County Development Plans, for example, can provide one such framework.

As outlined in PE-PMG-02047 it may be necessary to include the preferred Greenway option in the City and/or County Development Plan(s) (including Local Area Plans, as appropriate). This inclusion could be by means of a variation to the plan and in such circumstances, the Project Manager (with as required environmental specialist support) can assist the relevant Local Authority, as appropriate, to complete the variation(s) including any consequent SEA / AA requirements, see further detail in PE-PMG-02047.

[12] S.I. No. 435 of 2004 (European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, as amended by S.I. No. 200 of 2011 (European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011) & S.I. No. 436 of 2004 (Planning and Development (Strategic Environmental Assessment) Regulations 2004, as amended by S.I. No. 201 of 2011 (Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011).

**Box 5: National Cycle Network Plan- SEA and AA Mitigation**

As part of the development of the NCNP, SEA reporting and a NIS were also developed. Greenway routes may be contained in part, or wholly within some of the NCNP routes. Several strategic mitigation measures in relation to European sites have been outlined in the SEA and the NIS and in broad terms the following approach is advised:

- Avoidance of European sites.
- Utilise existing infrastructure such as existing roads, bridge crossings where possible.
- If the above is not achievable, further mitigation measures are suggested per NCN routes.

Further details of this strategic level mitigation can be found in the NCNP and associated SEA and NIS.

## 4.16 Environmental Related Deliverables by Planning Route

Table 4.6 sets out "required" and "typical" deliverables depending on the Greenway planning route. The environmental related deliverables at Phase 3 will depend on the outcome of the EIA and AA screening process which inform the appropriate planning route for the project and any additional requirements for assessment as outlined above. AA is a separate process to EIA and an NIS can be required without the need to undertake an EIAR and vice versa.

It should be noted that An Bord Pleanála set out its requirements in relation to applications made under 177AE and these requirements can be found on the An Bord Pleanála website under *Applications for approval for Local Authority Developments made to An Bord Pleanála under 177AE of the Planning and Development Act, 2000, as amended (Appropriate Assessment) - Guidelines for Local Authorities*. Reference should be made to this guidance document when making application under 177AE. See RE-ENV-07008 for further information on Section 38, Part 8, Section 177AE and the Roads Act.

**Table 4.6 - Typical Environmental Related Deliverables by Planning Route[13]**

| | Section 38[14] | Part 8 | Section 177AE | Roads Act |
|---|---|---|---|---|
| **Required** | • EIA Screening<br>• AA Screening[15] | • EIA Screening<br>• AA Screening<br>• FRA Stage 1 | • EIA Screening<br>• AA Screening<br>• NIS<br>• FRA Stage 1 | • EIA Screening<br>• AA Screening<br>• EIAR<br>• FRA Stage 1 |

[13] It should be noted that the Planning and Development Act 2024 was signed by the President on the 17th of October 2024. When relevant Parts and Sections of this Act are commenced and relevant Parts and Sections of the Planning and Development Act 2000 are repealed, the applicable consent mechanisms will change. A watching brief should be kept on such developments.

[14] See Guidelines on Traffic Works Procedures Section 38 of the Road Traffic Act (1994) (DOT, 2023).

[15] Note that screening for EIA is required where the traffic calming measure in question constitutes a project within the meaning of the EIA Directive, and screening for AA is required where it constitutes a project within the meaning of the Habitats Directive, see also the NTA's Guidance for EIA and AA Screening.

| | Section 38[14] | Part 8 | Section 177AE | Roads Act |
|---|---|---|---|---|
| **Other potential requirements** | • Other specialist assessments as required | • CEMP<br>• Traffic Management Plan (TMP)<br>• ISMP<br>• FRA Stage 2/3<br>• Photomontages<br>• Other specialist assessments as required | • CEMP<br>• TMP<br>• ISMP<br>• FRA Stage 2/3<br>• Photomontages<br>• Other specialist assessments as required | • NIS<br>• CEMP<br>• TMP<br>• ISMP<br>• FRA Stage 2/3<br>• Residential Amenity Assessment<br>• Photomontages<br>• Traffic Impact Assessment |

## 4.17 Consultation

Consultation is an important part of the project development. Table 4.7 summarises consultation that is be carried out at each project phase in terms of the Environmental Assessment.

**Table 4.7 - Consultation process from TII Phase 1 through 4**

| TII Phase | Progress through Phases |
|---|---|
| Phase 0 | Limited consultation is undertaken at Phase 0 however consideration of the requirement for public and stakeholder consultation commences. |
| Phase 1 | Requirements for stakeholder and public consultation is outlined in Project Managers Manual for Greenway projects. At this phase the PM should consult with the various Environmental Specialists to identify any specific stakeholder consultation requirements from an environmental perspective. |
| Phase 2 | |
| Phase 3 | Requirements for stakeholder and public consultation is outlined in Project Managers Manual for Greenway projects. At this phase the PM should again consult with the environmental team to identify any stakeholder requirements. Note: EIA Screening and EIA Scoping is undertaken at Phase 3. An EIA Screening direction can be sought from an Bord Pleanála. EIA scoping can be undertaken formally through an Bord Pleanála and/or informally by consulting directly with relevant bodies, see further detail in RE-ENV-07008. |
| Phase 4 | Any information received during the statutory process is considered as required. |

# 5. Environmental Assessment by TII Project Phase

## 5.1 Introduction

An overview of the EIA process with some consideration of the TII project phases in the context of Greenways is provided in Section 4. This Chapter summarises the environmental inputs and outputs by TII Project Phase.

