

# DRAFT MASTERPLAN FOR MOOREHALL AND ENVIRONS

## SEA 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 Draft Masterplan for Moorehall and Environs (the Draft Masterplan). The purpose of the ER is to provide information on the likely environmental effects regarding the future development of the plan area. This report should be read in conjunction with the Draft Masterplan.

### 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 Draft and Adopted Masterplan.

### How does it work?

The assessment identifies any environmental issues in the masterplan area as well as any significant environmental effects arising from the Draft Masterplan as well as measure to avoid or mitigate those effects.

In order to decide how best protects the environment as much as possible, the competent authority examines alternatives for the Masterplan. This helps to highlight the type of plan that is least likely to harm the environment.

### What is included in the Environmental Report which accompanies the Draft Masterplan?

The ER contains the following information:

- A description of the environment and the key environmental issues;
- A description and assessment of alternatives for the Masterplan.
- An assessment of the Masterplan 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 Masterplan 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 Draft Masterplan

The Draft Masterplan has been prepared by Mayo 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
  - 1.1 Background

- 1.2 Introduction and Approach to the Moorehall Masterplan
- 1.3 Strategic Environmental Assessment (SEA) for the Draft Masterplan
- 1.4 The Habitats Directive
2. Moorehall And Lough Carra: What Makes Them Special?
  - 2.1 Protected Wildlife – Lesser Horseshoe Bat at Moorehall: an internationally significant site
  - 2.2 Rich Culture and Built Heritage – Moorehall and the Moore Family
  - 2.3 Lough Carra, its setting and beauty
  - 2.4 The Enchanted Forest
  - 2.5 Proximity to People & Places of Interest
3. Tourism Context
  - 3.1 Tourism in Ireland
  - 3.2 Current Market Analysis – Co Mayo
  - 3.3 Visitor Attraction & Activity Trends – Ireland
  - 3.4 Market Led Approach
  - 3.5 Visitor Segmentation at Moorehall
  - 3.6 Future Visitor Numbers at Moorehall
4. Interpretative Framework For Moorehall
  - 4.1 Interpretation Framework for Moorehall
5. Key Development Issues
  - 5.1 Ensuring Sensitive Species and Habitats sit at the Heart of the Approach
  - 5.2 Protecting the Historic Environment
  - 5.3 Sustainable Woodland Management
  - 5.4 Sustainable Access
  - 5.5 Water Supply & Wastewater
  - 5.6 Tourism Infrastructure
  - 5.7 Community Involvement
  - 5.8 Sustainable Operational Model
6. The Masterplan Strategy
  - 6.1 The Vision
  - 6.2 Masterplan Aim
  - 6.3 Masterplan Options
  - 6.4 Spatial Strategy for Moorehall
  - 6.5 Detailed Design Considerations
7. Strategic Actions
  - 7.1 Strategic Action 1: Conservation Management for Moorehall & Lough Carra
  - 7.2 Strategic Action 2: Retain Authenticity & features of Historic Environment
  - 7.3 Strategic Action 3: Develop & Enhance the Visitor Experience
  - 7.4 Strategic Action 4: Improving Linkages, Interpretation & Signage
  - 7.5 Strategic Action 5: Infrastructure, Servicing And Business Model
8. Implementation Plan
  - 8.1 Priority Actions
  - 8.2 Action Plan
9. Next Steps

### Section 3 SEA Methodology and Consultations

The Draft Masterplan has been developed to provide a high-quality sustainable tourism plan for the Moorehall Estate and the surrounding area including the state owned lands of Lough Carra and Towerhill Estate. This ER has been produced to assess the significant environmental effects of the various objectives and developments (alternatives) proposed within the Masterplan.

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 Draft Masterplan.

## 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 including:

- Ireland 2040 – The National Planning Framework (2018)
- Regional Spatial and Economic Strategy for the Northern and Western Region (January 2020)
- Climate Action Plan 2019, To Tackle Climate Breakdown (Government of Ireland)
- National Adaptation Framework, Planning for a Climate Resilient Ireland, 2018
- The National Mitigation Plan, 2017
- National Climate Change Policy, 2013
- River Basin Management Plan for Ireland 2018-2021
- Mayo County Development Plan 2014-2020, including the Ballinrobe Area Plan
- Mayo County Development Plan 2022-2028
- Destination Mayo 2016-2021

## Section 5 Environmental Baseline and Relevant Environmental Issues

### Introduction

The environmental baseline of the masterplan area is described in this section. This baseline, together with the Strategic Environmental Objectives which are identified in Section 6, are used 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 environmental component heading listed above and historical trends are presented where information is available. In the absence of a masterplan 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 may impact on undesignated habitats such as hedgerows and trees.

