

LOUGH DERG VISITOR EXPERIENCE DEVELOPMENT PLAN 2020- 2024

ENVIRONMENTAL REPORT

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Non-Technical Summary

Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the SEA Environmental Report (ER) for the Lough Derg Visitor Experience Development Plan (VEDP). The purpose of the ER is to provide information on the likely environmental consequences of decisions regarding the future development of the plan area. This report should be read in conjunction with the Draft VEDP.

What is an SEA?

Strategic environmental assessment (SEA) is a systematic process of predicting and evaluating the likely environmental effects of implementing a proposed plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest appropriate stage of decision-making on a par with economic, social and other considerations.

Why is it needed?

The SEA is being carried out to comply with the provisions of the SEA Regulations and in order to improve planning and environmental management. The output of the process is an ER and SEA Statement, both of which should be read in conjunction with the Visitor Experience Development Plan.

How does it work?

All of the main environmental issues in the VEDP area are presented to the team who prepare the Plan which helps to devise a Draft VEDP that protects the environment. It also helps to identify wherever there are environmental problems in the area and ideally the VEDP tries to improve these. In order to decide how best to make a Draft VEDP that protects the environment as much as possible, the competent authority examined alternative versions of the VEDP. This helped to highlight the type of plan that is least likely to harm the environment.

What is included in the Environmental Report which accompanies the VEDP?

The ER contains the following information:

- A description of the environment and the key environmental issues;
- A description and assessment of alternatives for the VEDP;
- An assessment of the VEDP objectives; and,
- Mitigation measures which set out to aid compliance with important environmental protection legislation - e.g. the Water Framework Directive, the Habitats Directive - and which will avoid/reduce the environmental effects of implementing the Plan.

What happens at the end of the process?

Upon the making of the VEDP a document will be made public, referred to as the SEA Statement. The SEA Statement includes information on how environmental considerations have been integrated into the Plan and why the preferred alternative was chosen for the Plan in light of the other alternatives.

Section 2 Lough Derg Visitor Experience Development Plan

The Plan has been prepared for Tipperary County Council and comprises a written document with maps and action plan. The Plan will set the strategic context for tourism development within the area. The contents of the Plan (as set out in its chapter headings) are as follows:

1. Introduction
 - a. Why a Visitor Experience Development Plan?

- b. Where is it for?
 - c. Who is it for?
 - d. Key local insights
2. Ambition
3. Foundations
 - a. The place – our assets, our appeal
 - b. Getting here and around
 - c. The enabling policies
4. Market Assessment
 - a. Volume and value of tourism
 - b. Future prospects – understanding our visitors and what they want
5. Gearing Up
6. Experience Development
 - a. Killaloe/Ballina Destination Hub
 - b. Holy Island and Destination Villages
 - c. Portumna Destination Hub
 - d. Nenagh Gateway Town
 - e. Building a great Slow Travel Network
 - f. Marketing and Communications
7. Measuring Success
 - a. Useful Metrics
 - b. How we will gather the data
8. Action Plan Overview
 - a. Action Area 1 - Destination Management
 - b. Action Area 2 - Destination Innovation
 - c. Action Area 3 - The Visitor Experience
 - d. Action Area 4 - Destination Marketing

Section 3 SEA Methodology and Consultations

The Lough Derg VEDP has been developed to provide a high quality sustainable tourism plan for Lough Derg itself – the waters, islands, lakeshore and lakeside settlements. This SEA ER has been produced to assess the environmental impacts of the various objectives and developments(alternatives) proposed within the VEDP.

In parallel to this, an AA Screening and Nature Impact Report has been prepared to inform the decision-making process. Both environmental assessments have been central to the development of the VEDP.

Section 4 Review of Relevant Plans, Policies and Programmes

The Plan sits within a hierarchy of other plans. The Plan must comply with higher level strategic plans. The higher level plans include the following:

- Ireland 2040 – The National Planning Framework (2018)
- Regional Spatial and Economic Strategy for the Southern Region (January 2020)
- Regional Spatial and Economic Strategy for the Northern and Western Region (January 2020)
- Regional Spatial and Economic Strategy for the Eastern and Midlands Region (August 2019)
- Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change – July 2017
- Climate Action Plan 2019, To Tackle Climate Breakdown (Government of Ireland)
- National Climate Change Policy, 2013

- The National Mitigation Plan, 2017
- National Adaptation Framework, Planning for a Climate Resilient Ireland, 2018
- River Basin Management Plan for Ireland 2018-2021
- Tipperary Strategic Tourism Marketing, Experience & Destination Development Plan 2016-2021

Section 5 Environmental Baseline and Relevant Environmental Issues

Introduction

The environmental baseline of the plan area is described in this section. This baseline, together with the Strategic Environmental Objectives which are identified in Section 1, are used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Plan and to determine appropriate monitoring measures. The environmental baseline is described in line with the legislative requirements encompassing the following components:

1. Biodiversity, Flora and Fauna
2. Population and Human Health
3. Soil
4. Water
5. Air
6. Climatic Factors
7. Material Assets
8. Cultural Heritage (architectural and archaeological)
9. Landscape
10. The inter-relationship between these issues

Evolution of Environment in the Absence of a Plan

Problems were outlined under each heading above and historical trends were presented where possible. In the absence of the new Plan there would be no long-term area-specific framework or guidance for development within the plan area. Specifically, the following could occur:

1. Biodiversity, Flora and Fauna

Although some areas of sensitivity, such as the Natura 2000 sites, would continue to be protected under EU law, uncoordinated development and greenfield site development may impact on undesignated habitats such as hedgerows.

2. Population and Human Health

In the absence of appropriate objectives relating to the consolidation and improvement of tourism services and infrastructure in existing towns and settlements there would be no framework for concentrating development in the most accessible areas. In the absence of a coordinated plan, investment would not be appropriately directed towards improvements in recreational infrastructure. This would represent a loss of potential health benefits from appropriately planned and located walking and cycling activities.

3. Soil

There would be no framework for encouraging development to appropriate sites which could result in a loss of non-renewable soil resources.

4. Water

Water supplies, and wastewater treatment would continue to be governed by the Water Framework Directive. Without a framework that encourages development, there are increased potential for impacts affecting the quality of surface water, groundwater and locally important aquifers.

5. Air

Travel patterns would continue to occur in a dispersed pattern and this activity would intensify, leading to an increase in unsustainable travel patterns and a subsequent increase in travel related emissions.

6. Climatic Factors

Inappropriate development could take place in areas of flood risk and an unmitigated increase in travel will increase CO² emissions.

7. Material Assets

There would be no detailed framework to enhance existing navigation infrastructure.

8. Cultural Heritage

Cultural heritage is a cornerstone of the majority of tourism attractions within the VEDP area. Without the VEDP, there is no framework that will identify the measures required to achieve high quality development outcomes in these sensitive locations.

9. Landscape

In the absence of a VEDP, and with exception to the relevant County Development Plan, there would be no framework guiding developments to avoid areas of high landscape value.

Section 6 Assessment Framework

The proposed Lough Derg VEDP has been assessed against SEA Objectives in order to examine the significant likely environmental impacts of the Plan. This assessment is strategic and is designed to report likely impacts at a higher scale to reflect the scale at which the VEDP is being prepared. The SEA Objectives, including their indicators are identified as the assessment framework set out in Section 6.

Section 7 Description, Evaluation and Selection of the Alternative Plan Scenarios

One of the critical roles of the SEA is to facilitate an evaluation of the likely environmental consequences of a range of alternative scenarios for the future development of the plan area. In preparing this visitor experience development plan, three alternatives were considered, each focusing on a different spatial approach to the development of visitor experiences and associated tourism services and infrastructure. They are:

- Alternative 1: **Consolidation and Improvement to existing Tourism Infrastructure and Visitor Experiences and to provide new attractions in existing settlements**
- Alternative 2: Develop major new visitor attractions on or alongside the water/river.
- Alternative 3: Do nothing

Evaluation of Alternative Scenarios

This section summarises the evaluation of the Alternative Scenarios that is found in Section 7 of the Environmental Report.

Alternative 1: Consolidation and Improvement to existing Tourism Infrastructure, Visitor Attractions and Experiences and to provide new attractions in existing settlements.

Traditionally Lough Derg been a popular destination for both overseas and domestic visitors and the height of its popularity coincided with popularity in angling activities and emergence of the all island boat hire industry which acted as the cornerstone of Ireland's tourism product in the 1990. The area and the popularity of this product in particular has since declined, leaving behind a variety of underused hotels, jetties, harbours and boats. A key issue for the VEDP is the need to address the fall off in visitor number and regenerate the visitor infrastructure, services and towns that depend on the tourism industry as a basis for their economy.

Environmental impacts

The central environmental benefit of this alternative is associated with its focus on the re use and regeneration of existing tourism facilities and infrastructure and the regeneration of town centres. Whilst in some cases increased visitor numbers will mean that upgrades to existing infrastructure maybe required it is generally considered that the environmental impacts on air, water will be captured using these specific infrastructure upgrades and therefore minimised in this scenario. Indeed, the socio-economic benefits are likely to be greatest under alternative 1 as the economic benefits will accrue in areas where the existing population is highest.

Alternative 2: Develop major new visitor attractions on or alongside the water/river.

Lough Derg is located within a predominantly rural area which means that visitor infrastructure in terms of attractions, accommodation and associated activity is also relatively low. Generally, speaking, the study area lacks any attractions of scale. The development of new attractions of scale will be required to invigorate the visitor offer and experience. Several locations for new attractions were identified and considered during the preparation of the VEDP however these would require the development of green field sites.

Environmental impacts

The environmental impacts associated with developing wholly new visitor attractions within the VEDP area are dependent on the nature, scale and location of the development and are potentially wide ranging.

Alternative 3: Do nothing

The do nothing scenario was considered prior to the commissioning of the VEDP. With the emergence of Ireland's Hidden Heartlands brand, there is a requirement for a planned and coordinated approach. Without a VEDP in place, a number of potential disbenefits and environmental impacts would accrue.

Environmental impacts

The do nothing approach was not considered appropriate on the basis that it would result in poor value for money in terms of any future investment as well as a potentially greater scale of environmental impacts associated with significant levels of unplanned and uncoordinated development. Without a plan led approach, the opportunity to test and consult on the strategy in accordance with the requirements of the Strategic Environmental Assessment Directive would also be missed.

Selection of Preferred Alternative

The preferred alternative which emerged from the evaluation process is **Alternative 1** which is the consolidation of and improvement to existing tourism infrastructure, visitor attractions and experiences and the provision of new attractions in existing settlements within the VEDP area. This has the fewest potentially negative impacts on the SEA objectives set out in Section 6.

This scenario contributes towards the protection of the environment and conforms to high level planning objectives around the prioritisation of development around existing infrastructure and settlements.

By applying appropriate mitigation measures - including those which have already been integrated into the VEDP - potential adverse environmental effects which could arise as a result of implementing this scenario are likely to be avoided, reduced or offset.

Section 8 Assessment of Plan Effects and Likely Significant Environmental Effects

Section 8 of the Environmental Report evaluates the individual strategic aims and objectives of the VEDP using the assessment framework developed in Section 6. The purpose of this section is to evaluate the likely significant environmental effects of the VEDP.

Habitats Regulation Assessment

Habitats Regulation Assessment was also carried out for the VEDP and this is produced as a separate Natura Impact Report. The preparation of the VEDP, SEA and AA has taken place concurrently and the findings of the AA have informed both the Plan and the SEA.

Section 9 Monitoring, Review and Reporting

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Plan. Potential adverse effects have been and will be avoided, reduced or offset through:

- The consideration of alternatives;
- Through communication of environmental considerations and integration of these considerations into the Plan;
- The identification of a 'settlement strategy' which would provide the focus for new development; and
- Adherence to mitigation measures which have been integrated into the VEDP.

Monitoring

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. The Environmental Report contains proposals for monitoring the Plan which are adopted alongside the Plan. Monitoring enables the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

The Environmental Report identifies indicators which allow quantitative measures of trends and progress in the environment over time. Measurements for indicators generally come from existing monitoring sources.

1.0 Introduction and Terms of Reference

1.1 The Visitor Experience Development Plan for Lough Derg (2020-2030)

Lough Derg is set in beautiful countryside, encompassing an attractive blend of mountain and lakeshore, woodlands and farms. It is bookended by Portumna in the north and Killaloe-Ballina in the south, each offering a range accommodation, activities and visitor services. Covering 32,000 acres of waterway, Lough Derg is ideal for all kinds of water sports, cruising and angling, as well as excellent walking and cycling facilities, supported by visitor services in villages such as Terryglass, Dromineer, Garrykennedy, Mountshannon, Killaloe and Ballina.

The Lower Shannon, incorporating Lough Derg, is one of three “Discovery Zones” in the recently adopted Tourism Masterplan for the Shannon Region. The Lough Derg region also includes the long distance Beara Breifne Way which is one of Ireland’s Hidden Heartlands’ “transformational signature products of scale”. This strongly positions Lough Derg within a context of emerging national strategies and significant long-distance trails and greenways connecting Lough Derg to the whole Shannon region. ‘Ireland’s Hidden Heartlands’ promises to bring to life the Midlands’ rich natural assets including its many lakes, walkways and blueways, leveraging a growing tourism trend for outdoor activities by encouraging visitors to be ‘active in nature’. At present the region has just a 3% share of overnight stays by overseas visitors to Ireland and a 3% share of overnight stays by domestic visitors. Fáilte Ireland’s projected growth of future visitor numbers of c. 1.19 million to the Ireland’s Hidden Heartlands region by 2030 will result in an additional 304,000 additional visitors to the region.

This VEDP continues the integrated approach to destination development forged by the 2014-2017 Lough Derg Road Map. The cross-agency approach to co-ordinated investment in the area has positioned the Lough Derg region to fulfil a key role in the new Ireland’s Hidden Heartlands national brand experience. The core focus of this VEDP is Lough Derg itself - the waters, islands, lakeshore and lakeside settlements. The success of the lake region, however, depends on a connected network of visitor experiences across a geography stretching from Limerick in the south to Nenagh and Cloughjordan in the east, as far as Meelick and Banagher to the north and including East Clare and the Slieve Aughty mountains.



Figure 1 Lough Derg VEDP Area

1.2 The Purpose of this report

This document is the Environmental Report (ER) for the purposes of the Strategic Environmental Assessment (SEA) of the VEDP for Lough Derg. This Environmental Report has been compiled by SLR on behalf of Tipperary

County Council who, on behalf of the Lough Derg Marketing Group, are the competent authority for the VEDP and associated SEA.

SEA is the formal, systematic evaluation of the likely significant effects of implementing the plan, before a decision is made. The process includes preparing an Environmental Report where the likely significant effects are identified and evaluated. This report has been prepared in accordance with the SEA Guidelines for Regional and Planning Authorities.

1.3 Implications of the Visitor Experience Development Plan and SEA

The VEDP for Lough Derg identifies an integrated set of proposals for the Lough Derg area within the local authority boundaries of Tipperary, Galway and Clare. This VEDP continues the integrated approach to destination development forged by the 2014-2017 Lough Derg Road Map. Work completed to date includes:

- The Lough Derg canoe trail with new and upgraded service blocks, improved egress and access points, map boards and storage racks
- Lakeshore amenity infrastructure; Connaught Harbour, Castlough and Ballycuggeran amenity areas, Ballina Lakeside park and Portumna Castle harbour including recreational vehicle spaces
- Signage Strategy and implementation
- Lake wide branding alignment
- A Feasibility study and masterplan for Portroe Lookout Discovery Point and connecting walks
- A Visitor Management and sustainable tourism development plan for Holy Island Portumna Eco-tourism Destination Masterplan
- An Activity map, natural and cultural heritage trails and booklets
- Floating angling stands at Mota Quay
- Trails development; Killaloe-Ballycuggeran footpath, Tountinna amenity area, Millennium Cross
- Floating jetty at Ballina providing enhanced and disabled access to the lake
- Lake-wide trade familiarisation, training and networking events
- Marketing and promotion in conjunction with Fáilte Ireland, Tourism Ireland and Waterways Ireland
- Grant aid to Lough Derg tourism businesses
- Lough Derg participation in an EU INTERREG study
- The Taste of Lough Derg initiative with food events

Together with the National Planning Framework, RSES for the Southern Region and the relevant County Development Plans, the VEDP will be part of the decision-making framework for future development consent of projects listed in Annex II to the EIA directive. Relevant annex II (Projects referred to in Article 4(2)) include:

- Marinas;
- Holiday villages and hotel complexes outside urban areas and associated developments;
- Permanent campsites and caravan sites;
- Theme parks

The VEDP would be considered as a 'plan' according to the European Communities (Birds and Natural Habitats) Regulations 2011 and therefore must be subject to appropriate assessment (AA). Stage 2 AA was deemed necessary which also necessitates the undertaking of the SEA as per the requirements of the SEA Directive.

The findings of the SEA are explained in this Environmental Report, which will accompany the Lough Derg VEDP. It has been altered in order to take account of recommendations contained in submissions received as a result of the previous public consultation.

The competent authority, Tipperary County Council has addressed the findings of this Environmental Report in the adopted Lough Derg VEDP from draft to final stage. When the Lough Derg VEDP is finalised, an SEA Statement will be prepared which will summarise how environmental considerations have been integrated into the plan.

1.4 Competent Authority

On behalf of the Lough Derg Marketing Group, Tipperary County Council is the lead and Competent Authority for the preparation of the Lough Derg Visitor Experience Development Plan 2020-2024 and is also responsible for carrying out the SEA. On adoption of the VEDP, the Lough Derg Marketing Group will be renamed **Destination Lough Derg**. This Destination Management Organisation will include as its remit:

- Managing the developing local visitor economy,
- Protecting and enhancing the environmental resource on which tourism is based,
- Local capacity building and working with Fáilte Ireland on rolling out of training and supports across the tourism industry, and
- Supporting collaborative working between tourism businesses and clustering of experiences within each Destination hub – this would draw on the collective work already underway including the Heartlands Heritage Group, for example, in the northern lake region, the Tipperary Food Producers network, Chambers of Commerce and other groups around the lake.

1.5 Strategic Environmental Assessment – An Overview

SEA is a process for evaluating, at the earliest appropriate stage, the environmental consequences of implementing plan/ programme initiatives prepared by authorities at a national, regional or local level or which are prepared by an authority for adoption through legislative means. The purpose is to ensure that the environmental consequences of plans and programmes are assessed both during their preparation and prior to adoption. The SEA process also gives interested parties an opportunity to comment on the environmental impacts of the proposed plan or programme and to be kept informed during the decision making process.

1.5.1 SEA Directive and its Transposition into Irish Law

The proposed VEDP has the potential to identify and deliver tourism development proposals within and around the Lough Derg Area. The SEA will be applied to the full extent of the VEDP area which is outlined in Figure 1.

In Ireland, the European Directive (2001/42/EC) on the Assessment of the Effects of Certain Plans and Programmes on the Environment (the SEA Directive) was transposed into national legislation in Ireland by the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435/2004).

1.5.2 The SEA Process

The SEA process is comprised of the following principle steps:

1. **Screening:** Decision on whether or not an SEA is required;
2. **Scoping:** Consultation with the defined statutory bodies on the scope and level of detail to be considered in the assessment;
3. **Environmental Assessment:** An assessment of the likely significant impacts on the environment as a result of the VEDP, leading to the production of an Environmental Report;
4. **Consultation** on the Draft VEDP and associated Environmental Report;
5. **Evaluation of the submissions and observations** made on the draft VEDP and Environmental Report prior to finalising the VEDP;
6. Issuance of an **SEA Statement** identifying how environmental considerations and consultation have been integrated into the VEDP.

1.5.3 SEA Screening

The SEA Directive requires that certain plans and programmes, prepared by statutory bodies, which are likely to have a significant impact on the environment, be subject to the SEA process. As outlined above, the SEA Directive

was transposed into national legislation in Ireland by the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435/2004).

Together with the National Planning Framework, RSES for the Southern Region and the relevant County Development Plans, the VEDP for Lough Derg provides the opportunity for a decision-making framework for future development consent of projects listed in Annex II to the EIA directive. Relevant Annex II (projects referred to in Article 4(2)) include:

- Marinas;
- Holiday villages and hotel complexes outside urban areas and associated developments;
- Permanent campsites and caravan sites; and
- Theme parks.

The drafting of a VEDP provides the statutory context for the undertaking of an SEA that might otherwise be lost to examine inter-regional and inter-county environmental effects as a result of the implementation of a VEDP.

A VEDP would also be considered as a 'plan' according to the European Communities (Birds and Natural Habitats) Regulations 2011 and therefore must be subject to appropriate assessment (AA). Stage 2 AA was required to be undertaken which also necessitates the undertaking of the SEA as per the requirements of the SEA Directive.

On the basis of the rationale outlined above, it was determined that the provisions of Article 9 of these regulations have been met and that an SEA is required in relation to the VEDP.

1.6 Statutory Consultees for SEA

The SEA Directive 2001/42/EC was transposed into Irish Law through S.I. 435/2004. In Article 9 (5) of SI 435/2004, a list of statutory consultees is given:

- (a) The Environmental Protection Agency
- (b) Minister of the Environment, Heritage and Local Government
- (c) Minister of Communications, Marine and Natural Resources

Department names have changed since the transposition of the SEA directive into Irish Law, therefore the statutory consultees for the SEA as of 2019 are:

- Environmental Protection Agency
- Minister for Communications, Climate Action and Environment
- Minister for Housing, Planning and Local Government (No Response Received)
- Minister for Agriculture, Food and the Marine) (No Response Received)
- Minister for Culture Heritage and the Gaeltacht. (No Response Received)

Feedback from these statutory consultees is contained in Appendix 1 of this document.

2.0 Lough Derg Visitor Experience Development Plan

2.1 The Development Plan Area

Lough Derg and the lower Shannon is set in beautiful countryside, encompassing an attractive blend of mountain and lakeshore, wood and farmland. It is bookended by Portumna in the north and the twin towns of Killaloe-Ballina in the south, each offering a range accommodation, activities and visitor services.

Covering 32,000 acres of waterway, Lough Derg is ideal for all kinds of water sports, cruising and angling, as well as excellent walking and cycling facilities, supported by visitor services in picturesque towns and villages such as Portumna, Terryglass, Dromineer, Garrykennedy, Mountshannon, Killaloe and Ballina.

2.2 Plan Objectives

The VEDP for Lough Derg has been developed to set out an integrated approach to destination development. It outlines a cross-agency approach to co-ordinated investment in the area and positions the Lough Derg region to fulfil a key role in the new Ireland's Hidden Heartlands national tourism brand experience. This SEA Environmental Report has been produced to assess the environmental impacts of the various objectives and developments(alternatives) proposed within the VEDP area.

The purpose of the VEDP is to provide;

- a steer for experience development and investment based on geographically distinctive opportunities,
- insights into the motivations of our most likely visitors – what they need and want,
- a framework for curating clusters of experiences that will motivate prospective visitors,
- a collaborative approach to spreading the word about this great place, and
- ways of keeping track of progress

A VEDP is distinct from an infrastructure plan in that it takes a softer and often more nuanced approach to development by focusing on the unique qualities of a place. There are also transboundary and the multi-jurisdictional aspects of the VEDP as the Plan spans 3 administrative boundaries and focuses primarily on a significant waterbody and the areas in close proximity to this waterbody.

2.2.1 Key elements of the VEDP

The VEDP is split in to four Action Areas, these are outlined below. Its key commercial target is to increase visitor numbers, revenue from overseas visitors and domestic bed night to the destination by 3% year-on-year.

Area Action 1. Destination Management

- Resource the Partnership; Organise the stakeholder group and resource the tourism role at Lough Derg.
- Consolidate the Approach; Align with the Tourism Masterplan for the Shannon and Ireland's Hidden Heartlands (IHH).
- Coordinate Lake Wide Initiatives; that deliver a high quality visitor experience.
- Measure Progress; Measure performance and remain responsive to emerging evidence on visitor behaviour and preferences.

Area Action 2. Destination Innovation

- Provide a Great Visitor Welcome; Ensuring a great welcome for visitors across the whole destination.
- Enable a Choice of Accommodation; Support the development of a variety of unique accommodation options to meet visitor needs.
- Facilitate Slow Travel; Make it easy for our visitors to explore Lough Derg sustainably by developing services along the slow travel network.

- Offer Great Food; Enhance the visitor experience with high quality, locally produced food on and around Lough Derg.

Area Action 3. The Visitor Experience

- Killaloe/Ballina Destination Hub; A natural playground with fresh perspectives on this iconic Shannon crossing; the perfect base to get active in nature.
- Inis Cealtra (Holy Island) and Connected Destination Villages; Explore Inis Cealtra, a 6th century holy island connected across lake waters to a necklace of historic lakeside villages and harbours.
- Portumna Destination Hub; Uncover Irish history through a connected network of woodland, water and mountain trails, extending from Portumna's historic core to nearby villages and monastic settlements.
- Nenagh Gateway Town; A bustling market town steeped in heritage, with a great reputation for food, compelling stories and a great welcome to the Lough Derg region at Nenagh's Historic Quarter.

Area Action 4. Destination Marketing

- Develop a Distinctive Digital presence; Update and maintain a distinctive Lough Derg digital presence.
- Ensure Cohesive Communication; Work with national and local bodies to coordinate communication and ensure cohesive messaging.
- Partnership; Support marketing actions of tourism businesses.
- Be Market Ready; Work together to create and promote market-ready offers, packages and itineraries.

2.2.2 Destination Hubs

Lough Derg will frame experience development within four Destination hubs with distinctive experiences and each with a cohesive story to tell. This reframing of the geography will provide visitors with a clear sense of where to stay, what there is to do and see locally and how to get around in fun and relaxing ways. The destination hubs are:

- **Killaloe/Ballina Destination Hub** – a natural playground with fresh perspectives on this iconic Shannon crossing.
- **Holy Island and Connected Destination Villages** – journeys across lake waters to refresh, revitalise and renew.
- **Portumna Destination Hub** - forest bathing and wild swimming at the Port of the Oaks, the splendour and tragedy of Ireland's lived history at the junction of historic land and water routes.
- **Nenagh Gateway Town** - a bustling market town, steeped in history, with a great reputation for food and new stories to tell.

3.0 SEA Methodology and Consultations

3.1 Introduction

The VEDP for Lough Derg has been developed to set out an integrated approach to destination development. It outlines a cross-agency approach to co-ordinated investment in the area and positions the Lough Derg region to fulfil a key role in the new Ireland’s Hidden Heartlands national tourism brand experience. This SEA Environmental Report has been produced to assess the environmental impacts of the various objectives and developments(alternatives) proposed within the VEDP area.

In parallel to this, an AA Screening has been prepared to inform the decision making process, in terms of the potential for the route options to impact the integrity of any European sites in view of the conservation objectives of any site impacted. Both environmental assessments have been central to the development of the draft Masterplan.

3.2 Screening

The SEA Directive requires that certain plans and programmes, prepared by statutory bodies, which are likely to have a significant impact on the environment, be subject to the SEA process. A SEA screening of the VEDP was undertaken in March 2020 after which it was concluded that SEA would be undertaken. The decision to proceed with a Natura Impact Report with respect to the requirements of the Habitats Directive is considered to be a trigger for requiring an SEA.

3.3 Scoping

A scoping letter was prepared and issued in March 2020 and the purpose of the scoping letter was to advise statutory consultees that the VEDP for Lough Derg was being prepared and that SEA would be carried out. It also invited submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report. The purpose of the scoping stage is to ensure the identification of relevant environmental issues, so they could be addressed appropriately in the Environmental Report. The scoping stage also helps to establish the level of detail necessary for the SEA.

Consultation

In line with the Planning and Development (SEA) Regulations 2004 as amended, the Environmental and Planning Authorities were given notice on the 5th March 2020 of the intention of Tipperary County Council to carry out an environmental assessment.

3.3.1 Scoping Responses

Prior to this public consultation date, a scoping consultation ran from the 10 February 2020 to 09 March 2020. There were 02 responses which are outlined in Table 1, following.

Table 1: Record of Scoping Submissions Received

Agency	Interest	Concerns
Environmental Protection Agency	Statutory Environmental Agency	Overarching concerns include Infrastructure, transport, climate change resilience, biodiversity, ecosystem services and green infrastructure, water quality, invasive alien species control and management, landscape, assessment of likely significant effects.

Agency	Interest	Concerns
Department of Communications Climate Action and Environment (Geological Survey Ireland)	Government Department (the national earth science agency)	Overarching concerns include Geoheritage, Groundwater, Geohazards, Geothermal Energy, Natural Resources (Minerals/Aggregates).

3.4 Environmental Report

Information to be included in the Environmental Report is set out in Schedule 2 of S.I. No. 435/2004 - European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004. The SEA Guidelines for Regional and Planning Authorities also include a recommended layout, which this Report follows for the most part. The table below sets out how the layout of this Report satisfies the requirements of the Regulations.

Table 2: Report layout for the requirements of the Regulations

Requirements of SEA Directive	Section of Environmental Report
1. an outline of the contents and main objectives of the plan and relationship with other relevant plans;	Chapter 2: Contents and Description of the Plan
2. the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan;	Chapter 5: Current state of the environment
3. the environmental characteristics of areas likely to be significantly affected;	Chapter 5: Current state of the environment
4. any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Birds Directive or Habitats Directive;	Chapter 5: Current state of the environment
5. the environmental protection objectives, established at international, European Union or national level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation;	Chapter 6: Assessment Framework
6. the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;	Chapter 8: Likely significant effects on the environment
7. the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan;	Chapter 9: Mitigation measures

Requirements of SEA Directive	Section of Environmental Report
8. an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Chapter 7: Assessment of Plan Alternatives
9. a description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan;	Chapter 9: Development Plan Monitoring
10. a non-technical summary of the information provided under the above headings.	Non-Technical Summary

3.4.1 Challenges and Data Gaps

A VEDP is distinct from an infrastructure plan in that it takes a softer and often more nuanced approach to development by focusing on the unique qualities of a place. There are also transboundary and the multi-jurisdictional aspects of the VEDP as the Plan spans 3 administrative boundaries and focuses primarily on a significant waterbody and the areas in close proximity to this waterbody.

3.4.2 Transboundary Consultations

A transboundary consultation was not required as part of this SEA.

3.5 Consultation on the VEDP and Environmental Report

The findings of the SEA of the Draft Lough Derg VEDP are explained in an Environmental Report, which accompanied the Draft Lough Derg VEDP and was on public display for a period of 4 weeks.

This Environmental Report may be altered in order to take account of recommendations contained in submissions received as a result of public display. It will also be altered to take into account any changes to the Draft Lough Derg VEDP as a result of submissions received. Tipperary County Council considered the findings of the Environmental Report during the preparation of the Lough Derg VEDP.

3.6 Next Steps

When the VEDP is finalised, an SEA Statement will be prepared which will summarise how environmental considerations have been integrated into the VEDP.

4.0 Review of Relevant Plans, Policies and Programmes

4.1 Introduction

Article 5 of the Directive states that “where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated.”

The information to be given for the purpose of the environmental report is referred to in Annex I. In accordance with Annex I, the purpose of this section is to identify the environmental protection objectives, established at international, European Union or national level, which are relevant to the plan.

Environmental objectives and targets identified in the table below will inform the assessment framework which will use to assess the environmental performance of the Lough Derg Visitor Experience Development Plan.

4.2 A Review of Relevant Plans, Programmes and Policies

As part of the SEA process, the context of the VEDP must be established with regard to other Plans and programmes that have been adopted at international, European and national levels. In particular the interaction of the environmental protection objectives and standards included within these Plans and Programmes with the VEDP requires consideration.

Table 3 identifies the main significant environmental plans, programmes and legislation, adopted at international, European Community/Member State level, which would be expected to influence or be influenced by, the Masterplan. While it is recognised that there are many Plans, Programmes and legislation that could relate to the Masterplan, it is considered appropriate to only deal with those significant texts, to keep the assessment at a strategic level.

Table 3 Summary of Relevant Key Plans and Programmes Relevant to the Masterplan

Level	Name
EU Level	<ul style="list-style-type: none"> ○ A 2030 Framework for Climate and Energy Policies [COM (2013) 169] ○ Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) ○ Birds Directive [2009/147/EC] and Habitats Directive [92/43/EEC] ○ Bonn Convention [L210, 19/07/1982 (1983)] ○ Communication from the Commission to the European Parliament, The Council, the European Economic and Social committee and the Committee of the Regions COM/2010/0352 ○ EC (Birds and Natural Habitats) Regulations 2011 ○ EIA Directive [85/337/EEC] [2014/52/EU] ○ Environmental Liability Directive [2004/35/EC] ○ Environmental Quality Standards Directive [2008/105/EC] ○ EU 2020 Growth Strategy [COM (2010) 2020] ○ EU Biodiversity Strategy to 2020 [COM (2011)244] ○ EU Floods Directive [2007/60/EC] ○ EU Water Framework Directive (2000/60/EC) ○ EU Strategy on Adaption to Climate Change [EC, 2013] ○ European Landscape Convention [ETS No. 176] ○ Groundwater Directive (2006/118/EC) (Groundwater Regulations Ireland, 2010)

Level	Name
	<ul style="list-style-type: none"> ○ Invasive Species Regulation [EU/1143/2014] ○ SEA Directive [2001/42/EC] ○ Soils Thematic Strategy [COM (2006) 231] ○ The RAMSAR Strategic Plan (Ramsar Convention Secretariat, 2016)
National Level	<ul style="list-style-type: none"> ○ Climate Action Plan 2019: to Tackle Climate Breakdown (Department of Communications, Climate Action & Environment) ○ Ensuring a Sustainable Transport Future: A New Approach to Regional transportation (Department for Regional Development, 2011) ○ River Basin Management Plan for Ireland 2018-2021 ○ Groundwater Regulations 2010 ○ Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change – July 2017 ○ Ireland’s National Biodiversity Plan 2011-2016 (Dept. of Arts, Heritage and the Gaeltacht, 2011) ○ Irish Geological Heritage (IGH) Programme (GSI 1998) ○ National Adaptation Framework, Planning for a Climate Resilient Ireland, 2018 ○ National Biodiversity Action Plan 2017-2021 ○ National Climate Change Policy, 2013 ○ National Cycle Policy Framework (Dept. of Transport, Tourism and Sport) ○ National Landscape Strategy for Ireland (Draft) 2014 – 2024 (DAHG, 2014) ○ National Mitigation Plan, 2017 ○ National Planning Framework 2040: Our Plan ○ Natural Heritage Areas and proposed Natural Heritage Areas ○ Prioritised Action Framework for Natura 2000 (Dept. of the Environment, 2012) ○ Programme for Government Framework (Northern Ireland Executive, 2016) ○ Smarter Travel: A Sustainable Transport Future, 2009 – 2020 ○ Strategic Planning Policy Statement (Dept. of the Environment, 2015) ○ Sustainable Development – A Strategy for Ireland (Dept. of Environment, Heritage and Local Government, 1997) ○ The National Landscape Strategy for Ireland 2015-2025 ○ The National Mitigation Plan, 2017 ○ The Wildlife Acts 1976 – 2012 ○ Border Regional Authority Planning Guidelines 2010-2022 (The Border Regional Authority, 2010)
Regional Level	<ul style="list-style-type: none"> ○ Regional Spatial and Economic Strategy for the Southern Region (January 2020) ○ Regional Spatial and Economic Strategy for the Northern and Western Region (January 2020) ○ Regional Spatial and Economic Strategy for the Eastern and Midlands Region (August 2019)
County Development Plans	<ul style="list-style-type: none"> ○ Limerick County Development Plan 2010 - 2016 (as extended) ○ North Tipperary County Development Plan 2010 (as varied) ○ South Tipperary County Development Plan 2009 (as varied) ○ Clare County Development Plan 2017 - 2023 ○ Galway County Development Plan 2015 - 2021

Level	Name
	Tipperary Strategic Tourism Marketing, Experience & Destination Development Plan2016-2021

Table 4 Summary Legislation, Plans & Policies: Environmental Objectives and Targets