## 5.2 TII Phase 0: Scope and Strategic Assessment

The purpose of Phase 0 is to ensure that the project is aligned with current national policy and Approving Authority strategic policies, programmes and plans.

### 5.2.1 TII Phase 0 Project Deliverables

Full details and the deliverables required at Phase 0 are set out in PE-PMG-02047 and PAG Unit 2.1 with the POD being the deliverable of relevance to environment assessment at Phase 0.

### 5.2.2 TII Phase 0 Environmental Input

It is envisaged that no or limited environmental input is required at Phase 0 however, environmental constraints, risks and opportunities can begin to be considered along with the need for environmental related objectives, see Table 5.1.

**Table 5.1 - Phase 0 Environmental Input**

| Deliverable | Environmental Inputs |
|---|---|
| Project Outline Document | Highlight key environmental constraints, risks and opportunities within the emerging project study area. |
| | Support the development of environmental objectives to feed into the overall project objectives. |

### 5.2.3 TII Phase 0 Environmental Outputs

The outputs include:

- Early identification of key constraints, risks and opportunities within the emerging project study area.
- Environmental Objectives included as part of the overall project objectives within the POD.

## 5.3 TII Phase 1: Concept and Feasibility

The purpose of the Phase 1 Concept and Feasibility is to identify the nature and extent of significant constraints, risks and opportunities within a defined study area (see PAG Unit 3.0). These constraints, risks and opportunities should be documented and mapped so that feasible options can be designed to avoid such constraints and maximise opportunities where possible.

### 5.3.1 TII Phase 1 Project Deliverables

Full details and the deliverables required at Phase 1 are set out in PE-PMG-02047 and PAG Unit 3.0 with the Feasibility Report being the deliverable of main relevance to the environment assessment at Phase 1.

### 5.3.2 TII Phase 1 Environmental Input

It is envisaged that environmental input is required at Phase 1 and are undertaken as outlined in Table 5.2.

**Table 5.2 - Phase 1 Environmental Input**

| Deliverable | Environmental Inputs |
|---|---|
| Feasibility Report | Input to the development of the project study areas to take account of environmental constraints, risks and opportunities and potential Zones of Influence of the same. |
| | Identify, document and map environmental constraints, risks and opportunities within the project study area and consider the ZOI of any potential effects. |
| | Input to the assessment of options as required from an environment perspective. |
| | Advise the Project Manager on any consultation requirements from an environmental perspective. |

### 5.3.3 TII Phase 1 Environmental Outputs

The outputs of Phase 1 include a Feasibility Report with:

- Detail and mapping of environmental constraints, risks and opportunities within the project study area and the ZOI; and.
- Consideration of the same environmental constraints, risks and opportunities in the development of feasible options.

## 5.4 TII Phase 2: Options Selection

The purpose of Phase 2 is to examine options to determine a Preferred Option for the Greenway project.

### 5.4.1 TII Phase 2 Project Deliverables

Full details and the deliverables required at Phase 2 are set out in PE-PMG-02047 and PAG Unit 4.0 and Unit 13.0 with the Options Report being the deliverable of main relevance to the environment assessment at Phase 2.

### 5.4.2 TII Phase 2 Environmental Input

It is envisaged that environmental input is further increased at Phase 2 and are undertaken as outlined in Table 5.3.

**Table 5.3 - Phase 2 Environmental Input**

| Deliverable | Environmental Inputs |
|---|---|
| Option Report | Update the desk-based information gathered at Phase 1. |
| | Where available, ensure potential environmental effects have been identified and considered in the appraisal process in line with TII standards and guidelines. Where there is no relevant TII standard/guidance ensure the options assessment is undertaken in line with other relevant guidance and best practice, see Appendix C. |
| | At Phase 1 the Constraints/Opportunities study is likely to be a desk-based exercise however, during Phase 2 proportionate and targeted field walkovers/surveys including drone surveys may be required, depending on the complexity of the project and the sensitivity of the receiving environment, particularly if there are for example SAC/SPA, karst features, protected structures, or other sensitive features. |
| | Undertake and input to the options development and selection process including reporting under the criteria headings of; environment, and as required accessibility/social inclusion and integration. |
| | Advise the Project Manager of consultation requirements from an environmental perspective. |
| | Input and partake in project workshops as required. |

### 5.4.3 TII Phase 2 Environmental Outputs

The Phase 2 Stage 1 outputs include:

- Completion of the MCA to score each of the options relative to their potential environmental effect;
- Input to Working Papers if, and as, required;
- As required, mapping to illustrate the appraisal process; and
- Input to the Options Report.

## 5.5 Phase 3: Design and Environmental Evaluation

The purpose of Phase 3 is to develop the Greenway project design, following selection of a preferred option, based on both technical and environmental inputs, to a stage where sufficient levels of detail exist to establish land take requirements, to identify and mitigate project impacts, and to progress the project through the relevant statutory processes. The planning for any Greenway project shall be carried out in compliance with all appropriate environmental directives and legislation. Guidance on these aspects is set out in RE-ENV-07008 *Environmental Planning of National Road and Greenway Projects* and PE-PMG-02047 the *Project Manager Manual for Greenway Projects*.