#### 2. Population and Human Health

In the absence of appropriate objectives relating to the consolidation and improvement of tourism services and public amenities there would be no framework for facilitating access to the historical landmark of Moorehall. In the absence of a coordinated masterplan, 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 the appropriate site which could result in the degradation 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 will manage future development there is increased potential for impacts affecting the quality of surface water, groundwater and locally important aquifers.

### **5. Air**

Visitor experience development will impact on travel patterns 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 CO<sup>2</sup> emissions.

### **7. Material Assets**

There would be no detailed framework to protect material assets within the masterplan area and enhance the road network if required.

### **8. Cultural Heritage**

Cultural heritage is a cornerstone of this Draft Masterplan. Without the Masterplan, there is no framework that will identify the measures required to achieve high quality development outcomes in this sensitive location.

### **9. Landscape**

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

## **Section 6 Assessment Framework**

The Draft Masterplan has been assessed against SEA Objectives in order to examine the significant likely environmental effects of the Plan. This assessment is strategic and is designed to report likely significant effects at a higher scale to reflect the scale at which the Masterplan 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 masterplan area. In preparing this Draft Masterplan, several alternatives were considered. They fall into two categories:

- Alternatives for the siting of the Visitor Centre
- Alternatives Landscape Design / Restoration Options with respect to the Historic Environment

## Alternatives for the siting of the Visitor Centre

Based on the constraints with regard to the restoration of the House, a proposal to develop a standalone visitor centre away from the sensitive areas of the site, i.e. the house, was considered. It would also ensure that modern facilities state of the art facilities would meet the expectations of a modern visitor experience.

The following alternatives were considered in relation to the location of the new visitor centre:

- Alternative 1: Visitor Centre to the south of the walled garden;
- Alternative 2: Visitor Centre to the north of the walled garden;
- Alternative 3: Visitor Centre to north of walled garden plus existing car park to be relocated and the area restored to grassland.
- Alternative 4: Do nothing

## Evaluation of Alternative Scenarios

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

### Alternative 1: Visitor Centre to the south of the walled garden;

A visitor centre located south of the walled garden (Option 1) would be well placed to take advantage of views to the lake, Kiltoom point and Castle Island. However, the siting and design of this building would require very careful consideration in order to minimise the impact on the visual setting of the house, a protected structure, and its grounds which are intrinsic to the setting of the house. The visual impact in terms of the landscape character of Lough Carra and its shoreline would also potentially be impacted. The visitor centre would also be located at some distance from the car park and so accessibility to this location would also be limited.

#### Environmental Effects

The central environmental benefit of this alternative is associated with avoiding the redevelopment of the Moorehall House which thereby reduces visitor activity at this sensitive location. The environmental effects associated with developing a visitor Centre to the south of the walled garden are primarily associated with future servicing arrangement which are at present unknown and the visual impact.

### Alternative 2: Visitor Centre to the north of the walled garden

A visitor centre to the north of the walled garden would avoid significant effects on the setting of Moorehall and the walled garden. Car parking to the front of Moorehall will be relocated northwards from its current lakeside location to the northern track access point. The visitor centre would also be located at some distance from the car park and so accessibility to this location would also be limited.

#### Environmental Effects

The environmental effects associated with developing a visitor Centre to the north of the walled garden are primarily associated with future servicing arrangements which are at present unknown and dependent on the outcome of a feasibility study.

### Alternative 3: Visitor Centre to north of walled garden plus existing car park to be removed/relocated and grassed.

A visitor centre to the north of the walled garden would avoid visual impacts on the setting of Moorehall and the walled garden. Car parking to the front of Moorehall will be relocated northwards from its current lakeside

location to the northern track access point. This would focus the approach traffic towards the better route from the north into the site and away from the south. This option would result in the car park being relocated to the north of the walled garden which would also restore the original view from the house to the lake.