International / National / Regional	Outline of Targets and Objectives	SEA Topic
European Level		
<p>A 2030 Framework for Climate and Energy Policies [COM (2013) 169]</p>	<p>The 2030 climate and energy framework includes EU-wide targets and policy objectives for the period from 2021 to 2030.</p> <p>Key targets for 2030:</p> <ul style="list-style-type: none"> • At least 40% cuts in greenhouse gas emissions (from 1990 levels); • At least 32% share for renewable energy; • At least 32.5% improvement in energy efficiency <p>The framework was adopted by the European Council in October 2014. The targets for renewables and energy efficiency were revised upwards in 2018. A transparent and dynamic governance process will help deliver the objectives of the Energy Union, including the 2030 climate and energy targets, in an efficient and coherent manner. The EU has adopted integrated monitoring and reporting rules to ensure progress towards the 2030 climate and energy targets and its international commitments under the Paris Agreement. Based on the better regulation principles, the governance process involves consultations with citizens and stakeholders. Member States are obliged to adopt integrated National Climate and Energy Plans (NECPs) for the period 2021-2030. Member States had to submit their draft plans by the end of 2018. The final plans must be submitted by the end of 2019</p>	<p>Climate, Air & Human Beings</p>
<p>Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC)</p>	<p>The Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) was published in May 2008, superseding its three previous Directives and incorporating a subsequent Directive. The CAFE Directive was transposed into Irish legislation by the Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011). It replaces the Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002), the Ozone in Ambient Air Regulations 2004 (S.I. No. 53 of 2004) and S.I. No. 33 of 1999 and incorporates SI58 of</p>	<p>Climate, Air & Human Beings</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>2009. The CAFE Directive outlines set targets on air quality and long term objectives for all known air pollutants to 2030.</p>	
<p>Birds Directive [2009/147/EC] and Habitats Directive [92/43/EEC]</p>	<p>Flora and fauna in Ireland are protected at a European level by the EU Habitats Directive (92/43/EEC) and the EU Birds Directive (79/409/EEC) which is transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011). Under this legislation sites of nature conservation importance are designated in order to legally protect faunal and floral species and important/vulnerable habitats. The legal protection set out within the EC (Birds and Natural Habitats) Regulations 2011 applies to all faunal species listed in Annex IV of the Habitats Directive. Part 6, Section 51(2) of the Regulations makes it an offence to:</p> <ul style="list-style-type: none"> • deliberately capture or kill any specimen of these species in the wild, • deliberately disturb these species particularly during the period of breeding, rearing, hibernation and migration, • deliberately take or destroy eggs of those species from the wild, • damage or destroy a breeding site or resting place of such an animal, or • keep, transport, sell, exchange, offer for sale or offer for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive. <p>The legal protection set out within in Section Part 6, Section 52 of the EC (Birds and Natural Habitats) Regulations 2011 applies to species of plants listed on Annex IV of the Habitats Directive. Plants are afforded protection under Part 6, Section 52(2) of the Regulations boundaries of the sites'. In Section 27(5)(c) public authorities are required to 'take the appropriate steps to avoid disturbance of the species for which European Sites have</p>	<p>Biodiversity</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>been established, in so far as such disturbance could be significant in relation to the objectives of the Birds Directive or the Habitats Directive’.</p>	
<p>Bonn Convention (Convention on Migratory Species) [L210, 19/07/1982 (1983)]</p>	<p>The Bonn Convention provides legislative context for international cooperation for the protection and conservation of migratory species. To avoid any migratory species becoming endangered, the parties must endeavour:</p> <ul style="list-style-type: none"> • to promote, cooperate in or support research relating to migratory species; • to provide immediate protection for migratory species included in Appendix I; and • to conclude Agreements covering the conservation and management of migratory species listed in Appendix II. <p>To protect endangered migratory species, the parties to the Convention will endeavour:</p> <ul style="list-style-type: none"> • to conserve or restore the habitats of endangered species; • to prevent, remove, compensate for or minimise the adverse effects of activities or obstacles that impede the migration of the species; and • to the extent feasible and appropriate, to prevent, reduce or control factors that are endangering or are likely to further endanger the species. 	<p>Biodiversity</p>
<p>Communication from the Commission to the European Parliament, The Council, the European Economic and Social committee and the Committee of the Regions COM/2010/0352</p>	<p>This communication from the European Commission outlines the strategic economic and social impacts of tourism to the EU in 2010. This document provides clear evidence of tourism figures to the EU, and an action framework stimulating competitiveness in the sector while maintaining sustainability in the tourism sector.</p> <p><i>The European tourism industry generates over 5 % of EU GDP, a figure which is steadily rising. Tourism therefore represents the third largest socioeconomic activity in the EU after the trade and distribution and construction sectors. Taking into account the sectors linked to it, tourism's contribution to GDP is even greater; it is estimated to generate over 10 %</i></p>	<p>Human Health and Population</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p><i>of the European Union's GDP and provide approximately 12 % of all jobs. In this regard, observing the trend over the last ten years, growth in employment in the tourism sector has almost always been more pronounced than in the rest of the economy.</i></p> <p><i>In addition, the European Union remains the world's No 1 tourist destination, with 370 million international tourist arrivals in 2008, or 40 % of arrivals around the world, 7.6 million of them from the BRIC countries (Brazil, Russia, India and China), a significant increase over the 4.2 million in 2004. These arrivals generated revenues of around EUR 266 billion, 75 billion of which was from tourists coming from outside the Union. As regards journeys by Europeans themselves, they are estimated at approximately 1.4 billion, some 90 % of which were within the EU. According to estimates by the World Tourism Organisation (WTO), international tourist arrivals in Europe should increase significantly in the coming years. Finally, European tourists are one of the largest groups travelling to third countries, providing an extremely important source of revenue in many countries.</i></p>	

International / National / Regional	Outline of Targets and Objectives	SEA Topic
<p>EC (Birds and Natural Habitats) Regulations 2011</p>	<p>Flora and fauna in Ireland are protected at a European level by the EU Habitats Directive (92/43/EEC) and the EU Birds Directive (79/409/EEC) which is transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011). Under this legislation sites of nature conservation importance are designated in order to legally protect faunal and floral species and important/vulnerable habitats. The legal protection set out within the EC (Birds and Natural Habitats) Regulations 2011 applies to all faunal species listed in Annex IV of the Habitats Directive. Part 6, Section 51(2) of the Regulations makes it an offence to:</p> <ul style="list-style-type: none"> • deliberately capture or kill any specimen of these species in the wild, • deliberately disturb these species particularly during the period of breeding, rearing, hibernation and migration, • deliberately take or destroy eggs of those species from the wild, • damage or destroy a breeding site or resting place of such an animal, or • keep, transport, sell, exchange, offer for sale or offer for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive. <p>The legal protection set out within in Section Part 6, Section 52 of the EC (Birds and Natural Habitats) Regulations 2011 applies to species of plants listed on Annex IV of the Habitats Directive. Plants are afforded protection under Part 6, Section 52(2) of the Regulations.</p>	<p>Biodiversity</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
EIA Directive [85/337/EEC] [2014/52/EU]	The EIA Directive (85/337/EEC) is in force since 1985 and applies to a wide range of defined public and private projects, which are defined in Annexes I (Mandatory requirement for EIA) and Annex II (Screening). . The competent authority, at the developer’s request, can say what should be covered by the EIA information to be provided by the developer (Scoping), the developer then is required to provide information on the environmental impact (EIAR). The environmental authorities and the public (and in instances of transnational impacts, the adjoining member state affected by the proposed development) must be informed and consulted. The Competent authority then determines, after review and consideration of all concentration and information presented, whether the EIAR contains all relevant information and makes a decision on the proposed development. The public is informed of this decision, and can challenge the decision to ABP, and to the Courts.	All Topics
Environmental Liability Directive [2004/35/EC]	This Directive was released in April of 2004 regarding environmental liability and the prevention and remedying of environmental damage.	Biodiversity
Environmental Quality Standards Directive [2008/105/EC]	Article 16 of the Water Framework Directive required a first list of priority substances. Directive 2008/105/EC produced the list of priority substances deemed to be a significant risk to the aquatic environment in Annex II. This list has been subsequently amended under (COM (2011)846). The proposal accompanies a report (COM (2011)875) from the Commission to the European Parliament and the Council on the outcome of the review of Annex X to Directive 2000/60/EC of the European Parliament and of the Council on priority substances in the field of water policy.	Water
EU 2020 Growth Strategy [COM(2010) 2020]	The EU 2020 Growth Strategy is the EU growth and jobs strategy for 2020-2029. The strategy emphasises sustainable, smart and inclusive growth to overcome what is perceived to be structural weaknesses to Europe’s economy and to improve the competitiveness, productivity and sustainable economy.	Population and Human Health

International / National / Regional	Outline of Targets and Objectives	SEA Topic
<p>EU Biodiversity Strategy to 2020 [COM(2011)244]</p>	<p>The EU Biodiversity Strategy is an overarching support which works in independently from the Habitats and Birds Directives while these Directives are implemented across the Member States. The Strategy has six targets:</p> <ul style="list-style-type: none"> • Target 1 commits EU Member States to a full and swift implementation of the Birds and Habitats Directives. • Target 2 commits EU Member States to establish green infrastructure and to restore 15% of degraded ecosystems in the EU. • Target 3 commits the European Commission to reform the Common Agricultural Policy so that increases its contribution to biodiversity conservation on farmland and to improve forest management • Target 4 commits the European Commission to reform the Common Fisheries Policy so that it reduces its ecological impacts, including its impacts on marine ecosystems. • Target 5 commits the European Commission to combat Invasive Alien Species including through preventing the establishment of these species and through control and eradication. • Target 6 commits the EU to step up its contribution to combatting global biodiversity loss. 	<p>Biodiversity</p>
<p>EU Floods Directive [2007/60/EC]</p>	<p>EU Floods Directive works in coordination with the Water Framework Directive, via requiring Member States to coordinate their flood risk management plans, and not take measures that that will increase flood risk in neighbouring countries. Member States shall in take into consideration long term developments, including climate change, as well as sustainable land use practices in the flood risk management cycle addressed in this Directive.</p>	<p>Climate, Water</p>
<p>EU Water Framework Directive (2000/60/EC)</p>	<p>Establishes a framework for the protection of both surface and ground waters. Transposing legislation (S.I. 792 of 2009, European Communities Environmental Objective (Surface Water) Regulations 2009 as amended) outlines the water protection and water management measures required in Ireland to maintain high status of waters where it exists, prevent any</p>	<p>Water, Climate</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	deterioration in existing water status and achieve at least 'good' status for all waters.	
EU Strategy on Adaptation to Climate Change [EC, 2013]	<p>The EU Strategy on Adaptation to Climate Change is a strategy which aims to make Europe more climate resilient. This is brought about by three overarching objectives:</p> <ul style="list-style-type: none"> • Promoting action by Member States: The Commission encourages all Member States to adopt comprehensive adaptation strategies and provides funding to help them build up their adaptation capacities and take action. • Climate-proofing' action at EU level by further promoting adaptation in key vulnerable sectors such as agriculture, fisheries and cohesion policy, ensuring that Europe's infrastructure is made more resilient, and promoting the use of insurance against natural and man-made disasters. • Better informed decision-making by addressing gaps in knowledge about adaptation and further developing the European climate adaptation platform (Climate-ADAPT). <p>Upon evaluation of this strategy in November 2018, it was found that the strategy delivered on its objectives with progress on its 8 actions, but it has identified where Europe is still vulnerable to climate impacts.</p>	Climate, Population and Human Health
European Landscape Convention [ETS No. 176] (Florence Convention)	The European Landscape Convention provides a framework for international cooperation on the protection, management and planning of landscapes and landscape issues.	Landscape

International / National / Regional	Outline of Targets and Objectives	SEA Topic
<p>Groundwater Directive (2006/118/EC) (Groundwater Regulations Ireland, 2010)</p>	<p>Under Regulation 4 of the Groundwater Regulations 2010, a duty is placed on public authorities to promote compliance with the requirements of the regulations and to take all reasonable steps including, where necessary, the implementation of programmes of measures, to:</p> <ul style="list-style-type: none"> • “prevent or limit, as appropriate, the input of pollutants into groundwater and prevent the deterioration of the status of all bodies of groundwater; • protect, enhance and restore all bodies of groundwater and ensure a balance between abstraction and recharge of groundwater with the aim of achieving good groundwater quantitative status and good groundwater chemical status by not later than 22 December 2015; • reverse any significant and sustained upward trend in the concentration of any pollutant resulting from the impact of human activity in order to progressively reduce pollution of groundwater; • achieve compliance with any standards and objectives established for a groundwater dependent protected area included in the register of protected areas established under Regulation 8 of the 2003 Regulations [S.I. No. 722 of 2003] by not later than 22 December 2015, unless otherwise specified in the Community legislation under which the individual protected areas have been established.” 	<p>Water</p>
<p>Invasive Species Regulation [EU/1143/2014]</p>	<p>The EU Invasive Species Regulation provides a set of measures to be taken across the EU to any invasive alien species found on the list of Invasive Alien Species of Union Concern. There are three measures proposed:</p> <ul style="list-style-type: none"> • Prevention: to prevent the intentional or unintentional introduction of Invasive Alien Species of Union concern into the European Union; • Early detection and rapid eradication: Member States were required to institute a surveillance system to detect the present of Invasive Alien Species of Union concern as early as possible and take rapid measures to eradicate them to prevent establishment of the IAS; • Management – a concerted management action plan required for Member States for the IAS which have already established themselves to 	<p>Biodiversity</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>prevent the spread of IAS anywhere else and to minimise the harm that they cause.</p>	
<p>SEA Directive [2001/42/EC]</p>	<p>The SEA Directive augments the Espoo Directive by requiring all individual Parties to integrate Environmental Assessment into their plans and programmes at the earliest stages, laying the groundwork for sustainable development.</p> <p>The SEA Directive applies to a wide range of public plans and programmes. These plans and programmes must be adopted by an authority (national, regional or local level) and be required through the legislative, regulatory and administrative provisions.</p> <p>SEA is mandatory for all plans and programmes which are prepared for</p> <ul style="list-style-type: none"> • agriculture, forestry, fisheries, energy, industry, transport, waste/ water management, telecommunications, tourism, town & country planning or land use and which set the framework for future development consent of projects listed in the EIA Directive. <p>OR</p> <ul style="list-style-type: none"> • have been determined to require an assessment under the Habitats Directive. <p>SEA and EIA are very similar, except:</p> <ul style="list-style-type: none"> • SEA requires the environmental authorities to be consulted at the screening stage, • scoping (i.e. the stage of the SEA process that determines the content and extent of the matters to be covered in the SEA report to be submitted to a competent authority) is obligatory under the SEA. 	<p>All Topics</p>
<p>Soils Thematic Strategy [COM (2006) 231]</p>	<p>Communication (COM (2006) 231) explains why further action is required to ensure a high level of soil protection, an overall objective of the Strategy and what kind of measures must be taken. This Communication sets out common principles for protecting soils across the EU, providing a framework for Member States to decide how best to protect soil and use it sustainably in their own territory.</p>	<p>Soils</p>

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<p>The RAMSAR Strategic Plan (Ramsar Convention Secretariat, 2016))</p>	<p>The RAMSAR Convention discusses the <i>“conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world.”</i></p> <p>Wetlands are defined as <i>“areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed 6m.”</i></p> <p>The 4th RAMSAR Strategic Plan is a strategy which is updated routinely, following an assessment of the previous Strategy and provides new strategic and operational goals. The 4th Strategic Plan addresses:</p> <ul style="list-style-type: none"> • The drivers of wetland loss and degradation • Conserving and management of the RAMSAR site network, • Wisely using all wetlands; • Enhancing the implementation of RAMSAR guidance and methodologies. <p>The 4th Strategic Plan includes 19 targets in addition to the 4 overarching goals outlined above. These include:</p> <ul style="list-style-type: none"> • Recognising wetland benefits in several sectoral strategies; • Ensure water for wetland ecosystem needs; • Apply wise use guidelines in private and public sectors; • Control or eradicate invasive alien species; • Maintain ecological character through integrated management; • Increase wetland area under RAMSAR designation; • Address threats to ecological character; • Complete national wetland inventories; • Strengthen wise use through integrated river basin management or coastal zone management; 	<p>Biodiversity</p>

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	<ul style="list-style-type: none"> • Respect and use traditional knowledge and practices; • Document wetland services and benefits; • Restore degraded wetlands; • Enhance sustainability of projects in key sectors; • Develop scientific and policy guidance; • Reinforce RAMSAR Regional Initiatives for implementation of the Convention; • Mainstream wetland conservation and wise use through CEPA; • Mobilise resources for implantation; • Strengthen international cooperation; • Build capacity to implement the Convention and Strategic Plan. 	
National		
<p>Climate Action Plan 2019: To Tackle Climate Breakdown (Department of Communications, Climate Action and Environment)</p>	<p>A Plan adopted by the Government of Ireland to reduce Greenhouse Gas Emissions, improve energy security and address current air pollutants in line with the United Nations Sustainable Development Goals which together, will help form and promote a sustainable economic development pathway for the population of Ireland. This is done through the provision of 183 actions that must be taken across the topics of Carbon Pricing and cross-cutting policies, electricity, enterprise, built environment, transport, agriculture/forestry/land use, waste and the circular economy, public sector leading by example, Irelands international action on climate breakdown, citizen engagement, community leadership/Just Transition and Adaptation.</p>	<p>Biodiversity, Population and Human Health, Climate</p>
<p>Ensuring a Sustainable Transport Future: A New Approach to Regional transportation (Department for Regional Development, 2011)</p>	<p>This document sets out the Department for Regional Development's new approach to regional transportation and particularly future decisions on investment. This policy outlines Strategic Performance Indicators which must be used for a benchmark, and thereafter, biennial status reports are published to monitor progress and to develop new Strategic Performance Indicators dependent on each report's findings.</p>	<p>Air, population and human health</p>

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<p>River Basin Management Plan for Ireland 2018-2021</p>	<p>The Plan sets out the actions that Ireland will take to improve water quality and achieve ‘good’ ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2027. Ireland is required to produce a river basin management plan under the Water Framework Directive (WFD). An enhanced evidence base has been developed to guide national policies and the targeting of local measures. Technical assessments of 4,829 water bodies have been carried out, examining their status (quality) and whether they are ‘at risk’ of not meeting status objectives in the future. Using this information, the River Basin Management Plan sets out national policies and regional prioritised measures. It builds on lessons learned from the first planning cycle in a number of areas:</p> <ul style="list-style-type: none"> • Stronger and more effective delivery structures have been put in place to build the foundations and momentum for long-term improvements to water quality • A new governance structure, which brings the policy, technical and implementation actors together with public and representative organisations. This will ensure the effective and coordinated delivery of measures. • The newly-established Local Authority Waters and Communities Office will help people to get involved in improving water quality at a local level. An Fóram Uisce, also newly established, is a forum for stakeholders, community groups and sectoral representatives. It will analyse and raise awareness of water issues. <p>Among the main actions that will be taken through the Plan are:</p> <ul style="list-style-type: none"> • Improved wastewater treatment: €1.7 billion in investment by Irish Water in over 250 wastewater treatment projects between 2017 and 2021. This will help improve water quality and prevent deterioration of quality in targeted water bodies, including ‘protected areas’. • Conservation and leakage reduction: Irish Water will implement important measures to make water use more sustainable and 	<p>Water</p>

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	<p>efficient, reducing leakage in our water network from 45% of all water produced down to 37% by 2021, based on 2017 figures.</p> <ul style="list-style-type: none"> • Scientific assessments of water bodies and implementation of local measures by 43 new, specialist, local authority investigative assessment personnel: they will carry out scientific assessments of water bodies and lead on local implementation measures. • A new collaborative Sustainability and Advisory Support Programme: this partnership between the State and the dairy industry, consisting of 30 Sustainability Advisers, will promote best farming practice in 190 areas chosen for action, for up to 5,000 farmers. • Dairy Sustainability Initiative to help improve water quality: 18,000 dairy farmers to receive advice on sustainable farming practices in the 190 areas for action. • The development of water and planning guidance for local authorities: this will help local authorities to consider the risks to water quality during planning and development decision-making. • Extension of the Domestic Waste Water Treatment Systems grant scheme: the scheme will assist with the costs of septic tank remediation in High Status water areas. • A Blue Dot Catchments Programme: the new programme will create a network of excellent river and lake areas. Agencies will work together to protect or restore excellent water quality in these water bodies. • A new Community Water Development Fund: this will enable and support community water initiatives. 	
<p>Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change – July 2017</p>	<p>These interim guidelines state that local authority development plans are a critical part of translating overall national policy on energy, renewable energy and wind energy in a manner that supports the achievement of Ireland’s international obligations relating to climate change and renewable energy and taking account of local circumstances. As provided for in section 10(2) (n)</p>	<p>Climate, Air & Human Beings</p>

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	of the Planning and Development Act (2000), as amended, (the Act), development plans are required to include objectives to mitigate against climate change and reduce reliance on fossil fuels.	
Ireland’s National Biodiversity Plan 2017-2021 (Dept. of Arts, Heritage and the Gaeltacht, 2017)	A national action plan to tackle the loss of biodiversity through 7 overarching objectives: <ul style="list-style-type: none"> • Mainstream biodiversity into decision-making across all sectors • Strengthen the knowledge base for conservation, management and sustainable use of biodiversity • Increase awareness and appreciation of biodiversity and ecosystems services • Conserve and restore biodiversity and ecosystem services in the wider countryside • Conserve and restore biodiversity and ecosystem services in the marine environment • Expand and improve management of protected areas and species • Strengthen international governance for biodiversity and ecosystem services 	Biodiversity
Irish Geological Heritage (IGH) Programme (GSI 1998)	This Programme has been set up to protect and promote Irish sites of international and national geological importance	Soils, Land use and Geology

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<p>National Adaptation Framework, Planning for a Climate Resilient Ireland, 2018</p>	<p>Ireland's first statutory National Adaptation Framework (NAF) was published in January 2018. The NAF sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change. The NAF was developed under the Climate Action and Low Carbon Development Act 2015. In relation to the 'Built Environment and Spatial Planning' it states that</p> <p>'It is clear that climate change considerations need to be taken into account as a matter of course in planning-related decision making processes and that the deepening of adaptation considerations in the planning and building standards processes is considered the most appropriate way of increasing the resilience of the built environment.</p> <p>Integrating climate considerations into decision making should ensure that inappropriate forms of development in vulnerable areas are avoided and compact development in less vulnerable areas is promoted.</p> <p>Other considerations include the spatial implications of water stress. Land use policies may also facilitate the conversion or maintenance of land at risk of flooding to less vulnerable uses (e.g. parks, gardens and open spaces for natural habitats, etc.).</p> <p>Local Authorities are required to prepare Adaptation Strategies and the Guidelines for their preparation recommend that, once approved, strategies should be used to assess the adaptation fitness of spatial plans and ensure that climate change adaptation considerations are mainstreamed into the process.</p> <p>The measures proposed by the National Mitigation Plan lay the foundations for transitioning Ireland to a low carbon, climate resilient and environmentally sustainable economy by 2050. The Plan includes over 100</p>	<p>Climate, Air & Human Beings</p>

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	<p>individual actions for various Ministers and public bodies to take forward as we move towards implementation.</p> <p>Chapter 4 outlines proposals to ‘Decarbonise the Built Environment’, with the overall objective of use less energy and for most of the energy to come from low or zero-carbon fuels. This can be achieved by ensuring that new buildings are low or “nearly zero emission” standard and energy efficiency upgrades, known as retrofits, are carried out with respect to the existing building stock. The mitigation plan states that ‘as well as expecting buildings to consume much less energy, the mix of fuels providing that energy should be transitioning to a much lower carbon content.’</p>	

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<p>National Biodiversity Action Plan</p>	<p>National Biodiversity Action Plan for 2017-2021 demonstrates Ireland’s continuing commitment to meeting and acting on its obligations to protect our biodiversity for the benefit of future generations through a series of targeted strategies and actions. The Plan sets out actions through which a range of government, civil and private sectors will undertake to achieve Ireland’s ‘Vision for Biodiversity’ and follows on from the work of the first and second National Biodiversity Action Plans. It has been developed in line with the EU and International Biodiversity strategies and policies. 119 targeted actions are contained in the Plan, underpinned by seven strategic objectives. The objectives lay out a clear framework for Ireland’s national approach to biodiversity, ensuring that efforts and achievements of the past are built upon, while looking ahead to what can be achieved over the next five years and beyond. They include:</p> <ul style="list-style-type: none"> • mainstreaming biodiversity across the decision making process in the State; • strengthening the knowledge base underpinning work on biodiversity issues; • increasing public awareness and participation; • ensuring conservation of biodiversity in the wider countryside; • ensuring conservation of biodiversity in the marine environment; • expanding and improving on the management of protected areas and protected species; • enhancing the contribution to international biodiversity issues. <p>The National Biodiversity Plan is aspirational in nature and does not benefit from any policy or legislative support.</p>	<p>Biodiversity</p>

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<p>National Climate Change Policy,2013</p>	<p>The extent of the challenge to reduce Green House Gas (GHG) emissions in line with our International and EU obligations is reflected in the National Policy Position on Climate Action and Low Carbon Development (2014) and the Climate Action and Low Carbon Development Act 2015. The National Policy Position establishes the fundamental national objective of achieving transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050. ‘</p> <p>It clarifies the level of GHG mitigation ambition envisaged; and establishes the process to pursue and achieve the overall objective. Specifically, the National Policy Position envisages that policy development will be guided by a long-term vision based on:</p> <ul style="list-style-type: none"> • an aggregate reduction in carbon dioxide (CO2) emissions of at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors, • in parallel, an approach to carbon neutrality in the agriculture and land-use sector, including forestry, which does not compromise capacity for sustainable food production. 	<p>Climate, Air & Human Beings</p>
<p>National Cycle Policy Framework (Dept. of Transport, Tourism and Sport)</p>	<p>The mission of the National Cycle Policy Framework is to create a strong cycling culture in Ireland. the Framework can provide a common, integrated basis for the long term development and implementation of cycling policies among various sectors and levels of government. The preparation, and implementation, of an NCPF is part of the contribution to a sustainable travel vision and contributes to cultural development. The objectives developed in the policy document cover; Infrastructure, Communication/Education, Financial Resources, Legislation and Enforcement, Human Resources and Coordination, and Evaluation and Effects. They are listed as follows:</p> <ul style="list-style-type: none"> • Objective 1: Support the planning, development and design of towns and cities in a cycling and pedestrian friendly way. 	<p>Air, Population and Human Health</p>

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	<ul style="list-style-type: none"> • Objective 2: Ensure that the urban road infrastructure (with the exception of motorways) is designed/retrofitted so as to be cyclist-friendly and that traffic management measures are also cyclist friendly. • Objective 3: Provide designated rural cycle networks especially for visitors and recreational cycling. • Objective 4: Provide cycling-friendly routes to all schools, adequate cycling parking facilities within schools, and cycling training to all school pupils. • Objective 5: Ensure that all of the surfaces used by cyclists are maintained to a high standard and are well lit. • Objective 6: Ensure that all cycling networks - both urban and rural - are signposted to an agreed standard. • Objective 7: Provide secure parking for bikes; • Objective 8: Ensure proper integration between cycling and public transport. • Objective 9: Provide public bikes in cities. • Objective 10: Improve the image of cycling and promote cycling using “soft interventions” such as promotional campaigns, events etc. • Objective 11: Improve cyclists’ cycling standards and behaviour on the roads. • Objective 12: Improve driver education and driving standards so that there is a greater appreciation for the safety needs of cyclists. • Objective 13: Support the provision of fiscal incentives to cycle. • Objective 14: Provide appropriate levels of, and timely, financial resources towards implementing the NCPF. • Objective 15: Introduce changes to legislation to improve cyclist safety. • Objective 16: Improve enforcement of traffic laws to enhance cyclist safety and respect for cyclists. 	

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	<ul style="list-style-type: none"> • Objective 17: Develop a structure that can coordinate the implementation of activities across the many Government Departments, Agencies and NGO's. • Objective 18: Provide design professionals with suitable training / guidance to develop and implement the policies of the NCPF. Support the deepening of knowledge of the subject of planning for cyclists in Ireland. • Objective 19: Evaluate the cycling policy and monitor the success as the measures are implemented. 	
<p>National Mitigation Plan, 2017</p>	<p>The measures proposed by the National Mitigation Plan lay the foundations for transitioning Ireland to a low carbon, climate resilient and environmentally sustainable economy by 2050. The Plan includes over 100 individual actions for various Ministers and public bodies to take forward as we move towards implementation. Chapter 4 outlines proposals to 'Decarbonise the Built Environment', with the overall objective of use less energy and for most of the energy to come from low or zero-carbon fuels. This can be achieved by ensuring that new buildings are low or "nearly zero emission" standard and energy efficiency upgrades, known as retrofits, are carried out with respect to the existing building stock. The mitigation plan states that 'as well as expecting buildings to consume much less energy, the mix of fuels providing that energy should be transitioning to a much lower carbon content.'</p>	<p>Climate, Biodiversity, Population and Human Health</p>
<p>National Planning Framework 2040: Our Plan</p>	<p>The National Planning Framework (NPF2040) is the national planning policy providing overarching guidance for the provision of land use, housing provision and overall development from 2018-2030.</p>	<p>All</p>

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<p>Natural Heritage Areas and proposed Natural Heritage Areas</p>	<p>Natural Heritage Areas (NHA) are areas that are considered to be important for the habitats present or for the species of plants and animals supported by those habitats. Under the Wildlife Amendment Act 2000, NHAs are legally protected from damage from the date they were formally proposed for designation. Section 19(1) of the Act states that ‘Where there is a subsisting natural heritage area order in respect of any land, no person shall carry out, or cause or permit to be carried out, on that land any works specified in the order or any works which are liable to destroy or to significantly alter, damage or interfere with the features by reason of which the designation order was made’.</p> <p>In addition, a list of proposed NHAs (pNHAs) was published in 1995 but to date these have not had their status confirmed. Prior to statutory designation, pNHAs are subject to limited protection under various agri-environment and forestry schemes and under local authority planning strategies such as County Development Plans.</p>	<p>Biodiversity</p>
<p>Prioritised Action Framework for Natura 2000 (Dept. of the Environment, 2012)</p>	<p>This document provides an overarching funding framework for priority actions which underpin protecting habitats and birds. This document is to be utilised in tandem with the Habitats and Birds Directives.</p>	<p>Biodiversity</p>
<p>Programme for Government Framework (Northern Ireland Executive, 2016)</p>	<p>This programme is targeted at improving the well-being of the citizens of Northern Ireland through 12 outcomes:</p> <ul style="list-style-type: none"> • prosper through a strong, competitive, regionally balanced economy • live and work sustainably –protecting the environment • have a more equal society • enjoy long, healthy, active lives • an innovative, creative society, where people can fulfil their potential • more people working in better jobs • a safer community • care for each other and help those in need • a diverse society 	<p>Population and Human Health</p>

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	<ul style="list-style-type: none"> • create a place where people want to live and work • connect to people and opportunities through infrastructure • give children the best start in life 	
<p>Smarter Travel: A Sustainable Transport Future, 2009 – 2020</p>	<p>SmarterTravel, A Sustainable Transport Future, is the transport policy for Ireland for the period 2009-2020. In addition to prudent investment in new infrastructure, this document sets out necessary steps to ensure that people choose more sustainable transport modes such as walking, cycling and public transport. This key national policy has sustainability at its core and clearly indicates that future population and economic growth will have to take place predominantly in sustainable, compact urban and rural areas which discourage dispersed development and long commuting. This document sets out national transport policy according to five key goals:</p> <ul style="list-style-type: none"> • To reduce overall travel demand; • To maximise the efficiency of the transport network; • To reduce reliance on fossil fuels; • To reduce transport emissions; and • To improve accessibility to transport. 	<p>Climate and Air</p>
<p>The National Landscape Strategy for Ireland 2015-2025</p>	<p>The National Landscape Strategy for Ireland 2015-2025 (NLS) was published in line with the European Landscape Convention, of which Ireland is a signatory. This strategy places importance on the protection of landscape and sets out high level objectives and actions to support this protection. With regard to threats/opportunities to the landscape, the NLS states that “a broad range of national and sectoral policies and activities can have considerable effects – positive and negative – on landscape character or quality, including agriculture, forestry, marine, industry, energy, spatial and development planning, transport, infrastructure, tourism, recreation, natural and cultural heritage, and economic planning</p>	<p>Cultural heritage</p>

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<p>The National Mitigation Plan, 2017</p>	<p>The measures proposed by the National Mitigation Plan lay the foundations for transitioning Ireland to a low carbon, climate resilient and environmentally sustainable economy by 2050. The Plan includes over 100 individual actions for various Ministers and public bodies to take forward as we move towards implementation. Chapter 4 outlines proposals to ‘Decarbonise the Built Environment’, with the overall objective of use less energy and for most of the energy to come from low or zero-carbon fuels. This can be achieved by ensuring that new buildings are low or “nearly zero emission” standard and energy efficiency upgrades, known as retrofits, are carried out with respect to the existing building stock. The mitigation plan states that ‘as well as expecting buildings to consume much less energy, the mix of fuels providing that energy should be transitioning to a much lower carbon content.’</p>	<p>Climate, Air, Population and Human Health</p>
<p>The Wildlife Acts 1976 – 2012</p>	<p>Flora and fauna in Ireland are protected at a national level by the Wildlife Acts 1976 – 2012 and the Flora (Protection) Order 2015.</p> <p>Wildlife Act 1976 The Wildlife Act 1976 provides additional protection for certain species. Section 23 makes it an offence to:</p> <ul style="list-style-type: none"> • hunt a protected wild animal, • injure a protected wild animal, • wilfully interfere with or destroy the breeding place of any protected wild animal, • Other than when certain exemptions apply. <p>Species protected under the Act are those listed on Schedule 5. Since the publication of the Wildlife Act 1976, the list of Schedule 5 species has been extended through the publication of Wildlife Act 1976 (Protection of Wild Animals) Regulations in 1980 and 1990.</p>	<p>Biodiversity</p>

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	<p>Section 23(7) establishes that the offences described under Section 23 shall not apply for a person:</p> <ul style="list-style-type: none"> • who is engaged in agriculture, fishing or forestry, or in zoology or in any other scientific pursuit, and who unintentionally injures or kills a protected wild animal, or • who is engaged in these activities interferes with or destroys the breeding place of such an animal, or • who is constructing a road or carrying on any archaeological operation, building operation or work of engineering construction, kills or injures such an animal or destroys or injures the breeding place of such an animal, or • who captures an injured or disabled protected wild animal for the purpose of killing it humanely or with the intention of tending it and of later releasing it, or • who kills humanely a protected wild animal which is injured. <p>Wildlife (Amendment) Act 2000 The Wildlife (Amendment) Act 2000 sets out various amendments to the Wildlife Act 1976 that generally provide clarification and, in some cases, provide additional protection. Through this legislation Section 21(3) of the Wildlife Act 1976 was amended so that it is now an offence to:</p> <ol style="list-style-type: none"> a) cut, pick, collect, uproot or otherwise take, injure, damage, or destroy any specimen [plant] to which this section applies or the flowers, roots, seeds, spores or other part of such specimen, b) purchase, sell, keep for sale, transport for sale or exchange, offer for sale or exchange or be in possession of any such specimen whether alive or dead or the flowers, roots, seeds, spores or any part, product or derivative thereof; 	

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	<p>c) Section 22(g) of the Wildlife Act 1976 now makes it an offence to destroy or remove a nest which is built in or on an occupied building if the nest contains the eggs or young of a protected wild bird.</p> <p>d) Section 23(5)(d) of the Act has extended the legal protection to include the resting places of protected wild animals such that it is now an offence to wilfully interfere with or destroy the breeding place or resting place of any protected wild animal.</p> <p>Flora Protection Order 2015 The current list of plant species protected by Section 21 of the Wildlife Act, 1976 is set out in the Flora (Protection) Order, 2015, which supersedes orders made in 1980, 1987 and 1999.</p> <p>It is illegal to cut, uproot or damage the listed species in any way, or to offer them for sale. This prohibition extends to the taking or sale of seed. In addition, it is illegal to alter, damage or interfere in any way with their habitats. This protection applies wherever the plants are found and is not confined to sites designated for nature conservation.</p> <p>The plant species protected by the Flora (Protection) Order 2015 are listed on five schedules, A - E.</p> <p>Under Section 21 of the Wildlife Act a person may apply for a licence to take, alter or otherwise interfere, with the habitat or environment of a species of protected flora. Licences will only be issued in the absence of any viable alternative and where no significant damage will be caused to the conservation status of the species and where the adverse impact on the local population of species is kept to a minimum.</p>	
<p>Government of Ireland. Outdoor Recreation Plan for Public Lands and Waters in Ireland 2017-2021: https://www.coillte.ie/media/2017/06/GRP_Screen.pdf</p>	<p>Let by the Department of Culture Heritage and the Gaeltacht (DCHG), the Plan was prepared jointly by Coillte, NPWS, Waterways Ireland, Bord na Móna and Inland Fisheries Ireland.</p>	<p>Population and Human</p>

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	<p>It was developed by five public landowning organisations as ‘creating step change’ in delivery of outdoor recreation opportunities on public lands and waters, comprising 15% of Ireland’s land surface.</p> <p>It focused on 7 strategic themes:</p> <ul style="list-style-type: none"> (i) managing & maintenance of recreational infrastructure; improving recreational facilities; (ii) developing consistent standards; (iii) promotion of outdoor recreation; (iv) professional development of staff; (v) developing a culture of outdoor recreation and volunteering in Ireland; and (vi) maximising the benefits to communities. <p>The Outdoor Recreation Plan (2017-2021) estimates the value of outdoor recreation annually to Ireland’s economy is €1.2 billion. Also estimated that €165 million investment is required over five years (2017-2021) to manage, maintain and upgrade the recreational assets on public lands, with the potential to generate an additional €142 million per annum as the market grows.</p>	<p>Health, Biodiversity</p>
<p>RSES for the Southern Region</p>	<p>The RSES for the Southern Region identifies the role of the Limerick – Shannon Metropolitan Area. It refers to Limerick City as Ireland’s third largest city. The nearby town of Shannon in Co. Clare is a significant employment centre with assets such as Shannon International Airport, Shannon Free-Zone and the International Aviation Services Centre (IASC).</p> <p>Nenagh is identified as a Key Town with major synergies with MASP (Metropolitan Area Strategic Plan). Nenagh and its hinterland area have potential as a location for a vibrant and diverse enterprise mix including major research and development functions, tourism, water-based and outdoor recreation, renewable energy and emerging sectors such as agritech, life sciences, financial services and engineering.</p>	<p>Population and Human Health, Biodiversity</p>

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	<p>Regional policy in relation to Nenagh highlights high quality of life, strong retail offering, attractive town centre, vibrant cafe and restaurant offering as well as</p> <ul style="list-style-type: none"> • Delivery of the Nenagh Traffic Management plan and associated public realm works and a Local Transport Plan • Continued investment and development of the historic core of the town as a key driver of tourism. Identification and development of Nenagh as the Gateway to Ireland’s Hidden Heartlands. • Proximity to Lough Derg and the Silvermines Mountains and tourism-focused settlements such as Ballina, Killaloe and Dromineer <p>Examples of attractions in the Mid-West include, inter alia, the promotion of Ireland’s Lakelands, the Shannon Estuary and its islands as tourism and recreation destination, greenways, blueways, effective place making, Munster Vales, the Burren, Cliffs of Moher, West Clare NST tourism route, Loop Head, Bunratty, Holy Island, Lough Derg, Shannon Estuary Way, festivals (e.g. Willie Clancy Festival), Limerick City’s St. Johns Castle. It is an objective to support utilisation and realisation of the Mid-West’s existing and emerging tourism assets.</p> <p>It states that promotion of enhanced transport networks including public transport services is essential to attract and enable ease of movement around the region by tourists and visitors. Improvements are needed at key arrival points such Ferry Ports with better public transport connections and improvements to the existing road and rail networks/services to remove bottlenecks and increase and improve connectedness to and between key tourism destinations. The identification of strategic corridors can assist in the development of the network between our cities, towns and rural areas.</p>	

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	<p>Regional Policy Objective 51: Tourism It is an objective to:</p> <ul style="list-style-type: none"> a. Enhance provision of tourism and leisure amenity to cater for increased population in the Region including recreation, entertainment, cultural, catering, accommodation, transport and water infrastructure inter alia; b. Promote activity tourism; c. Sustainably develop the road network and public transport services and facilities for improved visitor access, longer dwell times due to improved connectivity to ports and airports and tourism growth; d. Sustainably develop walking and cycling trails opening greater accessibility to the marine and countryside environment by sustainable modes and promote the sustainable designation and delivery of Greenway and Blueway Corridors. e. facilitate appropriate tourism development and in particular a National Greenways, Blueways and Peatways Strategy, prioritising sustainable projects that achieve maximum impact and connectivity at national and regional level; f. identify and map catchment areas concerning Culture, Heritage and Tourism of regional significance/scale. Such catchments should have the potential to deliver small scale economic development and using wider local services such as Post Offices and local public transport. g. Support the relevant authorities in the development of specific monitoring protocols for visitor pressure to ensure that tourism activities are maintained within sustainable limits for the European sites in the region. 	