### 5.5.1 TII Phase 3 Project Deliverables

Full details and the deliverables required at Phase 3 are set out in PE-PMG-02047 the following are the deliverables of most relevance to the environment assessment at Phase 3:

- EIA related deliverables - EIA Screening Report, EIA Scoping Report, EIA Report (EIAR), other non-statutory Environmental Assessment report(s);
- Habitats Directive related deliverables - AA Screening Report, NIS;
- Other Statutory Documents – related to Compulsory Purchase Order (CPO), Part 8, etc; and
- Design Report;
- Other supporting reports – CEMP, EOP, TMP, FRA Report, Invasive Species Management Plan (ISMP) as required.

### 5.5.2 TII Phase 3 Environmental Input

Environmental input will be significantly increased at Phase 3 and are undertaken as outlined in Table 5.4.

**Table 5.4 - Phase 3 Environmental Input**

| Deliverable | Environmental Inputs |
|---|---|
| Environmental and Other Statutory Required Documentation | Update and develop the baseline data. |
| | Undertake environmental surveys. |
| | Undertake and support consultation requirements from an environmental perspective. |
| | Collaborate with design engineers and other environmental disciplines. |
| | Identify and rate environmental effects. |
| | Input to design and propose design changes and mitigation for any significant effects. |
| | Document findings in appropriate reporting i.e. EIAR, CEMP, NIS, Design Report etc. |

### 5.5.3 TII Phase 3 Environmental Outputs

The Phase 3 outputs include:

- The development of the EIA Screening Report and AA Screening Report;
- If required, the development of the EIA Scoping Report, an EIAR, an NIS etc.;
- Other Environmental Assessment reports as required; and
- Input into the Design Report.

## 5.6 Phase 4: Statutory Processes

The purpose of Phase 4 is to compile documentation and participate in oral hearing(s) as required by the statutory processes to ensure that the proposed Greenway project is developed in accordance with planning, environmental and other relevant legislation.

### 5.6.1 TII Phase 4 Project Deliverables

Full details and the deliverables required at Phase 4 are set out in PE-PMG-02047 with the Briefs of Evidence, Schedule of Environmental Commitments and Planning Decision being the deliverables of main relevance to the environment assessment at Phase 4.

### 5.6.2 TII Phase 4 Environmental Input

The envisaged environmental input and review process at Phase 4 is undertaken as outlined in Table 5.5.

**Table 5.5 - Phase 4 Environmental Input**

| Deliverable | Environmental Inputs |
|---|---|
| Statutory Processes (Oral Hearing, Request for Further Information) | Each Environmental Specialist Lead under instruction from the Project Manager and/or Environmental Coordinator will review and draft responses, where warranted, to issues raised in submissions to the consenting process. |
| | Review and draft responses to Requests for Further Information (RFI) issued by the consenting authority. |
| | Review and update, if necessary, any aspect of the EIA. |
| | Draft a Brief of Evidence, where an oral hearing is to be held and in the context of a CPO in relation to environmental aspects and responses to submissions etc. |
| | Taking part in oral hearing preparation meetings. |
| | Finalise the Brief of Evidence. |
| | Present the Brief of Evidence at the oral hearing and respond to any questions on this particular aspect direct from the public, other bodies, or the Inspector for the consenting authority. |
| | Review and report on any environmental aspects addressed in the decision of the consenting authority (and Planning Inspector's report). |
| Schedule of Environmental Commitments | Where relevant, the Schedule of Environmental Commitments submitted as part of the Statutory Processes will be updated to include any outcomes during the statutory process. |
| Planning Decision | Review of planning decision to understand any implications for TII or the Local Authority (LA). |
| Procurement process advanced work | Input as requested by Project Manager. |

### 5.6.3 TII Phase 4 Environmental Outputs

The Phase 4 outputs include:

- Briefs of Evidence; and
- Updated Schedule of Environmental Commitments.

## 5.7 Phase 5-7: Enabling and Procurement, Construction and Implementation and Close Out and Review

The purpose of Phase 5 to 7 is as follows:

- To compile tender documentation to allow for the appointment of a Contractor to execute the Main Contract and/or to execute enabling works to facilitate the works;
- The administration and execution of the Main Contract or enabling works contract in accordance with the design, specification, relevant standards, and legislation; and
- Completion of all outstanding contractual and residual issues relating to the Project.

### 5.7.1 TII Phase 5-7 Project Deliverables

Full details and the deliverables and requirements from Phase 5 to 7 are set out in PE-PMG-02047. This section does not outline the requirements of the appointed contractor.

### 5.7.2 TII Phase 5-7 Environmental Input

The envisaged environmental input at Phase 5-7 are undertaken as outlined in Table 5.6.

**Table 5.6 - Phase 5-7 Environmental Input**

| Deliverable | Environmental Inputs |
|---|---|
| Contract Documents | At the request of the Project Manager, the environmental specialist can provide support, advice and input to tender documents development and appraisal process and the develop of contract documents. |
| Enabling Works/ Archaeological Services Contracts | At the request of the Project Manager the environmental specialist can provide support, advise and input to the Enabling Works /archaeological services contract procurement process. |
| CEMP | At the request of the Project Manager the environmental specialist can review the CEMP updated at Phase 6 by the appointed contractor. |
| Schedule of Environmental Commitments | The Contracting Authority's Representative will ensure that the Contractor has implemented all mitigation measures to the satisfaction of the Contracting Authority and/or relevant statutory bodies, where necessary. |

### 5.7.3 TII Phase 5-7 Environmental Outputs

The outputs include:

- Contract documents; and
- Updated CEMP.