#### Environmental Effects

The environmental effects associated with developing a visitor centre to the north of the walled garden are primarily associated with future servicing arrangement which are at present unknown and dependent on the outcome of a feasibility study. The removal of the existing car park at the lake would also have short term effects (during the construction stage) in relation to noise, air/dust and associated disturbance.

#### Alternative 4: Do nothing

The do nothing scenario was considered prior to the preparation of the Masterplan. With the need for habitat management and improved public amenity space, there is a requirement for a planned and coordinated approach. Without a Masterplan in place, a number of potential disbenefits and environmental effects would accrue.

#### Environmental Effects

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 significant environmental effects associated with subsequent 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 3** which is the Visitor Centre to north of walled garden plus existing car park to be removed and grassed. This has the fewest potentially negative effects 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 integration of new development in the least sensitive locations of the site.

By applying appropriate mitigation measures - including those which have already been integrated into the Masterplan - 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 Masterplan using the assessment framework developed in Section 6. The purpose of this section is to evaluate the likely significant environmental effects of the Masterplan.

### Appropriate Assessment Screening Report and Natura Impact Statement

Appropriate Assessment Screening Report and Natura Impact Statement were also carried out for the Draft Masterplan and this is produced as a separate report. The preparation of the Draft Masterplan, SEA and Natura Impact Statement has taken place concurrently and the findings of the Appropriate Assessment Screening Report and Natura Impact Statement have informed both the Draft Masterplan and the SEA.

## Section 9 Monitoring, Review and Reporting

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

- The avoidance of development in sensitive locations;
- The consideration of alternatives;
- Through communication of environmental considerations and integration of these considerations into the Draft Masterplan; and
- Adherence to and implementation of mitigation measures which have been integrated into the Draft Masterplan and will be incorporated into the adopted Masterplan.

### 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 Masterplan which are adopted alongside the Masterplan. 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 Draft Masterplan

The Draft Masterplan has been developed to identify strategic actions dedicated to protection of the Lesser Horseshoe Bat, improving the ecological functionality of the Moorehall complex, while securing its natural and cultural heritage through sensitive redevelopment as a visitor attraction and recreational amenity.

The vision for Moorehall is to develop a strategically important centre for nature conservation focused on preservation of the Lesser Horseshoe Bat and other protected species within a national Nature Reserve. Where feasible, appropriate restoration of historic structures on-site will contribute to development of a world class heritage, interpretation and recreational visitor experience.

The vision will inform the future development of Moorehall, centred on five priority elements:

1. Wildlife & Protected Species, with particular reference to the Lesser Horseshoe Bat and its habitats
2. Cultural Heritage & Legacy of the Moore Family in the context of Irish political and literary history
3. Lough Carra & its unique cultural, geological and wider ecological significance
4. The Enchanting Forest: its recreational and amenity value.
5. Proximity to People & Places at world class amenity, ecclesiastical and heritage sites of Mayo.