International / National / Regional	Outline of Targets and Objectives	SEA Topic
<p>RSES for the Eastern and Midlands Regional Assembly</p>	<p>Athlone’s central and accessible location nationally at a key nodal point between Dublin and Galway and at a principal crossing point on the River Shannon further enhances its role and potential. Athlone’s strong historic and cultural core, along with its attractive natural environment along the banks of the River Shannon, provides for significant tourism opportunities and an enhanced quality of life for both residents and visitors to the town.</p> <p>In order to enhance co-ordination of development in Athlone where the town and its environs lie within the combined functional area of two Local Authorities, the preparation and adoption of a Joint Urban Area Plan (UAP) shall be a priority for Westmeath County Council and Roscommon County Council following the adoption of the RSES.</p> <p>The Joint UAP shall support and provide for an enhanced urban environment and improve sustainable modes of transport with a particular focus on the following key objectives:</p> <ul style="list-style-type: none"> • Support the implementation of the Athlone Waterfront Strategy (2011) to provide for a strategic approach to waterfront management, amenity provision, tourist related developments and environmental awareness along the waterfront within the town. • Support construction of a new pedestrian and cycleway bridge across the River Shannon in Athlone as part of the Galway to Dublin Cycleway. • Support the role of lands on the Western Bank as a Cultural and Tourism Quarter. • Support public realm enhancement works along the River Shannon’s waterfront at The Quay and along The Strand to maximise tourist footfall along the river. • Provide for a public park within the Monksland/ Bellanamullia (Athlone West) LAP lands. 	<p>Population and Human Health</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<ul style="list-style-type: none"> • Provide a walkway and nature park adjacent to the Cross River. <p>Significant opportunities to develop a number of flagship greenways in the Region are highlighted. They are;</p> <ul style="list-style-type: none"> • Greenways: The Dublin-Galway National Cycling Greenway offers potential to link the marketing of the Wild Atlantic Way, Ireland’s Ancient East and the Hidden Heartlands and connect to the EuroVelo network of long-distance European cycling trails. Other regional greenways under development include the Old Rail Trail between Athlone to Mullingar, which highlights the potential to develop disused railway lines in the Region. • Blueways: The development of navigable inland waterways in collaboration with Waterways Ireland including; the Shannon and Shannon-Erne connecting the islands of Lough Ree, Clonmacmoise and Shannon Harbour; linking the Royal Canal with the Grand Canal along the River Shannon. • Peatways: There is potential in the midlands to develop a regional peatway interconnecting a range of biodiversity and cultural hotspots such as the Mesolithic (first settlers) site in Lough Boora, Co. Offaly and the Iron Age bog road in Corlea, Co. Longford. 	
<p>RSES for the Northern and Western Regional Assembly Area</p>	<p>The Draft RSES provides for targeted growth in the Regional Centres and the network of Key Towns will take the lead in a regional context. In order to address the weak urban structure in the northern and western region, it is necessary to target growth of the Regional Centres by at least 40% and the Key Towns to have a targeted growth of at least 30%.</p>	<p>Population and Human Health</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
<p>Tourism Masterplan for the Shannon (2020-2030)</p>	<p>The masterplan provides a co-ordinated strategy and development framework of scale to guide sustainable development of the Shannon as a compelling tourism destination within Ireland’s Hidden Heartlands. It will serve as a roadmap for future tourism investment and resources, all of which should be directly aligned to the core proposition and experience development themes for the Shannon.</p> <p>The masterplan identify key projects across Shannon’s three spatial Discovery Zones. Discovery Zone 3 is referred to as the Lower Shannon and comprises Lough Derg and the Lower Shannon. The following Lower Shannon Priority projects have been identified:</p> <ul style="list-style-type: none"> • Ardnacrusha – Feasibility Study for redevelopment of Visitor Centre and associated Visitor Management Plan • Develop enhanced Castlough & Portroe Lookout; Active Amenity Zone & Slow Travel Interchange • Feasibility Study for Development of ‘Shannon Greenway’ • Implementation of the Iniscealtra Visitor Management Plan • Portumna Attractions - Integrated Tourism Development Plan • Link to Lough Derg Visitor Experience Development Plan proposals <p>Chapter 7 of the Masterplan identify provisions for Environmental Management which are intended to secure the implementation of the recommendations identified as a result of the SEA process and the Habitats Directive Assessment. The requirements are that:</p> <ul style="list-style-type: none"> - All project proposals and other proposed plans, referred to in this Masterplan will need to take into account the requirements of the relevant environmental legislation and associated EU Directives such as SEA, EIA, Birds, Habitats, Floods and Water Framework directives, as appropriate. All projects should consider the need for project level 	<p>Population and Human Health</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>environmental assessment. This will have implications for Part 8 arrangements and the consent process for ‘small scale’ development.</p> <ul style="list-style-type: none"> - Wastewater, surface water drainage and drinking water infrastructure must be in place prior to development. - Measures to protect the environment will be incorporated into design of projects to avoid adverse effects on the integrity of Natura 2000 sites. These will include, but will not limited to, measures such as those set out in: <ul style="list-style-type: none"> o Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters (IFI, 2016) and o Environmental Good Practice on Site Guide (CIRIA, 2015) - Irrespective of planning requirements, ecological assessment and, as appropriate, habitat and species surveys should be carried out for all projects or other means of implementing the objectives of the Tourism Masterplan. - The design of linkages, paths and cycleways must be prepared with the sensitivities of Natura 2000 sites and the broader ecological environment in mind. Any such proposal must consider the potential for increased disturbance of species, such as otter, due to any increase of human activities near watercourses. Paths and cycleways should be prepared with input from ecologists and planners to ensure there is no risk of adverse effect on Natura 2000 sites. - Lighting of buildings and features along watercourses will be avoided wherever possible. If lighting is required within the riparian zone or along the banks of a watercourse, it should be designed in consultation with an appropriately qualified ecologist. - Contractors appointed to undertake any construction works will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works. 	

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<ul style="list-style-type: none"> - Addressing climate change will be a considerable challenge for all sectors in the coming decade. As a result, it is suggested that all new major tourism development incorporates a net zero-carbon approach. - In areas of potential flood risk, a flood risk assessment will be necessary. Vulnerable uses will not be appropriate in areas of high risk. - Site specific flood risk assessments will identify the constraints for consideration at the detailed design stage. Further consideration of the potential impact of climate change on all potential sources of flooding will also be provided. 	
<p>North Tipperary County Development Plan 2010, adopted in July 2010</p>	<p>The Plan highlights the importance of tourism and the county as home to a number of nationally renowned visitor attractions including Lough Derg. Fáilte Ireland has recognised Lough Derg and the Munster Vales (the Galtee, Knockmealdown and Commeragh Mountain Ranges) as unique and distinctive experiences.</p> <p>The Plan (as varied) will ensure that the environmental, cultural and social resources upon which these activities are based are protected, and it is the intention of the Council work in partnership with a range of organisations to capitalise on and maximise the potential of such opportunities.</p> <p>The Plan (as varied), informed by the North and South Tipperary Landscape Character Assessments, has identified sensitive landscapes as Primary and Secondary Amenity Areas, by virtue of their scenic and visual quality and offer significant opportunities for tourism development and rural recreational activities. The shoreline of Lough Derg has been identified as a Primary Amenity Areas</p>	<p>Population and Human Health, Landscape, Biodiversity</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>The Council will seek to ensure that a balance is achieved between the protection of sensitive landscapes and the appropriate socio-economic development of these areas. In this respect, development proposals will be required to demonstrate that they integrate and respect the visual quality of the landscape.</p> <p>Policy LH2: Protection of Visual Amenity and Character of Primary and Secondary Amenity Areas</p> <p>It is the policy of the Council to ensure the protection of the visual amenity, landscape quality and character of designated Primary and Secondary Amenity Areas. Developments which would have an adverse material impact on the visual amenities of the area will not be permitted. New development shall have regard to the following:</p> <ul style="list-style-type: none"> a) Developments should avoid visually prominent locations and be designed to use existing topography to minimise adverse visual impact on the character of primary and secondary amenity areas. b) Buildings and structures shall ensure that the development integrates with the landscape through careful use of scale, form, finishes and colour. c) Existing landscape features, including trees, hedgerows and distinctive boundary treatment shall be protected and integrated into the design proposal. d) Developments shall comply with the development standards set out in Chapter 10 and, as appropriate, the Rural Housing Design Guidelines contained in Appendix 5. <p>The following policies are also of note:</p> <p>Policy LH3: Protection of Views of Scenic Value</p> <p>It is the policy of the Council to protect and enhance views identified in Appendix 4 Listed Views in Tipperary, and views to and from lakelands and</p>	

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>waterways. The Council will not permit development which would obstruct or have a significant adverse impact on these views.</p> <p>Listed views include: V01: Views west and sections of the road to the east of the R494 road from Ballina to Portroe V02: Views north and west of the L6037 and L6056 west of Portroe V03: Views west of the L1203 south of Dromineer V04: Views west of the L1206 north of Dromineer V05: Views west of the R493 north of Puckane to Ballinderry V06: Views west of the L5080 north of Ballinderry V07: Views west of the L1091 south west of Terryglass V08: Views west of the R493 north of Terryglass V09 : Views south of the R489 east of Lorrha</p> <p>42. Policy LH5: Biodiversity, Trees and Habitats It is the policy of the Council to conserve, protect and enhance the county’s bio-diversity, including trees and hedgerows, in accordance with the County Biodiversity Plans (any any review thereof) and the standards set out in this Plan (as varied).</p> <p>Policy LH6: Natura 2000 Sites and Protected Species It is the policy of the Council to ensure the protection, integrity and conservation of existing and candidate Natura 2000 sites and Annex I and II species listed in EU Directives. Where it is determined that a development may independently, or cumulatively, impact on the conservation values of Natura 2000 sites, the Council will require planning applications to be accompanied by a Natura Impact Statement in accordance with ‘Appropriate Assessment of Plans and Projects, Guidelines for Planning Authorities’, (DEHLG 2009) or any amendment thereof.</p>	

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>Policy LH8: Inland Waters and Riparian Zones It is the policy of the Council to protect the ecological status and quality of watercourses. In order to maintain the natural function of existing ecosystems associated with water courses and their riparian zones and to encourage sustainable public access to waterbodies, the Council will require an undisturbed edge or buffer zone to be maintained, where appropriate, between new developments and riparian zones of water bodies.</p> <p>Policy LH9: Marinas and Jetties It is the policy of the Council to support the continued operation and improvement of commercial and public marinas, harbours, moorings and jetties. Development proposals for private marinas, harbours, moorings and jetties will not be permitted in SPAs, SACs or NHAs (including proposed or candidate).</p>	
<p>Galway County Development Plan 2015-2021</p>	<p>The Galway County Development Plan 2015-2021 sets out an overall strategy for the proper planning and sustainable development of the functional area of Galway County Council. This plan includes the administrative area of what was formerly Ballinasloe Town Council. On foot of a recent amendment to the Planning and Development Act, 2000 (as amended), by the Electoral Local Government and Planning and Development Act, 2013, the provisions and zonings of the Ballinasloe Development Plan will remain in force to the extent provided for by that Development Plan or until a Local Area Plan is prepared for Ballinasloe, whichever is the earlier. The plan presents Galway County Council’s outlook for future development of the County up to 2021. It sets out the longer term vision for the development of the County, while protecting and enhancing its environment through employing the principles of sustainable development in the policies and objectives set out therein. Local Area Plans have been or will be prepared for the towns/areas with a</p>	<p>Population and Human Health</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>population over 1,500 persons; however, the County Development Plan remains the overarching plan for the County.</p> <p>The following Economic Development and Tourism Objectives has been included in the plan:</p> <p>Objective EDT 23 – East Galway, Lough Derg and The Burren</p> <p>a) Facilitate the sustainable development of East Galway, Lough Derg and the Burren as cultural and tourist destinations while simultaneously safeguarding their integrity.</p> <p>Chapter 9 refers to Heritage, Landscape & Environmental Management. The following General Heritage Policies are set out in the plan:</p> <ul style="list-style-type: none"> - Policy GH 1 – Conserve, protect and enhance the special character of the County as defined by its natural heritage and biodiversity, its built environment, landscape and cultural, social and sporting heritage. - Policy GH 2 – Ensure that heritage protection is an integral part of coherent policies on economic and social development and of urban and rural planning. - Policy GH 3 – Implement the legislative provisions of the Planning and Development Act, 2000 (as amended), which offers protection to the architectural, archaeological and natural heritage. - Policy GH 4 – Engage with all relevant stakeholders (and in particular local communities) in matters relating to the protection of natural, built and cultural heritage 	
<p>Clare County Development Plan 2017 - 2023</p>	<p>Section 9.4.3 refers to Tourism in East Clare and states that East Clare has a diverse range of tourism resources, especially along the shores of Lough Derg. It states that</p> <p>‘Opportunities exist to further develop the area, by promoting and encouraging niche tourism products such as the Mountshannon</p>	<p>Population and Human Health, Biodiversity</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>Bird Viewing Information Point, facilities for water-sports and outdoor activity centres, wellness and self-development facilities, spa and health facilities and agri-tourism. The purchase of Holy Island by Clare County Council provides a significant opportunity to sustainably manage the cultural and historic tourism potential of the ancient island. Any significant tourism project in proximity to European sites along Lough Derg and the other lakes in East Clare should be accompanied by an ecological impact assessment and must be screened for appropriate assessment to establish if there is potential for significant effects on any European site and to determine if an appropriate assessment is required.'</p>	
<p>Tipperary Strategic Tourism Marketing, Experience & Destination Development Plan 2016-2021</p>	<p>The overall objective of this Plan is to 'create a Plan to galvanise and enable growth for Tipperary as a unique tourism destination within the island of Ireland experience.</p> <p>In meeting that objective the Plan's aims are:</p> <ul style="list-style-type: none"> • to develop and promote the tourism experiences in order to improve Tipperary's performance within the national framework; • to encourage industry sustainability and growth through the improvement and development of product offering; • to build the capacity of tourism providers and to extend visitor length of stay; • to identify and build synergies between different tourism product offerings in order to deliver a top quality visitor experience. <p>The Tipperary Tourism Plan addresses all of these elements and is founded on five pillars which are:</p> <ol style="list-style-type: none"> 1) Destination Development 2) Product Development 3) Industry Development 4) Marketing 5) Measurement. 	<p>Human Health</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	As part of the destination development pillar, the development of some 'signature experiences' within Tipperary has been identified including Lough Derg, the Munster Vales, the Butler Trail and the River Suir water activity hub.	

5.0 Environmental Baseline and Relevant Environmental Issues

5.1 Introduction

In order to assess the environmental effects of the Draft VEDP it is necessary to understand the present state of the environment (the baseline environment) of the area. In particular, aspects of the environment that are already experiencing specific issues have been highlighted in order to establish whether these issues are likely to worsen as a consequence of the masterplan.

The environmental baseline is analysed in accordance with SEA topic areas and under the following headings below.

- Biodiversity, Flora and Fauna
- Population and Human Health
- Geology, Soils and Land use
- Water
- Air
- Climate
- Material Assets
- Cultural Heritage (architectural and archaeological)
- Landscape
- The inter-relationship between these issues

Where possible, historical data and trends are outlined in order to provide a picture of the do nothing scenario; i.e. what would happen if current development trends in a certain area were to continue into the future.

5.2 Biodiversity, Flora and Fauna

The United Nations Convention on Biological Diversity (CBD) defines “biological diversity” (biodiversity) as the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes genetic diversity within species, between species and of ecosystems.

The Habitats Directive ensures the conservation of a wide range of rare, threatened or endemic animal and plant species. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora was adopted in 1992 and aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements. It forms the cornerstone of Europe's nature conservation policy with the Birds Directive and establishes the EU wide Natura 2000 ecological network of protected areas, safeguarded against potentially damaging developments.

The Natura 2000 network of protected areas is known as Special Areas of Conservation (SAC) and Special Protection Areas (SPA). In general terms, they are considered to be of exceptional importance in terms of rare, endangered or vulnerable habitats and species within the European Community. The requirements of the Habitats Directive have been transposed into Irish law through the European Communities (Birds and Natural Habitats) Regulations 2011 [S.I. No. 477/2011]. This legislation affords protection to both Special Protection Areas and Special Areas of Conservation.

5.2.1 Designated Sites

Special Areas of Conservation (SAC) are designated under the Conservation of Natural Habitats and of Wild Fauna and Flora Directive 92/43/EEC (Habitats Directive) which is transposed into Irish law by the EC (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011). Special Protection Areas (SPA) are classified under the Birds Directive (2009/147/EC on the Conservation of Wild Birds).

Flora and fauna in Ireland are protected at a national level by the Wildlife Acts 1976 to 2012 and the Flora (Protection) Order 2015. Natural Heritage Areas (NHA) are areas that are considered to be important for the habitats present or for the species of plants and animals supported by those habitats. Under the Wildlife Amendment Act 2000, NHAs are legally protected from damage from the date they were formally proposed for designation. Section 19 (1) of the Act states that *'Where there is a subsisting natural heritage area order in respect of any land, no person shall carry out, or cause or permit to be carried out, on that land any works specified in the order or any works which are liable to destroy or to significantly alter, damage or interfere with the features by reason of which the designation order was made'*.

In addition, a list of proposed NHAs (pNHAs) was published in 1995 but to date these have not had their status confirmed. Prior to statutory designation, pNHAs are subject to limited protection under various agri-environment and forestry schemes and under local authority planning strategies such as County Development Plans.

As set out in the Appropriate Assessment Screening Report and Natura Impact Report, the potential zone of influence adopted for the VEDP is 2 km either side of Lough Derg and 500m either side of slow travel routes (up to 15km from Lough Derg). There are 20 Natura 2000 sites within the zone of influence of the Visitor Plan, 15 SACs and five SPAs.

Special Areas of Conservation

River Shannon Callows SAC 000216: The River Shannon is the largest river in Ireland. It is the largest area of semi-natural floodplain grassland in Ireland and Britain. A number of Red Data Book and scarce plant species occur on the site. This is one of the great waterfowl sites in Ireland, with huge numbers of a wide range of species occurring in winter, with a mean peak of 34,985 waterbirds recorded.

Barroughter Bog SAC 000231: Barroughter bog is a small raised bog site which contains good examples of the priority Annex I habitat active raised bog and the non-priority habitats degraded raised bog and depressions on peat substrates. The bog lies along the western shores of Lough Derg.

Cloonmoylan Bog SAC 000248: A large raised bog site that contains one of the largest remaining areas of uncut raised bog surface in east Galway. Of particular ecological note is a large flushed area in the northern half of the site which contains areas of bog woodland.

Kilcarren-Firville Bog SAC 000647: A relatively large raised bog site which contains good examples of the priority Annex I habitat active raised bog and the non-priority habitats degraded raised bog and depressions on peat Substrates (Rhynchosporion). The surrounding cutover contains a number of regenerating areas and some areas of well-developed scrub including the nationally rare shrub *Frangula alnus*.

Glendree Bog SAC 001912: A highland blanket bog underlain by Old Red Sandstone containing three upland oligotrophic lakes, the largest of which is Lough Ea. One of only three intact blanket bog sites known in the Slieve Aughty Mountains, of value as an example of a scarce, transitional highland type. Considerable diversity within the site, including *Schoenus nigricans* flush vegetation. Lough Ea, is a traditional roosting site for *Anser albifrons flavirostris*.

Keeper Hill SAC 001197: A small to medium upland site in the midlands, underlain by Old Red Sandstone. The dominant habitats are heath, blanket bog and upland wet grassland. The site is a popular amenity area and vantage point. The site supports a significant representation of intact blanket bog. *Falco peregrinus* and *Lagopus lagopus* breed within the site. Several rare bryophytes occur within the site.

Slieve Bernagh Bog SAC 002312: One of the most extensive, high quality upland areas in the mid-west of Ireland. Annex 1 habitats include active blanket bog, dry heath and wet heath. The occurrence of *Vaccinium oxycoccus* is of note. The site is used as foraging habitat by *Circus cyaneus* which nests in the Slieve Bernagh mountain range. *Lagopus lagopus* occurs on site.

Redwood Bog SAC 002353: The bog is a good example of a flood-plain bog, lying at the confluence of the Shannon and Little Brosna rivers. It is a feeding site for the Little Brosna flock of *Anser albifrons flavirostris*. Overall, this site, is considered as one of the most important, relatively intact raised bogs along the banks of the River Shannon.

Clare Glen SAC 000930: A steep-sided ravine, cut into Old Red Sandstone, surrounded by mixed woodland and pockets of old oak wood. The Clare river flows east to west through the ravine and incorporates a series of waterfalls, fast-flowing ripples and pool sections. An important site for its remnants of old oak wood and an interesting and rich bryoflora, including the only station in Ireland for *Fissidens exiguus*. The ravine includes a population of *Trichomanes speciosum*.

Liskeenan Fen SAC 001683: A shallow, wet basin dominated by fen vegetation which is adjacent to cutover raised bog. The fen still floods somewhat in winter. A swallow hole does not appear to be active. The site supports a good, though small, example of *Cladium mariscus* fen. It occurs in association with alkaline fen and *Phragmites* reed beds. Cutover raised bog, scrub and woodland add diversity to the site, and the close proximity of the fen and bog habitats is of ecological interest. The site supports a stand of *Orchis morio*, a Red Data Book species.

Silvermine Mountains SAC 000939: Situated on the northern slopes of the Silvermine Mountains. The site is underlain by sandstone. The dominant habitat is heath, which occurs with upland grasslands and scrub. The site rises 150m from north to south and has a maximum altitude of 409m. The site is important for the presence of the priority habitat *Nardus* grassland and also for the nationally important population of the Red Data Book species *Pseudorchis albida* within this habitat.

Silver Mountains West SAC 002258: An upland site dominated by heath, grassland and blanket bog habitats. Extensive disused mine workings - dominated by a large tailings pond - lie along the north-eastern boundary and some areas within the site show indications of disturbance from these past mining works. This is one of the largest remaining unafforested upland areas in the north Tipperary area. It is used as foraging habitat by part of the important *Circus cyaneus* population that nests in the Silvermine-Slievefeelim uplands.

Lough Derg, North-East Shore SAC 002241: This site incorporates the northern lake shore and approximately one-third of the northeast shoreline of Lough Derg which is one of the largest freshwater bodies in Ireland. Habitats include: Alkaline fens, Juniper scrub formations, limestone pavement, Yew woodlands, alluvial woodlands and *Cladium* fen. It supports the only known Irish population of *Inula salicina*. The lake is important for wintering wildfowl. Goat island has a breeding colony of *Sterna hirundo*.

Loughatorick South Bog SAC 000308: A highland blanket bog, the site incorporates the headstreams of the Coos, Conra and Bow river catchments. The largest of three highland blanket bogs in the Slieve Aughty mountains, with vegetation intermediate between lowland and mountain blanket bog, which is remarkably intact with a range of altitudinal, topographic and vegetation variation and including the most western station for *Andromeda polifolia* on an upland blanket bog.

Lower River Shannon SAC 002165: A very large, long site approximately 14 km wide and 120 km long, encompassing: the drained river valley which forms the River Shannon estuary; the broader River Fergus estuary, plus a number of smaller estuaries. The site contains many Annexed habitats, including the most extensive area of estuarine habitat in Ireland. A good range of Annexed species are also present, including the only known resident population of *Tursiops truncatus* in Ireland, all three Irish species of lamprey, and a good population of *Salmo salar*. A number of birds listed on the EU Birds Directive either winter or breed in the site.

Special Protection Areas

Slieve Aughty Mountains SPA 004168: A very large mountain site which rises to 400m and includes many small- and

medium-sized lakes. The site consists of a variety of upland habitats, though approximately half is afforested. Almost one-third of the site is unplanted blanket bog and heath, with both wet and dry heath present. The site supports over 12% of the all Ireland population of *Circus cyaneus* and is among the top five sites in the country for this species. It also supports a breeding population *Falco columbarius* likely to exceed five pairs and *Lagopus lagopus*.

Lough Derg (Shannon) SPA 004058: The largest of the Shannon Lakes, being some 40 km long. The lake shows the high hardness levels and alkaline pH to be expected from its mainly limestone catchment basin. It is classified as a mesotrophic system and is often fringed with swamp vegetation. The islands support nationally important breeding colonies of *Sterna hirundo*, *Phalacrocorax carbo*, *Podiceps cristatus* and probably *Aythya fuligula*. The site is nationally important for populations of *Aythya fuligula*, *Bucephala clangula* and *Cygnus olor*.

River Little Brosna Callows SPA 004086: The site follows the River Brosna from its confluence with the River Shannon for approximately 9 km. The main habitat present is grassland that is improved to varying extents and which is seasonally flooded. The river channel is fringed by swamp and marsh vegetation. It regularly supports in excess of 30,000 waterfowl and is rated among the top five sites in the country for numbers of wintering birds. It supports internationally important populations of *Anser albifrons flavirostris* and *Limosa limosa*. As well as nationally important populations of: *Cygnus cygnus*, *Anas penelope*, *Anas crecca*, *Anas acuta*, *Anas clypeata*, *Pluvialis apricaria* and *Vanellus vanellus*. It has substantial nesting populations of *Gallinago gallinago* and *Tringa tetanus*.

Middle Shannon Callows SPA 004096: The site follows the River Shannon from Athlone, over c. 50 km. The main habitat present is humid grassland, improved to varying extents, that is seasonally flooded. The river channel is fringed by swamp and marsh vegetation. There is an extensive system of drainage channels, many of which support a diverse flora. It represents one of the most important wetland systems in the country. It is of International Importance for wintering waterfowl as numbers regularly exceed the 20,000 (mean of 34985 for the 5 winters 1994/94-1998/99). It supports an Internationally Important population of *Cygnus Cygnus* and nationally important populations of: *Cygnus olor*, *Anas penelope*, *Pluvialis apricaria*, *Vanellus vanellus* and *Limosa limosa*. It is also of high importance for breeding birds including the largest concentration of *Crex crex* in Ireland, *Coturnix coturnix*, *Vanellus vanellus*, *Gallinago gallinago* and *Tringa totanus*, *Locustella naevia* *Alauda arvensis* and *Anas clypeata*. In autumn and winter, *Circus cyaneus* is a regular visitor.

Slievefelim to Silvermines Mountain SPA: An extensive upland site mostly over 200 metres in altitude, rising to 694 m at Keeper Hill. Approximately half of the site is afforested. Roughly one-quarter of the site is unplanted blanket bog and heath. The site supports c. 3% of the all-Ireland population of *Circus cyaneus* and is among the top 5 most important sites in the country for the species. Habitat excellent for both nesting and foraging purposes. Also has nesting *Falco peregrinus*, *Falco columbarius* and *Lagopus lagopus*, the latter a Red Data Book species. *Falco columbarius* probably nests but a survey is required.

Figure 7 shows the location of Natura 2000 in the context of proposals in the Draft VEDP.

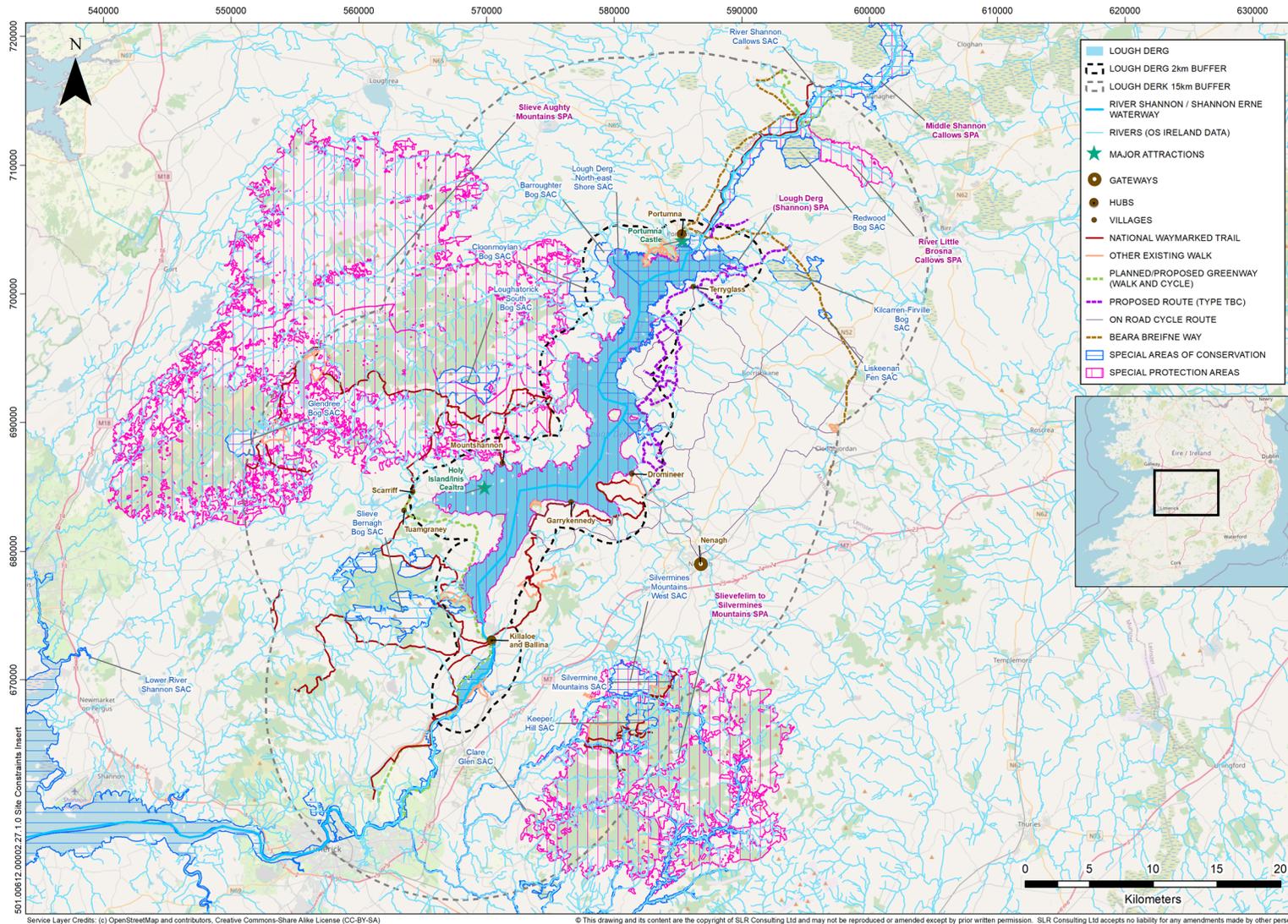


Figure 3 VEDP Environmental Constraints

5.2.2 Natural Heritage Areas and proposed Natural Heritage Areas

Natural Heritage Areas (NHA) are areas that are considered to be important for the habitats present or for the species of plants and animals supported by those habitats. Under the Wildlife Amendment Act 2000, NHAs are legally protected from damage from the date they were formally proposed for designation. Section 19(1) of the Act states that 'Where there is a subsisting natural heritage area order in respect of any land, no person shall carry out, or cause or permit to be carried out, on that land any works specified in the order or any works which are liable to destroy or to significantly alter, damage or interfere with the features by reason of which the designation order was made'.

In addition, a list of proposed NHAs (pNHAs) was published in 1995 but to date these have not had their status confirmed. Prior to statutory designation, pNHAs are subject to limited protection under various agri-environment and forestry schemes and under local authority planning strategies such as County Development Plans. Natural Heritage Areas and proposed Natural Heritage Areas are shown in Figure 10.

5.2.3 Species

Species most under threat include those linked to wetlands, uplands or sensitive to water pollution. The current status and trends of Ireland's species are presented in Figure 4.3 (NPWS, 2013). Levels of many species are reported to be stable, but a number of key or iconic species are declining. One of the species of greatest concern is the pollution-sensitive freshwater pearl mussel as only a few rivers have populations with even near adequate recruitment (NPWS, 2013).

Red Lists Species

Red Lists provide an objective assessment of species using the International Union for the Conservation of Nature (IUCN) categories and criteria. They identify species in most need of conservation interventions. The NPWS and NIEA co-ordinate Red Lists in Ireland, and these lists are available on the NPWS website. Current assessments of Irish Red List species are outlined below in Figure

. According to the latest Red List, Macro-moths (Lepidoptera), 43 species of Irish macro-moth are assessed as threatened to some degree (i.e. vulnerable, endangered or critically endangered), which represents 8% of the current Irish list. Fourteen species are considered to have become regionally extinct as they had not been recorded in the 50 years prior to 31 December 2012 (Allen et al., 2016)¹.

¹ Extract from Ireland's Environment 2016- An Assessment, EPA 2016

Figure 4.6 Conservation Status of Ireland’s Red List Species; Number of Species Assessed in Brackets (Source: NPWS)

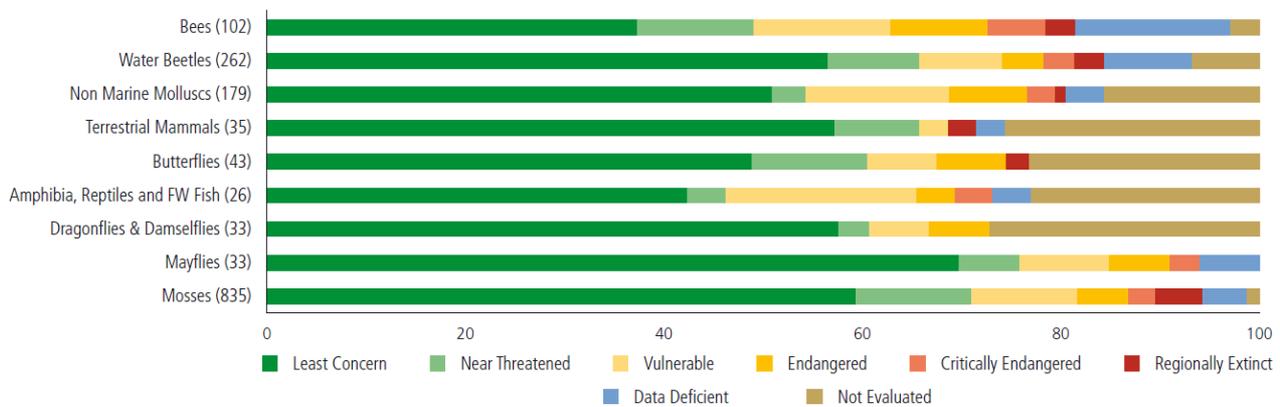


Figure 4 Conservation Status of Ireland’s Red List Species; Number of Species Assessed in Brackets (Source: Ireland’s Environment 2016- An Assessment, EPA 2016 / NPWS)

In 2014, BirdWatch Ireland and the Royal Society for the Protection of Birds (Northern Ireland) (RSPB NI) collaborated in producing a revised Birds of Conservation Concern in Ireland (BoCCI) list. Of 185 birds that breed and/or winter in Ireland, 37 were placed on the Red List and 90 on the Amber List, based on conservation status. Red-Listed breeding species include the barn owl, corncrake, grey partridge, grey wagtail and red grouse. Red-Listed breeding and wintering species include the curlew, dunlin, golden plover and Bewick’s swan. Two birds of prey that have recently been reintroduced, the white-tailed eagle and the golden eagle (see topic box “Reintroducing Birds of Prey to Ireland”), are both Red Listed².