# 6. References

To avoid duplication/repetition the below list is for additional references outside TII documents referred to throughout these Guideline which form part of the TII publication list (see full list on the TII publications website), the policy documents listed in Appendix A and guideline documents listed in Appendix C.


- EPA, 2023. Landcover Mapping https://www.epa.ie/our-services/monitoring--assessment/assessment/mapping/national-land-cover-map/
- TII, 2023. Biodiversity Plan
- TII, 2023. Circular Economy Strategy 2023-2025
- TII, 2023. Circular Economy Policy 2023-2025
- TII, 2023. Landscape Plan
- TII, 2021. Sustainability Implementation Plan

# Appendix A – Policy of Relevance to Greenways

It should be noted that this list is subject to change as new and/or updated policy gets published and reference should be made to department and/or organisational websites.

| Scale | By<br>see Abbreviation & Acronyms | Year | Title |
|---|---|---|---|
| International | UN | 2015 | The 2030 Agenda for Sustainable Development |
| European | EC | 2020 | Sustainable and Smart Mobility Strategy - putting European transport on track for the future |
| European | EC | 2019 | European Green Deal |
| European | EC | 2021 | EU Strategy on Adaptation to Climate Change |
| European | ECF | 2017 | European Cycling Strategy |
| National | GI | 2018 | Project Ireland 2040 - National Planning Framework |
| National | GI | 2020 | Programme for Government - Our Shared Future |
| National | GI | 2024 | Moving Together: A Strategic Approach to Improving the Efficiency of Ireland's Transport System (DRAFT) |
| National | DPER | 2021 | National Development Plan 2021-2030 |
| National | DOT | 2018 | Strategy for the Future Development of National and Regional Greenways |
| National | DOT | 2022 | National Sustainable Mobility Policy |
| National | DOT | 2021 | National Investment Framework for Transport in Ireland |
| National | DOT | 2021 | Ireland's Government Road Safety Strategy 2021–2030 |
| National | DOT | 2024 | National Cycle Network Plan |
| National | DOT | 2015 | People Place and Policy Growing Tourism to 2025 |
| National | DOH | 2016 | National Physical Activity Plan |
| National | DOH | 2019 | A Framework for Improved Health and Wellbeing 2013 – 2025 |
| National | DHLGH | 2024 | 4TH National Biodiversity Action Plan |
| National | DHLGH | 2024 | River Basin Management Plan |
| National | DHLGH | 2015 | National Landscape Strategy 2015-2025 |
| National | DHLGH | 2021 | All-Ireland Pollinator Plan 2021-2025 |

| Scale | By<br>see Abbreviation & Acronyms | Year | Title |
|---|---|---|---|
| National | DHLGH | 2015 | National Peatlands Strategy |
| National | DECC | 2023 | Climate Action Plan |
| National | DECC | Ongoing | National Air Pollution Control Programme |
| National | DECC | 2022 | Ireland's Second National Implementation Plan for the Sustainable Development Goals 2022-2024 |
| National | DRCD / DHLGH | 2022 | Town Centre First - A Policy Approach for Irish Towns |
| National | DRCD | 2018 | Realising Our Rural Potential - Action Plan for Rural Development |
| National | TII | 2023 | National Roads 2040 |
| National | OPW | 2018 | Flood Risk Management Plans |
| National | NTA | 2022 | Cycle Connects - Ireland's Cycle Network |
| Regional | RA | Various | Regional Economic & Spatial Strategy |
| Regional | NTA | Various | Regional Transport Plans (where available) |
| County/Local | LA | Various | County and or Local Area Plans |

# Appendix B – Policy Overview

## B.1 Project Ireland 2040 - National Planning Framework

The *National Planning Framework* (NPF) is the Government's high-level strategic plan for shaping the future growth and development in Ireland to the year 2040. The NPF emphasises several times of the need to develop an '*integrated network of greenways, blueways and peatways to support the diversification of rural and regional economies and promote more sustainable forms of travel and activity based recreation'*.[16] Greenways are discussed and referenced under a number of the National Strategic Outcomes (NSO) set out in the NPF; and also among the policy objectives, including:

- National Strategic Outcome 3 – Strengthened Rural Economies and Communities: This NSO relates to investment, development and diversification of the rural economy. With regards Greenways, NSO 3 recognises the 'start' that has been made '*in the development of a national long-distance Greenway/ Blueway Network'*; and the need to '*invest in greenways, blueways and peatways as part of a nationally coordinated strategy'*[17].
- National Strategic Outcome 4 – Sustainable Mobility: The NPF recognises the importance of significant investment in sustainable mobility (active travel and public transport) networks if the NPF population growth targets are to be achieved. Specifically, under NSO 4, the NPF flags the need to: '*Develop a comprehensive network of safe cycling routes in metropolitan areas to address travel needs and to provide similar facilities in towns and villages where appropriate'*[18] – Greenways are key enablers, in this regard.

In addition to the above, the NPF also contains some National Policy Objectives which make specific reference to Greenways and are as follows:

- National Policy Objective 22: Facilitate tourism development and in particular a National Greenways, Blueways and Peatways Strategy, which prioritises projects on the basis of achieving maximum impact and connectivity at national and regional level.
- National Policy Objective 46: In co-operation with relevant Departments in Northern Ireland, enhanced transport connectivity between Ireland and Northern Ireland, to include cross-border road and rail, cycling and walking routes, as well as blueways, Greenways and peatways.
- National Policy Objective 64: refers to the improvement of air quality through integrated land use and spatial planning that supports public transport, walking and cycling as more favourable modes of transport to the private car.