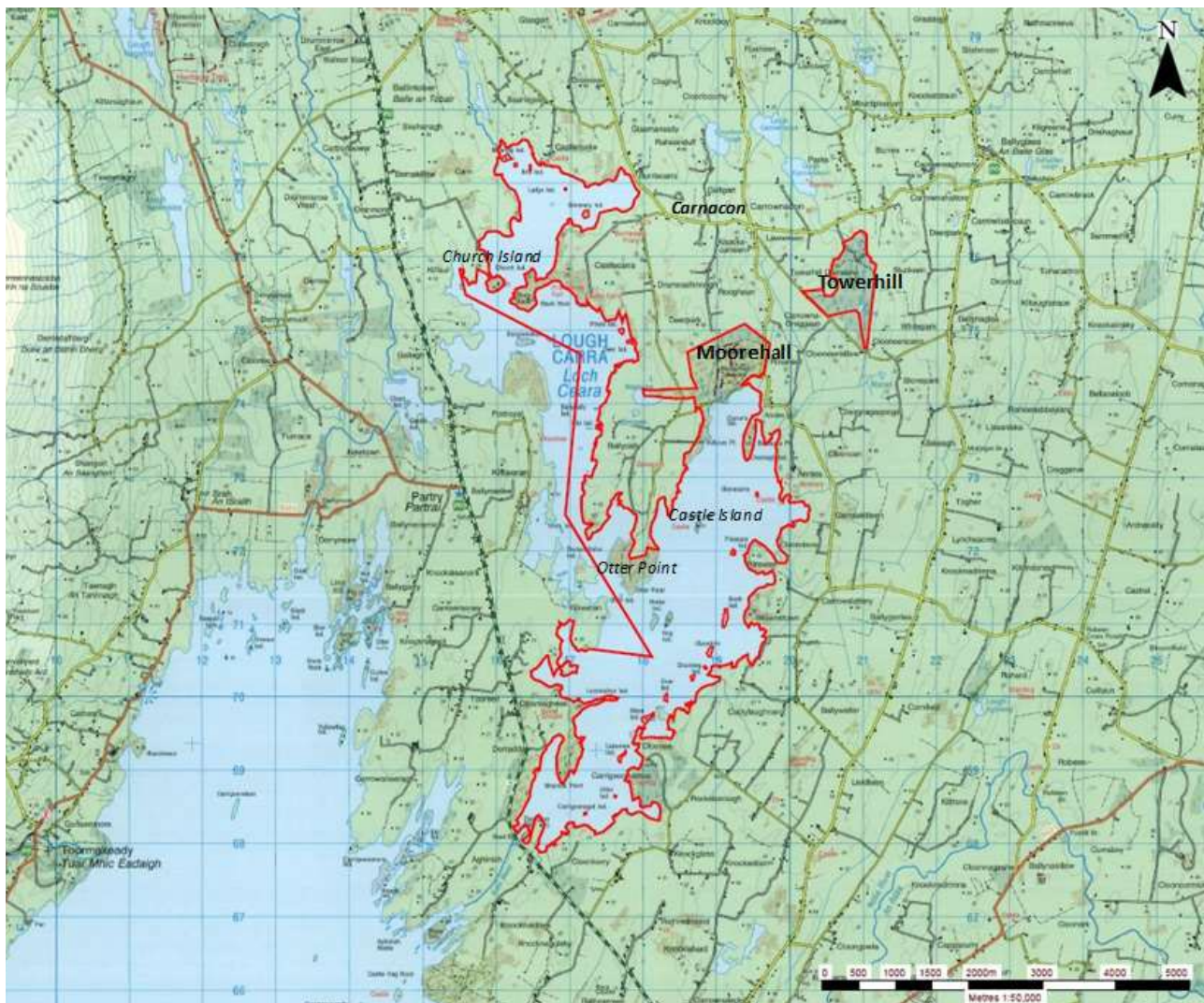


Figure 1 Draft Masterplan Boundary

## 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 Draft Masterplan. This Environmental Report has been compiled by SLR on behalf of Mayo County Council who are the competent authority for the Masterplan and associated SEA.

SEA is the formal, systematic evaluation of the likely significant effects of implementing the masterplan, 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 Masterplan and SEA

The vision for the Draft Masterplan is informed by the area's high quality environment and unique characteristics – by what makes these places special and attractive to visitors. Sustaining authentic and exceptional features lies at the heart of the Masterplan, which will allow key features and their significance at both Moorehall and Lough Carra to be fully identified and protected.

The Masterplan will define key issues to be addressed and will support decision-making for its future development and management. The Masterplan will be guided by the following principles:

- To maintain or restore the favourable conservation condition of Lesser Horseshoe Bat at Moorehall and Lough Carra's shallow marl lake habitats.
- Any redevelopment of the built heritage shall promote the conservation of protected species as a priority.
- Development of sustainable and appropriate recreational or tourism infrastructure will be in line with the conservation objectives of the Special Areas of Conservation and Special Protection Area.

The Masterplan would be considered as a 'plan' according to the European Communities (Birds and Natural Habitats) Regulations 2011 and EU (Birds and Natural Habitats) (Amendment) Regulations 2021 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 Draft Masterplan. The Environmental Report has been amended to take account of recommendations contained in submissions received as a result of the previous public consultation.

## 1.4 Competent Authority

This Environmental Report is prepared on behalf of the Mayo County Council, the Competent Authority for the preparation of the Masterplan. Mayo County Council will address the findings of this Environmental Report in the adopted Masterplan. When the Masterplan is finalised and adopted, an SEA Statement will be prepared which will summarise how environmental considerations were integrated into the masterplan.