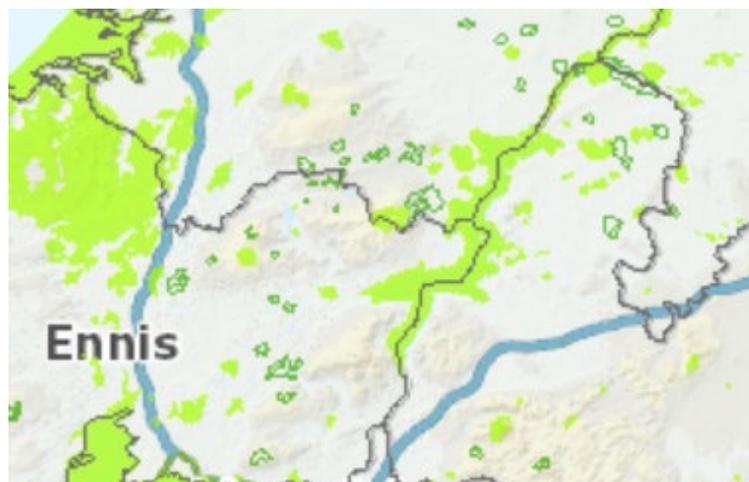


Figure 5 NHAs and PNHAs within the study area

² Extract from Ireland’s Environment 2016- An Assessment, EPA 2016

5.2.4 Curlew

The Curlew Conservation Programme (CCP) involves locally based teams of advisors, community engagement and nest protection officers, working closely with landowners and other local interests, to protect Curlew nesting attempts and to improve habitat quality. NPWS Conservation Rangers and management are also centrally involved in a number of areas.

In 2020, the Curlew Conservation Programme focussed on nine of the most important areas in Ireland for breeding Curlew, which include

- Stack's Mountains
- Lough Corrib (North) Lough Ree
- North Roscommon/Mayo
- Mid-Leitrim
- North Monaghan
- Donegal
- Slieve Aughty Mountains
- Laois-Kildare

The Slieve Aughty Mountains are within and in close proximity to study area for the VEDP.

5.3 Biosecurity

Invasive species present issues which concern the whole of the island of Ireland and pose threat to biodiversity. Under the objective of conserving and restoring biodiversity and ecosystem services in the wider countryside the national biodiversity plan identifies Target 4.4. which is for 'Harmful invasive alien species to be controlled and there is reduced risk of introduction and/or spread of new species.

Regulations on the prevention and management of the introduction and spread of IAS came into force in the EU in 2015 (Regulation (EU) No. 1143/2014; EU, 2014). These regulations seek to protect native biodiversity and ecosystem services from damage caused by IAS, as well as minimising and mitigating the effects they can have on human health and the economy.

The Regulations require Member States to implement early warning and eradication systems for listed species as well as establishing border controls and licensing systems to manage trade. Individual countries are also required to prepare management plans for the eradication or containment of listed species.

The National Biodiversity Data Centre (NBDC) has also developed an online invasive species database and an early warning system. In 2014, a report entitled Ireland's Invasive and Non-native Species – Trends in Introductions was published by the centre (O'Flynn et al., 2014). This report found that 13% of invasive alien species recorded in Ireland are high-impact IAS. The percentage of high impact species in Ireland is similar to that reported for other European countries.

Species such as the zebra mussel was recorded in 70 lakes, which is an increase of 20 lakes from the known populations in the previous report. As one of the identified sectoral Impacts of Climate Change for Ireland, it is anticipated that projected shifts in climate, temperature and precipitation may result in the increased occurrence of invasive species and competitive pressures on Ireland's native species. (Source: Climate Ireland).

5.3.1 Biosecurity for Invasive Species

Boats and watercraft have been known to introduce and spread environmentally damaging organisms such as invasive species and fish pathogens between waterbodies. These organisms, species and pathogens are transferred between waterbodies via a boat's bilge, wet well water, trailers, outboard motors anchor chains and boat hulls.

While there are currently no official biosecurity plans in place within the existing Shannon Navigation area, there are several standard practices and measures which are currently employed by anglers and routine users of most waterbodies, particularly before and after entering different waterbodies. Such standard practices include:

- Before moving between watercourses, to stop the boat and visually inspect all exposed engine parts, hull, for attached plant or animal material and debris. If the debris is present:
 - remove and safely dispose of the debris;
 - clean and disinfect all livewells and baitwells or any other source of contaminant water with aquatic disinfectant;
 - flush the bilge with aquatic disinfectant prior to proceeding to the new watercourse.
- Regularly cleaning the exposed part of the bilge area, hull, live wells, baitwells, decking and fixed equipment with aquatic disinfectant;
- Regularly cleaning the trailer and mobile equipment with aquatic disinfectant;
- Expelling the contents of, then cleaning the bilge pump with aquatic disinfectant;
- When the boat is removed from the water, the boat should be drained of all water. All cleaning and disinfecting protocols as mentioned above must be followed again to ensure that the boat is decontaminated prior to its next launch.
- When handling aquatic disinfectant, protective gloves should always be worn.

Other measures, dependent upon the type of watercraft or boat include:

- Routinely spraying the trailer, hull, bilge, livewells, baitwells, deck and fixed equipment with heated water (60 °C/140 °F) or aquatic disinfectant
- Routinely thoroughly cleaning all non-motorised watercraft (canoes, kayaks and sailboats) inside and out with aquatic disinfectant,
- All associated PPE and other equipment should be submerged in aquatic disinfectant for a minimum of 15 minutes. Where practicable, the interior of all non-motorised craft should also be immersed.

These basic biosecurity measures are the baseline activity for all boat and watercraft operators to prevent the threat of spreading invasive species, organisms and pathogens to aquatic and riparian systems. Figures 5 and 6 following provide more information on freshwater security.

5.4 Population and Human Health

5.4.1 Human Health

The 2016 Census provided some indicators regarding health. One question on the Census related to how the respondent felt about their overall health. The findings indicate that 87% of the population of Ireland consider themselves to be in “good or very good” health. Only 1.6% of the overall population reported themselves as being in “bad or very bad” health. Figure 6, following, provides a “heatmap” on the self-reporting of health by administrative area. It is noted that in the VEDP area **87.30%** of the population consider themselves to be in “good or very good” health which is above the national average. By increasing opportunities for physical activity, the VEDP is likely to facilitate improvements to physical and mental wellbeing within the resident population.

Table 5 Figures of Population with Good or Very Good Health in Ireland

County	Total Population by County	Very good health	Good health	Total	Percentage
Galway	179,390	106,570	50,910	157,480	87.79%
Tipperary	159,553	91,935	46,506	138,441	86.77%
Clare	118,817	69,375	34,397	103,772	87.34%
TOTALS	457,760	267,880	131,813	399,693	Average 87.30 %

Source: CSO Census 2016 Theme 12

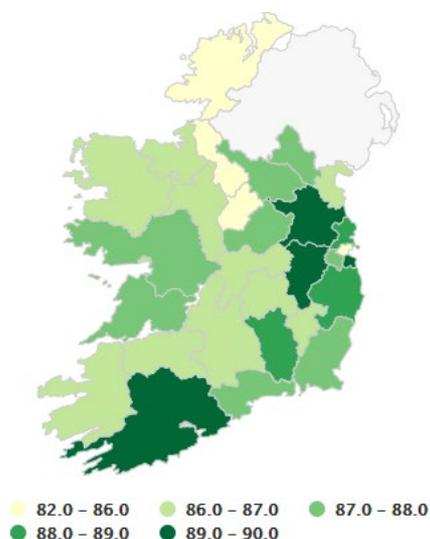


Figure 2 Percentage of persons with very good and good health, 2016 - Source CSO Profile 9

COVID 19

COVID 19 has had a major impact on human health across the world and since the beginning of March 2020 the pandemic has also negatively impacted on public health in Ireland. Measures to prevent the spread of the virus are being implemented across all sectors and areas of the country. As a service industry relying to some extent on international travel, tourism has been particularly badly affected and guidelines have been introduced to facilitate the continued operation of the sector. Ongoing efforts will be required by tourism operators and capital

projects proponents must also consider the design implications stemming from ongoing social distancing requirements.

5.4.2 Population

The VEDP area is a moderately populated area. CSO data does not relate exactly to the VEDP boundary, but the area encompasses three counties in the south of the country. Baseline population data is quantified by county first and settlement within the 5km inclusion zone of the area. After investigation into each county, the following settlements in Table 6, following, have been identified as within the 5km of the VEDP:

Table 6: Settlements Identified Per County within 5km Inclusion Zone of the VEDP

County	VEDP Settlement
County Galway	Ballinasloe Portumna
County Tipperary	Terryglass Ballinderry Dromineer Portroe Nenagh Ballina
County Clare	Scariff-Tuamgraney Killaloe O'Briensbridge Ardnacrusha

5.4.3 Populations by County and Settlement

An analysis of total resident population figures is critical to understanding the number of key receptors and users of the waterways and lake within the area. The Central Statistics Office changed a number of key measurements between the 2011 and 2016 census, including the boundaries of settlements. To compare population trends between 2011 and 2016, an analysis of Small Area Statistics were the only manner by which to record the population of settlement area where the settlement area has been changed. Table 7 in this section provide a clear breakdown of resident population by each settlement (2011) and by small area statistic (which encompass each settlement) for 2016. For consistency in measurements, Small Area Population statistics have been utilised for the overall population within the VEDP area.

Table 7 Population by Settlement in VEDP 5km Inclusion Zone

County	Settlement	Population by Settlement 2011	Population by Settlement 2016 (Small Area Statistics)
Galway	Ballinasloe	6,659	6,660
Galway	Portumna	1,530	1,450
Tipperary	Terryglass	142	144
Tipperary	Ballinderry	139	133
Tipperary	Dromineer	145	126
Tipperary	Portroe	468	461

County	Settlement	Population by Settlement 2011	Population by Settlement 2016 (Small Area Statistics)
Tipperary	Nenagh	8,439	8,656
Tipperary	Ballina	2,442	2,632
Clare	Scariff-Tuamgraney	816	770
Clare	Killaloe	1,292	1,484
Clare	O'Briensbridge	383	396
Clare	Ardnacrusha	1,414	1,383
TOTAL		23,869	24,295

Source: CSO SAPMAP 2011 and 2016 by legal settlement, towns/cities and small areas

Note* availability of detailed statistical data from NINIS by Settlement. Small Area Statistic encompasses a 5km radius from Corraquill and Aghalane.

Republic of Ireland and Counties Galway, Tipperary, and Clare

County Galway

County Galway has a significant area of shoreline along the Shannon and lakeshore on Lough Der, though the region is sparsely populated. Portumna is on the northern entrance to Lough Derg.

County Tipperary

County Tipperary also has a substantial shoreline to Lough Derg at the eastern boundary of the County. There are several smaller settlements in this area that are attractive visitor hubs.

County Clare

County Clare includes important destinations within the VEDP area. Killaloe/Ballina (Co. Tipperary) is a choice destination town for tourism and for those who utilise the waterway. Ardnacrusha currently is the only throughway for river travellers who traverse between Limerick and any other point along the Shannon Navigational area.

Table 8 Total Population by County within 5km Inclusion Zone

County	Total Population of Settlements in 5km Radius 2011	Total Population of Settlements and Small Area Statistics in 5km Radius 2016
County Galway	8,189	8,110
County Tipperary	11,775	12,152
County Clare	3,905	4,033
TOTAL	23,869	24,295

Source: CSO SAPMAP 2011 and 2016 by legal settlement, towns/cities and small area population statistics

Table 8 above provides a total population by county within the VEDP area.

Age Profile of Ireland

Census 2016 indicated that the population of Ireland was 4.7 million people, with a 63% urban and 37% rural divide. The average age of the population was 37.4 years, making Ireland one of the youngest populations in Europe. While the population has increased substantially in Leinster, it is noted that Ulster, Connacht and Munster have also experienced substantial growth. Figure 6 following provides a snapshot of the population pyramid of Ireland.

It is worth noting the following:

- There are two majority age groups- these are the aged 30-45 and the aged 0-5 groups;
- Age groups 0-45 make up 66% of the overall population;
- There is a significantly sized upcoming generation (currently aged 0-5)

These indicators demonstrate that the majority of the population is young, perhaps with young families, and that a significant portion of the population are young children. These age groups would be most likely to benefit from the Draft VEDP.

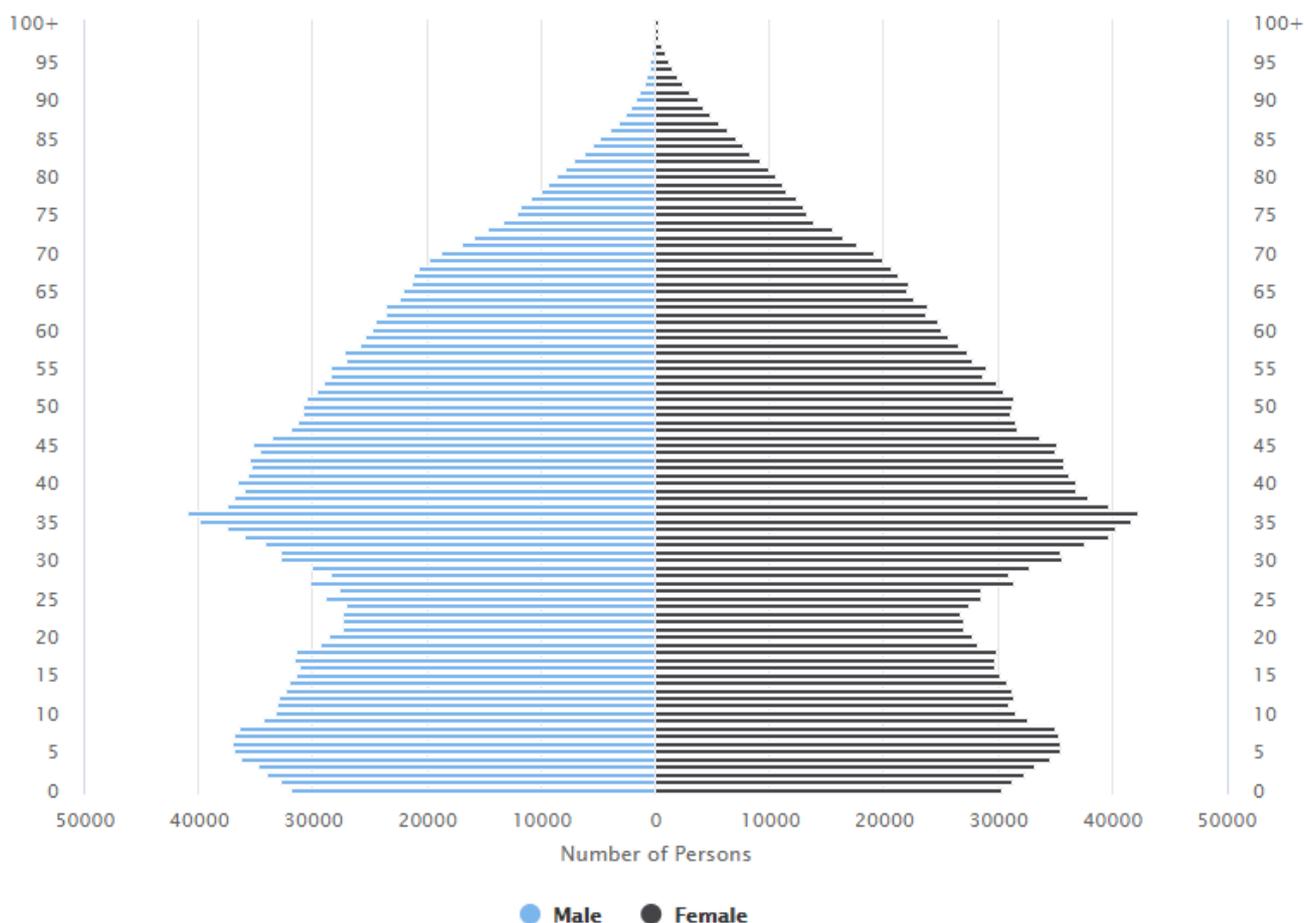


Figure 7 Population Pyramid of Ireland 2016

5.5 Geology, Soils and Land Use

Geology

Much of the VEDP area is underlain by limestones and bioclastic mudstones. The massive Waulsortian limestones are over 1200m thick in the Shannon Estuary area but are more typically 300 - 500 m thick. They are overlain by undifferentiated Visean limestones in the Lower Shannon area.

Soils

The rich soils of the Shannon region mean that agriculture is widespread. Over 70% of the land area is farmed. Livestock grazing on pasture land is the most widespread type of farming in the VEDP area. There is a healthy milk and meat processing industry. Though much of the land area is agricultural, there are also areas of forestry and peatlands.

Soils in the vicinity of Lough Derg are generally a mixture of peats, grey brown podzols, brown earths and gley soils. The west of the study area is dominated by poorly drained gley soils. The north, northeast and centre of the area consists mostly of well-drained grey brown podzols. There are also various smaller areas of poorly drained peats and well drained brown earths spread throughout the area. The CORINE landcover map in figure 15 shows large areas of pasture (yellow) and peatland (blue), interspersed with relatively small pockets of forestry as well as urban areas (red).

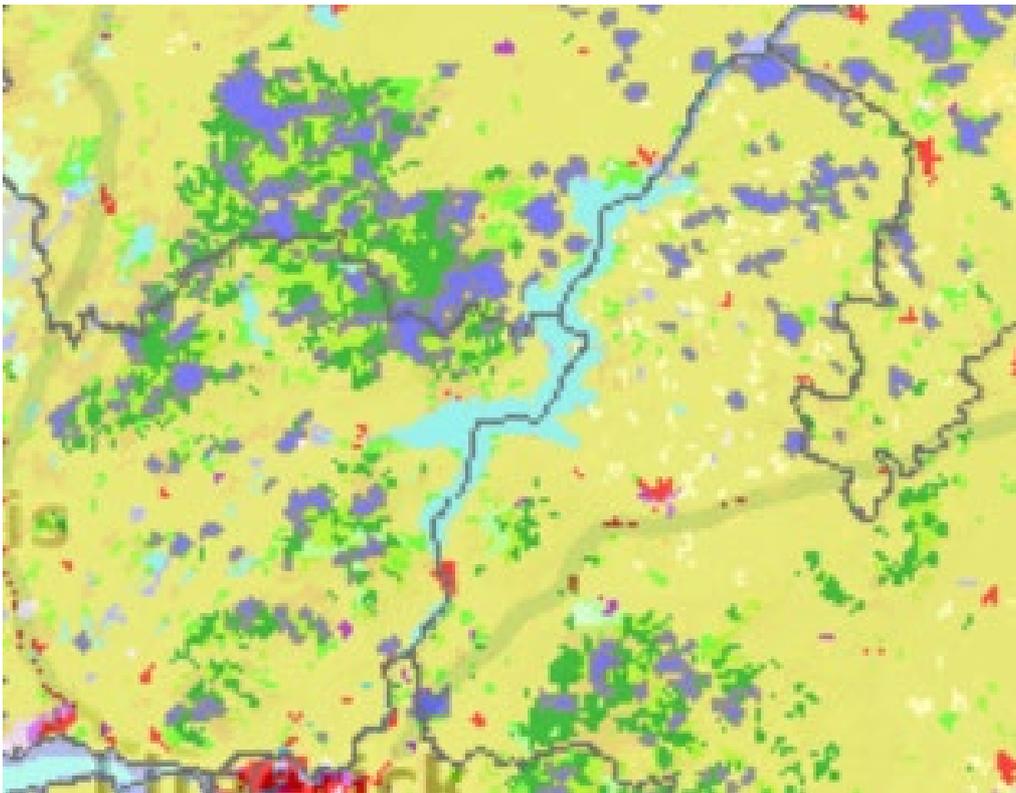


Figure 8 CORINE landcover (Source Environmental Sensitivity Mapping Webtool (www.enviromap.ie)).

5.6 Water

Since 2000, Water Management in the EU has been governed by the Water Framework Directive 2000/60/EC (WFD). Transposing legislation (S.I. 792 of 2009, European Communities Environmental Objective (Surface Water) Regulations 2009 as amended) outlines the water protection and water management measures required in Ireland to maintain high status of waters where it exists, prevent any deterioration in existing water status and achieve at least 'good' status for all waters.

The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving "good status" by 2015. All public bodies are required to coordinate their policies and operations so as to maintain the good status of water bodies which are currently unpolluted and improve polluted water bodies to good status by 2015.

An enhanced evidence base has been developed to guide national policies and the targeting of local measures. Technical assessments of 4,829 water bodies have been carried out, examining their status (quality) and whether

they are 'at risk' of not meeting status objectives in the future. Using this information, the River Basin Management Plan sets out national policies and regional prioritised measures.

Under Regulation 4 of the Groundwater Regulations 2010, a duty is placed on public authorities to promote compliance with the requirements of the regulations and to take all reasonable steps including, where necessary, the implementation of programmes of measures, to:

- a) *“prevent or limit, as appropriate, the input of pollutants into groundwater and prevent the deterioration of the status of all bodies of groundwater;*
- b) *protect, enhance and restore all bodies of groundwater and ensure a balance between abstraction and recharge of groundwater with the aim of achieving good groundwater quantitative status and good groundwater chemical status by not later than 22 December 2015;*
- c) *reverse any significant and sustained upward trend in the concentration of any pollutant resulting from the impact of human activity in order to progressively reduce pollution of groundwater;*
- d) *achieve compliance with any standards and objectives established for a groundwater dependent protected area included in the register of protected areas established under Regulation 8 of the 2003 Regulations [S.I. No. 722 of 2003] by not later than 22 December 2015, unless otherwise specified in the Community legislation under which the individual protected areas have been established.”*

River Basin Management

On April 17th, 2018 the Government published the River Basin Management Plan for Ireland 2018-2021. The Plan sets out the actions that Ireland will take to improve water quality and achieve 'good' ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2027. Ireland is required to produce a river basin management plan under the Water Framework Directive (WFD).

5.6.1 Surface Water

WFD Monitoring Programmes are undertaken in Ireland by the EPA. Overviews of the status for monitored waterbodies are published and made available online.

5.6.2 Shannon Upper and Lower River Basin

The VEDP boundary falls within the Shannon RBD Upper and Lower River Basin. The Shannon drains land from fifteen counties; Limerick, Clare, Tipperary, Offaly, Meath, Westmeath, Longford, Roscommon, Galway, Leitrim, Cavan, Sligo, Mayo, Laois, and a small portion of Fermanagh in Northern Ireland. The total area draining into the Shannon Upper and Lower River Basin is approximately 11, 600 km².

Current Management of Surface Water Levels at the Shannon

The Shannon Flood Risk State Agency Co-ordination Working Group was established by the Government to enhance on-going co-operation across all of the State Agencies involved with the River Shannon (<https://www.opw.ie/en/latestnews/articleheading,36110,en.html>).

The river level is primarily the result of the amount of rain that falls on the river catchment area. The water levels on the 3 lakes (Lough Allen, Lough Ree and Lough Derg) are controlled and managed by the ESB. The levels of Lough Derg are managed for the purpose of electricity generation. The levels in between the lakes are managed by Waterways Ireland for navigation purposes.

ESB's statutory role on the Shannon is to generate electricity at Ardnacrusha. The relevant legislation is the Shannon Electricity Act 1925, Electricity Supply Act 1927 and Electricity Supply (Amendment) Act 1934. In broad terms, under this legislation, ESB generates electricity at Ardnacrusha and manages the weirs, sluices and other works that are part of the Shannon Scheme.

Waterways Ireland is a navigation authority established under statute. As such Waterways Ireland is responsible for the management, maintenance and development of those waterways principally for recreation purposes. Waterways Ireland has no statutory function in relation to drainage matters or flood relief.

There is daily communication and a co-ordinated approach to management of the levels between Waterways Ireland and the ESB with the ESB managing levels for electricity production and Waterways Ireland managing the levels for navigation in the boating season.

The ESB manage the outlets of the major lakes through sluice barrages at Parteen/Ardnacrusha (Lough Derg). The outlet at Parteen/Ardnacrusha are controlled and managed by the ESB.

ESB Shannon Scheme

ESB generates electricity at Ardnacrusha by diverting water from the River Shannon downstream of Lough Derg. As such, the operation of Ardnacrusha generating station alleviates flooding in the lower Shannon by diverting flood waters away from the “old” river. If there was no generating station at Ardnacrusha the full flood would be flowing down the “old” Shannon river and downstream flooding in these areas would be more severe.

Ardnacrusha generating station uses up to a maximum of 400 cubic metres per second (tonnes per second) of water, and so up to this amount of water is diverted away from the “old” river. This water therefore bypasses areas that historically have been at greater risk of flooding. In a flood with 800 cubic metres per second (such as happened in December 2015), the ESB can divert nearly half of the water through Ardnacrusha and away from the “old” river. During large floods, excess water that exceeds the capacity of Ardnacrusha will flow down the “old” course of the Shannon, controlled by the operation of the gates at Parteen Weir.

5.6.3 Groundwater

The groundwater conditions of the VEDP area have been assessed using the GSI’s characterisation of the main groundwater bodies (GWBs) in the Lower Shannon region. The groundwater bodies are summarised in Table 9 and the locations are shown in Figure 13.

Details of each groundwater body are provided, including aquifer categories and lithologies. Karst features, where present, are also described as well as details on groundwater flow and discharges in the groundwater body. Regionally important aquifers are present in some groundwater bodies particularly in the upper and mid Shannon regions. The aquifer categories are also shown on Figure 13.

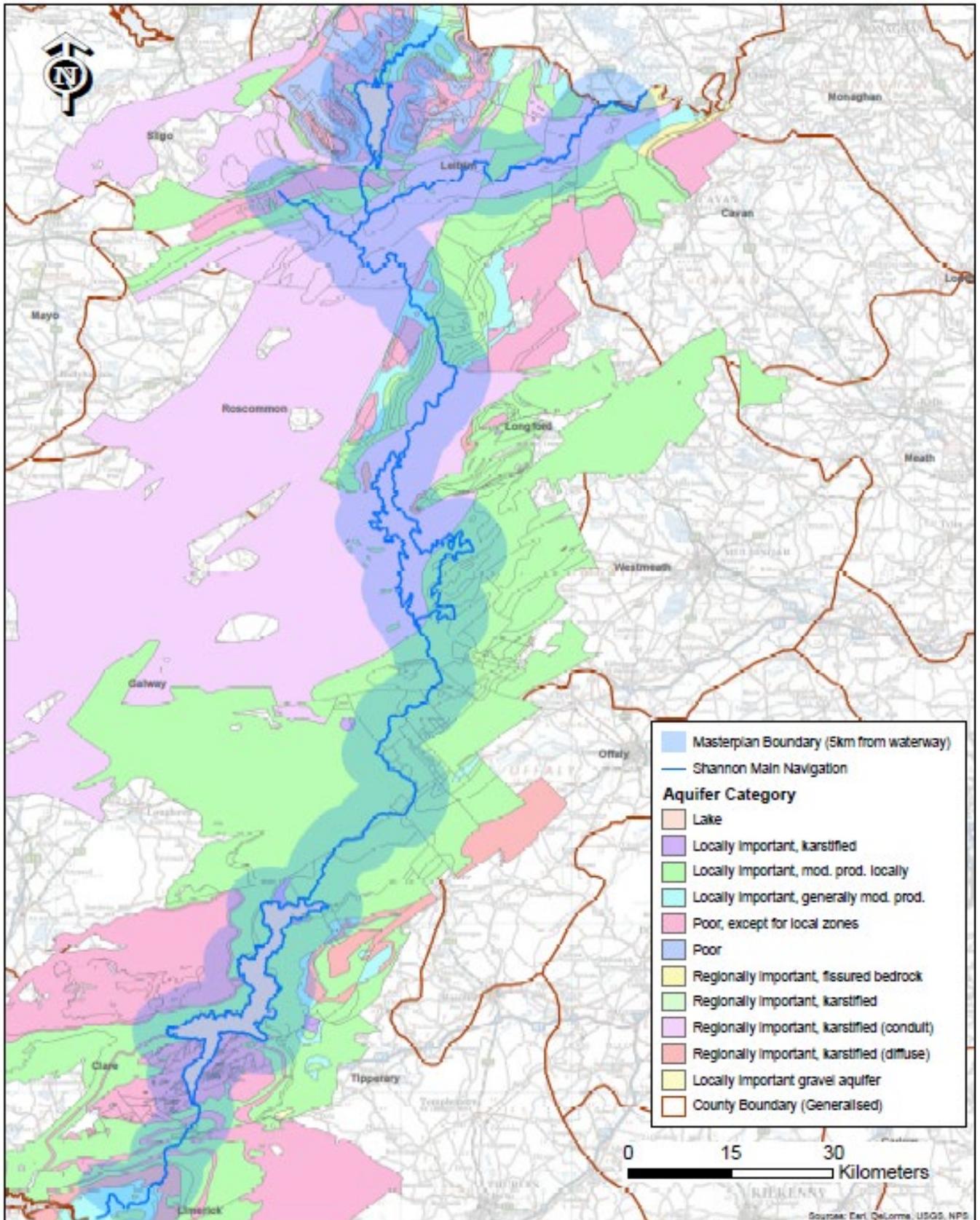


Figure 9 Location of Groundwater Bodies in the VEDP area (after GSI)

Table 9 Groundwater Body Summary

Groundwater Body	Key Characteristics
Lough Derg and Lower Shannon	
Nenagh	<p>Aquifer Categories: LI, PI, Lm, Rkd</p> <p>Mountainous in areas underlain by Silurian and Devonian rocks to flat-lying or gently undulating in areas underlain by the impure and pure limestones</p> <p>Generally low transmissivity and storativity rocks</p> <p>Groundwater discharges to springs and to the numerous streams and rivers crossing the aquifer, and to Lough Derg.</p> <p>There are several ecosystems in the GWB dependent on groundwater, including mineralised flushes.</p> <p>Three turloughs and two swallow holes known in the GWB.</p>
Lough Graney	<p>Aquifer Categories: LI, PI</p> <p>The terrain ranges between mountainous in areas underlain by Silurian and Devonian rocks to flat-lying or gently undulating in areas underlain by the impure and pure limestones.</p> <p>Groundwater discharges to springs and to the numerous streams and rivers crossing the aquifer, and to Lough Derg.</p> <p>There are several ecosystems in the GWB dependent on groundwater. Groundwater and surface water interactions require special attention where the terrestrial ecosystems within this GWB are dependent on a sustainable balance between the two.</p>
Tynagh	<p>Aquifer Categories: Mostly LI, PI to south west</p> <p>Springs occur especially where changes in topography around the base of the Slieve Aughty cause the water table to intersect the ground surface.</p> <p>There are several ecosystems in the GWB dependent on groundwater, including mineralised flushes and turloughs.</p>

5.6.4 Lough Derg & Lower Shannon

Nenagh Groundwater Body

The Nenagh groundwater body is bounded to the west by Lough Derg, and to the northeast by the contact between the Pure Unbedded and Lower Impure Limestones of this GWB and the Pure Bedded Limestones of the adjacent Lismaline GWB. The terrain ranges between mountainous in areas underlain by Silurian and Devonian rocks to flat-lying or gently undulating in areas underlain by the impure and pure limestones.

The groundwater body is comprised of generally low transmissivity and storativity rocks. The older rock units (i.e., Silurian and Devonian) are likely to have the lowest transmissivities, whereas the Pure Unbedded and Upper

Impure (i.e. younger rock units) will have better flow properties. Where gravels, extensive alluvium or very sandy till overlies the bedrock aquifer, this can contribute to the storage.

Flow occurs along fractures, joints and major faults. Within the pure limestones, transmissivity may have been enhanced further by dissolution of calcium carbonate along fracture and bedding planes. Flows in the aquifer are typically concentrated in a thin zone at the top of the rock. An epikarstic layer exists at the top of the Pure Unbedded Limestones, at least in the vicinity of Lough Derg.

Recharge occurs particularly in the upland areas, and where rock outcrops, or subsoils are thin. Much of the potential recharge runs off in the upland areas. Where the water table is close to the surface in upland or lowland areas, potential recharge may be rejected.

Depending upon the local topography, the water table can vary between a few metres up to >10 m below ground surface. Overall, groundwater flow follows topography, flowing generally westwards. Locally, groundwater flows to the surface water bodies.

Flow path lengths in the upland areas are short (≤ 300 m). The increased hydraulic gradient, due to the sloping topography, will allow groundwater to flow faster than if it were flowing through a similar rock type in low-lying land.

Groundwater discharges to springs and to the numerous streams and rivers crossing the aquifer, and to Lough Derg.

Due to the shallow groundwater flow in this aquifer the groundwater and surface waters are closely linked. There are several ecosystems in the GWB dependent on groundwater, including mineralised flushes.

In areas underlain by Pure Unbedded Limestones, there are three turloughs and two swallow holes known; swallow holes accept point recharge from surface waters, and turloughs act as both groundwater discharge and recharge points.

Lough Graney Groundwater Body

This groundwater body is bounded to the west, north and northeast by surface water catchments, to the southeast by Lough Derg and the River Shannon, and to the south by the contact with the karstified limestones of the Ardnacrusha GWB. The terrain ranges between mountainous in areas underlain by Silurian and Devonian rocks to flat-lying or gently undulating in areas underlain by the impure and pure limestones.

The groundwater body is comprised of generally low transmissivity and storativity rocks. As above, the older rock units (i.e., Silurian and Devonian) are likely to have the lowest transmissivities, whereas the Pure Unbedded and Lower Impure Limestones (i.e. younger rock units) will have better flow properties. Transmissivities are generally lower in the northern part of the GWB than in the south. Aquifer specific yield is low in all aquifers. However, where gravels, extensive alluvium or very sandy till overlies the bedrock aquifer (such as at Killaloe), this can contribute to the storage.

Flow occurs along fractures, joints and major faults. Faults within the rocks may act both as groundwater flow conduits and barriers. Within the pure limestones, transmissivity may have been enhanced further by dissolution of calcium carbonate along fracture and bedding planes. Flows in the aquifer are typically concentrated in a thin zone at the top of the rock. An epikarstic layer may exist at the top of the Pure Unbedded Limestones.

Recharge occurs particularly in the upland areas, and where rock outcrops, or subsoils are thin. Much of the potential recharge runs off in the upland areas. Where the water table is close to the surface in upland or lowland areas, potential recharge may be rejected.

Aquifers within this GWB are mainly unconfined. They are probably only confined where raised bogs with low permeability clayey bases overlie the aquifers. Depending upon the local topography, the water table can vary between a few metres up to >10 m below ground surface. Locally, groundwater flows to the surface water bodies and is determined by local topography; there is no regional flow system. Flow path lengths in the upland and

lowland areas are short (30-300 m). The increased hydraulic gradient, due to the sloping topography in the upland areas, will allow groundwater to flow faster than if it were flowing through a similar rock type in low-lying land.

Groundwater discharges to springs and to the numerous streams and rivers crossing the aquifer, and to Lough Derg. Due to the shallow groundwater flow in this aquifer the groundwater and surface waters are closely linked. There are several ecosystems in the GWB dependent on groundwater. Groundwater and surface water interactions require special attention where the terrestrial ecosystems within this GWB are dependent on a sustainable balance between the two.

Tynagh Groundwater Body

The groundwater body is bounded to the west, north and northeast by surface water catchments, to the southeast and south by Lough Derg.

The groundwater body contains older rock units (i.e. Silurian and Devonian) and younger rock units (Pure Unbedded and Upper Impure) has properties as above.

Flow occurs along fractures, joints and major faults. The faults within the Old Red Sandstone act both as groundwater flow conduits and barriers. Within the pure limestones and to a much more limited extent the Upper Impure Limestones, transmissivity may have been enhanced further by dissolution of calcium carbonate along fracture and bedding planes. Flows in the aquifer are typically concentrated in a thin zone at the top of the rock. An epikarstic layer probably exists at the top of the Pure Unbedded Limestones, at least in the vicinity of Lough Derg.

Recharge occurs as outlined above.

Aquifers within the GWB are mainly unconfined. They are probably only confined where raised bogs with low permeability clayey bases overlie the aquifers. Depending upon the local topography, the water table can vary between a few metres up to >10 m below ground surface. Overall, groundwater flow follows topography, flowing generally eastwards and southeastwards.

Locally, groundwater flows to the surface water bodies. Flow path lengths in the upland and lowland areas are short (≤ 300 m). The increased hydraulic gradient, due to the sloping topography in the upland areas, will allow groundwater to flow faster than if it were flowing through a similar rock type in low-lying land.

Groundwater discharges to springs and to the numerous streams and rivers crossing the aquifer, and to Lough Derg. Springs occur especially where changes in topography around the base of the Slieve Aughty cause the water table to intersect the ground surface.

Due to the shallow groundwater flow in this aquifer the groundwater and surface waters are closely linked. There are several ecosystems in the GWB dependent on groundwater, including mineralised flushes and turloughs. Groundwater and surface water interactions require special attention where the terrestrial ecosystems within this GWB are dependent on a sustainable balance between the two.

5.6.5 Source Protection Zones

A number of public water supplies are located within the VEDP area, with associated public supply inner and outer source protection areas. The following public water supplies (PWS) are shown to be within the VEDP area by the GSI:

- Whitegate PWS adjacent to Lough Derg
- Lorrha PWS, located near Portumna

5.6.6 Groundwater Quality - Groundwater Waterbodies at Risk

The following groundwater waterbodies to the south of the VEDP area were categorised as being at risk under the Water Framework Directive, according to the EPA:

- Limerick City East, IE_SH_G_138 Poor Chemical Groundwater Status

5.6.7 Flooding

A number of flooding events have occurred along the Shannon, in particular flooding events are noted by the OPW south of Ballina and in the Portumna area.