It is important that TII Greenway projects can demonstrate that they support the objectives and strategic outcomes of Project Ireland 2040 NPF.

## B.2 National Development Plan 2021 - 2030

The Government's *National Development Plan* (NDP) sets out a ten-year capital expenditure framework to support Ireland's transition to a low carbon society to 2030. The NDP sets out details of a new National Active Travel Programme which will complement the active travel investments in cities, towns and villages and deliver significant additional walking and cycling infrastructure around the country by 2025. The NDP refers to the development of a new National Cycling Network Strategy.

[16] Project Ireland 2040: National Planning Framework (NPF), p. 47.
[17] NPF, p. 141.
[18] NPF, p. 142.

With regards the National Cycling Network, the NDP states; '*The development of a new National Cycling Network Strategy by end-2022 which will map existing cycling infrastructure in both urban and rural areas, including Greenways, and will serve to inform future planning and project delivery decisions in relation to walking and cycling infrastructure for the remainder of the decade*.' [19] Furthermore, the NDP suggests '*Greenways around the country will link in with Active Travel infrastructure in our towns and cities as we develop a National Cycle Network strategy…*'[20] and '*The Programme for Government requires Greenways to also provide connectivity to our towns and villages and to pivot to also provide for everyday journeys to work and school, as well as for leisure purposes'*[21].

Within Chapter 17 – 'A Shared Island', the NDP calls for '*an island-wide greenway network, linking the Atlantic coast with the Eastern seaboard through greenway projects across the border region, creating a transformational green infrastructure asset, benefitting residents and growing sustainable tourism*'[22] including '*development of a network of cross-border greenways and blueways'*[23]

## B.3 National Investment Framework for Transport in Ireland

The DOT *National Investment Framework for Transport in Ireland* (NIFTI) (DOT, 2021) is a framework for prioritising future investment in the land transport network. The primary goal of NIFTI is to ensure that investment in Ireland's land transport network supports the delivery of Project Ireland 2040 NSO. NIFTI established a set of Investment Priorities, in addition to Modal and Intervention Hierarchies, which serve to guide land transport investment. During the development of Greenway projects, Sponsoring Agencies must demonstrate that a proposed investment aligns with these Priorities and Hierarchies to be considered for funding. NIFTI recognises that investment in Greenways can extend '*the reach of sustainable mobility in rural areas'*[24], and '*Greenways can also make a contribution to reducing private car use in rural areas by providing an alternative means of accessing larger settlements'*[25]*.*

The NIFTI Investment Priorities are Decarbonisation, Protection and Renewal, Mobility of People and Goods in Urban Areas, and Enhanced Regional and Rural Connectivity. Under the NIFTI Modal Hierarchy, sustainable modes, starting with active travel (walking, wheeling and cycling) and then public transport, should be considered first before less sustainable modes such as the private car. In terms of the Intervention Hierarchies the order of priority is Maintain, Optimise, Improve and New; and so, there is a need to examine the existing asset stock within 'a study area' (that might support provision of a Greenway corridor) and evaluate and assess such options before consideration of the 'New'.

## B.4 National Sustainability Mobility Plan

The *National Sustainable Mobility Policy* (GI, 2021) sets out a strategic framework to 2030 for active travel and public transport to help Ireland meet its climate obligations. It is accompanied by an action plan to 2025 which contains actions to improve and expand sustainable mobility options across the country by providing safe, green, accessible and efficient alternatives to car journeys. It also includes demand management and behavioural change measures to manage daily travel demand more efficiently and to reduce the journeys taken by private car.

[19] Project Ireland 2040: National Development Plan 2021-2030 (NDP), p. 61.
[20] NDP, p. 62.
[21] NDP, p. 72.
[22] NDP, p. 165.
[23] NDP, p. 163.
[24] National Investment Framework for Transport in Ireland (NIFTI), p. 7.
[25] NIFTI, p. 22.

The National Sustainable Mobility Policy (NSMP) also recognises the potential of Greenways in regards to low-carbon mobility in rural areas; and seeks to support 'safe and green mobility' by '*Expanding walking and cycling options across the country, including greenways.'*[26] The NSMP states *'Greenways have an important role, both in terms of their economic contribution to communities in attracting tourism and leisure activity, but also their potential to enable active travel within local communities as part of the overall cycle network within settlements. Greater connectivity from/ to greenways to city, town and village centres is being prioritised'*.[27] With regards the Strategy for the Future Development of National and Regional Greenways (discussed below) the NSMP states the following emphasising the multi-facets roles of Greenways in terms of facilitating utility trips in addition to recreation trips*: 'While the focus is on tourism and leisure amenities, Greenways have potential to enable active travel within local communities and many of the routes funded under the strategy will provide safe segregated routes to schools and workplaces*'[28].

## B.5 National Climate Policy

An overview of the key legislation and policy framework driving the requirement for action to reduce GHG Emissions and mitigate the impacts of climate change in Ireland is provided in TII's *Climate Guidance for National Roads, Light Rail, and Rural Cycleways (Offline & Greenways) - Overarching Technical Document* (PE-ENV-01104). In summary, the Climate Act and Low Carbon Development Act 2015, as amended, sets out Ireland's objectives to halve Ireland's emissions by 2030 and reach net zero no later than 2050. The Climate Action Plan (CAP) (which is updated annually) sets out the roadmap not only to deliver on Ireland's targets to reduce our emissions but also places an emphasis on the need for climate adaptation.