## 1.5 Strategic Environmental Assessment – An Overview

SEA is a process for evaluating, at the earliest appropriate stage, the environmental consequences of implementing a plan/ programme 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 Masterplan has the potential to identify and deliver tourism development proposals within and around the Moorehall Area. The SEA will be applied to the full extent of the Masterplan 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 effects on the environment as a result of the Draft Masterplan, leading to the production of an Environmental Report;
4. **Consultation** on the Draft Masterplan and associated Environmental Report;
5. **Evaluation of the submissions and observations** made on the draft Masterplan and Environmental Report prior to finalising the Masterplan;
6. Adoption of the **Masterplan** and issuance of an **SEA Statement** identifying how environmental considerations and consultation have been integrated into the Masterplan.

### 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).

The drafting of a Masterplan 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 Masterplan.

A Masterplan would also be considered as a 'plan' according to the European Communities (Birds and Natural Habitats) Regulations 2011 and EU (Birds and Natural Habitats) (Amendment) Regulations 2021. 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 Masterplan.

## 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 2021 are:

- Environmental Protection Agency
- Minister for Housing, Local Government and Heritage
- Department of Environment, Climate and Communications
- Department of Agriculture, Food & the Marine
- Any adjoining planning authority whose area is contiguous to the area of the planning authority

## 2.0 Moorehall Masterplan

### 2.1 The Development Plan Area

The vision for Moorehall and Lough Carra is informed by the unique complex of cultural and natural assets, set within a high-quality environment and landscape of significant amenity potential on the shores of the lake. These include:

1. **Wildlife & Protected Species** - The presence of the internationally important lesser horseshoe bat, its favourable habitats and high-quality natural environment in the environs of Moorehall.
2. **Rich Cultural and Built Heritage** – The engaging history of the Moores and their association with the political and cultural renaissance of the emerging Irish state, within a rich historic built environment.
3. **Lough Carra and its Setting** – Moorehall on the shores of Lough Carra, its unique cultural, geological and ecological significance (*part of the candidate UNESCO Joyce Country and Western Lakes Geopark*). Lough Carra is an internationally important wetland system, supporting an array of habitats and species listed in the EU Habitats and Birds Directives.
4. **The Enchanting Forest** – located within a mixed woodland, with recreational offerings for both residents and visitors in the demesne and the wider area of Lough Carra.
5. **Proximity to People and Places** - located close to several ecclesiastical and heritage sites, attractive towns and quaint villages, along the proposed ‘Lost Treasures’ Trail.



Figure 2 Moorehall and Lough Carra: what Makes it Special?

## 2.2 Plan Objectives

The development of a masterplan for Moorehall has considered the site context including its history, landscape, location, access, availability of services as well as environmental sensitivity. The environmental and cultural characteristics of the site and the surrounding areas are significant and include several noteworthy designations:

- Designation of Moorehall House as a protected structure;
- Presence of European Protected Species and Natura 2000 sites, at Moorehall as well as Lough Carra;
- Presence of a number of National Monuments on the site;
- Designation of scenic routes and highly scenic views.

While a wide variety of factors combine to influence the masterplan strategy, several key development issues will require careful consideration so that Moorehall can realise its full potential and retain its character:

- Ensuring that conservation of sensitive species and habitats sits at the heart of the masterplan approach;
- Protection of built heritage and the historic environment;
- Ensuring appropriate restoration or development that fully considers protection of the historic and natural environment;
- Identify an integrated, sustainable and sensitive approach to woodland management among the partners involved;
- Providing sustainable access and transport solutions that recognise the site's rural location;
- Providing sustainable wastewater solutions, taking account of the lack of on-site services and the sensitivity of the surrounding environment;
- Need for improved capacity in tourism infrastructure;
- Need for community involvement, support and resourcing; and
- A sustainable operational model.