The River Shannon is slow moving and any flood waters stay within the flood plains for long periods. The presence of lakes and the restrictive capacity of the river channel has a marked effect in attenuating run-off resulting in a lag of many days between causal rainfall and resultant run-off.

The Shannon Flood Risk State Agency Co-ordination Working Group was established by the Government in January 2016. It has published and consulted on its Work Programme and it is a solutions-focussed group that added value to the Shannon CFRAM Study by ensuring the best possible level of co-ordination between all statutory bodies involved in flood risk management of the Shannon River Basin.

Flood Events

Details on flood events from the last 10 years have been obtained from floodmaps.ie, the OPW database. Many of the reported flood events were the result of extensive flooding on the Shannon which occurred in November and December 2009. The Met Éireann Monthly Weather Summary for November 2009 reported that persistent and often heavy rain and saturated ground conditions led to unprecedented levels of flooding in parts of the West and South. Rainfall totals for November 2009 were the highest on record at most monitoring stations. Rain or showers were recorded on almost every day, with between 22 and 27 wet days observed (days with 1mm or more rainfall), compared with the normal range of 13-20 wet days for the month of November.

Following this flooding, a water levels profile survey was undertaken by OPW staff and the water levels varied from 31.92m OD to 42.44m OD (Malin Head).

Record flooding hit the Shannon river basin in late November 2009. The Castleconnell, Mountpelier and Castletroy areas of Limerick County were severely affected as a result of the increased levels of water in the Shannon System. This increase in water levels subsequently necessitated the ESB to increase the amount of water discharged at Parteen Weir.

5.6.8 Shannon CFRAM Programme

The CFRAM Programme was the first phase in proactively addressing flood risk in Ireland. In the second cycle of the implementation of the EU 'Floods' Directive, from 2017 – 2021, it is foreseen that there will be a greater level of assessment of rural and dispersed risk, such as for individual homes and farm properties, agricultural risk and access roads to properties.

The OPW has undertaken a catchment-based Flood Risk Assessment and Management (CFRAM) Programme to give a clear and comprehensive picture of flood risk in areas at significant risk and impact of flooding and to set out how the risk can be managed effectively and sustainably. This is a strategic approach that recognises the need, in line with international best practice, to move to a more sustainable, planned and risk-based approach to dealing with significant flooding risks.

The study is focussing on areas of significant flood risk and impact that were identified through an assessment of areas known to have experienced flooding in the past and areas that may be subject to significant flooding in the future.

The 2018 CFRAM Flood Risk Management Plan for the Shannon Upper & Lower River Basin (UoM 25/26) includes the VEDP area. The purpose of the Plan is to set out the strategy, including a set of proposed measures, for the cost-effective and sustainable, long-term management of flood risk in the River Basin, including the areas where the flood risk has been determined as being potentially significant.

The Plan is for the period of 2018-2021 and sets out the feasible range of flood risk management measures proposed. The preparation of the plan is part of the implementation of Government policy on flood risk management, as set out in the Report of the Flood Policy Review Group (OPW, 20043), and addresses Ireland's obligations under the 2007 EU 'Floods' Directive (EU, 20074).

There is an existing Flood Relief Scheme providing protection to properties in the following communities. Ongoing maintenance will be undertaken of schemes including the following within the masterplan.

5.6.9 Surface Water Quality - Lake and River Waterbodies at Risk

The EPA has identified those surface water bodies *At Risk* of not meeting their environmental objectives. Following this, detailed assessment were undertaken by the EPA to identify the likely significant pressures preventing the water bodies from achieving the required environmental objectives. The locations of the *At Risk* surface water bodies are presented in Figures 15 and 16.

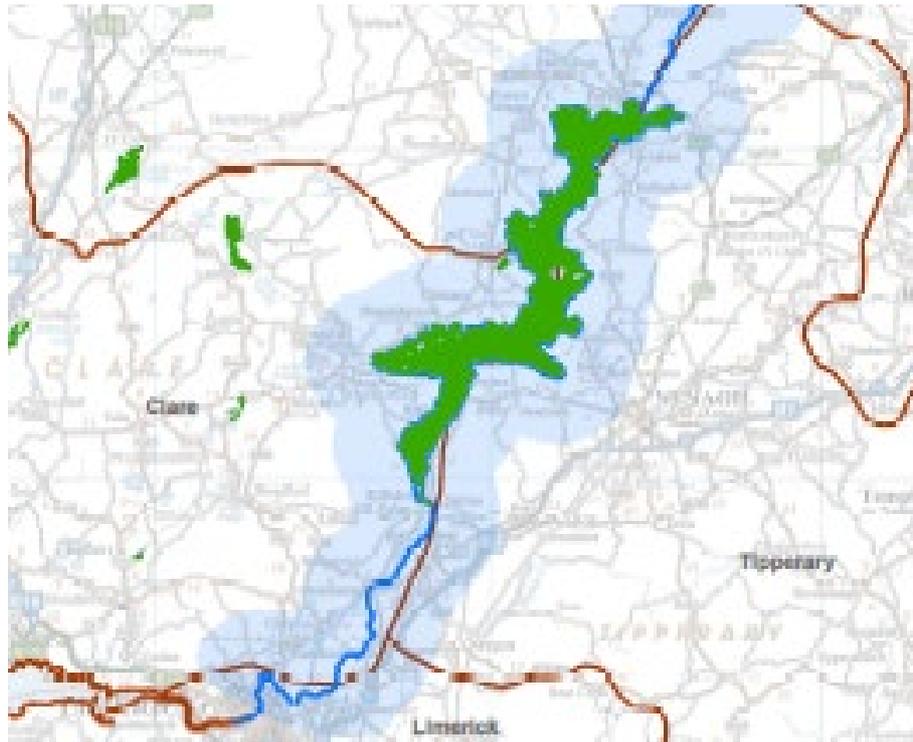


Figure 3 Lake Water Bodies at Risk

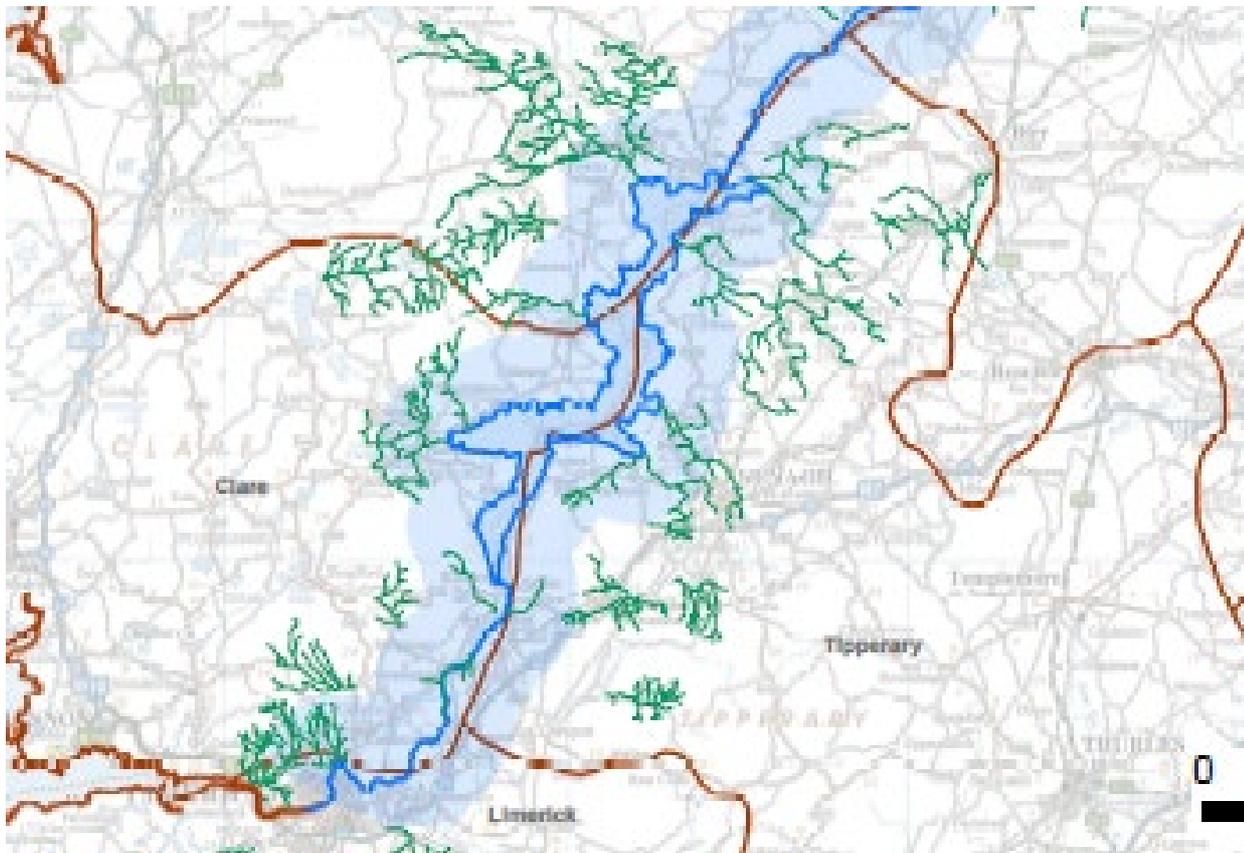


Figure 4 River Water Bodies at Risk

The following lake waterbodies within the VEDP area were categorised as being at risk under the Water Framework Directive, according to the EPA:

- * **Lough Derg TN**
Code IE_SH_25_191a
Poor Biological Status or Potential
Poor Fish Status or Potential

The Lough Derg WFD Management Unit Action Plan which was published with the Shannon RBMP in 2009 lists the pressures / risks to Lough Derg as including diffuse nutrient sources from agriculture (71%), unsewered properties (10%) and forestry (8%). 7% of nutrients was noted to come from wastewater treatment plants.

A number of river waterbodies which discharge to the lakes within the VEDP area are determined by the EPA to be at risk including:

- * **KILCROW_070**
Code IE_SH_25K010700
- * **NENAGH_070**
Code IE_SH_25N010800

5.6.10 Bathing Water

For water based recreational activities, particularly those that are immersive, such as swimming, faecal contamination from sewage and animals is a cause of concern for public health as swimming in contaminated waters can result in illness.

The major sources of pollution responsible for faecal bacteria in surface water come from sewage and from farmyards and farmland where animals are housed or put out to pasture. Where bacteriological pollution in surface waters is a problem, there will be an increase in pollution during periods of heavy rains and floods, when the bacteriological pollutants are washed into rivers and seas.

In terms of surface water pollution, potential point sources of sewerage in a catchment are from poorly maintained or over capacity Waste Water Treatment Plants, domestic wastewater treatments systems including septic tanks, miss connections in the sewerage network and storm overflow from combined sewers.

From desk based research carried out, there are no particular water quality standards for Blueways. However, there are a number of comparable quality standards for bacteria in surface water which could be used as the Environmental Quality Standard for a Blueway.

The bathing water standards most relevant to the VEDP area are the Blue Flag Water Quality Standard and the Bathing Water Directive.

The EU Bathing Water Directive (2006/7/EC)

The Bathing Water Directive sets quality standards and provides monitoring guidelines for EU bathing sites. It was first issued 40 years ago, in 1976, and revised in 2006. It requires the monitoring of bathing water quality. Member states are required to

- identify national bathing water sites,
- define the length of their bathing season
- establish a monitoring calendar for each bathing water site before the start of the bathing season.
- ensure that the analysis of bathing water quality takes place in accordance with the reference methods specified in the directive.
- make the results of the analysis available to the public.

Water quality Standards under the Bathing Water Directive are set out in Table 10 below for microbiological contamination.

Table 10 Bathing Water Directive Quality Limits for Inland Water

Parameter	Excellent Quality	Good Quality	Sufficient
Intestinal enterococci (cfu/100 ml)	200	400	330
Escherichia coli (cfu/100 ml)	500	1000	900

Besides the monitoring of bacteria concentrations, bathing (Blue Flag) water sites are also regularly inspected for other potential hazards such as cyanobacterial proliferation, chemical spills, marine litter etc. If such events affect bathing water sites and present a threat to human health, information is made available to the public at the bathing water's location (signs and boards), through the media, via bathing water profiles etc.

Bathing Locations

Ballycuggeran is on the south-west of Lough Derg. According to www.beaches.ie it is monitored by Clare County Council and is classified as achieving excellent water quality in 2018 based on the assessment of bacteriological results for the period 2015-2018. Ballycuggeran has achieved an excellent water quality rating for the four consecutive years 2015-2018. Annual water quality ratings are generally calculated using monitoring results over a four year period and are assess against stringent bacterial limits to protect bather health.

Portumna is on the north of the lake. According to www.beaches.ie it is monitored by Galway County Council and is classified as achieving excellent water quality in 2018 based on the assessment of bacteriological results for the period 2015-2018. Bathing place at Portumna has achieved an excellent water quality rating for the four consecutive years 2015-2018. Annual water quality ratings are generally calculated using monitoring results over a four year period and are assess against stringent bacterial limits to protect bather health.

5.6.11 Transboundary Issues

For the River Basin Management Plan for Ireland 2018-2021, the Eastern, South Eastern, South Western, Western and Shannon River Basin Districts will be merged to form one national River Basin District. In relation to the North Western and Neagh Bann International River Basin Districts a single administrative area will be established in the Republic of Ireland portion of these two IRBDs for the purpose of coordinating their management with authorities in Northern Ireland.

Overall coordination for the implementation of the Water Framework Directive between Northern Ireland and the Republic of Ireland is undertaken, on a bilateral basis of Ministerial level, between the Minister with responsibility for the Environment in the North and the Minister for the DoEHLG in the Republic.

5.6.12 Wastewater

Wastewater is an important infrastructural consideration. Table 11, following, provides a comprehensive list of the wastewater treatment plants within the Study Area which are to be upgraded, or have already been upgraded³.

³ According to www.water.ie on 7th June 2019

Table 11 Planned Upgrade to Wastewater Treatment Plants in the VEDP Area

Planned WWTPs	Status	Completion date	Works
Nenagh Water Conservation and Wastewater Network Project	Completed	2017	Upgrades and replacements made to the aging sections of the wastewater network
Limerick City Sewer Surveys	In progress		Survey being undertaken which is examining 22km of sewer pipe to construct a hydraulic model to prioritise the sewers in biggest need of upgrade.

5.7 Air

There are no air quality monitoring stations within the VEDP area. The VEDP area is split between ‘Rural West’ and ‘Rural East’ Air Quality Index Regions. In both regions air quality is classified as ‘2 - good’.

Air quality in the vicinity of the VEDP area is therefore considered to be good, due to the low development density and the limited concentrations of industrial operations in the area. There are a number of national and regional roads with run adjacent to, or in close proximity to, the VEDP area and there are potentially notable sources of local anthropogenic pollution.

5.8 Climate

The United Nations Intergovernmental Panel on Climate Change (2007), in its 4th assessment report (AR4) has stated that there is unequivocal evidence of climate change and that much of the global temperature increases *“since the mid-20th Century is very likely to the observed increase in anthropogenic greenhouse gas concentrations.”*

Climate change may have substantial impacts on coastal and riparian development with increases in flood risk and sea level change. In Ireland, wetter winters are anticipated in addition to these changes, which may result in further anticipation of climate change effects. The impacts of climate change may have serious consequences along coastal and large tidal river settlements and may have impacts on natural and artificial waterbodies.

Other effects of climate change include

- Increases in frequency and intensity of rainfall
- Increases in peak river flows
- Increased frequency of storms
- erosion

Future development must therefore be adaptable and resilient to climatic changes, and projects arising from the proposed Masterplan must be developed to ensure future drainage and flood risk are taken into account.

Sectoral Impacts of Climate Change must also be considered, particularly with respect to biodiversity due to increasing temperatures which will impact upon the geographical range and phenology (the timing of life cycle events) of native species. Projected shifts in climate, temperature and precipitation may also result in the increased occurrence of invasive species and competitive pressures on Ireland’s native species.

Critical infrastructure such as water, energy, communications, transport and emergency services are also at risk from a range of projected changes, including sea-level rise, increasing temperatures, changing rainfall patterns

and extreme weather events. In relation to water management the projected changes are expected to impact on water management and will exacerbate existing pressures in terms of water supply, quality and flooding. (Source: *Climate Ireland*).

Within the study area, the annual average air temperatures (measured at Clones, Co. Monaghan, Mullingar, Co. Westmeath and Shannon Airport, Co. Clare) from 1978-2010⁴ were 9.8°C, with an average of 3.47 hours of sunshine per day. Mean annual rainfall over this period was 959.77mm. Rainfall patterns are typical of what might be expected in terms of wind patterns and topography in the area. Table 14, following, provides the averages of sun, wind and rain for the weather station at Shannon Airport.

Table 12 Weather Averages 1978-2010

Weather Station	Average Temperature	Average Daily Hours of Sunshine	Average Monthly Wind Speed (m/s)	Average Rainfall per year
Shannon Airport*	10.7°C	3.5 hours	4.68m/s	977.6mm
*Figures taken from Met Eireann Historical data 1981-2010 – Southernmost long-term weather station in proximity to River Shannon				

5.9 Material Assets

The VEDP area encompasses road corridors within mostly rural areas with low density of development. These corridors link a variety of settlements, from village to city across the counties Galway, Tipperary, and Clare. The implementation of the VEDP has the potential to impact upon these material assets.

There are 3 significant roads which intersect with the VEDP area, including the M7, N52, and N65. The VEDP area encompasses 2 rail stations, Birdhill and Nenagh.

Development within the VEDP area has the potential to increase the intensity of usage in relation to material assets such as roads, walkways and cycleways and other recreational infrastructures. The intensification of use may result in the need for capacity improvements and investment in new material assets should avoid areas at risk of flooding and should focus primarily on improvements that relate to more sustainable forms of transport.

5.9.1 Fisheries and Aquaculture

The River Basin Management Plan for Ireland 2018 – 2021 highlights key measures aimed at moving towards meeting the environmental objectives of the Water Framework Directive. The key measures are in line with the pressures identified through the characterisation process and include:

- To work to address significant pressures arising from hydromorphology, the EPA and Inland Fisheries Ireland will improve assessment methods and knowledge in relation to the physical condition of rivers lakes and marine coastal waters to inform and support future management measures. The Office of Public Works (OPW) will incorporate mitigation measures when undertaking channel maintenance over 2,000 kilometres per year.
- In addition, the feasibility of implementing measures to improve fish connectivity in the Lower Shannon catchment will be assessed

⁴ Met Eireann “30 year averages”

It is also worth noting that areas of shellfish aquaculture are located further downstream of the masterplan area, in the Shannon Estuary. These areas are governed by the provisions of the **European Union Shellfish Waters Directive** which is designed to protect the aquatic habitat of bivalve and gastropod molluscs, including oysters, mussels, cockles, scallops and clams. The directive has a number of different strands:

- It requires all member states, including Ireland, to designate waters that need protection in order to support shellfish life and growth.
- It sets physical, chemical and microbiological requirements that designated shellfish waters must either comply with or try to improve.
- It allows for the establishment of pollution reduction programmes for the designated waters.

5.10 Cultural, Archaeological and Architectural Heritage

There is the potential for both direct and indirect impacts on archaeological and architectural features and their settings as a result of siting of new tourism facilities and supporting infrastructures. The key issues associated with the development of the masterplan and cultural heritage relates to:

- Impacts on archaeological features and setting;
- Potential impacts for unknown archaeological features during construction of new infrastructure and/or land cover changes; and
- Potential impacts for underwater archaeological features during construction of new infrastructure and/or upgrades.

5.10.1 Archaeological and Architectural Heritage

The sites and features considered as part of the cultural heritage baseline for the draft RBMP include those listed on the:

- Record of Monuments and Places (RMP), which is the statutory list of all known archaeological monuments in Ireland as compiled by the Archaeological Survey of Ireland, part of the Department of Arts, Heritage and the Gaeltacht;
- National Inventory of Architectural Heritage (NIAH), which identifies, records and evaluates the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. NIAH surveys provide the basis for the recommendations of the Minister for Housing, Planning and Local Government [previously the Minister for Environment, Heritage and Local Government] to the planning authorities for the inclusion of particular structures in their Record of Protected Structures; and
- United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage List, which includes cultural and natural heritage sites around the world considered to be of outstanding value to humanity.

At present there are no UNESCO sites within the VEDP area.

Any construction activity has the potential for direct negative impacts on heritage features, especially in areas known for rich heritage such as watercourses, hilltops and historic transportation corridors. There is potential during the course of development to uncover new heritage features. There is also potential to enhance existing heritage sites through incorporation in detailed design which may be a step towards the overall preservation and restoration of cultural heritage sites.

5.10.2 Industrial Heritage

There are a number of sites such as buildings and structures listed for their Industrial heritage importance within the National Industrial Engineering Heritage (NIEH) maintained by the Engineering Department of Trinity College.

There are a number of water-related engineering features listed, for example: the engineering complexes of the adjacent water mills, bridges and weirs, lighthouses and breakwaters.

5.10.3 Underwater Archaeology

Ireland's waterways – both marine and freshwater – have been central to the development of life in Ireland since the first water craft crossed the seaways from Britain and the Continent almost 10,000 years ago. Waterborne vessels of various shapes and sizes have explored the coast and used the rivers as route ways into the interior where settlements were established, resources exploited, trade developed and conflict often took place over territory and control of the same resources and waterways.

The underwater cultural heritage is a finite and irreplaceable resource, with both natural and manmade pressures threatening its preservation, which can include expanding marine development, threats from treasure hunting, unregulated salvage or greater erosion of our coastal areas as a result of climate change.

5.11 Landscape and Visual Amenity

In 2002, Ireland ratified the European Landscape Convention which promotes the protection, management and planning of landscapes. The National Landscape Strategy for Ireland 2015-2025 was published “to ensure compliance with the European Landscape Convention and establish principles for protecting and enhancing the landscape while positively managing its change.”

Article 1a of the European Landscape Convention defines landscape as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”.

This definition has been included in the Planning and Development (Amendment) Act 2000 as amended, along with the requirement that objectives relating to landscape shall be included in development plans. Owing to this, County Development Plans typically contain objectives/policies to conserve scenic viewpoints, scenic routes, areas of high amenity or similar. However, the types of landscape designations and levels of protection vary considerably from county to county.

Similarly, this applies to Landscape Character Assessments (LCAs), which are available for most counties, but are uncoordinated and provide different levels of detail. The National Landscape Strategy contains an objective for the development of a National Landscape Character Assessment, which is awaiting implementation. The absence of a National Landscape Character Assessment, which will impede the consistent assessment of potential impacts.

The key issues associated with the development of the VEDP and landscape relate to:

- impacts on designated landscapes, e.g. due to the visibility of potential new tourism developments or alterations to existing sites;
- impacts on landscape character, e.g. due to land use changes or due to increased visitor numbers, resulting in changes to how a landscape is experienced;

The VEDP area comprises a variety of landscapes which include lakelands, mountains and rolling farmlands.

There are also a number of designated landscape areas that are found within the VEDP area, including Amenity zones, Tourism Conservation Zones, Areas of Village Character, Local Landscape Policy Areas. Many of the landscape classifications are designated due to their landscape value, wildlife value and landscape heritage value. These classifications may seek to limit or prevent development that diminishes the quality of the local landscape or may be intrusive.

Other landscape designations may include High Landscape Areas, such as the Erne-Shannon Canal Corridor, and Scenic Viewing points which may be found throughout the study area. These designations may recognise the significant value of local landscape and will also seek to minimise visually intrusive developments upon landscapes of scenic beauty.

The VEDP Area may also hold additional landscape features, including Areas of Secondary Amenity and areas of Scenic Quality. These features may be highly sensitive to any new development. Extensive development in these areas should be avoided if possible so as to minimise intrusion into the scenic qualities of the area.

Landscape Character

The VEDP boundary therefore crosses the boundaries of three counties i.e. Tipperary, Clare and Galway respectively.

As mentioned above the LCAs provided for each of these counties vary with regard to the detail provided and were not coordinated with the relevant neighbouring counties. Considering these inconsistencies, it was decided that for the purpose of landscape the masterplan area is sub-divided into 9 general landscape units (LU), as listed below. These subdivisions are based on any high level descriptions made in the available LCAs (e.g. uplands, boglands, lakelands, etc.), as well as distinct changes of the river morphology, such as when the Shannon widens to form one of the lakes along the course of the river. They take account of landform (i.e. topography) and land cover (e.g. grassland, boglands etc.). The extent of each of the landscape units is illustrated in Figures 17, 18, 19 and 20.

- **LU1 –Shannon Headwaters Uplands.** Description: small winding river, set in narrow undulating farmed river valley, adjoined by steeply sloping mountainsides.
- **LU2 – Lough Allen.** Description: large lake, surrounded by a narrow band of farmed undulating land, adjoined by steeply sloping mountainsides.
- **LU3 – Drumshanbo to Roosky and Lough Key Lakelands.** Description: series of small to medium sized lakes along the course of the River Shannon, as well as in the wider area, surrounded by gently undulating farmed land.
- **LU4 – Shannon-Erne Lakelands.** Description: series of mostly small lakes along the Shannon-Erne Waterway, surrounded by gently undulating farmed land.
- **LU5 – Roosky to Lanesborough Shannon Boglands.** Description: gently winding large river, surrounded by extensive flat boglands, as well as farmland.
- **LU6 – Lough Ree.** Description: large lake surrounded by flat (north) to gently undulating (south) farmland, as well as some boglands.
- **LU7 – Athlone to Portumna Shannon Callows.** Description: gently winding large river, set in extensive farmed floodplains, adjoined by numerous boglands.
- **LU8 – Lough Derg.** Description: large lake surrounded by flat (north) to gently undulating (central) to sloping farmland, as well as some boglands (north).
- **LU9 – Killaloe/Ballina to Limerick Shannon Farmland.** Description: gently winding large river, as well as the Headrace Canal, set in very gently undulating farmland.

The VEDP are forms part of Landscape Unit 8 and 9.

Protected Views and Scenic Routes

While each of the twelve counties provides slightly different landscape designations, it was found that most of them have designated a type of protected view and/or scenic route.

Existing Environmental Pressures / Problems: Landscape

- lack of consistent landscape character assessments and landscape designations throughout the masterplan area, resulting in different importance placed on the protection of landscape in different areas;
- the potential for poor design and siting of proposed development, having impact on existing views and landscape setting;
- changes to existing land uses resulting in impacts on landscape character.

5.11.1 Environmental Sensitivity Mapping

Further information on environmental sensitivities in the plan area which will help inform the need for project level assessments is available from the EPA's Environmental Sensitivity Mapping Webtool (www.enviromap.ie). See map extract below.

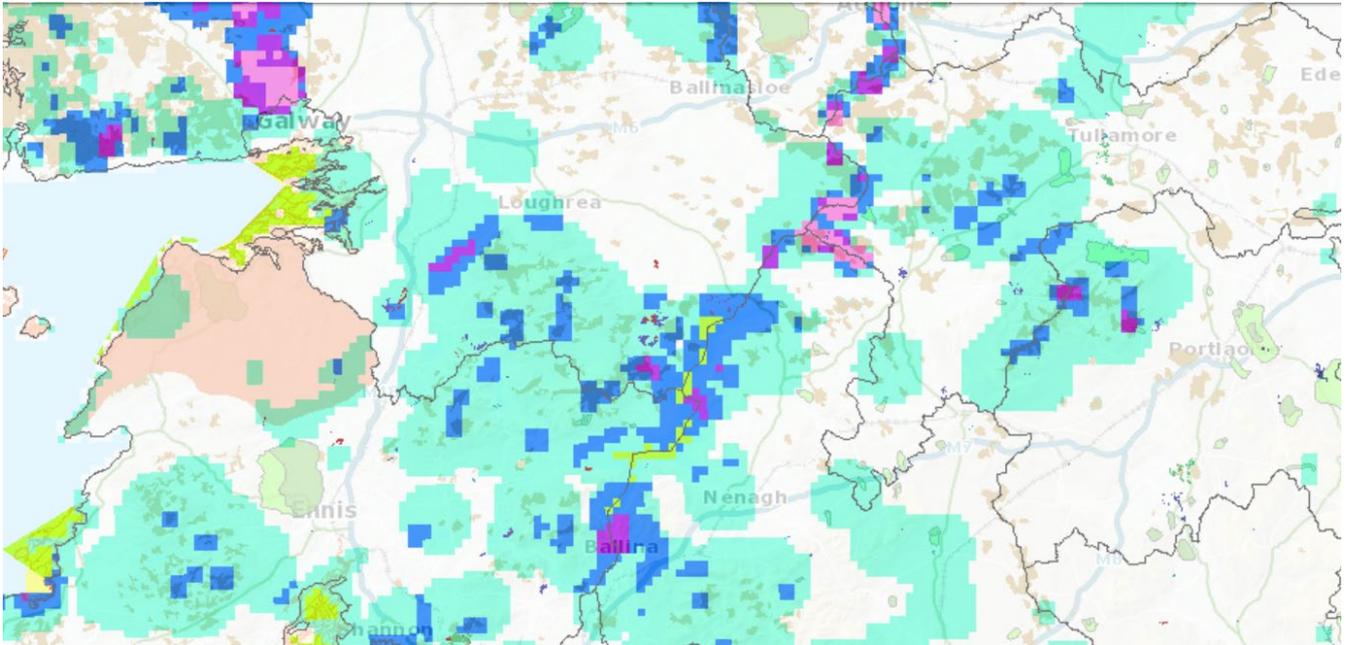


Figure 12 Lough Derg - Environmental Sensitivity Mapping (Source Environmental Sensitivity Mapping Webtool (www.enviromap.ie)).

6.0 Assessment Framework

6.1.1 SEA Objectives for the VEDP

The Draft VEDP has been assessed against the SEA Objectives in order to examine the significant likely environmental impacts of the plan.

The SEA Objectives, including their indicators can be found in Table 15, following.

Table 13: SEA Objectives for Lough Derg VEDP

Ref	Environmental Objective	Indicator
1 BIO	Conserve and enhance habitats and species, with priority protection afforded to sites and species designated under the Habitats Directive.	Loss of habitats and species
2 BIO	Prevent the spread of invasive species	Occurrence of invasive species
3 HEA	Improve health and wellbeing by improving opportunities safe and sustainable transport	Public transport availability Numbers participating in walking and cycling activities
4 WAT	Protect and improve the quality of surface and ground water bodies	WFD water status of surface and groundwaters
5 WAT	Protect water levels	WFD water status of surface and groundwaters
6 WAT	Minimise development in areas of flood risk, where flood risk compatible development is proposed ensure that flood risk does not increase elsewhere.	Interaction with flood extents
7 CLI	To adapt and mitigate the effects of climate change	No of zero carbon tourism developments in the masterplan area Number of people using walking, cycling and public transport as a means of transport
8 HER	To protect the integrity and authenticity of cultural heritage	Status and of cultural heritage features
9 LAN	To protect landscape character, minimise the loss of historic landscape features such as mature trees and hedgerows and scenic views	Number of developments subject to Landscape and Visual impact assessment
10 SOIL	To protect soil resources and minimise the loss of the high quality agricultural land	Area of agricultural land lost Area of cut away bog remediated

7.0 Description, Evaluation and Selection of the Alternative Plan Scenarios

One of the critical roles of the SEA is to facilitate an evaluation of the likely environmental consequences of a range of alternative scenarios for the future development of the plan area. In preparing this tourism masterplan, the following three alternatives were considered, each focusing on a different spatial approach to the development of visitor experiences and associated tourism services and infrastructure:

- Alternative 1: Consolidation and Improvement to existing Tourism Infrastructure and Visitor Experiences and to provide new attractions in existing settlements;
- Alternative 2: Develop major new visitor attractions on or alongside the water/river; or
- Alternative 3: Do nothing.

7.1 Evaluation of Alternative Scenarios

The VEDP alternatives have been assessed for their broad impact on each of the strategic environmental objectives. This shows that on balance, alternative 1 which is associated with its focus on the re use and regeneration of existing tourism facilities and infrastructure, performs better. Whilst in some cases increased visitor numbers will mean that upgrades to existing infrastructure maybe required it is generally considered that the cumulative environmental effects on soil, air, water will be minimised and captured using this approach. Indeed the socio economic benefits are also likely to be greatest under alternative 1 as the economic benefits will accrue in areas where the existing population is highest.

Ref	Environmental Objective	Alternative 1	Alternative 2	Alternative 2
1 BIO	Conserve and enhance habitats and species, with priority protection afforded to sites and species designated under the Habitats Directive.	✓	x	x
2 BIO	Prevent the spread of invasive species	x	xx	x
3 HEA	Improve health and wellbeing by improving opportunities safe and sustainable transport	✓✓	✓	0
4 WAT	Protect and improve the quality of surface and ground water bodies	✓✓	xx	x
5 WAT	Protect water levels	0	0	0
6 WAT	Minimise development in areas of flood risk, where flood risk compatible development is proposed	✓✓	xx	x

Ref	Environmental Objective	Alternative 1	Alternative 2	Alternative 2
	ensure that flood risk does not increase elsewhere.			
7 CLI	To adapt and mitigate the effects of climate change	✓	x	x
8 HER	To protect the integrity and authenticity of cultural heritage	✓	0	0
9 LAN	To protect landscape character, minimise the loss of historic landscape features such as mature trees and hedgerows and scenic views	✓	x	x
10 SOIL	To protect soil resources and minimise the loss of the high quality agricultural land	✓	x	x

This section summarises the evaluation of the Alternative Scenarios set out in the preceding Table.

7.1.1 Alternative 1

Consolidation and Improvement to existing Tourism Infrastructure, Visitor Attractions and Experiences and to provide new attractions in existing settlements

Traditionally Lough Derg been a popular destination for both overseas and domestic visitors and the height of its popularity coincided with popularity in angling and emergence of the all island boat hire industry which acted as the cornerstone of Ireland's tourism product in the 1990. The area and the popularity of this product in particular has since declined, leaving behind a variety of underused hotels, jetties, harbours and boats. A key issue of the VEDP is the need to address the fall off in visitor number and regenerate the visitor infrastructure, services and towns that depend on the tourism industry as a basis for their economy.

Environmental impacts

The central environmental benefit of this alternative is associated with its focus on the re use and regeneration of existing tourism facilities and infrastructure and the regeneration of town centres. Whilst in some cases increased visitor numbers will mean that upgrades to existing infrastructure maybe required it is generally considered that the environmental impacts on air, water will be captured using these specific infrastructure upgrades and therefore minimised in this scenario. Indeed, the socio-economic benefits are likely to be greatest under alternative 1 as the economic benefits will accrue in areas where the existing population is highest.

7.1.2 Alternative 2

Develop major new visitor attractions on or alongside the water/river.

Lough Derg is located within a predominantly rural area which means that visitor infrastructure in terms of attractions, accommodation and associated activity is also low. Generally, speaking, the study area lacks any attractions of scale. The development of new attractions of scale will be required to invigorate the visitor offer and experience. Several locations for new attractions were identified and considered during the preparation of the VEDP however these would require the development of green field sites.

Environmental impacts

The environmental impacts associated with developing wholly new visitor attractions within the VEDP area are dependent on the nature, scale and location of the development and are potentially wide ranging.

7.1.3 Alternative 3:

Do nothing

The do nothing scenario was considered prior to the commissioning of the VEDP. With the emergence of Ireland's Hidden Heartlands brand, a requirement for a planned and coordinated approach was established. Without a masterplan in place, a number of potential disbenefits and environmental impacts would accrue.

Environmental impacts

The do nothing and business as usual approach was not considered appropriate on the basis that it would result in poor value for money in terms of any future investment as well as a potentially greater scale of environmental impacts associated with significant levels of unplanned and uncoordinated development. Without a plan led approach, the opportunity to test and consult on the strategy in accordance with the requirements of the Strategic Environmental Assessment Directive would also be missed.

7.1.4 Selection of Preferred Alternative

The preferred alternative which emerged from the evaluation process is **Alternative 1** which is the consolidation of and improvement to existing tourism infrastructure, visitor attractions and experiences and the provision of new attractions in existing settlements within the VEDP area. This has the fewest potentially negative impacts on the SEA objectives set out in Section 6.

This scenario contributes towards the protection of the environment and conforms to high level planning objectives around the prioritisation of development around existing infrastructure and settlements.

By applying appropriate mitigation measures - including those which already have been integrated into the VEDP - potential adverse environmental effects which could arise as a result of implementing this scenario are likely to be avoided, reduced or offset.

Section 8 of the Environmental Report evaluates the individual strategic aims and objectives which have been prepared to realise the selected scenario.

8.0 Assessment of Plan Effects Likely Significant Effects on the Environment

8.1 Do Nothing / Evolution of the Environment in the Absence of the Masterplan

In the absence of the VEDP, the plan area would be much unchanged from the present circumstances. Natural increases in visitor numbers, both overseas and domestic would continue in Lower Shannon area.

Fragmentation of existing recreational infrastructure may become united in some fashion through the provision of other plans, programmes and strategies, but the provision of additional recreational infrastructure may be fragmentary in development. Wastewater treatment facilities may not be increased to support additional tourist numbers. Bio-security provision and water quality monitoring may also be fragmentary.

In the absence of a VEDP, Lough Derg, its surrounding village and the numerous walkways and existing recreational infrastructure would remain in their current state, without additional investment and maintenance. Much existing recreational infrastructure including walkways, trails, blueways, cycleways and boating will continue as it currently does.

8.1.1 Biodiversity, Flora and Fauna

The biodiversity, flora and fauna within the VEDP study area will likely remain in its current state. Agricultural development will continue to impact through continued degradation of local water quality. The semi natural and natural areas within the VEDP area will eventually become impacted by human development, or it will go through the natural succession process with evolving alterations of flora and fauna to continue over time until a dominant and stable condition is achieved. In its current state, it is likely that there will be a loss of local biodiversity, flora and fauna due to a continued cumulation of impacts from agriculture and other rural development. There is unlikely to be a change in the designated/protected areas within the study area.