In the context of Greenway projects, a vital element of the CAP is to reduce transport emissions by adopting the Avoid-Shift-Improve approach: reducing or avoiding the need for travel, shifting to public transport, walking and cycling and improving the energy efficiency of vehicles. In terms of climate adaptation, it calls for the integration of enhanced climate resilience into all existing and new transport infrastructure. Several of the CAP iterations call for the '*Advance roll-out of walking/cycling infrastructure in line with National Cycle Network and Cycle Connects plans'* of which Greenways may form part.

## B.6 Moving Together: A Strategic Approach to Improving the Efficiency of Ireland's Transport System (DRAFT)

The Government recently published *Moving Together: A Strategic Approach to Improving the Efficiency of Ireland's Transport System* (GI, 2024). Moving Together, falling out of the CAP, has been developed to make our transport system more efficient and to alleviate the impacts of car-dependency and congestion on the economy, the environment, and the health of our society. Greenways are discussed within Moving Together as part of that transport system. With regards Greenways, Moving Together states: '*It should be noted that greenway schemes can also contribute to modal shift in varying degrees. While greenways are most popular for recreational trips, they also have a function in enabling greater levels of travel via walking and cycling rather than private car use amongst leisure users, and tourists but also by residents for non-recreational trips – shopping, education and work/business.'*[29]

[26] National Sustainable Mobility Policy (NSMP), p. 5.
[27] NSMP, p. 38.
[28] NSMP, p. 22.
[29] Moving Together: A Strategic Approach to Improving the Efficiency of Ireland's Transport System, p. 85.

## B.7 Strategy for the Future Development of National and Regional Greenways

DTTS published the *Strategy for the Future Development of National and Regional Greenways* in 2018. The objective of this strategy is to assist in the strategic development of nationally and regionally significant Greenways in appropriate locations constructed to an appropriate standard to deliver a quality experience for all Greenways users. The delivery of 'a quality experience' of an appropriate standard should not be confused with the delivery of 'a standardised experience'. National and Regional Greenways should ultimately reflect the diversity of landscapes and places in which each project is uniquely set.

The strategy outlines the Five Ss criteria when developing Greenway projects which include Scenic, Sustainable, Strategic, Segregated, and lots to See and do. Sustainability is one of the Five S criteria for overall Greenway development, outlined in both the *Strategy for the Future Development of National and Regional Greenways* and the *Code of Best Practice for National and Regional Greenways* (DOT, 2021. See Section 2.5.1). For more information on the consideration of the Five S's during the planning of Greenway projects please see Section 4.4.1.

## B.8 National Cycle Network Plan

The National Cycle Network and associated Plan is a core cycle network of 3,500km that proposes to connect more than 200 villages, towns and cities across Ireland. It will integrate with other cycling infrastructure, including Eurovelo, Greenways, regional and urban networks. The network will also include cycling links to transport hubs, education centres, employment centres, leisure and tourist destinations, and support "last mile" bicycle deliveries in order to reduce reliance on private car usage.

Regard should be given to the NCNP when planning any Greenway project and how this proposed infrastructure may interact with the route corridors of the Plan. It is noted that a Strategic SEA and AA was carried out in relation to the NCNP and reference should also be made to the associated documents.

## B.9 Cycle Connects

Cycle Connects, Ireland's Cycle Network is being developed by the National Transport Authority (NTA) to provide a cycle route network to both rural and urban parts of Ireland outside the Greater Dublin Area (GDA)). The draft proposals anticipate an extensive cycling network across the 22 counties, complementing the cycling plans that have already been developed for the GDA.

## B.10 National Roads 2040

TII has developed a strategy for the National Roads network (NR2040) to 2040. This strategy aims to enable the delivery of Project Ireland 2040, support the realisation of several NSOs and align with NIFTI and other government policy.

TII's vision is for the National Roads network to be an evolving sustainable transport system focused on safety, innovation, accessibility and mobility of people, goods, and services. The strategy will be delivered by TII in collaboration with other government agencies and transport stakeholders to provide a consistent approach to achieve this vision.

NR2040 recognises the potential for Greenways in enabling modal shift and the need to expand the network; exploiting potential to reduce some transport demands along National Road corridors.

## B.11 National Biodiversity Action Plan

*Ireland's 4th National Biodiversity Action Plan* (NBAP) sets out the national biodiversity agenda for the period 2023-2030 striving for a "Whole-of-Government, Whole-of Society" approach to the governance and conservation of biodiversity as part of a national effort to address the biodiversity emergency. TII has an action under the Plan relating to the use of native planting from appropriate sources in landscaping works. There are also a number of other actions which are relevant to the development and operation of Greenways and reference should be made to the NBAP when progressing Greenway projects.