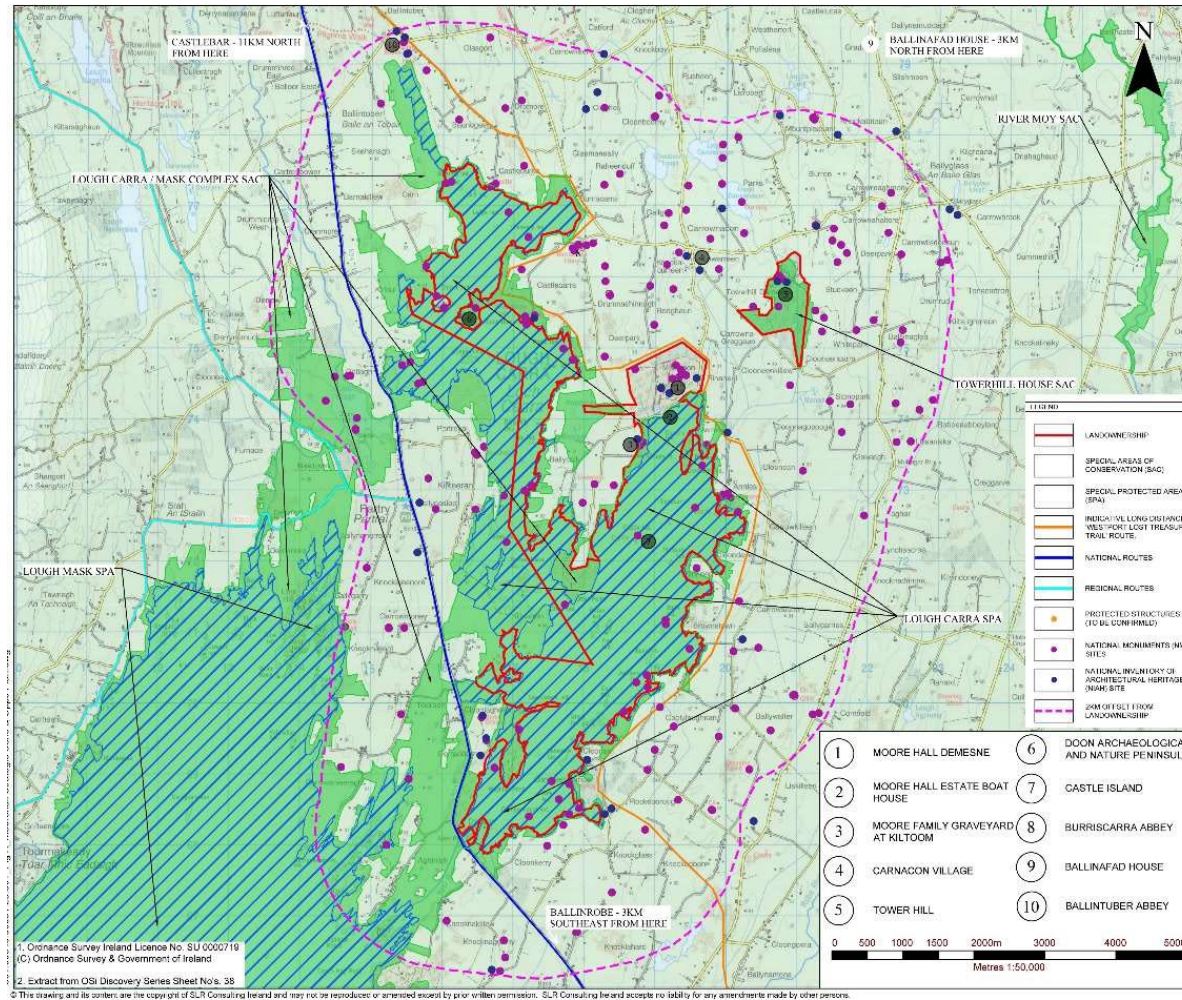


Figure 3 Wider Area: Environmental Designations and Features

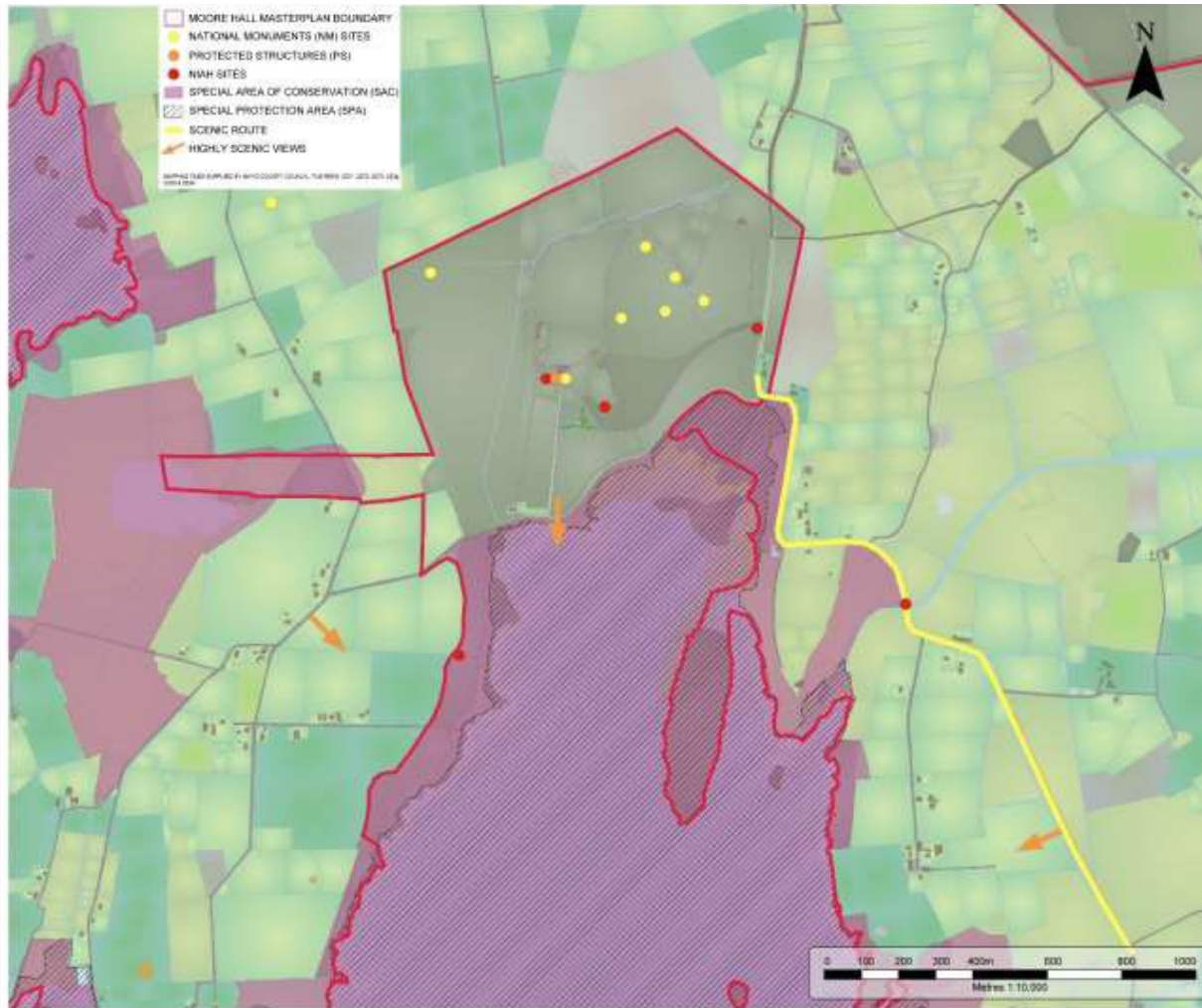


Figure 4 Moorehall: Environmental and Conservation Features

### 2.2.1 Key elements of the Masterplan

The Masterplan is split in to five strategic actions which are outlined below.

#### **Strategic Action 1: Conservation Management Plan for Moorehall and Lough Carra (*to protect and enhance habitat for Lesser Horseshoe Bat and other species*)**

The following projects should be prioritised for conservation purposes:

##### **Moorehall SAC – targeted conservation measures**

1. Preparation and adoption of Conservation Management Plan (CMP).
2. Targeted interventions for Biodiversity Enhancement and Conservation Measures:
  - Moorehall building enhancement of hibernation and maternity roosts.
  - Restoration and enhancement of outbuildings as favourable bat roosts and habitats.
  - Retention and enhancement of linear landscape features.
  - Suitable planting of Walled Garden with night scented plants.
  - Alteration of tracks and trails in consideration of bat commuting routes.
  - Develop bat box scheme (c. 20 boxes) to offset any loss of roost sites.
  - Sensitive treatment of bridges, culverts and tunnels to optimise bat use.
  - Assessment of mature tree stands for selective felling in accordance with CMP.
  - Avoid lighting on site as it deters bat activity, particularly near roosting sites.
  - Building repairs or demolition in accordance with the Conservation Management Plan.
3. Any mitigation measures in the development plan should be monitored for effectiveness in perpetuity and, based on the results, alterations and/or enhancements should be undertaken.