8.1.2 Population and Human Health

The influence of national policy such as *Project Ireland 2040* along with social and increased employability factors are impacting net migration between the rural and urban areas. In rural areas within the study area, most employment opportunities centre around agriculture and agriculture related activities, with occasional manufacturing and tourism jobs. Due to this lack of employable diversity, it is likely that younger generations will continue to migrate towards urban areas. According to CSO data, the migration of the younger generations to urban areas is on the increase. However, more people are choosing to move to rural locations for a number of reasons. It is considered therefore, that natural population levels in the study area will remain stable in the future.

In relation to tourism, it is likely, in the absence of a VEDP, that the tourism industry will remain underdeveloped in many areas where there are not currently other strategies in the proposal stage.

Human health, in terms of life expectancy and general wellbeing will likely remain unchanged in the near future, but may increase due to factors which are outside the scope of the proposed Masterplan.

8.1.3 Geology, Soil and Land Use

In the absence of a VEDP, it is unlikely that there will be significant changes to the geology, soil or land use in the study area. There may be areas of small improvements of soil and land in agricultural areas. There may also be the loss of more natural land to agriculture and agricultural land due to the expanding urban areas. These however would not be likely due to the absence of the VEDP.

8.1.4 Water

In the absence of a VEDP, the water quality in the study area may see little change but would be monitored and protected under the Water Framework Directive (WFD) and other European and National water protections. The water status objectives for the waterbodies in the study area are to be restored; however, many waterbodies such as Upper Lough Erne are located in cross-border and in relatively remote locations, which add additional jurisdictional issues and may lower the prioritisation of restoring the waterbodies in favour of other more populated waterbodies.

Future flooding within the area may remain prevalent, despite the aims of the EU Flood Directive to reduce and manage floods that pose a threat to human health. The masterplan study area is partially cross border in nature, in an area with low population and a low development density. In areas further south along the Study Area, populations and development density are much higher and will therefore be the priority of the EU Flood Directive for the protection of human health, infrastructure and property.

In the absence of a VEDP, the supply of water for business and household consumption would rely on the existing infrastructure and supply in the study area. There would be slight increases in demand pressure as the population increases naturally within the study area.

8.1.5 Air

In the current timeframe, the air quality along the length of the VEDP area is considered to be of good quality. In more densely developed areas such as Athlone and Limerick, there are low levels of pollutants like nitrogen dioxide and other particulates. Whilst these reflect positively upon the air quality of the area, increasing levels of road traffic (particularly along busy roads), as well as the absence of local sustainable transport resources, are likely to contribute towards enhanced levels of traffic related pollutants into the atmosphere. In the absence of the Masterplan there would be less opportunity for local sustainable transport to replace air pollutant emitting automotive transport along some of these corridors within the Masterplan study area.

8.1.6 Climate

Climate change has been predicted to occur in the future. Climate change is particularly important when examining future development and what mitigation measures may be employed to offset more extreme conditions into the future. Some of the impacts of climate change include:

- sea level rise as a result of human made greenhouse gas emissions (GHG);
- changes in rainfall patterns;
- changes in temperatures and more temperature extremes;
- an increase in extreme weather;
- an increase in the frequency of droughts.

In the absence of the Masterplan, the above listed changes are both likely and predicted to occur; however, there would be limited opportunities to develop and utilise local sustainable transport options to reduce GHG emissions from visitor generated automotive transport within the study area.

8.1.7 Material Assets

The absence of the VEDP would result in an unlikelihood of any significant changes to the current material assets within the study area. There would also be an unlikelihood for infrastructural improvements in the future, unless there are future plans, masterplans or strategies which provide the opportunity for them. Planned infrastructural and service related changes in the future would evolve independently from the absence of this VEDP. Planned energy and transport developments and upgrades would also independently evolve in the absence of the VEDP.

While the River Shannon and other waterways currently within the VEDP area are existing assets, there would be no wider secondary development in the area as a result of the VEDP. The absence of a VEDP would play no

role in the numbers of visitors to the existing assets of the Study area. The most significant impact in the absence of a plan, however, would be the uncontrolled growth of visitors and their associated impacts on the existing assets and infrastructure within the VEDP boundary. If uncontrolled, there is a likelihood of a deteriorating water quality due to the continued increase of the assets and infrastructure, including septic tanks, pump-out facilities, lack of infrastructure and other issues.

8.1.8 Cultural, Archaeological and Architectural Heritage

In the absence of the VEDP, heritage features within and adjacent to the plan area would continue to degrade from un-managed use of hiking trails leading through cultural heritage features and waterfront features. Some heritage features may be lost to nature or in the development process of other developments not associated with the Masterplan. Without the development of the VEDP, there is potential that heritage features in the area may remain inaccessible, not preserved, undiscovered and potentially not restored.

8.1.9 Landscape and Visual Impact

In the absence of the VEDP, the value of the landscape within the study area is unlikely to change in any significant manner. The landscape itself however may be subject to some development, particularly around the urban settlements of Ballina and Portumna and smaller towns and villages. However, there are large swathes of the VEDP area which are predominantly rural in nature.

8.2 Visitor Experience Development Plan Appraisal

This section presents an evaluation of the likely significant effects of the Draft Visitor Experience Development Plan (Table 16).

Table 14 Evaluation of the Likely Significant Effects of the Draft Tourism Masterplan

Visitor Experience Development Plan Objectives	SEA Objective										Comments (Including reference to secondary, cumulative, synergistic, short, medium, long-term, permanent, temporary, positive and negative effects and scale (local / regional / national))
	✓✓ - Significant beneficial effect ✓ - beneficial effect O – neutral ✕ - Adverse effect / uncertain ✕✕ Significant adverse effect										
	1 BIO	2 BIO	3 HEA	4 WAT	5 WAT	6 WAT	7 CLI	8 HER	9 LAN	10 SOI	
Action Plan Objectives Contained within the Visitor Experience Development Plan											
Action Plan Lough Derg will frame experience development within four Destination hubs with distinctive experiences. This reframing of the geography will provide visitors with a clear sense of where to stay, what there is to do and see locally and how to get around in fun and relaxing ways. This vision has been developed into objectives within four 'Action Areas' as assessed overleaf.	x/ ✓	✓	✓	O	O	O	O	x/✓	x/✓	x/✓	Depending on the content of the interpretation there is potential for positive as well as negative impact on a range of receptors. Recommendation: Interpretation text should be developed to reflect environmental sensitivities and specific issues around wildlife disturbance including noise, littering and contamination of habitats. In addition, appropriate wayfinding should be used to

												guide visitors towards designated routes to create awareness and appreciation of areas of significant environmental quality and/or architectural significance, whilst mitigating the disturbance, erosion, and damage of same.
Lough Derg Visitor Experience Development Plan Action Areas												
Action Area 1 Destination Management												
<p>1.1 Resource the Partnership Organise the stakeholder group and resource the tourism role at Lough Derg.</p> <p>1.1.1 Reshape the Lough Derg Marketing Group into a Lough Derg Destination Management Organisation named Destination Lough Derg. Draw up terms of reference for tourism industry representation from each destination hub (Killaloe/Ballina, Portumna, Connected Villages, Nenagh).</p> <p>1.1.2 Appoint a dedicated Lough Derg Tourism Officer and additional support for Destination Lough Derg with a key focus on tourism business liaison and building connections with community groups with an interest in tourism.</p>	x/√	x/√	x/√	o	o	x/√	x/√	x/√	x/√	x/√	<p>Lough Derg has been designated a SPA, and its north east shore has also been qualified as a SAC. The lake waterway itself is integral to the River Shannon, a watercourse of significant environmental amenity. Moreover, the surrounding natural environment is of significant environmental quality with numerous areas designated environmental protection status of European significance.</p> <p>Recommendation: This objective focuses on the development of stakeholder</p>	

												and community networks with limited potential for significant environmental effects. However, it should be noted that increased visitor numbers, unless appropriately managed, have the potential to inflict significant damage to such environmentally sensitive areas (as described). The established management organisation, tourism officer and supporting team should be made aware of these areas of environmental sensitivity and ensure their significance is understood, using it to their advantage in attempts to attract more visitors as part of a sustainable plan. Alternatively, addition support or resourcing in relation to the environmental commitments in this plan should be made available to the Lough Derg Tourism Officer.
1.2 Consolidate the Approach Align with the Tourism Masterplan for the Shannon and Ireland’s Hidden Heartlands (IHH).	x/√	√	x/√	x/√	x/√	x/√	x/√	x/√	x/√	x/√	x/√	As stated, the Lough Derg waterway and its wider catchment forms part of a wider corridor of significant natural beauty and environmental importance.

<p>1.2.1 Support sustainable tourism within Destination Lough Derg guided by the Tourism Masterplan for the Shannon and the Ireland’s Hidden Heartlands proposition.</p> <p>1.2.2 Support development and implementation of forthcoming Tourism plans for Beara Breifne Way and Shannon Erne Pilgrim Way where appropriate.</p>												<p>The tourism plans proposed seek to capitalise on these areas of special amenity.</p> <p>Recommendation:</p> <p>When considering the synergies of the various plans, it is also imperative that the VEDP aligns with conclusions and recommendations arising from related environmental assessments.</p>
<p>1.3 Coordinate Lake Wide Initiatives Initiatives that deliver a high-quality visitor experience.</p> <p>1.3.1 Prepare a Lough Derg Interpretation Plan which builds up a database of key themes, stories and tourism experiences that are unique to the Lough Derg area and aligns with IHH themes. This will also provide local detail for the future Shannon Integrated Interpretation Strategy and Design Guide.</p>	✓	o	o	x/✓	x/✓	o	x/✓	x/✓	x/✓	o	<p>Depending on the content of the interpretation there is potential for positive as well as negative impact on a range of receptors.</p> <p>Recommendation: Interpretation text should be developed to reflect environmental sensitivities and specific issues around wildlife disturbance including noise, littering and contamination of habitats. In addition, appropriate wayfinding should be used to guide visitors towards designated routes to create awareness and appreciation of areas of significant</p>	

												environmental quality and/or architectural significance, whilst mitigating the disturbance, erosion, and damage of same.
Festivals and Events	x/√	o	x/√	x	x	x	x/√	✓	x/√	x		Festivals and events have the potential to attract large numbers of visitors to an area. Such occasions can also advocate and create awareness for the environmental and cultural significance of the area.
1.3.2 Continue to support and encourage the development, delivery and marketing of a broad range of festivals and events that align to the themes of Lough Derg Interpretation Plan.												
1.3.3 Develop a database of Festivals and Events around Lough Derg to enable awareness raising of Lough Derg experiences.												Recommendation: The wider impact of increased visitors and traffic to the area should be considered. Event management plans should be prepared to manage the environmental impact of popular festivals, with an attendance of under 5,000 people.
Lough Derg Blueway	x/√	o	✓	x	x	x	x/√	o	o	x/√		The use, revitalisation and further development of waterways is generally beneficial in that it will support the re use of existing infrastructure. However, as with most waterway
1.3.4 Build upon the success of the Lough Derg Blueway and continue to work with stakeholder groups through networking and marketing actions.												

<p>1.3.5 Develop Lough Derg Blueway interpretation in line with Lough Derg Interpretation Plan.</p> <p>1.3.6 Enhance experiences and connectivity along Lough Derg Blueway by achieving and retaining accreditation.</p>												<p>development it is likely to increase visitor activity and has the potential to impact on water quality, both directly and indirectly. It also increases the likelihood of biosecurity issues.</p> <p>Further clarity around what is proposed here would aid this assessment.</p> <p>Recommendation: Provide further clarity on what is proposed as a result of ‘enhancing experiences and connectivity’ on the waterway. Working towards Blueway accreditation is a positive as it will assist in ensuring levels of use are sustainable with regard for conservation of the environment. Appropriate biosecurity measures should be introduced.</p>
<p>Discovery Points</p> <p>1.3.7 Support and deliver a feasibility study for six identified “Discovery Point” sites across Destination Lough Derg. Sites include: The Lookout, Ogonnoloe, Co</p>	x	o	o	x	o	o	x	x	x	o	<p>Discovery points can prove to be a very attractive amenity to visitors as they allow for a means of landscape discovery and observation.</p> <p>Recommendation:</p>	

<p>Clare, Drumman Harbour, Co Clare, Ben Hill, Woodford, Co Galway, Swimming/Water Recreation Area, Portumna, Co Galway, Castlelough, Co Tipperary, The Lookout, Portroe, Co. Tipperary.</p>											<p>As part of the feasibility studies proposed, further consideration should be given to potential impact on heritage assets, sustainable transport and access, water quality and designated sites.</p> <p>Proposals should implement the principles of sustainable access and design.</p> <p>It should be ensured that any technical assessment is supported by an environmental feasibility study and landscape and visual impact assessment.</p>
<p>1.4 Measure Progress Measure performance and remain responsive to emerging evidence on visitor behaviour and preference.</p> <p>1.4.1 Pool resources to invest in a robust data collection, market intelligence and impact assessment system.</p> <p>1.4.2 Source, channel and communicate both quantitative and qualitative intelligence that will support the business decisions of the destination’s stakeholders, inform and monitor the implementation of the Visitor</p>	x	x	✓	x/o	o	o	o	x	x	x/o	<p>These objectives relate to information gathering and sharing processes which will have no direct environmental consequences.</p> <p>Recommendation:</p> <p>The information gathered and inferences made should not only be used to boost tourism potential, but to consider how to better the sustainable use of the VEDP area.</p> <p>Environmental indicators should be developed in order</p>

<p>Experience Development Plan recommendations.</p> <p>1.4.3 Monitor and integrate into project delivery: visitor numbers, visitor satisfaction, visitor movement etc., including responding to “secret shopper” insights.</p> <p>1.4.4 Encourage Lough Derg businesses to feed data to the national tourism research unit and local survey initiatives.</p>											<p>to monitor visitor trends and related environmental impact. Such information can be used to improve environmental management plans going forward, that should be considered as part of any proposed business plans and proposals.</p>
<p>Action Area 2 Destination Innovation</p>											
<p>2.1 Provide a Great Visitor Welcome Ensure a great welcome is provided for visitors across the whole destination.</p> <p>Support delivery of consistent visitor focus through training and development:</p> <p>Support tourism facing businesses and communities to access training to ensure consistent visitor experiences are encountered across the destination.</p> <p>Promote and create awareness of the range of trade supports, advice, training and capacity building tools and services available through Fáilte Ireland, LEO and ETB e.g. FI Local Experts Programme, Fáilte Ireland’s Trade Portal.</p>	x	x	✓	x/o	o	o	o	o	x/o	x/o	<p>These objectives relate to appropriate methods of information sharing and training.</p> <p>Recommendation:</p> <p>These objectives will have little to no impact on the environment, however, established environmental protection measures in place, should also form part of such training and information sharing objectives.</p>

<p>1.5 Enable a Choice Accommodation Support the development of a variety of unique accommodation options to meet visitor needs.</p> <p><i>Support development of Accommodation that is 'distinctively Lough Derg'</i></p> <p>1.5.1 Prepare a feasibility study of Recreation Vehicle Aire de Service points in the Lough Derg region.</p> <p>1.5.2 Support the Scattered Accommodation Concept (as outlined in the Fáilte Ireland Destination Town Guidelines) in Destination Lough Derg.</p> <p>1.5.3 Explore the potential of forest sites around Lough Derg as a suitable setting for low impact accommodation.</p> <p>1.5.4 Support the development of activity friendly accommodation characteristics e.g. drying rooms, cycle, canoe and equipment storage.</p> <p>1.5.5 Explore options for flexible alternative accommodation for large scale activity events (e.g. Quest.)</p>	x	o	✓	x	x	x	x/o	x/✓	x	o	<p>Objectives such as implementing 'scattered accommodation', remote accommodation in natural wildlife settings and developing 'Quest' activities and facilities can greatly enhance the visitor experience however, if not management correctly, they may have detrimental effects on the environment.</p> <p>Recommendation:</p> <p>All accommodation, change of use, and related sporting activity proposals should be supported by the necessary technical and environmental impact assessments, in order to ensure a sustainable design solution is achieved and any environmental impacts are appropriately mitigated.</p>	

<p>1.5.6 Provide industry specific digital marketing and online booking training for accommodation providers in the Lough Derg Region.</p>											
<p>1.6 Facilitate Slow Travel Make it easy for our visitors to explore Lough Derg sustainably by developing services along the slow travel network.</p> <p>Road Infrastructure</p> <p>1.6.1 Audit the connectivity, safety, accessibility and wayfinding along the existing looped land and water trail network in order to identify improvements in line with Blueway and Sport Ireland guidelines.</p> <p>1.6.2 Prioritize the existing trails that lead directly from the town and village centres that offer looped experiences to visitors.</p> <p>1.6.3 Ensure accessible and sustainable links for visitors to both low and high</p>	<p>x/√</p>	<p>✓</p>	<p>✓</p>	<p>x/√</p>	<p>o</p>	<p>x</p>	<p>x/√</p>	<p>x/√</p>	<p>x/√</p>	<p>x</p>	<p>This objective focuses on slow tourism and travel which facilitates visitors with a desirable pause from the faster pace of life. The concept of slow travel encourages travel by train, coach, bicycle, and on foot travel. It offers experiences focusing on landscape, culture and interaction with other tourists and the host community.</p> <p>The objective also focuses on the development of trails, which if developed at scale have the potential for significant environmental effect as this implies a requirement for a substantial</p>

adrenaline activities available across the trail network.												<p>amount of additional infrastructure.</p> <p>Recommendation:</p> <p>Ensure that possible conflicts around access and ecologically sensitive sites are resolved. A mobility management plan should be carried out in order gauge potential levels of travel and related CO₂ emissions.</p> <p>The development of boardwalks, blueways and trails generally involve the introduction of small-scale infrastructure such as signage as well as trail surfacing. New trails and associated infrastructure has the potential to impact on vegetation and increase soil compaction due to the change in surfaces and the increase in use. The impact will depend on the sensitivity of the selected route. There is also potential for environmental sensitivities along waterways, due increased use of the same. Project specific environmental impact assessment should be carried</p>
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												out order to mitigate negative effects and ensure the most sustainable design solution is put forward.
Visitor Services	x/✓	✓	✓	x/✓	x/✓	x/✓	x/✓	✓	✓	x/✓		
1.6.4 Support a feasibility study that assesses ‘Slow Travel’ visitor services/experiences across the region and prepare recommendations for the upgrade, expansion and enhancement of Lough Derg Blueway visitor experiences to grow Destination Lough Derg’s reputation as a leader in sustainable tourism development. Consider the range of boating options, sailing, canoe hire, guided walking, horse-riding, bike hire, luggage transfer, ‘learn-to’ experiences, multi-day bookable experiences etc.												<p>The concept of slow travel encourages sustainable modes of mobility; however, consideration should be given to natural environment in which it is intended to develop such activities and the wider network they will form a part of. It should be noted that increased boating activity on the water is likely to result in an increase in disturbance of wild birds, their natural habitat due to the deterioration of water quality.</p> <p>Recommendation:</p> <p>A project specific environmental impact assessment should be carried in order to appropriately assess the final desired route and the impact of the associated facilities and activities.</p>
Public Transport	✓	✓	✓	o	o	o	✓	✓	o	o		The use of multi modal travel with the capacity to carry large

<p>1.6.5 Meet with Local Link operators (Clare, Tipperary, Limerick and Galway) to explore options for providing shuttle bus services throughout the Lough Derg region. Explore potential regular Local Link service from Birdhill train station/ Nenagh to destinations within Lough Derg region.</p> <p>1.6.6 Promote the use of the “slow train to Ballybrophy” – linking Limerick and Dublin to the Lough Derg region (Birdhill and Nenagh).</p>												<p>numbers of visitors as opposed to private means of transport is positive.</p> <p>Recommendation: n/a</p>
<p>Deep Encounters with Heritage</p> <p>1.6.7 Identify the locations along the slow travel network which best articulate the themes and stories of the Lough Derg Interpretation plan and update/source information from Lough Derg Cultural and Heritage trail booklets. Support and develop immersive interpretation that animates these stories.</p>	o	o	o	o	o	o	o	o	o	o	o	<p>Such initiatives allow for an appreciation for and engagement with the cultural value of the area, however, such objectives have no environmental impact.</p> <p>Recommendation: N/A</p>
<p>1.7 Offer Great Food Enhance the visitor experience with high quality, locally produced food on and around Lough Derg.</p> <p>Present Lough Derg food on a national platform</p>	o	o	o	o	o	o	o	o	o	o	o	<p>A coordinated approach to offering local food products that are locally grown and sourced would observe the principles of circular economies.</p>

<p>1.7.1 Support a cohesive and locally distinctive, destination-driven food experience in line with Fáilte Ireland Food and Drink Strategy recommendations and Taste the Island objectives.</p> <p>1.7.2 Continue to develop, co-ordinate and deliver the annual Taste of Lough Derg initiative.</p>												<p>Recommendation: N/A</p>
<p><i>Work with local food stakeholders; food producers and tourism providers</i></p> <p>1.7.3 Create links with the food producing community to promote Lough Derg food initiatives at production level, e.g. Irish Seedsavers; Brookfield Farm etc,</p> <p>1.7.4 Build a database of key Food Ambassadors for Lough Derg and invite to join digital campaigns.</p> <p>1.7.5 Encourage supply and presentation of locally produced food at every visitor experience/food outlet including ‘direct marketing’ of local food produce on premises.</p> <p>1.7.6 Support provision for and marketing actions for local farmers and producers markets e.g. Lakeshore Community Markets.</p>	o	o	o	o	o	o	o	o	o	o	o	<p>A coordinated approach to offering local food products that are locally grown and sourced would observe the principles of circular economies.</p> <p>Recommendation: In supporting local and rural food producers, natural means of production and supply chains that do not rely on pesticides or genetically modified organisms (GMOs) could be encouraged.</p>

<p>1.7.7 Increase the number of accommodation providers offering a quality Irish Breakfast showcasing local produce (Tipperary Tourism ‘Tipperary Breakfast Champions’ model has been successful).</p> <p>1.7.8 Support where possible food producers in rural communities to diversify into tourism.</p>											
Action Area 3 The Visitor Experience											
<p>3.1 Killaloe Ballina Destination Hub</p> <p>A natural playground with fresh perspectives on this iconic Shannon crossing; the perfect base to get active in nature, discovering the compelling history, landscapes and beauty of Lough Derg.</p> <p><i>Improve the visitor experience of the Killaloe/Ballina public realm</i></p> <p>2</p> <p>2.1</p> <p>2.1.1 Support the preparation and delivery of the Town Enhancement and Mobility Plan for Killaloe/Ballina.</p> <p>2.1.2 Consider inclusion of a Lough Derg Discovery Point in Killaloe/ Ballina.</p>	o	o	✓	o	o	o	x/ ✓	o	x/ ✓	o	<p>The town enhancement and mobility plan should include and refer to principles and methods of sustainable design.</p> <p>Recommendation:</p> <p>The town enhancement and mobility plan should refer to the guidance outlined in ‘Smarter Travel, A Sustainable Transport Future, A New Transport Policy for Ireland 2009 – 2020. It should seek to reinforce policies regarding alternative ways of travelling, efficiency of motorised transport, and the overall</p>

											integration of smarter travel policy.
Provide easy ways to be active in nature	x/ ✓	x/ ✓	✓	x	o	x	x/ ✓	o	x/ ✓	o	Feasibility appraisals and audits are the correct way of achieving the optimal design solutions for such objectives.
2.1.3 Support a feasibility study for the development of a Greenway between Limerick city and Killaloe/Ballina including integration of Ardnacrusha as a key feature.											<p>Recommendations:</p> <p>Regarding the proposed greenways, design options could be put forward for public consultation as part of a Part 8/10 application. An Environmental Impact Assessment Screening could also be undertaken for further assessment regarding potential environmental constraints, short to long term impact and any cumulative impact that may incur.</p> <p>Such an assessment would help establish the most sustainable option going forward. The design scheme could also look to develop linear parks in support of the long-term rehabilitation of natural species and habitats where possible.</p>
2.1.4 East Clare Way and Lough Derg Way - audit and improve connectivity, safety, accessibility and wayfinding along the existing trail networks on approaches to Killaloe/Ballina – in line with Sport Ireland guidelines.											
2.1.5 Support flagship sporting events to take place at Killaloe/ Ballina (e.g. Quest Lough Derg; events at Clarisford Park).											
2.1.6 Conduct a feasibility study for a heritage driven water experience (such as a 'steamship'; interpreting the industrial heritage stories of the lake.)											

												<p>The wider impact of increased visitors and traffic to the area should be considered. A capacity constraints assessment should be carried out in light of any marketed festivals or events. This is to ensure that proposed temporary facilities and those already in place can meet increased demands due to a sudden rise in visitor numbers and vehicular traffic, without incurring negative effects on the environment. In parallel, in light of the increased capacity of any festivals or events, an environmental management plan should be put place to provide certainty regarding the protection of the environment, natural habitats and animal species.</p>
<p>Promote the proximity of visitor services</p> <p>2.1.7 Support local Tourism providers with a digital marketing project (e.g. film piece to highlight town accommodation and food providers).</p>	o	o	o	o	o	o	o	o	o	o	<p>The objective relates to branding and marketing.</p> <p>Recommendation:</p> <p>N/A</p>	

<p>2.2 Inis Cealtra and Connected Destination Villages Explore Inis Cealtra, a 6th century holy island connected across lake waters to a necklace of historic lakeside villages and harbours.</p> <p><i>Deliver the Inis Cealtra Experience</i></p> <p>2.2.1 Support the delivery of the Inis Cealtra (Holy Island) Visitor Experience highlighting its importance as one of the most important ecclesiastical sites in Ireland.</p> <p>2.2.2 Support existing service providers to deliver more 'on water' experiences and encourage additional small enterprise around water transport using existing navigation infrastructure.</p>	x	x	✓	x	x	x	x/✓	x/o	x/o	o	<p>Inis Cealtra is an island of historic importance with built heritage dating back to the 6th century. The National Monuments Service has also recorded a number of monuments on the island. It is also significant to note that the island sits within the Lough Derg SPA boundary.</p> <p>Recommendation:</p> <p>It should be ensured that no adverse effects are placed upon the historic built and architectural heritage of the island and further ensured that the habitats of protected bird species are protected.</p> <p>A constraints led development approach should be adopted, informed by the natural wildlife and migratory patterns in the area, and a capacity constraints exercise regarding the management of potential increased footfall on the island.</p> <p>It should be considered that water experiences and water-based transport, should be</p>
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												assessed as development in a similar light to terrestrial based transport routes or amenity developments, requiring the appropriate environmental assessments that would inform design and development solutions.
<p><i>Improve connectivity for visitors across the lake between Scarriff, Tuamgraney, Mountshannon, Dromineer and Garrykennedy</i></p> <p>2.2.3 Improve sustainable connectivity using off-road and water trails in East Clare, connecting towns and villages.</p> <p>Improve sustainable connectivity using off-road and water trails in Tipperary, connecting towns and villages.</p> <p>2.2.4 Explore the potential to improve connectivity for visitors between Scarriff/Tuamgraney, Scarriff Harbour, and Reddan’s Quay including potential use of Scarriff river for low impact activities.</p>	x	x	✓	x	x	x	x/✓	x/o	o	o	<p>The development of blueways and trails generally involve the introduction of small-scale infrastructure such as signage as well as trail surfacing. In addition, Blueways are primarily sited within and or immediately adjacent to areas of biodiversity and nature conservation interest</p> <p>Recommendation:</p> <p>A constraints-led development approach should be adopted, informed by the preservation objectives of natural wildlife and migratory patterns in the area. It should be considered that water-based transport, should be assessed as development in a similar light to terrestrial based transport routes or amenity developments, requiring the</p>	

												appropriate environmental assessments that would inform design and development solutions.
<p>Creation of linked boating/sailing clubs, focused on existing settlements</p> <p>2.2.5 Support the enhancement of water-based linkages between boat clubs in settlements along Lough Derg, building on the opportunities to develop the visitor experience.</p> <p>Support proposals to enhance Dromineer’s role and facilities as a centre for excellence for those looking to learn how to sail and as a location for national and international sailing events.</p>	x	x	✓	x	x	x	x/✓	o	x	o	<p>The development of boating and sailing facilities generally involve the introduction of small-scale infrastructure in areas within and or immediately adjacent to areas of biodiversity and nature conservation interest.</p> <p>Recommendation:</p> <p>A constraints-led development approach should be adopted, informed by the preservation objectives of natural wildlife and migratory patterns in the area. It should be considered that water-based transport, should be assessed as development in a similar light to terrestrial based transport routes or amenity developments, requiring the appropriate environmental assessments that would inform design and development solutions and the seamless introduction of such facilities</p>	

												regarding environmental impact.
Provide visitor orientation and interpretation	x/✓	x/✓	o	x/✓	x/✓	x/✓	x/✓	x/✓	x	x		
2.2.6 Support and enhance further the tourist offices/informal visitor information points across the lake including Scarriff/Tuamgraney/Mountshannon/Whitegate/Garrykennedy and Dromineer.												Discovery points can prove to be a very attractive amenity to visitors as they allow for a means of landscape discovery and observation.
2.2.7 Support a feasibility study for development of Discovery Points at The Lookout, Ogonnelloe, Co Clare and Drumman Harbour, Co Clare.												<p>Recommendation:</p> <p>As part of the feasibility studies proposed, further consideration should be given to potential impact on heritage assets, sustainable transport and access, water quality and designated sites.</p> <p>Proposals should implement the principles of sustainable access and design.</p> <p>It should be ensured that any technical assessment is supported by an environmental feasibility study and landscape and visual impact assessment.</p>
Enhance Castlelough and Portroe Lookout Point: Amenity Zone / Slow Travel Interchange / Discovery Points	x/✓	x/✓	✓	o	o	o	x/✓	✓	x	x		This objective focuses on slow and sustainable travel options to minimise the impact of tourism development in

<p>2.2.8 Support proposals for amenity zone at Castlelough; enhance the visitor experience with safe swimming/ boating/ canoeing access.</p> <p>Provide enhanced walking links to Castlelough Woods onwards to Ballina/ Killaloe (south) and Garrykennedy/Dromineer (north) along the Lough Derg Way.</p> <p>Support a feasibility study to develop a visitor experience at Portroe Lookout Point, Tipperary.</p>												<p>relation to car-based travel and CO₂ emissions. Specific environmental effects are dependent on the detail of the proposed links.</p> <p>Recommendation: Further environmental assessment may be required depending on the sensitivity of on-water slow travel route area. Moreover, the development of facilities at Castlelough, will require the appropriate project-based assessments regarding environmental sensitivities.</p> <p>Proposals for trails of scale require further consideration under statutory provisions for environmental assessment at project level.</p> <p>The feasibility study should be used as an opportunity and method to inform the scheme of potential environmental constraints.</p>
<p>2.3 Portumna Destination Hub Uncover Irish lived history through a connected network of woodland, water and mountain trails, extending from Portumna's</p>	x	x	✓	x	x	x	x/✓	o	x	x	<p>This objective is focused on visitor experience development in environmentally sensitive locations. It is unclear from</p>	

<p>historic core to nearby villages and monastic settlements.</p> <p>Establish Portumna as a Destination Hub</p> <p>2.3.1 Commission a Portumna Interpretation Plan to align with the Lough Derg Interpretation Plan and support marketing of Portumna and its nearby villages as a significant cluster of built, natural and nautical heritage sites.</p> <p>Support implementation of relevant recommendations from the Tourism Masterplan for the Shannon.</p> <p>Review progress and assess the feasibility of implementing the concept set out in the Lough Derg Road Map 2014-2017 for a shared spatial vision for the state lands to the south of Portumna town including the Forest Park, Castle, Abbey, County Council and Waterways Ireland lands.</p> <p>Position Portumna’s main street to play a new role at the centre of a network of historic routes that extend around the town, to the nearby villages and beyond by providing central visitor information point and working with local businesses to play a visitor facing role.</p>												<p>this objective where visitor infrastructure and services will be provided. The number of visitors and the location of services and infrastructure has the potential for significant environmental effects.</p> <p>Recommendation: A detailed sustainable visitor management plan is required prior to the implementation of this objective. The reuse of existing infrastructure and services should be prioritised.</p> <p>Also, refer to recommendations within SEA carried out for the Shannon Masterplan.</p> <p>Development of a Water Recreation ‘Swimming Area’ in Portumna will require the appropriate project-based assessments regarding environmental sensitivities.</p>
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Support upgrade of the Water Recreation Area 'Swimming Area' in Portumna.												
<p><i>Position Portumna as a key component in a connected network of historic towns and villages - Clonfert, Meelick, Woodford, Terryglass, Lorrha, Borrisokane, Cloughjordan accessible via the Beara Breifne Way/Shannon and Erne Pilgrim Way</i></p> <p>2.3.2 Support establishment of Portumna hub dedicated tourism group or initiate strong collaboration with an existing representative group focusing on tourism priorities.</p> <p>Support implementation of the relevant recommendations of the Fáilte Ireland Beara Breifne Way Tourism Masterplan. Support the implementation of the relevant recommendations for Portumna in the Shannon and Erne Pilgrim Way Feasibility Study strengthening linkages between towns and villages with ecclesiastical and spiritual heritage.</p>	x	x	✓	x	x	x	x/✓	o	x	x	<p>The strategic overview and implementation of plans is beneficial regarding the sustainable use and management of natural resources.</p> <p>Recommendation:</p> <p>Specific project development linkages should be appropriately assessed under the appropriate planning environmental policy code at project level.</p>	
<i>Embrace the North West - focus on Woodford, Abbey and the Slieve Aughtys</i>											Such objectives should consider the optimal means of constraints-led development.	