# Appendix C – Environmental Guidelines

It should be noted that this list is subject to change as new and/or updated guidance gets published and reference should be made to TII Publications website and other organisational websites.

| Environmental Factor or Aspect | Relevant TII Standards and/or Technical Guidance and Documents | Previous TII (formally National Roads Authority (NRA)) Guidance (pre-2015) | Other Relevant Guidance |
|---|---|---|---|
| General | PE-ENV- 01109: Greenway Environmental Guidance (TII, 2024) – these Guidelines.<br>RE-ENV-07008: Environmental Planning of National Road and Greenway Projects (TII, 2023). | | Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022).<br>Environmental Impact Assessment of Projects - Guidance on Screening 2017 (EC, 2017).<br>Environmental Impact Assessment of Projects - Guidance on Scoping 2017 (EC, 2017).<br>Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report 2017 (EC, 2017).<br>Guidance for EIA and AA Screening of Active Travel Projects Funded by the NTA (NTA, 2023).<br>Note PN02 Environmental Impact Assessment Screening (OPR, 2021).<br>Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (DHLGH, 2018).<br>Guidelines on Traffic Works Procedures Section 38 of the Road Traffic Act (1994) (DOT, 2023). |

| Environmental Factor or Aspect | Relevant TII Standards and/or Technical Guidance and Documents | Previous TII (formally National Roads Authority (NRA)) Guidance (pre-2015) | Other Relevant Guidance |
|---|---|---|---|
| Population | PE-ENV-01108: Population and Human Health Assessment of Proposed National Roads – Standard (TII, 2024). | | Code of Best Practice – National and Regional Greenways (DOT, 2021).<br>NTA - Infrastructure-Equality-Guidance (NTA, 2024). |
| Human Health | | | |
| Biodiversity (including Appropriate Assessment) | GE-ENV-01104: The Management of Invasive Alien Plant Species on National Roads – Standard (TII, 2020).<br>GE-ENV-01105: The Management of Invasive Alien Plant Species on National Roads – Technical Guidance (TII, 2020).<br>PE-ENV-07005: Survey and Mitigation Standards for Barn Owls to inform the Planning, Construction and Operation of National Road Projects (TII, 2021). | TII Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009).<br>TII Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes (NRA, 2009).<br>Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes (NRA, 2006). | Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2019).<br>Pollinator-friendly Management of Transport Corridors (NBDC, 2019).<br>Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (NPWS, 2009).<br>Guidance for EIA and AA Screening of Active Travel Projects Funded by the NTA (NTA, 2023).<br>Assessment of Plans and Projects in Relation to Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2021).<br>Note PN01 Appropriate Assessment Screening for Development Management (OPR, 2021). |
| Water | DN-DNG-03065: Road Drainage and the Water Environment (TII, 2015). | Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes (NRA, 2009). | Planning System and Flood Risk Management Guidelines for Planning Authorities (OPW,2009).<br>Greening and Nature-based SuDS for Active Travel Schemes (NTA, 2023). |

| Environmental Factor or Aspect | Relevant TII Standards and/or Technical Guidance and Documents | Previous TII (formally National Roads Authority (NRA)) Guidance (pre-2015) | Other Relevant Guidance |
|---|---|---|---|
| Air | PE-ENV-01107: Air Quality Assessment of Proposed National Roads – Standard (TII, 2022).<br>PE-ENV-01106: Air Quality Assessment of Specified Infrastructure Projects - Overarching Technical Document (TII, 2022). | | |
| Climate | PE-ENV-01106: Climate of Proposed National Roads – Standard Document (TII, 2022).<br>PE-ENV-01104: Climate Guidance for National Roads, Light Rail, and Rural Cycleways (Offline & Greenways) - Overarching Technical Document (TII, 2022). | | |
| Noise and Vibration | | Guidelines for the Treatment of Noise and Vibration in National Road Schemes (NRA, 2004).<br>Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes (NRA, 2014). | |
| Land, Soil, Geology | GE-ENV-01101: The Management of Waste from National Road Construction Projects (TII, 2017). | Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes (NRA, 2009). | |
| Cultural Heritage | PE-ARC-02009: Guidelines for Cultural Heritage Impact Assessment of TII National Roads and Greenway Projects (TII,2024). | | Code of Practice for Archaeology agreed between the Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs and Transport Infrastructure Ireland (NMS, 2017). |

| Environmental Factor or Aspect | Relevant TII Standards and/or Technical Guidance and Documents | Previous TII (formally National Roads Authority (NRA)) Guidance (pre-2015) | Other Relevant Guidance |
|---|---|---|---|
| Landscape and Visual | PE-ENV-01102: Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Proposed National Roads – Standard (TII, 2020).<br>PE-ENV-01101: Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Specified Infrastructure Projects - Overarching Technical Document (TII, 2020).<br>GE-ENV-03001: Guide for the Implementation of Soft Landscape in Towns and Villages on National Roads (TII, 2024)<br>GE-ENV-03002: Design and Delivery of Soft Landscape Treatments in Urban Transport Environments Overarching Technical Document (TII, 2024). | | Design Manual for Urban Roads and Streets (DOT, 2019). |
| Material Assess | | | Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022).<br>DMRB LA 110 - Material assets and waste (HA, 2019).<br>IEMA Guide to: Materials and Waste in Environmental Impact Assessment - Guidance for a Proportionate Approach (IEMA, 2020). |
| Waste | GE-ENV-01101: The Management of Waste from National Road Construction Projects (TII, 2017). | | |

| Environmental Factor or Aspect | Relevant TII Standards and/or Technical Guidance and Documents | Previous TII (formally National Roads Authority (NRA)) Guidance (pre-2015) | Other Relevant Guidance |
|---|---|---|---|
| Risk of Major Accident | | | Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022). |
| Cumulative | | | Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022). |
| Construction | | See suite of construction environmental guidance document on the TII website.<br>https://www.tii.ie/technical-services/environment/construction/ | Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (IFI, 2016).<br>CIRIA suite of construction guidelines. |

# Appendix D – Biodiversity and Landscape Plan

This guidance seeks to build upon the guidance around management and maintenance as set out in the Project Managers Manual for Greenways (specifically Section 7.3 and Appendix A3.2) and the TII Rural Cycleway Design (Offline & Greenway) (specifically Section 9.1 and Appendix D1). The focus of the below guidance is on biodiversity and landscaping aspects and is suggested best practice guidance only.

| Aspect | Considerations for the Biodiversity and Landscape Plan |
|---|---|
| **Protection, Restoration & Enhancement** | • What areas have been identified as requiring biodiversity or landscape mitigation measures i.e., specific mitigation needs from the EIAR/NIS to mitigate any significant effects.<br>• What areas require protection and/or restoration during and post construction of the Greenway e.g. areas where vegetation should be protected and areas where vegetation clearance is required to facilitate the construction of the Greenway project but does not form part of the permanent "hard standing" Greenway infrastructure elements and therefore provides an opportunity for landscape/biodiversity restoration and enhancement measures.<br>• In terms of restoration areas what is the existing landscape context (woodland, agricultural peatland, coastal etc.) and are there different landscape contexts along the Greenway and what is most appropriate method of restoration for that area i.e. do nothing, managed natural regeneration in full or in part, full or partial planting.<br>• Is there potential to provide biodiversity enhancement measures along the Greenway project such as hedgerows, trees or other. |
| **Management** | • How can the Greenway be managed in a way to be sensitive to the surrounding landscape context and ensure biodiversity measures and EIAR or planning commitments regarding the environment are integrated into long term operation of the Greenway.<br>• Who will manage it and when? How would changes in management responsibilities impact on the biodiversity and landscape character of the project and how can this be accommodated at handover points if, and when, Greenway manager(s) change. |
| **Maintenance[30] & Monitoring** | • Land ownership and boundary treatments - natural (hedgerows, treelines) or artificial (fencing, walls).<br>• How to minimise potential for unwanted weed establishment or IAPS.<br>• Regular maintenance to keep the Greenway safe and functional such as branch trimming, maintaining sightlines etc.<br>• Ensure timing of regular operations comply with biodiversity or EIAR restriction such as nesting birds.<br>• What enhancement measures outside planting in relation to ecological features along the Greenway project are required e.g., bat boxes, signage and how will these be maintained.<br>• What monitoring (including any required as part of the EIAR and/or NIS) will be required during and post construction. If changes need to be made, how can they be accommodated. |

[30] Further details on maintenance are also available in the TII *Guideline - Design and Delivery of Soft Landscape Treatments in Urban Transport Environments Overarching Technical Document* (GE-ENV-03002).

# Appendix E – Sample EIAR Content

**Greenway Environmental Impact Assessment Report - Sample Content**

## Non-Technical Summary

**Main EIAR -** Depending on the scale or nature of the Greenway project it may be prudent to have a number of opening chapters. However, regardless of the number of chapters, the opening section of the EIAR should be easy to navigate and contain the following elements as a minimum:

- Introduction
- EIA Process/Methodology/Experts
- Project objectives, Need, Planning & Policy Details
- Consultation Details
- Reasonable Alternatives
- Project Description
- Construction Details
- Any other as required under the EIA Directive

**Main EIAR -** There are opportunities to combine factors into one chapter appropriate to the scale and nature of the projects. EIAR chapters should be consistent in structure and format and should make use of tables where appropriate. In some instances, such as for major or complex projects, it may be advisable to have an EIAR writing guidance and/or chapter templates. The chapter should clearly set out the receptor sensitivity, potential effect rating in terms of magnitude and effect significance, the proposed mitigation applicable to that effect and then the final residual impact.

**Environmental Factors/Aspects to be considered as follows:**

- Population
- Agronomy
- Human Health
- Traffic and Transport
- Air
- Noise & Vibration
- Light
- Climate
- Geology, Land and Soils
- Water (Surface and Groundwater)
- Biodiversity
- Landscape and Visual
- Cultural Heritage (Archaeology and Architectural)
- Waste
- Material Assets (not covered elsewhere).
- Risk of Major Accidents & Disasters
- Any other as required under the EIA Directive

**Main EIAR -** Depending on the scale or nature of the project it may be prudent to have several closing chapters but regardless of the number of chapters or location the EIAR should contain the following elements:

- Interactions
- Cumulative Impacts
- Summary of Significant Effects
- Summary of Mitigation and Monitoring/ Schedule of Environmental Commitments
- Any other element as required under the EIA Directive

It is noted that in some instances the cumulative impact may form part of the main Environmental Factor chapters, but it is advisable to provide an overall summary of the cumulative assessment.

**Supporting Drawings, Figures and/or Images -** A set of engineering maps/drawings should be provided to illustrate the project layout and design with the overall land take clearly shown. Land take should include permanent and temporary land take delineated as such on the maps for clarity. Most specialist chapters of an EIAR will use figures for information purposes. These drawings are normally contained in a separate volume to the main text of the EIAR. It is very important that the drawings in an EIAR are clear, at an appropriate scale and contain the land take boundary as appropriate.

**Supporting Drawings, Figures and/or Images which typically could include the following:**

- Project Design Drawings
- Environmental Baseline, Impact and/or Mitigation Figures
- Photomontages

**Appendices -** should be proportionate and include any detail required to support the assessment. Appendices typically include the following:

- Supporting Design Reports
- Planning Report
- Consultation Report
- CEMP or EOP
- Construction related TMP
- Detailed Baseline Reports
- Detailed Assessment Reports/Tables
- Modelling Report or data
- Flood Risk Assessment
- WFD Compliance Assessment
- Any other as required to support the assessment.

Note: If required, the Natura Impact Statement should be a standalone report.

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