<p>2.3.3 Support collaboration between Local Development Companies, Rural Recreation Officers and local stakeholders in Clare and Galway to explore potential for new walking trails and loops connecting to existing trails in the north west of Lough Derg.</p> <p>2.3.4 Identify Biophonic Zones - map places where only sounds of nature are heard.</p> <p>Support “Headstone and Homestead” opportunities between Woodford and Nenagh Genealogy Centre</p>												<p>Recommendation: N/A</p>
<p>2.4 Nenagh Gateway Town A bustling market town steeped in heritage, with a great reputation for food, compelling stories and a great welcome to the Lough Derg region at Nenagh’s Historic Quarter.</p> <p><i>Support the preparation, design and development of a historic quarter at Nenagh</i></p> <p>2.4.1 Improve the public realm in the historic quarter and support feasibility studies for a linked up urban space that provides a cluster of heritage and visitor experiences.</p> <p>Develop Nenagh in line with Fáilte Ireland’s ‘Development Guidelines for</p>	o	o	✓	o	o	o	x/✓	x	o	o		<p>The implementation of the objective could realise increased footfall in the town with knock on socio-economic impacts.</p> <p>Recommendation: Public realm strategies should seek to take inspiration from exemplar initiatives developed elsewhere regarding regeneration and sustainable design that prioritises pedestrian, cyclist and public transport routes in that order.</p>

Tourism Destination Towns’.												Project development environmental appraisals will also be necessary.
<p>Nenagh 800</p> <p>2.4.2 Exploit the opportunity to run and promote significant events to raise awareness of the town as a gateway town for Destination Lough Derg and IHH.</p>	o	o	✓	o	o	o	x	x	o	o	<p>Festivals and events have the potential to attract large numbers of visitors to an area. Such occasions can also advocate and create awareness for the environmental and cultural significance of the area.</p> <p>Recommendation:</p> <p>The wider impact of increased visitors and traffic to the area should be considered. Depending on the scale of the foreseen promotional events, a capacity constraints assessment should be carried out This is to ensure that proposed temporary facilities and those already in place can meet increased demands due to a sudden rise in visitor numbers and vehicular traffic, without incurring negative effects on the environment</p>	
<p>Review and map Nenagh cycling network</p>	x	x	✓	o	o	o	x/✓	x/✓	x	x	<p>Quieter routes removed from vehicular traffic greatly</p>	

<p>2.4.3 Audit existing routes and prepare action plan to improve the current experience.</p> <p>Identify any quieter on-road options or off-road sections that could be developed to improve and broaden the safety and appeal of the network.</p>												<p>enhance the visitors experience.</p> <p>Recommendation:</p> <p>The development of such routes should be managed in a sustainable way. They should be supported by an environmental constraints mapping exercise and EIA screening process. Route implementation should also be supported by an environmental management plan to provide certainty regarding the protection and rehabilitation of the environment, natural habitats and animal species.</p>
<p>2.4.4 Develop the Slí Éala Way</p> <p>Assess safety and accessibility of the walking route, enhance interpretation of the Slí Éala Way linking Nenagh with Dromineer and the banks of Lough Derg.</p>	x	x	✓	o	o	o	x/✓	x/✓	x	x	<p>The development of boardwalks and trails generally involve the introduction of small-scale infrastructure such as signage as well as trail surfacing. New trails and associated infrastructure has the potential to impact on vegetation and increase soil compaction due to the change in surfaces and the increase in use. The impact will depend</p>	

												<p>on the sensitivity of the selected route.</p> <p>Recommendation:</p> <p>The development of such routes should be managed in a sustainable way. They should be supported by an environmental constraints mapping exercise and EIA screening process. Route implementation should also be supported by an environmental management to provide certainty regarding the protection and rehabilitation of the environment, natural habitats and animal species.</p>
Action Area 4 Destination Marketing												
<p>3</p> <p>3.1 Develop a Distinctive Digital Presence Update and maintain a distinctive Lough Derg digital presence.</p> <p>Review Discoverloughderg.ie</p> <p>3.1.1 Review, upgrade and further develop discoverloughderg.ie website to fix glitches, streamline content in line with new experience geographic clusters, key themes, stories and experiences</p>	o	o	o	o	o	o	o	o	o	o	o	<p>These objectives relate to marketing targets through web based and social media channels. It is not expected that they will have a negative effect on the environment.</p> <p>Recommendation: N/A</p>

<p>unique to the Lough Derg area and carry out regular updates to content.</p> <p>3.1.2 Continue to increase social media presence across all platforms.</p> <p>3.1.3 Support training for tourism providers to deliver online bookable experiences.</p>											
<p>3.2 Ensure cohesive communication Work with national and local bodies to ensure cohesive messaging.</p> <p><i>Communicate the brand essence and appeal of Lough Derg within a national context</i></p> <p>3.2.1 Assess Ireland’s Hidden Heartlands brand architecture and position Lough Derg’s distinctive brand vision in this context.</p> <p>3.2.2 Align Lough Derg to Destination Experience Themes in the Tourism Masterplan for the Shannon.</p> <p>3.2.3 Use the Lough Derg Interpretation Plan as a framework for developing creative marketing briefs (graphic design/ photography, video work etc.).</p> <p>3.2.4 Produce and provide the necessary promotional material i.e. video,</p>	o	o	o	o	o	o	o	o	o	o	<p>These objectives relate to brand development and marketing. It is not expected that they will have a negative effect on the environment.</p> <p>Recommendation: N/A</p>

<p>imagery, clips and testimonials to place the Lough Derg region in a strong position for inclusion in any Fáilte Ireland’s national and international marketing campaigns.</p> <p>Identify opportunities to work with Tourism Ireland to reach a number of key international markets within Europe.</p>											
<p>3.3 Partnership Support marketing actions of tourism businesses.</p> <p>3.3.1 Facilitate partnership marketing with local hospitality and tourism businesses through a series of networking events to ensure Destination Lough Derg can reach key target markets with consistent messages in a focused way – refresh annually.</p> <p>3.3.2 Work with tourism providers to develop GDPR compliant database of key industry contacts.</p> <p>3.3.3 Identify the tourism and hospitality businesses across the area that could form cluster groups in response to the strategy’s development themes with whom Destination Lough Derg can work</p>	0	0	0	0	0	0	0	0	0	0	<p>These objectives relate to brand development, marketing and exploitation strategies. It is not expected that they will have a negative effect on the environment.</p> <p>Recommendation: N/A</p>

<p>to bring the experiences they offer to life.</p> <p>3.3.4 Work closely with tourism businesses to create an annual mini digital campaign targeted at specific audiences in the home market and in Europe.</p>											
<p>3.4 Be Market Ready</p> <p>Work together to create and promote market-ready offers, packages and itineraries.</p> <p><i>Develop market ready experiences and packages</i></p> <p>Facilitate tourism providers to work collaboratively with each other to provide offers of value which are promotable, bookable and easily purchased online at the stage when people are booking their travel arrangements online – focus on saleable experiences that align with destination themes, target markets and trends.</p> <p>Continue to build on material bank of photos, videos and presentations, elevator pitches and stories, for use by Destination Lough Derg partners and tourism businesses.</p>	o	o	o	o	o	o	o	o	o	o	<p>These objectives relate to brand development, marketing and exploitation strategies. It is not expected that they will have a negative effect on the environment.</p> <p>Recommendation: N/A</p>

Consolidate Lough Derg Blueway promotional literature to ensure it meets the needs of the visitor.												
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8.3 Habitats Regulation Assessment

The Natura Impact Report which should be read alongside this Environmental Report concluded that:

'The elements of the VEDP likely to give rise to significant effects on the environment are objectives relating to recreational activities, transport and associated infrastructure such as: roads, tracks, accommodation and entertainment facilities.

The VEDP is by its nature a high level strategic document and by default the mitigation measures proposed will also be relatively high level in nature. Tipperary County Council and associated partners will be responsible for ensuring that the mitigation measures proposed are implemented fully over the lifetime of the Visitor Plan.'

8.3.1 Biosecurity Strategy for Lough Derg

Biosecurity measures for inland waterways, prepared by organisations such as Waterways Ireland to prevent the inadvertent disruption of the Lough Derg and the Shannon's natural ecosystems, would be implemented across the VEDP area. To implement these measures would require provision of signage and information on non – native invasive species in addition to introducing biosecurity facilities at Designated Entry Points around Lough Derg. These measures will reduce the risk of introduction and / or spread of invasive species. The following facilities should also be provided by Waterways Ireland, or other agency as appropriate, as a starting point:

- anti-fouling stations for routine boat cleansing procedures;
- cleansing / power washing stations for incoming / outgoing craft;
- well placed and well serviced pumping stations to prevent unlicensed bilge discharge; and
- spot inspections by licensed navigation staff.

8.3.2 General Environmental Mitigation

The mitigation measures for the effects of the VEDP are set out in detail in the Natura Impact Report but can be broadly summarised as follows:

- Wastewater, surface water drainage and drinking water infrastructure must be in place prior to development.
- Contractors appointed to undertake any construction works will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works.
- Measures to protect the environment will be incorporated into design of projects to avoid adverse effects on the integrity of Natura 2000 sites. These will include, but will not limited to, measures such as those set out in:
 - Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters (IFI, 2016)' and
 - Environmental Good Practice on Site Guide (CIRIA, 2015)
- Irrespective of planning requirements ecological assessment should be carried out for all projects or other means of implementing the objectives of the Visitor Plan.
- The design of linkages, paths and cycleways must be prepared with the sensitivities of Natura 2000 sites and the broader ecological environment in mind. Any such proposal must consider the potential for increased disturbance of species, such as otter and breeding, roosting or foraging birds, due to any increase of human activities. Locating and designing paths and cycleways should be carried out with input from ecologists and planners to ensure there is no risk of adverse effect on Natura 2000 sites.

- Lighting of buildings and features around Lough Derg and along watercourses will be avoided wherever possible. If lighting is required within the riparian zone or along the banks of a watercourse it should be designed in consultation with an appropriately qualified ecologist.
- It must also be noted that the appropriate assessment at plan level does not exempt projects or plans arising from the plan from the assessment requirements of Article 6(3) at a later stage, when much more details of potential impacts and effects are known. In other words, projects or plans that result from the Visitor Plan are also required to undergo Article 6 assessment before they can proceed or be permitted. The relevant competent authority, such as Tipperary County Council, An Bord Pleanála or other designated public authority, will be responsible for ensuring that projects or plans that result from the Visitor Plan are also required to undergo Article 6 assessment before they can be permitted or proceed.

Mitigation measures are also set out in Section 9.4 below are proposed to avoid, reduce or remedy the potential adverse effects on the integrity of the sites in question. In identifying appropriate mitigation measures it is acknowledged that the VEDP by its nature is a high-level strategic document and thus, the mitigation measures proposed will also be relatively **strategic and cross cutting** in nature.

8.4 Inter-relationships

The interrelationship between the SEA environmental topics is an important consideration for environmental assessment. The table below highlights the key interrelationships identified in this SEA, with √ indicating a potential inter-relationship (either positive or negative) and X indicating limited or no inter-relationship. These potential interrelationships will be taken into account in the assessment of the different alternatives.

Of particular note is the primary interrelationship between water (quality and quantity) and biodiversity, flora and fauna, soils, human health and population. Flora and fauna rely directly on the aquatic environment as a habitat but the terrestrial environment can also be strongly impacted by the aquatic environment.

Water quality is also of particular importance with regard to human health as it provides a source of drinking water and it yields foodstuffs (e.g. fish and shellfish). Water is also used for leisure and recreational purposes, providing a material asset both for local populations and as part of the tourism economy.

Another key interrelationship is between water and climate. Greenhouse gas emissions associated with energy use during water management activities, such as treatment of drinking water and wastewater, have the potential to negatively impact on climate through increased contribution to climate change. This in turn can result in more frequent and more intense flooding and drought conditions affecting material assets and human health as well as biodiversity.

In carrying out the assessment these important direct and indirect relationships have been taken into account fully to ensure a robust and complete assessment.

Table 15 Interrelationship between the SEA environmental topics

Population / Human Health	✓							
Soil	✓	✓						
Water	✓	✓	✓					
Air	✓	✓	✓	✓				
Climate Factors	✓	✓	✓	✓	✓			
Material Assets	✓	✓	✓	✓	x	✓		
Cultural Heritage	x	✓	✓	✓	✓	✓	✓	
Landscape	x	✓	✓	✓	x	✓	✓	✓
	Biodiversity Flora, Fauna	Population / Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Cultural Heritage

8.5 Cumulative Effects

Cumulative effects result from impacts on the environment as a result of incremental developments and can result from individually minor, but collectively significant, actions taking place over a period of time. Broadly speaking cumulative effects can occur from interaction from other policies and projects.

Cumulative environmental benefits are anticipated from the combined actions and the overall strategy which emphasises coordinated spatial planning, the development of projects in existing settlements. This approach should bring positive cumulative impacts for population and human health as well as air quality and climate as a result of facilitating increased sustainable transport access.

However, it is acknowledged that even with a high level of consolidation in settlement there will remain a need for further greenfield development with continued gradual loss of open space and encroachment on wild areas. As such there is potential for cumulative negative impacts on receptors such as biodiversity, water, soils, cultural heritage and landscape, particularly as a result of construction activities such as site clearance and construction related emissions including emissions air and water. There is also a need for the phasing of future development to ensure that infrastructure services are in place in advance of, or rolled out in tandem with, the development of both brownfield and greenfield lands.

The anticipated cumulative impacts associated with the VEDP are as follows:

Population and Human Health: Cumulative impacts to PHH will be primarily related to the increase in employment opportunities and demand for holiday accommodation. The cumulative benefits for PHH can be achieved where there is appropriate phasing of future development in settlements to ensure that infrastructure services are in place in advance of, or rolled out in tandem with, increasing visitor activity as identified in the strategy.

Increased growth may place additional demand on existing water and wastewater services, utilities and transport services which may be at or over capacity currently. Significant negative cumulative impacts would occur if the

phasing of services and infrastructure does not align with growth. In such a situation there would be a risk from deterioration of water quality as a result of insufficient wastewater treatment, water rationing as a result of inadequate potable water supplies; deterioration in air quality from emissions to air from transport and associated climate and flood related impacts.

Plan / Project	Summary of Relevant Policies/ Project	Cumulative Impact
National Planning Framework 2040: Our Plan	<p>The National Planning Framework (NPF2040) is the national planning policy providing overarching guidance for the provision of land use, housing provision and overall development from 2018-2030.</p> <ul style="list-style-type: none"> • Guide the future development of Ireland, taking into account a projected 1 million increase in our population, the need to create 660,000 additional jobs to achieve full employment and a need for 550,000 more homes by 2040; • Secure more compact forms of urban development in all types of settlements. • Regenerate rural Ireland by promoting environmentally sustainable growth patterns; • Plan for and implement a better distribution of regional growth, in terms of jobs and prosperity; • Transform settlements of all sizes through imaginative urban regeneration and bring life / jobs back into cities, towns and villages; • Co-ordinate delivery of infrastructure and services in tandem with growth, through joined-up NPF/National Investment Plan and consistent sectoral plans, which will help to manage this growth and tackle congestion and quality of life issues. 	Population increase
RSES for the Southern Region	<p>The RSES for the Southern Region identifies the role of the Limerick – Shannon Metropolitan Area. It refers to Limerick City as Ireland’s third largest city. The nearby town of Shannon in Co. Clare is a significant employment centre with assets such as Shannon International Airport, Shannon Free-Zone and the International Aviation Services Centre (IASC).</p> <p>Nenagh is identified as a Key Town with major synergies with MASP (Metropolitan Area Strategic Plan). Nenagh and its hinterland area have potential as a location for a vibrant and diverse enterprise mix including major research and development functions, tourism, water-based and outdoor recreation, renewable energy and emerging sectors such as agritech, life sciences, financial services and engineering.</p>	Increase in population which will also use the Shannon as a recreational facility

	<p>Regional policy in relation to Nenagh highlights high quality of life, strong retail offering, attractive town centre, vibrant cafe and restaurant offering as well as</p> <ul style="list-style-type: none"> • Delivery of the Nenagh Traffic Management plan and associated public realm works and a Local Transport Plan • Continued investment and development of the historic core of the town as a key driver of tourism. Identification and development of Nenagh as the Gateway to Ireland's Hidden Heartlands. • Proximity to Lough Derg and the Silvermines Mountains and tourism-focused settlements such as Ballina, Killaloe and Dromineer 	
Development Plans	<ul style="list-style-type: none"> • Limerick County Development Plan 2010 - 2016 (as extended) • North Tipperary County Development Plan 2010 (as varied) • Clare County Development Plan 2017 - 2023 • Galway County Development Plan 2015 - 2021 • Offaly County Development Plan 2014 - 2020 • Westmeath County Development Plan 2014 - 2020 	County Development Plans listed here are the subject of formal review processes and have not been summarised here as a result. Where appropriate, it is likely that the review process will consider the adopted of relevant proposals set out in the VEDP.

Biodiversity Flora and Fauna: Cumulative impact in this regard is often a gradual erosion of open and wild spaces and squeezing of buffer areas particularly along rivers and coasts and deterioration of ecological condition e.g. water or air quality. Cumulative impacts will arise from increased human activity leading to increased disturbance of animal and bird species and their habitat.

Plan / Project	Summary of Relevant Policies/ Project	Potential Cumulative effect
Government of Ireland. Outdoor Recreation Plan for Public Lands and Waters in Ireland 2017-2021	Developed by five public landowning organisations as 'creating step change' in delivery of outdoor recreation opportunities on public lands and waters, comprising 15% of Ireland's land surface.	Further recreational development in natural areas
Beara Briefne Way	Redevelopment of existing walking route	Further recreational development / disturbance in natural areas

Soils: Potential for cumulative impacts as a result of additional and incremental development particularly where this occurs on greenfield sites.

Water: Due to the projected visitor numbers, there may be negative impacts due to additional demand on water supply and wastewater services which are at or are approaching capacity in some areas or have limited or no treatment. Water and wastewater services must be delivered on a phased basis to match projected demand.

The re-development of harbours and waterways could have negative cumulative impacts in terms of the resultant increase in boating, which will increase the number of sources of pollution e.g. emissions to air, wastewater and litter.

Plan / Project	Summary of Relevant Policies/ Project	Potential Cumulative effect
River Basin Management Plan for Ireland 2018-2021	The Plan sets out the actions that Ireland will take to improve water quality and achieve 'good' ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2027. An enhanced evidence base has been developed to guide national policies and the targeting of local measures. Technical assessments of 4,829 water bodies have been carried out, examining their status (quality) and whether they are 'at risk' of not meeting status objectives in the future. Using this information, the River Basin Management Plan sets out national policies and regional prioritised measures.	Improved water quality
Irish Water Capital Investment Plan 2017 to 2021	Irish Water's Investment Plan set out the capital projects and programmes that it plans to progress and deliver during the plan period. They include proposed costs and timelines and the outputs and outcomes that will be delivered for the investment. The Investment Plans allow Irish Water to maintain, upgrade and build new treatment plants, sewers, pipes and so on. This allows Irish Water to improve the quality of water and wastewater treatment, to provide better service to homes and businesses, and, to help facilitate social and economic growth. Irish Water's Investment Plans contain a mix of projects, national programmes and capital maintenance programmes including projects deliver new and upgraded assets at specific locations e.g. a new treatment plant.	Improved water quality

Air Quality and Climatic Factors: The EPA has reported that between 1990 and 2015, the transport sector showed the greatest overall increase in GHG emissions per sector (at 130.3%). Increase in transport requirements is likely to have negative cumulative impacts on air quality and climate.

Plan / Project	Summary of Relevant Policies/ Project	Potential Cumulative effect
Climate Action and Low Carbon Development (Amendment) Bill 2020	This Bill will drive implementation of a suite of policies to help achieve the goal of a 7% average yearly reduction in overall greenhouse gas emissions over the next decade, and to achieving net zero emissions by 2050. The Bill includes the following key elements: <ul style="list-style-type: none"> Establishes a 2050 emissions target 	Reduction in GHG emissions

	<ul style="list-style-type: none"> Introduces system of successive 5-year, economy-wide carbon budgets starting in 2021 Introduces a requirement for all Local Authorities to prepare individual Climate Action Plans which will include both mitigation and adaptation measures 	
Limerick Northern Distributor Road	Limerick Northern Distributor Road This will improve accessibility through the northern side of Limerick and will cross the Ardnacrusa Tailrace and River Shannon. There is potential for crossings of the Blackwater and Mulkear Rivers.	Air quality

Material Assets: Infrastructure and services needed to support visitor growth in the region will have to be developed in both a local and a strategic manner to ensure that environmental protection and enhancement policies are adhered to and cumulative impacts on the natural environment are reduced.

There are overall long-term positive cumulative effects due to improved public transport connectivity, access to alternative modes, and public transport. The encouragement of walking and cycling as alternative modes are also positive for population and human health and climatic factors.

Plan / Project	Summary of Relevant Policies/ Project	Potential Cumulative effect
Flood Risk Management Plan for the Shannon Upper and Lower River Basin 2018	<p>The Plan sets out a sustainable, long-term strategy to manage the flood risk within the Shannon Upper and Lower River Basin, focused on the areas of potentially significant flood risk (AFAs), and the sources of flooding giving rise to that risk. It addresses fluvial, coastal and tidal flooding in one or more communities (AFAs), as these sources were determined through the PFRA to be potentially significant in one or more communities within the area covered by the Shannon Upper and Lower River Basin Plan.</p> <p>Community-Level Measures It is proposed that a flood relief scheme is progressed to project-level development and assessment and as appropriate, implementation at the following settlements: Athleague, Athlone, – Ballinasloe, Birr, Boyle, Carrick on Shannon, Castleconnell, Clonaslee, Dromod, Killaloe, Leitrim Village, Limerick City, Longford, Mohill, Nenagh, Portumna, Rahan, Roscommon, Roscrea, Springfield.</p>	Infrastructure to manage flood risk
Limerick Northern Distributor Road	Limerick Northern Distributor Road This will improve accessibility through the northern side of Limerick and will cross the Ardnacrusa Tailrace and River Shannon. There is potential for crossings of the Blackwater and Mulkear Rivers.	Improved road infrastructure

Cultural Heritage and Landscape: The objectives proposed in the Draft VEDP could have a cumulative negative impact on both cultural heritage and landscape as a result of land use change, new infrastructure, alteration of historic or cultural landscape. Sensitive siting and consideration of the wider environment prior to siting new infrastructure will greatly reduce this potential cumulative impact.

Plan / Project	Summary of Relevant Policies/ Project	Potential Cumulative effect
<p>The Inis Cealtra Visitor Management and Sustainable Tourism Development Plan, July 1017</p>	<p>Holy Island or Inis Cealtra is a 20-hectare (50-acre) island located in Scariff Bay in the south-west part of Lough Derg between County Clare and County Galway and is one of the key attractions within this sub region. A management plan was commissioned by Clare County Council, with the remit to seek to ensure the long-term conservation of this significant historical and cultural site, while expanding its attractiveness as a sustainable tourist destination for an increased number of visitors. The village closest to the island is Mountshannon in Co. Clare, and boat access is available from both the village marina, which lies 2km from the island, and from Knockaphort Pier on the shore near the island (1km away), as shown in Figure 15.</p> <p>The recommendations as set out in the Iniscealtra Management Plan are that</p> <ol style="list-style-type: none"> 1. Visitor numbers can, and should, be increased to bring more tourism, and socioeconomic benefits, to the local region. 2. There is capacity to increase the numbers of visitors significantly, while ensuring protection of the built and natural heritage of the island within the context of a number of management strategies and new facilities. 3. The rich heritage and history of the site is of such importance that it justifies broadening access to it for more visitors. It is important that such a significant example of our cultural heritage will be shared beyond those currently familiar with it. 4. In order to increase visitor numbers, specific amenities must be provided to allow effective management of such growth in numbers. 5. A visitor facility is required as a gateway to receive, inform and filter access to the island. This should comprise high quality facilities for visitors. Without significant investment in such a facility, the island cannot withstand the impact of increased visitor numbers, nor could the whole experience be considered to be of the quality expected of comparable historical site destinations nationally and internationally. 6. Some new facilities to enhance the visitor experience, provide ease of access, safety and information on the island's heritage, will be needed on the island. These will be the minimum facilities necessary to allow the growth of visitor numbers that a site of such cultural value deserves and could absorb. However, to preserve the authenticity and ambience of the island, more elaborate facilities will have to be provided off site. Having considered a number of alternatives, it is regarded that Mountshannon is the most fitting location to receive and manage a new visitor centre; it is the lakeshore village closest to the island, has a deep cultural connection to it and has enough infrastructure potential to accommodate an increase in visitors. 	<p>Effects on a site of cultural heritage significance</p>

	<p>There are a series of Specific Objectives which provide detail on the overall management approach. In relation to visitor numbers, Objective 2 states</p> <p>‘To restrict access to the island to a maximum number at any one time of 100 persons (excluding guides and staff), no more than 400 in any day and a maximum of 45,000 over the course of the year. These numbers should be taken as the maximum number of persons arriving on the island for all subsequent studies, projections, models and projects.’</p>	
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Interaction from Policies and Proposals in Other Related Plans

There are a number of key national policies which have the potential to result in cumulative impact (both positive and negative) on the receiving environment. The most noteworthy of these are policies relating to land use planning and the built environment, transport, services (e.g. water and wastewater), climate and maritime spatial planning. Critical to this, is the supporting role of statutory lower level plans such as County Development Plans and Local Area Plans, so that issues can be evaluated from both the local and strategic regional perspectives.

9.0 Mitigation and Monitoring Measures

Mitigation measures have been recommended where potential negative impacts from development in the VEDP area on environmental topic areas have been identified. These mitigation measures have been proposed with the aim of preventing, reducing and offsetting any significant adverse effects on the environment as a result of implementing the plan.

In developing the mitigation measures set out below, it is acknowledged that the implementation of the VEDP shall be consistent with the policies and objectives set out within the statutory planning framework provided by the National Planning Framework, the Regional Economic and Spatial Strategy for the Southern Region and the relevant County Development Plans. This statutory planning context provides the framework under which any new proposals associated with the VEDP will be assessed. Implementation will also have to comply with the all relevant legislation, policies, plans and programmes, particularly with respect to the provisions of the EIA and Habitats Directive.

9.1 Mitigation Measures incorporated into the Draft VEDP

Mitigation involves avoiding and /or reducing significant negative effects of the Draft VEDP. Where an environmental assessment identifies significant adverse effects, consideration is given in the first instance to preventing such impacts i.e. avoidance. Where this is not possible, reducing the magnitude or extent, probability and/or severity of effects is proposed.

Strategic Environmental Assessment is an iterative process and should be fully integrated into each stage of VEDP preparation. This section outlines the general mitigation measures currently integrated into the Draft VEDP that will prevent, reduce, and offset as much as possible any significant adverse effects on the environment resulting from the implementation of the masterplan.

In addition to avoiding certain approaches such as dispersal of tourism development in greenfield locations, the following mitigation measures are currently incorporated into the draft tourism masterplan:

- Under **Chapter 02 Ambition**, reference to the VICE Model of Sustainable Tourism. The VEDP states that *‘We will develop the Lough Derg Destination across four areas of Sustainable Tourism, using the VICE model’*. With respect to Environment is also states that *‘Ensuring that the implementation of this Destination Lough Derg Strategy facilitates the protection and enhancement of the environment of Lough Derg and its environs as the fundamental asset that is the basis of tourism in the region, in association with other key stakeholders’*.
- The Lough Derg Marketing Group will be renamed **Destination Lough Derg**. This Destination Management Organisation will include as its remit:
 - Managing the developing local visitor economy,
 - **Protecting and enhancing the environmental resource on which tourism is based**,
 - Local capacity building and working with Fáilte Ireland on rolling out of training and supports across the tourism industry, and
 - Supporting collaborative working between tourism businesses and clustering of experiences within each Destination hub – this would draw on the collective work already underway including the Heartlands Heritage Group, for example, in the northern lake region, the Tipperary Food Producers network, Chambers of Commerce and other groups around the lake.
- In **Chapter 07 Measuring Success**, the following key performance indicators are identified:
 - Increased visitor numbers using public transport for getting to and around Lough Derg region
 - Adoption of eco-environmental ethos by businesses and community groups
 - Green boating (including electrification of boats and supporting infrastructure, where feasible);
 - Biosecurity measures in place at key harbours/ marinas
 - Number of Local Link or public transport improvements introduced

- Meeting water quality targets

9.2 Further Mitigation Measures included in the Adopted VEDP

It is recommended that further measures are included in the adopted VEDP to address the potential for environmental effects. It is recommended that the following measures are included in the plan prior to its adoption:

1. An overarching statement and commitment to compliance with existing environmental legislation. This statement has been included in Chapter 01 Introduction.
2. Inclusion of an Environmental Management Section in Chapter 07, Measuring Success

9.2.1 An overarching statement and commitment to compliance with existing environmental legislation

The VEDP emphasises that subsequent tourism proposals must be consistent with the environmental commitments contained in the National Planning Framework and Regional Spatial and Economic Strategies as well as the County Development Plans and Local Area Plans of the relevant local authority.

Project proposals and other proposed plans, referred to in this VEDP will also need to consider the requirements of the relevant environmental legislation and associated EU Directives such as SEA, EIA, Birds, Habitats, Floods and Water Framework directives, as appropriate. Further information on environmental sensitivities in the plan area which will help inform the need for these assessments is available from the EPA's Environmental Sensitivity Mapping Webtool (www.enviromap.ie).

9.2.2 Proposed Additional Text relating to Environmental Management

The following additional text was included in Chapter 07, Measuring Success:

1. Interpretation text should be developed to reflect environmental sensitivities and specific issues around wildlife disturbance including noise, littering and contamination of habitats. In addition, appropriate wayfinding should be used to guide visitors towards designated routes to create awareness and appreciation of areas of significant environmental quality and/or architectural significance, whilst mitigating the disturbance, erosion, and damage of same.
2. When considering the synergies of the various plans, it is important that the VEDP aligns with conclusions and recommendations arising from related environmental assessments.
3. Event management plans should be prepared to manage the environmental impact of popular festivals, with an attendance of under 5,000 people. This can be facilitated through the assistance and support of Destination Lough Derg and input from relevant statutory authorities such as the NPWS in relation to 'Notifiable Actions'.
4. Ensure that appropriate biosecurity measures are implemented in relation to the Lough Derg Blueway,
5. In relation to discovery points, further consideration should be given to potential impact on heritage assets, sustainable transport and access, water quality and designated sites.
6. In relation to measuring progress, environmental indicators should be developed in order to monitor visitor trends and related environmental impact. Draft monitoring measures are proposed in Section 9.4 and will be finalised on adoption of the VEDP.
7. Advice of the local planning authority should be sought in relation to developments or renovations that facilitate the 'scattered accommodation concept'.
8. Wastewater, surface water drainage and drinking water infrastructure must also be in place prior to development.
9. Support ongoing efforts to comply with COVID 19 guidelines for tourism operators and facilitate achievement of the relevant Q Mark standard where appropriate. Anticipate the future design

implications relating to capital projects which may arise from the presence of COVID 19 in the longer term.

10. Seek to ensure that mayor new development incorporates a zero carbon approach

11. Ensure that mayor new development incorporates appropriate traffic management measures and measures to enhance sustainable travel.

9.3 Mitigation by SEA Topic

In the assessment of key environmental considerations, the VEDP was assessed as a single unit, with the opportunities and challenges highlighted within each SEA topic area. A discussion of the key conclusions follows. Table 17, following, provides a full summary of key environmental considerations for the Masterplan.

SEA Topic Areas	Opportunities / challenges	Potential Significant Effects	Proposed Mitigation
Population and Human Health	<p>Opportunities</p> <ul style="list-style-type: none"> Improving recreational infrastructure along Lough Derg; Ensuring tourism potential is linked to economic opportunities in nearby settlements; Improved health and well-being by encouraging physical activity; Better integration of visitor services with existing infrastructure; Strengthening of communities; Inclusion of sustainable transport; and Promotion of natural asset-based economic growth. <p>Challenges</p> <ul style="list-style-type: none"> Increased infrastructural requirements for water and wastewater treatment to service visitor growth; Increase in demand for transport services and associated infrastructure i.e. car parking; 	<ul style="list-style-type: none"> Deterioration of water quality Increase in air emissions. Increase in development that creates unsustainable transport patterns. 	<p>Provide adequate facilities to manage wastewater</p> <p>Support ongoing efforts to comply with COVID 19 guidelines for tourism operators and facilitate achievement of the relevant Q Mark standard where appropriate. Anticipate the future design implications relating to capital projects which may arise from the presence of COVID 19 in the longer term.</p> <p>Ensure that mayor new development incorporates appropriate traffic management measures and measures to enhance sustainable travel.</p>

SEA Topic Areas	Opportunities / challenges	Potential Significant Effects	Proposed Mitigation
	<ul style="list-style-type: none"> • Potential risks associated with COVID 19; and • Increasing car dependency and associated emissions to air with associated health impacts. 		
Biodiversity	<p>Opportunities</p> <ul style="list-style-type: none"> • More coherent protection and enhancement of biodiversity on a regional scale; and • Consideration of the economic potential of biodiversity, flora and fauna to contribute to economic wellbeing of communities. <p>Challenges</p> <ul style="list-style-type: none"> • Potential for interactions with population and human health e.g. access to outdoors and disturbance to wildlife; • Balancing tourism growth with protecting wild places and protected areas; • Realising amenity-based tourism without causing recreational pressures on sites of biodiversity importance; • Potential for effects on protected areas; • Potential for habitat loss and fragmentation; • Potential introduction / spread of alien species and invasive species; • Potential for disturbance of wildlife particularly birds listed as features of SPA sites; • Deterioration in water quality 		<p>Biosecurity measures for inland waterways, prepared by organisations such as Waterways Ireland to prevent the inadvertent disruption of the Lough Derg and the Shannon's natural ecosystems, would be implemented across the VEDP area.</p> <p>The mitigation measures for the effects of the VEDP are set out in detail in the Natura Impact Report but can be broadly summarised as follows:</p> <ul style="list-style-type: none"> • Wastewater, surface water drainage and drinking water infrastructure must be in place prior to development. • Contractors appointed to undertake any construction works will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works. • Measures to protect the environment will be incorporated into design of projects to avoid adverse effects on the integrity of Natura 2000 sites. These will include, but will not limited to, measures such as those set out in:

SEA Topic Areas	Opportunities / challenges	Potential Effects	Significant	Proposed Mitigation
	<ul style="list-style-type: none"> Deposition of pollutants on vegetation and to water. 			<ul style="list-style-type: none"> <ul style="list-style-type: none"> Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters (IFI, 2016)' and Environmental Good Practice on Site Guide (CIRIA, 2015) Irrespective of planning requirements ecological assessment should be carried out for all projects or other means of implementing the objectives of the Visitor Plan. The design of linkages, paths and cycleways must be prepared with the sensitivities of Natura 2000 sites and the broader ecological environment in mind. Any such proposal must consider the potential for increased disturbance of species, such as otter and breeding, roosting or foraging birds, due to any increase of human activities. Locating and designing paths and cycleways

SEA Topic Areas	Opportunities / challenges	Potential Effects	Significant	Proposed Mitigation
				<p>should be carried out with input from ecologists and planners to ensure there is no risk of adverse effect on Natura 2000 sites.</p> <ul style="list-style-type: none"> • Lighting of buildings and features around Lough Derg and along watercourses will be avoided wherever possible. If lighting is required within the riparian zone or along the banks of a watercourse it should be designed in consultation with an appropriately qualified ecologist. • It must also be noted that the appropriate assessment at plan level does not exempt projects or plans arising from the plan from the assessment requirements of Article 6(3) at a later stage, when much more details of potential impacts and effects are known. In other words, projects or plans that result from the Visitor Plan are also required to undergo Article 6 assessment before they can proceed or be permitted. The relevant competent authority, such as Tipperary County Council, An Bord Pleanála or other

SEA Topic Areas	Opportunities / challenges	Potential Significant Effects	Proposed Mitigation
			<p>designated public authority, will be responsible for ensuring that projects or plans that result from the Visitor Plan are also required to undergo Article 6 assessment before they can be permitted or proceed.</p>
Soil	<p>Opportunities</p> <ul style="list-style-type: none"> • Encourage sustainable soil management; • Protect soils including prime agricultural land; • Protect soils with high carbon content e.g. peatlands; • Protect lands with ecosystem services e.g. peatlands, wetlands, hedgerows, grasslands; • Utilisation of existing brownfield sites; and • Support the long-term strategy for the transition from peat extraction towards a natural asset-based rural economy. <p>Challenges</p> <ul style="list-style-type: none"> • Identify appropriate locations for tourism development i.e. in existing settlements or brownfield sites. • Avoid the loss of prime agricultural land for development • Erosion of soils; • Soil compaction; • Spread of invasive species; • Soil pollution; 	<ul style="list-style-type: none"> • Introduction / spread of invasive aquatic and terrestrial species • Soil erosion/compaction 	<ul style="list-style-type: none"> • Implement and enforce good biosecurity measures. • Siting of new infrastructure and facilities in town centre locations, focusing on the reuse of existing buildings and the redevelopment of brownfield land to minimise the impact on soil.

SEA Topic Areas	Opportunities / challenges	Potential Significant Effects	Proposed Mitigation
	<ul style="list-style-type: none"> • Effects on geomorphology (i.e. landforms and river channels); and • Sealing of soils; and • Increase in extent of built up areas/urbanisation/impermeable surfaces. 		
Water	<p>Opportunities</p> <ul style="list-style-type: none"> • Improve water quality by influencing the location and type of development within all catchments, but particularly those with water quality issues; • Improve water quality by identifying and addressing impacts on the water environment; and • Improve water infrastructure networks and ensure development is matched with current and future infrastructure capacity. • Ensuring new development does not increase current risk; • Reduce flooding by ensuring new development is not located in areas of high flood risk; • Potential to further develop permeable lands and sustainable drainage systems in urban areas; and • Support the fishing industry and encourage other value-added activities. <p>Challenges</p> <ul style="list-style-type: none"> • Facilitating growth and development without compromising 	Potential adverse effects of new development on the capacity of existing waste water treatment facilities	<ul style="list-style-type: none"> • Ensure adequate drinking water and wastewater treatment is available to accommodate planned growth and development;

SEA Topic Areas	Opportunities / challenges	Potential Significant Effects	Proposed Mitigation
	<p>achievement of WFD objectives;</p> <ul style="list-style-type: none"> • Ensure adequate drinking water and wastewater treatment is available to accommodate planned growth and development; • Protect water dependant ecosystems from pollution; • Prevent the introduction and/ or spread of invasive species; • Morphological impacts on water bodies from additional boating infrastructure; • Preparing for and taking account of coastal hazards such as erosion and impacts from climate change such as sea level rises, increased flooding events and extreme weather events; and • Impacts on water bodies from construction of new wastewater treatment facilities and infrastructure. 		
Air Quality	<p>Opportunities</p> <ul style="list-style-type: none"> • Reduce transport related emissions and increase energy efficiency across all transport modes; and • Encourage modal shift amongst visitors. <p>Challenges</p> <ul style="list-style-type: none"> • Visitors are largely car dependant; • Increase in emissions to air due to increase in boat activity and traffic to the site; 	<ul style="list-style-type: none"> • Increase in emissions to air stemming from 	<ul style="list-style-type: none"> • Encourage and support walking, cycling and public transport to reduce emissions to air • Focus infrastructure and amenity areas outside high value biodiversity zones. • Encourage new and refurbished electric powered boats.

SEA Topic Areas	Opportunities / challenges	Potential Significant Effects	Proposed Mitigation
	<ul style="list-style-type: none"> Increasing NOx and particulate matter (PM10 and PM2.5) emissions as a result of road transport and increased transport on water; Modal shift away from road transport; and Reduce transport demand. 		
Climate Change	<p>Opportunities</p> <ul style="list-style-type: none"> Integrate pathways to carbon neutrality across development plan proposals; Increase efficiency and reduce energy demand in new build; Consider opportunities for renewable energy in new build; Encourage modal shift; and Reduce transport related emissions. <p>Challenges</p> <ul style="list-style-type: none"> Car dependency within the visitor economy; Climate adaptation and mitigation; Increased risk of extreme weather events; and Flood risk. 	<ul style="list-style-type: none"> Increased energy demand, particularly from carbon intensive development and car based travel. 	<ul style="list-style-type: none"> Seek to ensure that mayor new development incorporates a zero carbon approach Ensure that mayor new development incorporates appropriate traffic management measures and measures to enhance sustainable travel. In areas of potential flood risk, a flood risk assessment will be necessary. Vulnerable uses may not be appropriate in areas of high risk. Site specific flood risk assessments will identify the constraints for consideration at the detailed design stage. Further consideration of the potential impact of climate change on all potential sources of flooding will also be provided.
Cultural Heritage	<p>Opportunities</p> <ul style="list-style-type: none"> Support national level policies at regional level to protect and enhance the region's varied archaeological and architectural heritage assets; Integration of cultural heritage into the design of future developments; Promotion of the cultural heritage 	Developments that do not consider the role, value and opportunity provided by cultural heritage.	Where development involves a protected structure or national monument professional design input and conservation expertise will be required to avoid impacts on the historic fabric of the building.

SEA Topic Areas	Opportunities / challenges	Potential Significant Effects	Proposed Mitigation
	<p>resource as a source of economic benefit for communities e.g. tourism;</p> <ul style="list-style-type: none"> Promotion of Lough Derg's unique cultural wealth and assets; and Cultural contribution to wider social and economic goals e.g. a heritage based approach to renewal and tourism. <p>Challenges</p> <ul style="list-style-type: none"> To preserve and protect the cultural heritage including architecture, archaeology and cultural heritage; Impacts on archaeological features and setting; and Impacts for underwater archaeological features during construction of new infrastructure and/or upgrades. 		
Material Assets	<p>Opportunities</p> <ul style="list-style-type: none"> Plan to be aligned with required transport, water, energy infrastructure; Balance competing requirements for land use and natural resources; and Investment in supporting infrastructure e.g. water infrastructure. <p>Challenges</p> <ul style="list-style-type: none"> Scale or pace of development not in keeping with level of service provision/adequate capacity e.g. serviced land, water supply and drainage, 	Inadequate infrastructure to facilitate new development	<ul style="list-style-type: none"> Ensure the proposal meets defined local/market need and avoids displacement of existing facilities. Encourage event management plans for festivals under 5,000 people

SEA Topic Areas	Opportunities / challenges	Potential Significant Effects	Proposed Mitigation
	<p>road/ port/ airport capacity;</p> <ul style="list-style-type: none"> • Provision of infrastructure which is adaptable to the impacts of climate change; • Increased in waste generated; and • Increased demands on water supply. 		
Landscape	<p>Opportunities</p> <ul style="list-style-type: none"> • Support policies to protect landscapes; • To integrate landscape considerations into the design of future developments; • To develop requirements for design statements for villages, towns, and key service centres around Lough Derg; and • Develop a coordinated approach to identify scenic routes and associated key attractions coupled with infrastructure provision for the creation of safe, segregated pathways. <p>Challenges</p> <ul style="list-style-type: none"> • Impacts on landscape character; • No national landscape character assessment; and • The lack of coherent landscape designations and LCAs will provide a challenge in the preparation of the Environmental Report and SEA assessment, but potential impacts on all existing such designations should be considered. 	<ul style="list-style-type: none"> • Poor site selection in relation to new projects • Inappropriate site design, height and massing of new development • Varying approach to design policy 	<ul style="list-style-type: none"> • Siting of new infrastructure and facilities in town centre locations, focusing on the reuse of existing buildings and the redevelopment of brownfield land to minimise the impact on soil.

9.4 Monitoring

The SEA Directive requires the monitoring of a Plan upon the implementation of the Plan to identify any unforeseen significant adverse environmental effects and to take the appropriate remedial action. The following monitoring framework outlined in Table **16** overleaf is proposed.

Table 16 Proposed Monitoring Framework for the Lough Derg VEDP

Ref	Environmental Objective	Indicator	Topic	International, National policy documents / strategies / guidelines	European, Source of Information
1 BIO	Conserve and enhance habitats and species, with priority protection afforded to sites and species designated under the Habitats Directive	<ol style="list-style-type: none"> 1. Loss of habitats and species 2. Quality and range of statutorily protected areas along the Shannon 	Biodiversity	<p>EU Habitats Directive (92/43/EEC)</p> <p>EU Birds Directive (79/409/EEC)</p> <p>UN Convention on Biological Diversity Actions for Biodiversity 2011- 2016, Ireland’s National Biodiversity Plan (2011)</p> <p>National Wildlife Act 1976-2000</p>	<ol style="list-style-type: none"> 1. Department of Culture, Heritage and the Gaeltacht report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years) 2. Department of Culture, Heritage and the Gaeltacht’s National Monitoring Report for the Birds Directive under Article 12 (every 3 years) / Consultations with the NPWS / CORINE mapping resurvey (every c. 5 years)
2 BIO	Prevent the spread of invasive species	<ol style="list-style-type: none"> 1. Occurrence of invasive species 	Biodiversity	<p>EU Habitats Directive (92/43/EEC)</p> <p>EU Birds Directive (79/409/EEC)</p> <p>UN Convention on Biological Diversity Actions for Biodiversity 2011- 2016, Ireland’s National Biodiversity Plan (2011)</p> <p>National Wildlife Act 1976-2000</p>	<ol style="list-style-type: none"> 1. National Biodiversity Data Centre Examine records of http://invasives.biodiversityireland.ie / Heritage/biodiversity officers of local authorities
3 HEA	Improve health and wellbeing by improving	<ol style="list-style-type: none"> 1. Numbers participating in walking and cycling activities – based on data 		Ireland 2040 – The National Planning Framework (2018)	<ol style="list-style-type: none"> 1. Waterways Ireland 2. Area Engineers at Local authorities 3. EPA, air quality monitoring stations

	opportunities safe and sustainable transport	<p>from existing Waterways Ireland Counters</p> <ol style="list-style-type: none"> 2. Issues with traffic flows/congestion during peak visitor periods 3. Air Quality 	Population and Human Health	<p>People, Place and Policy Growing Tourism to 2025 Directive 2002/49/EC of 25 June 2002 relating to the assessment and management of environmental noise Directive 96/62/EC – Air Quality Framework Directive Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC)</p>	
4 WAT	Protect and improve the quality of surface and ground water bodies	WFD water status of surface and groundwaters	Water	<p>European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94 of 1997 as amended by S.I. No. 233 of 1998 and S.I. 378 of 2005); European Communities Environmental Objectives (Surface Water) Regulations, 2009 (S.I. No. 272 of 2009); European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010), and; European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2010 (S.I. No. 610 of 2010). EU Water Framework Directive (2000/0/EC)</p>	Environmental Protection Agency

				<p>Bathing Water Quality Regulations (SI No. 79 of 2008)</p> <p>European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009)</p>	
<p>5 WAT</p>	<p>Protect water levels</p>	<p>WFD water status of surface and groundwaters</p>	<p>Water</p>	<p>European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94 of 1997 as amended by S.I. No. 233 of 1998 and S.I. 378 of 2005);</p> <p>European Communities Environmental Objectives (Surface Water) Regulations, 2009 (S.I. No. 272 of 2009);</p> <p>European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010), and;</p> <p>European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2010 (S.I. No. 610 of 2010).</p> <p>EU Water Framework Directive (2000/0/EC)</p> <p>Bathing Water Quality Regulations (SI No. 79 of 2008)</p> <p>European Communities Environmental Objectives</p>	<p>Environmental Protection Agency</p>

				(Surface Waters) Regulations 2009 (SI No. 272 of 2009)	
6 WAT	Minimise development in areas of flood risk, where flood risk compatible development is proposed ensure that flood risk does not increase elsewhere.	Interaction with flood extents / significant planning application within areas of flood risk	Water, material assets	<p>European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94 of 1997 as amended by S.I. No. 233 of 1998 and S.I. 378 of 2005);</p> <p>European Communities Environmental Objectives (Surface Water) Regulations, 2009 (S.I. No. 272 of 2009);</p> <p>European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010), and;</p> <p>European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2010 (S.I. No. 610 of 2010).</p> <p>EU Water Framework Directive (2000/0/EC) Bathing Water Quality Regulations (SI No. 79 of 2008)</p> <p>European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009)</p> <p>EU Directive on the assessment and management of flood risks [2007/60/EC],</p>	Area engineers within local authorities / Assessments carried out at project level CFRAMS / floodmaps.ie

				The Planning System and Flood Risk Management Guidelines for Planning Authorities (2009) National Adaptation Framework, Planning for a Climate Resilient Ireland, 2018	
7 CLI	To adapt and mitigate the effects of climate change	<ol style="list-style-type: none"> 1. No of new major zero carbon tourism developments in the VEDP area 2. Electrification of boats and supporting infrastructure / Number of electric vehicles introduced and level of investment in supporting infrastructure (indicator to be confirmed) 	Climate	<p>EU Directive on the assessment and management of flood risks [2007/60/EC], The Planning System and Flood Risk Management Guidelines for Planning Authorities (2009) National Adaptation Framework, Planning for a Climate Resilient Ireland, 2018 A 2030 Framework for Climate and Energy Policies [COM (2013) 169] EU 2020 Climate and Energy Package 2013-2020 National Planning Framework 2040 National Mitigation Plan 2017 Climate Act 2015</p>	<ol style="list-style-type: none"> 1. Local authority development management teams 2. Waterways Ireland
8 HER	To protect the integrity and authenticity of cultural heritage	Number of unused historic properties redeveloped or brought back into use	Cultural heritage	National Monuments Act, 2004 Planning and Development Act, 2000	<ol style="list-style-type: none"> 1. Information on funding under the Structures at Risk Scheme is available from the Department of Culture, Heritage and the Gaeltacht / Local authority

				S.I. 229/2005 - National Monuments Act 1930 (Section 14B) Regulations 2005 Government Policy on Architecture 2009 – 2015	development management teams / information from local authorities on number of planning applications referred to the DAHG 2. Lower tier environmental assessment and decision making by local authorities
9 LAN	To protect landscape character, minimise the loss of historic landscape features such as mature trees and hedgerows and scenic views	Number of developments subject to Landscape and Visual impact assessment	Landscape	The European Convention on Landscape, 2000 A National Landscape Strategy for Ireland Strategy Issues paper for consultation (2011)	1. Information from planning departments of local authorities 2. Lower tier environmental assessment and decision making by local authorities
10 SOIL	To protect soil resources and minimise the loss of the high quality agricultural land	Area of cut away bog remediated	Soil, Geology	A Resource Opportunity, Waste Management Policy in Ireland. Department of the Environment, Community and Local Government July 2012	- Bord na Mona / Corine land cover data

APPENDIX 01

SEA Screening of Minor Modifications to the Draft VEDP

Screening of the Minor Modifications to the VEDP

The SEA Directive requires that certain plans and programmes, prepared by statutory bodies, which are likely to have a significant impact on the environment, be subject to the SEA process. As outlined above, the SEA Directive) was transposed into national legislation in Ireland by the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435/2004).

Article 9 of the 2004 regulations identifies the requirement to carry out environmental assessment. In relation to modifications to a plan, in this case the VEDP for Lough Der, it states that

9. (2) A plan or programme referred to in sub-article (1) which determines the use of a small area at local level or a minor modification to a plan or programme referred to in sub-article (1) shall require an environmental assessment only where the competent authority determines that it is likely to have significant effects on the environment and, for this purpose, the competent authority shall make any necessary determination.

9. (4) A competent authority shall, in determining on a case by-case basis under sub-article (2) or (3) whether a plan or programme, or modification to a plan or programme, would or would not be likely to have significant effects on the environment, take account of relevant criteria set out in Schedule 1 and any submission or observation received in response to a notice under sub-article (5).

Schedule 1 Criteria

Schedule 1 of European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435/2004) sets out the criteria for determining whether a modification to a plan is likely to have significant effects on the Environment.

1. The characteristics of the plan or programme, or modification to a plan or programme, having regard, in particular, to

- the degree to which the plan or programme, or modification to a plan or programme, sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources,
- the degree to which the plan or programme, or modification to a plan or programme, influences other plans including those in a hierarchy,
- the relevance of the modification to a plan or programme, for the integration of environmental considerations in particular with a view to promoting sustainable development,
- environmental problems relevant to the modification to a plan,
- the relevance of the modification to a plan or programme, for the implementation of European Union legislation on the environment (e.g. plans and programmes linked to waste management or water protection).

2. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to

- the probability, duration, frequency and reversibility of the effects,
- the cumulative nature of the effects,
- the transboundary nature of the effects,
- the risks to human health or the environment (e.g. due to accidents),
- the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected),
- the value and vulnerability of the area likely to be affected due to:
 - (a) special natural characteristics or cultural heritage,
 - (b) exceeded environmental quality standards or limit values,

(c) intensive land-use,

- the effects on areas or landscapes which have a recognised national, European Union or international protection status.

Table 17 Minor Amendments Prior to Adoption of VEDP

Page	Comment / Query	Comment re VEDP	Changes made to document 19/11/20	Comment re SEA
Cover	Confirm that the tag line agreed by the LDMG	<p>The tag line “The Power of Nature” appeared on draft covers and there was no specific formal feedback comment for or against it, although at one of the LDMG meetings one person said they weren’t 100% happy with it.</p> <p>I would be completely fine with removing it, in fact, at this point I would recommend removing it, given that we now have final Shannon Masterplan Interpretive themes and to leave space for evolving marketing content development for Lough Derg in a broader IHH/Shannon Masterplan context. Its prominent location on the cover might be a distraction from the broader strategic actions set out in the VEDP and give the impression that this is a promotional document rather than a strategic one.</p>	Removed “ The power of nature ” tagline from the first, inside page and last pages of the VEDP and Action Plan	Minor editorial amendment. No effects on the environment or implications for the SEA process.
Page 4	Remove job title as its not consistent with the rest of the list	Propose removal of title “Senior Planner,” T	Deleted “ Senior Planner, ”	Minor editorial amendment. No effects on the environment or implications for the SEA process.
Page 6	Amend the term constructive tourism to something	Propose change “constructive tourism” to “opportunities to learn new skills”	Deleted “ constructive tourism, ” replaced with “opportunities to learn new skills”	Minor editorial amendment. No effects on the environment or

	clearer. (beneficial)			implications for the SEA process.
Pg 6	Include as action 1.1.3 in Action plan overview at end of VEDP and in Action Plan	Include the following text The establishment of a Lough Derg Destination Recovery Task Force as a tactical response to guide the reactivation of the destination following the impacts of government safety restrictions to lead and to co-ordinate the ongoing process of returning the destination to a more normalised state	Included as action 1.1.3 The establishment of a Lough Derg Destination Recovery Task Force as a tactical response to guide the reactivation of the destination following the impacts of government safety restrictions to lead and to co-ordinate the ongoing process of returning the destination to a more normalised state.	Minor editorial amendment. No effects on the environment or implications for the SEA process
Pg. 6	key focus on communication, co-ordination, building capacity and driving the delivery of the plan.	Action 1.1.2 – delete current action text Appoint a dedicated Lough Derg Tourism Officer and additional support for Destination Lough Derg with a key focus on tourism business liaison and building connections with community groups with an interest in tourism.	Replace with the following: Appoint a dedicated Lough Derg Tourism Officer and additional support for Destination Lough Derg with a key focus on communication, co-ordination, building capacity and driving the delivery of the plan. This will include tourism business liaison and building connections with community groups with an interest in tourism.	Minor editorial amendment. No effects on the environment or implications for the SEA process
Page 9	Add the following text by way of an additional bullet point: - The establishment of the Destination Recovery	Insert a new bullet point for page 9 at end of bullet point list: <ul style="list-style-type: none"> • The establishment of the Lough Derg Destination Recovery Taskforce and the implementation of an action plan which will focus on the delivery of the COVID-19 safety charter and related business supports. (note bolding of text in line with other bullet points on this page)	Included new bullet point at end of bullet point list on pg. 9 <ul style="list-style-type: none"> • The establishment of the Lough Derg Destination Recovery Taskforce and the implementation of an action plan which will focus on the delivery of the COVID-19 safety charter and related business supports 	Proposed change consistent with the recommendations set out within the Environmental Report.

	<p>y Taskforce and the implementation of an action plan which will focus on the delivery of the COVID – 19 safety charter and related business supports</p>			
Pg 11	Action 2.4.1 covers 2.4.2		Action 2.4.2 deleted	Minor editorial amendment. No effects on the environment or implications for the SEA process
Page 12	Strategic Environmental	Yes that's fine: we will inset a new box on page 12 with following text. Existing photographs of	Reduced and relocated photographs of workshop to accommodate new text box to include the following text and cover of Environmental Report (attached)	Proposed change consistent with the recommendations set out within the

	<p>Assessment text to be added.</p>	<p>workshops can be reduced in size/moved to pg 13 to accommodate new box.</p> <p>“Strategic Environmental Assessment</p> <p>Tipperary County Council, as the competent authority, commissioned this VEDP to support tourism and experience development in Lough Derg. An Environmental Report was prepared by SLR Consulting as part of the Strategic Environmental Assessment of the VEDP in accordance with the requirements of EU and national legislation on the assessment of the effects of certain plans and programmes on the environment.</p> <p>The purpose of the Environmental Report is to:</p> <ul style="list-style-type: none"> • Inform the development of the draft Lough Derg VEDP; • Identify, describe and evaluate the likely significant effects of the draft Lough Derg VEDP and its reasonable alternatives; • Improve the environmental performance of the VEDP; and • Provide an early opportunity for the statutory authorities and the public to offer views on any aspect of the Environmental Report and accompanying VEDP, through effective consultation. <p>The Environmental Report complies with the requirements of the Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the SEA Directive) as implemented in Ireland through the European Communities (Environmental</p>	<p>Strategic Environmental Assessment</p> <p>Tipperary County Council, as the competent authority, commissioned this VEDP to support tourism and experience development in Lough Derg. An Environmental Report was prepared by SLR Consulting as part of the Strategic Environmental Assessment of the VEDP in accordance with the requirements of EU and national legislation on the assessment of the effects of certain plans and programmes on the environment.</p> <p>The purpose of the Environmental Report is to:</p> <ul style="list-style-type: none"> • Inform the development of the draft Lough Derg VEDP; • Identify, describe and evaluate the likely significant effects of the draft Lough Derg VEDP and its reasonable alternatives; • Improve the environmental performance of the VEDP; and • Provide an early opportunity for the statutory authorities and the public to offer views on any aspect of the Environmental Report and accompanying VEDP, through effective consultation. <p>The Environmental Report complies with the requirements of the Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the SEA Directive) as implemented in Ireland through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (S.I. No. 435 of 2004).</p>	<p>Environmental Report.</p>
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		<p>Assessment of Certain Plans and Programmes) Regulations (S.I. No. 435 of 2004).</p> <p>The VEDP has been developed having regard to the key features and characteristics of the masterplan area. Key environmental issues were identified as part of the SEA process, documented in the Environmental Report and addressed within the VEDP. Measures to improve the environmental performance of the VEDP have been integrated throughout the document but are also outlined in the environmental management section in Chapter 07 Measuring Success.</p> <p>This VEDP also emphasises that subsequent tourism proposals must be consistent with the environmental commitments contained in the National Planning Framework and Regional Spatial and Economic Strategies as well as the County Development Plans and Local Area Plans of the relevant local authority.</p> <p>Project proposals and other proposed plans, referred to in this masterplan will also need to take into account the requirements of the relevant environmental legislation and associated EU Directives such as SEA, EIA, Birds, Habitats, Floods and Water Framework directives, as appropriate. Further information on environmental sensitivities in the plan area which will help inform the need for these assessments is available from the EPA’s Environmental Sensitivity Mapping Webtool (www.enviromap.ie).</p>	<p>The VEDP has been developed having regard to the key features and characteristics of the masterplan area. Key environmental issues were identified as part of the SEA process, documented in the Environmental Report and addressed within the VEDP. Measures to improve the environmental performance of the VEDP have been integrated throughout the document but are also outlined in the environmental management section in Chapter 07 Measuring Success.</p> <p>This VEDP also emphasises that subsequent tourism proposals must be consistent with the environmental commitments contained in the National Planning Framework and Regional Spatial and Economic Strategies as well as the County Development Plans and Local Area Plans of the relevant local authority.</p> <p>Project proposals and other proposed plans, referred to in this masterplan will also need to take into account the requirements of the relevant environmental legislation and associated EU Directives such as SEA, EIA, Birds, Habitats, Floods and Water Framework directives, as appropriate. Further information on environmental sensitivities in the plan area which will help inform the need for these assessments is available from the EPA’s Environmental Sensitivity Mapping Webtool www.enviromap.ie.</p>	
Page 13	Add text after the bullet point –	We have been careful to only use the words/expressed points of the workshop attendees on pg 13 and keep this page focused on	Included the following text on pg. 11 under the “where is it for” section to include the following text	Proposed change consistent with the recommendations

	<p>the environment is the asset</p> <p>Lough Derg is the third largest lake in Ireland and the largest lake in the River Shannon system. It lies within a limestone basin and the surrounding uplands, the Slieve Aughties, the Arra Mountains and Slieve Bearnagh, are composed of much harder rock, mainly sandstones. The diversity of landscapes is a result of the variation in geology, topography, climate and land-use history in and around the lake. Its outstanding natural heritage of Lough Derg enhances the</p>	<p>the outcome of the public consultation. I think the line about the environment as the asset is quite powerful in itself and would be reluctant to add in more text to this page that could confuse the record of the public consultation. However, I can see the benefit of reinforcing the connection between the environmental resource, tourism and the natural heritage designations early in the document. Could the text below be better included in a box on pg. 11 under the “where is it for” section? One grammatical tweak highlighted below:</p> <p>“Lough Derg is the third largest lake in Ireland and the largest lake in the River Shannon system. It lies within a limestone basin and the surrounding uplands, the Slieve Aughties, the Arra Mountains and Slieve Bearnagh, are composed of much harder rock, mainly sandstones. The diversity of landscapes is a result of the variation in geology, topography, climate and land-use as well as history in and around the lake. The outstanding natural heritage of Lough Derg enhances the visitor experience by providing a range of vistas, sights, sounds and places to explore and opportunities to experience and learn about nature and wildlife.</p> <p>Lough Derg, and several areas in the surrounding landscape are designated for nature conservation both as Special Areas of Conservation (SACs) and a Special Protection Areas (SPAs), which reflects the huge significance of the natural heritage in this area.”</p>	<p>Lough Derg is the third largest lake in Ireland and the largest lake in the River Shannon system. It lies within a limestone basin and the surrounding uplands, the Slieve Aughties, the Arra Mountains and Slieve Bearnagh, are composed of much harder rock, mainly sandstones. The diversity of landscapes is a result of the variation in geology, topography, climate and land-use history in and around the lake. The outstanding natural heritage of Lough Derg enhances the visitor experience by providing a range of vistas, sights, sounds and places to explore and opportunities to experience and learn about nature and wildlife.</p> <p>Lough Derg, and several areas in the surrounding landscape are designated for nature conservation both as Special Areas of Conservation (SACs) and a Special Protection Areas (SPAs), which reflects the huge significance of the natural heritage in this area.</p>	<p>set out in the Environmental Report and comments from the EPA.</p>
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	<p>visitor experience by providing a range of vistas, sights, sounds and places to explore and opportunities to experience and learn about nature and wildlife.</p> <p>Lough Derg, and several areas in the surrounding landscape are designated for nature conservation both as Special Areas of Conservation (SACs) and a Special Protection Areas (SPAs), which reflects the huge significance of the natural heritage in this area.</p>			
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Pg 14	Insert Support before Deliver		Changed action heading in green band from “ Deliver the Inis Cealtra Experience ” to “Support the delivery of the Inis Cealtra Experience”	Minor editorial amendment. No effects on the environment or implications for the SEA process
Pg 15	Replace “lived history” with “living history”		Deleted “ lived history ” replace with “living history”	Minor editorial amendment. No effects on the environment or implications for the SEA process
Pg 16	Better word than “provision”		in the “The Promise to Visitors” circle - replace “ provision ” with “shop”	Minor editorial amendment. No effects on the environment or implications for the SEA process
Page 24	First paragraph on page 24, includes 2017 figures but the rest of the page is 2018.	<p>Current text in the VEDP is based on information available at the time of the last drafting, county level data for 2018 was available but not the aggregated national data – the opening paragraphs have been updated, 2019 aggregated FI data is still provisional.</p> <p>Overseas tourist visits to Ireland in 2018 grew by 6.6% to 9.6 million. Overseas tourists from Mainland Europe rose by 7.8%, while other markets continued to grow. North America performed very strongly, increasing by 14%. The long-haul markets also increased by 7.7% in 2018. Great Britain recorded growth of 1%.Mainland</p>	<p>Deleted first two paragraphs (under “Volume and value of tourism” heading)</p> <p>Overseas tourist visits to Ireland in 2017 grew by 3.2% to 9.0 million. Overseas tourists from Great Britain fell by 5.1%, while other markets continued to grow. Mainland Europe recorded growth of 5%. North America also performed very strongly, increasing by 16.1%. The long-haul markets also increased by 14.2% in 2017.</p> <p>Great Britain remains the Republic of Ireland’s biggest source market for overseas tourists, representing 38.1% of all such visits (and 21.3% of spending by overseas tourists). The next biggest source market is Mainland Europe, which accounts for 36.1% of</p>	Proposed change consistent with the recommendations set out in the Environmental Report and comments from the EPA.

		<p>Europe was, in 2018, the Republic of Ireland’s biggest source market for overseas tourists, representing 36.5% of all such visits (and 35.3% of spending by overseas tourists). The next biggest source market is Great Britain, which accounts for 36.2% of international volume and 19.6% of spending by overseas tourists. Some 20.4% of overseas tourists come from North America. The balance, 6.8%, comes from other long-haul markets.</p>	<p>international volume. Some 19.0% of overseas tourists come from North America. The balance, 6.7%, comes from other long-haul markets.</p> <p>and replaced with:</p> <p>Overseas tourist visits to Ireland in 2018 grew by 6.6% to 9.6 million. Overseas tourists from Mainland Europe rose by 7.8%, while other markets continued to grow. North America performed very strongly, increasing by 14%. The long-haul markets also increased by 7.7% in 2018. Great Britain recorded growth of 1%.</p> <p>Mainland Europe was, in 2018, the Republic of Ireland’s biggest source market for overseas tourists, representing 36.5% of all such visits (and 35.3% of spending by overseas tourists). The next biggest source market is Great Britain, which accounts for 36.2% of international volume and 19.6% of spending by overseas tourists. Some 20.4% of overseas tourists come from North America. The balance, 6.8%, comes from other long-haul markets.</p>	
Page 31	Text to be added: Advice of the local planning authority should be sought in relation to developments or renovations that facilitate the ‘scattered accommodation concept’.	Text added to page 31 at the end of the paragraph headed “Approach” “Advice of the local planning authority should be sought in relation to developments or renovations that facilitate the scattered accommodation concept.”	Added text at the end of the paragraph headed “Approach” within the Alberghi Diffusi box - Advice of the local planning authority should be sought in relation to developments or renovations that facilitate the scattered accommodation concept.	Consistent with recommendations set out in the environmental report.

Page 33	<p>All of the things which we know attract visitors; the natural environment, the heritage and culture, iconic buildings, the shops, leisure and cultural facilities, food, the events, the scenery; all the things which make a place special, distinctive and worth experiencing;</p> <p>Text to be added community needs to be acknowledged</p>	<p>We will insert highlighted text to first bullet point:</p> <p>All of the things which we know attract visitors; the natural environment, the heritage and culture, a vibrant community, iconic buildings, the shops, leisure and cultural facilities, food, the events, the scenery; all the things which make a place special, distinctive and worth experiencing;</p>	<p>Bold text inserted into first bullet point in the section headed "The Visitor Economy":</p> <p>All of the things which we know attract visitors; the natural environment, the heritage and culture, a vibrant community, iconic buildings, the shops, leisure and cultural facilities, food, the events, the scenery; all the things which make a place special, distinctive and worth experiencing;</p>	<p>Minor editorial amendment. No effects on the environment or implications for the SEA process.</p>
Page 32	<p>Over the course of the 2014-2017 Roadmap timescale, a Tourism Co-ordinator based in Tipperary County Council was secured to steer</p>	<p>We will insert highlighted text to second paragraph:</p> <p>Over the course of the 2014-2017 Roadmap timescale Between 2014 and 2015, a Tourism Co-ordinator based in Tipperary County Council and funded by the EU TRAP INTERREG project was secured to steer steered the implementation of projects and programmes around Lough Derg.</p>	<p>Deleted second paragraph</p> <p>Over the course of the 2014-2017 Roadmap timescale, a Tourism Co-ordinator based in Tipperary County Council was secured to steer implementation of projects and programmes around Lough Derg.</p> <p>and replaced with following text:</p> <p>Between 2014 and 2015, a Tourism Co-ordinator based in Tipperary County Council and funded by the EU TRAP INTERREG project, steered the implementation of projects and programmes around Lough Derg.</p>	<p>Minor editorial amendment. No effects on the environment or implications for the SEA process.</p>

	<p>implementation of projects and programmes around Lough Derg. Correction needed: not technically correct, the dedicated tourism coordinator was in place only for 2014 - 2015. funding by an interreg project at the time</p>			
Page 32	<p>Correction needed in Destination Lough Derg : action 2</p>	<p>This stated remit can be moved to be the fourth bullet pointed list in this box. It reflects the policies of the local and state agencies represented on the group and underpins the overall strategy.</p>	<p>In box headed "Destination Lough Derg" - moved second bullet point to end of bullet point list.</p>	<p>Minor editorial amendment. No effects on the environment or implications for the SEA process.</p>
	<p>A new dedicated Tourism Officer for Lough Derg will be appointed, reporting to Destination Lough Derg. Administrative support will be provided by a dedicated</p>	<p>We will insert highlighted text to this paragraph: To ensure effective co-ordination and delivery of this VEDP, a new dedicated Tourism Officer for Lough Derg will be appointed, reporting to Destination Lough Derg. Administrative support will be provided by a dedicated clerical resource.</p>	<p>Second column, first paragraph after bullet point list – included text to this paragraph: To ensure effective co-ordination and delivery of this VEDP, a new dedicated Tourism Officer for Lough Derg will be appointed, reporting to Destination Lough Derg. Administrative support will be provided by a dedicated clerical resource.</p>	<p>Minor editorial amendment. No effects on the environment or implications for the SEA process.</p>

	<p>clerical resource.</p> <p>Correction needed this could be stronger, needs to say this will not work without a dedicated resource to drive and coordinate delivery.</p>			
Page 54	<p>Environmental management requirements must be implemented over the course of the VEDP. These environmental management proposals are intended to secure the implementation of the recommendation s identified as a result of the SEA process and the Habitats Directive Assessment.</p>	<p>It would be important to have this as discernible section of the VEDP to share with the Planning Departments of each local authority. I would suggest we would add a line after the second paragraph on page 54 to say:</p> <p>“The environmental management requirements arising from the Strategic Environmental Assessment process/Habitats Directive Assessment and which need to be implemented over the course of the VEDP are set out in in Chapter 07 measuring success”</p> <p>Environmental Management</p> <p>The following environmental management requirements must be implemented over the course of the VEDP. These environmental management proposals are intended to secure the implementation of the recommendations identified as a result of the SEA process and the Habitats Directive Assessment.</p> <ul style="list-style-type: none"> • Wastewater, surface water drainage and drinking water infrastructure must be in place prior to development 	<p>Inserted new page after pg 57 to include the following:</p> <p>Environmental Management</p> <p>The following environmental management requirements must be implemented over the course of the VEDP. These environmental management proposals are intended to secure the implementation of the recommendations identified as a result of the SEA process and the Habitats Directive Assessment.</p> <ul style="list-style-type: none"> • Wastewater, surface water drainage and drinking water infrastructure must be in place prior to development • Contractors appointed to undertake any construction works will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works • Measures to protect the environment will be incorporated into design of projects to avoid adverse effects on the integrity of Natura 2000 sites. These will include, but will not limited to, measures such as those set out in: <ul style="list-style-type: none"> ○ Guidelines on Protection of Fisheries 	<p>This is consistent with recommendations set out in the environmental report.</p>

		<ul style="list-style-type: none"> • Contractors appointed to undertake any construction works will be expected to provide site specific method statements detailing measures taken to protect the environment during all phases of works • Measures to protect the environment will be incorporated into design of projects to avoid adverse effects on the integrity of Natura 2000 sites. These will include, but will not limited to, measures such as those set out in: <ul style="list-style-type: none"> ○ Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters (IFI, 2016) and ○ Environmental Good Practice on Site Guide (CIRIA, 2015) • Irrespective of planning requirements, ecological assessment should be carried out for all projects or other means of implementing the objectives of the VEDP • The design of linkages, paths and cycleways must be prepared with the sensitivities of Natura 2000 sites and the broader ecological environment in mind. Any such proposal must consider the potential for increased disturbance of species, such as otter and breeding, roosting or foraging birds, due to any increase of human activities. Locating and designing paths and cycleways should be carried out with input from ecologists and planners to ensure there is no risk of adverse effect on Natura 2000 sites. 	<p style="text-align: center;">During Construction Works In and Adjacent to Waters (IFI, 2016) and</p> <ul style="list-style-type: none"> ○ Environmental Good Practice on Site Guide (CIRIA, 2015) • Irrespective of planning requirements, ecological assessment should be carried out for all projects or other means of implementing the objectives of the VEDP • The design of linkages, paths and cycleways must be prepared with the sensitivities of Natura 2000 sites and the broader ecological environment in mind. Any such proposal must consider the potential for increased disturbance of species, such as otter and breeding, roosting or foraging birds, due to any increase of human activities. Locating and designing paths and cycleways should be carried out with input from ecologists and planners to ensure there is no risk of adverse effect on Natura 2000 sites. • In relation to discovery points, further consideration should be given to potential impact on heritage assets, sustainable transport and access, water quality and designated sites • Lighting of buildings and features around Lough Derg and along watercourses will be avoided wherever possible. If lighting is required within the riparian zone or along the banks of a watercourse it should be designed in consultation with an appropriately qualified ecologist • It must also be noted that the appropriate assessment at plan level does not exempt projects or plans arising from the plan from the assessment requirements of Article 6(3) 	
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		<ul style="list-style-type: none"> • In relation to discovery points, further consideration should be given to potential impact on heritage assets, sustainable transport and access, water quality and designated sites • Lighting of buildings and features around Lough Derg and along watercourses will be avoided wherever possible. If lighting is required within the riparian zone or along the banks of a watercourse it should be designed in consultation with an appropriately qualified ecologist • It must also be noted that the appropriate assessment at plan level does not exempt projects or plans arising from the plan from the assessment requirements of Article 6(3) at a later stage, when much more details of potential impacts and effects are known. In other words, projects or plans that result from the Visitor Plan are also required to undergo Article 6 assessment before they can proceed or be permitted. The relevant competent authority, such as Tipperary, Galway, Clare County Councils as well as An Bord Pleanála or another designated public authority, will be responsible for ensuring that projects or plans that result from the Visitor Plan are also required to undergo Article 6 assessment before they can be permitted or proceed. • Biosecurity measures for inland waterways, prepared by organisations such as Waterways Ireland to prevent 	<p>at a later stage, when much more details of potential impacts and effects are known. In other words, projects or plans that result from the Visitor Plan are also required to undergo Article 6 assessment before they can proceed or be permitted. The relevant competent authority, such as Tipperary, Galway, Clare County Councils as well as An Bord Pleanála or another designated public authority, will be responsible for ensuring that projects or plans that result from the Visitor Plan are also required to undergo Article 6 assessment before they can be permitted or proceed.</p> <ul style="list-style-type: none"> • Biosecurity measures for inland waterways, prepared by organisations such as Waterways Ireland to prevent the inadvertent disruption of the Lough Derg and the Shannon’s natural ecosystems, would be implemented across the VEDP area • Interpretation text should be developed to reflect environmental sensitivities and specific issues around wildlife disturbance including noise, littering and contamination of habitats. In addition, appropriate wayfinding should be used to guide visitors towards designated routes to create awareness and appreciation of areas of significant environmental quality and/or architectural significance, whilst mitigating the disturbance, erosion, and damage of same • Event management plans should be prepared to manage the environmental impact of popular festivals, with an attendance of under 5,000 people. This can be facilitated 	
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		<p>the inadvertent disruption of the Lough Derg and the Shannon’s natural ecosystems, would be implemented across the VEDP area</p> <ul style="list-style-type: none"> • Interpretation text should be developed to reflect environmental sensitivities and specific issues around wildlife disturbance including noise, littering and contamination of habitats. In addition, appropriate wayfinding should be used to guide visitors towards designated routes to create awareness and appreciation of areas of significant environmental quality and/or architectural significance, whilst mitigating the disturbance, erosion, and damage of same • Event management plans should be prepared to manage the environmental impact of popular festivals, with an attendance of under 5,000 people. This can be facilitated through the assistance and support of Destination Lough Derg and input from relevant statutory authorities such as the NPWS in relation to ‘Notifiable Actions’ • Seek to ensure that mayor new development incorporates a zero carbon approach • Ensure that mayor new development incorporates appropriate traffic management measures and measures to enhance sustainable travel. 	<p>through the assistance and support of Destination Lough Derg and input from relevant statutory authorities such as the NPWS in relation to ‘Notifiable Actions’</p> <ul style="list-style-type: none"> • Seek to ensure that mayor new development incorporates a zero carbon approach • Ensure that mayor new development incorporates appropriate traffic management measures and measures to enhance sustainable travel. 	
Page 58	08 Action Plan Overview. Add	LDMG is supporting the Covid response and the following change is proposed:	Changed the introduction text on this page to include text:	Consistent with recommendations

	<p>action under ACTION AREA 1 Destination Management</p> <p>Implement COVID-19 Action Plan to secure a sustainable recovery.</p>	<p>“A detailed action plan is set out in the accompanying Lough Derg Destination Action Plan 2020-2024 – an overview is given here.(include footnote ref.)</p> <p><i>Footnote - Note that the response to the 2020 Covid-19 crisis included formation of Lough Derg Destination Recovery Task Forces who have devised rapid implementation Action Plans separate to those set out in this VEDP”</i></p>	<p>s“A detailed action plan is set out in the accompanying Lough Derg Destination Action Plan 2020-2024 – an overview is given here ³¹</p> <p><i>Footnote - Note that the response to the 2020 Covid-19 crisis included formation of Lough Derg Destination Recovery Task Forces who have devised rapid implementation Action Plans separate to those set out in this VEDP</i></p>	<p>set out in the environmental report.</p>
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