##### **Lough Carra SPA/ SAC – targeted conservation measures**

4. Targeted measures to enhance the Lake's ecological integrity:
  - The installation of a number of nesting rafts on the lake.
  - Vegetation management on islands and rocky shoals for enhanced nesting opportunities.
  - The construction of a number of bird hides at agreed, discreet locations.
  - Calcareous grassland & scrub management on important grassland areas & lakeshore.
  - Woodland management on the islands, removal of invasive species; opening of the canopy.
  - Installation of an array of different bird boxes to support breeding avifauna around Lough Carra.

#### **Strategic Action 2: Authenticity and Restoration of key Features of the Historic Environment**

The following projects should be prioritised for the historic environment:

1. Carry out a survey of historic built elements on the site.
2. The preparation of a conservation management plan and detail design proposals for the restoration/conservation of the following historic features:
  - House, walled garden, avenues, farmyard, view corridor.
  - Historic landscape – returning some parts of Moorehall environs to original layout.
3. Carry out a detailed tree survey to be undertaken by a qualified arboriculturist.



4. Prepare a detailed planting Plan, involving a phased strategy for tree clearance (based on bat conservation requirements) and selective clearing of the view corridor to the front of the house, selective clearance of trees along the main entrance.
5. Apply for licence under the Forestry Act 2014 for tree felling in the area in front of the house and identify areas where compensatory replanting is possible and prepare planting plans for same.
6. Designation of the site as a Nature Reserve by Ministerial Order.

### **Strategic Action 3: Development of the Visitor Experience**

1. Consider the development of a world class, innovative Visitor Centre, subject to servicing and requirements of the integrated Conservation Management Plan.
2. Restoration of key elements of Moorehall, house, garden, farm, historic tracks and trails subject to requirements of the integrated Conservation Management Plan.
3. Refinement of the Experience Opportunity framework to inform detailed Thematic Interpretation Plans.
4. Development of linkages with Towerhill, Ballintubber Abbey, Burriscarra Abbey and other historic attractions.
5. Work with local service providers to provide excellent ancillary experiences.

### **Strategic Action 4: Building Strategic Linkages; Interpretation and Signage**

1. Work with destination hub towns of Castlebar and Ballinrobe to identify visitor servicing requirement and sustainable transport links where feasible.
2. Develop improved linkages from Moorehall to wider visitor heritage attractions through creation of recreational walking and cycling / e-cycling trails, in consultation with local communities.
3. Design a detailed Interpretation Plan to inform experience development and engagement with visitors.
4. Develop and refine the Interpretation Framework for Moorehall and Lough Carra in its wider context.
5. Training of staff and guides in use of the Interpretative Framework.
6. Create linkages with the candidate UNESCO Joyce Country & Western Lakes Geopark with specific reference to the unique geology and ecology of Lough Carra.
7. Devise an appropriate branded signage strategy in line with Mayo County Council guidelines.
8. Create dedicated website for the Moorehall and Lough Carra Nature Reserve (name to be confirmed) to signpost visitors to the site. MCC to lock down the domain names as soon as possible.
9. Prepare a transport assessment / sustainable transport strategy based on the projected visitor numbers of 90,000 per annum.

### **Strategic Action 5: Infrastructure Planning & Business Case**

1. Assess servicing options for new build elements in the masterplan.

2. Preparation of a detailed site Infrastructure Plan.
3. Consider the capital costing requirements.
4. Consider and agree the preferred operational model in collaboration with the community.
5. Prepare a business case for shortlisted proposals based on this model.
6. Establish potential revenue streams.
7. Develop an integrated Business Plan for Moorehall.

## 3.0 SEA Methodology and Consultations

### 3.1 Introduction

This SEA Environmental Report has been produced to assess the environmental impacts of the various objectives and developments(alternatives) proposed within the Masterplan.

In parallel to this, an AA has been prepared to inform the decision-making process, in terms of the potential for the masterplan proposals 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 SEA Legislation

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).

### 3.3 SEA Guidance

There are several guidance documents available to inform and support the SEA process and outputs. They include:

- SEA of Local Authority Land Use Plans – EPA Recommendations and Resources (EPA, updated regularly and last updated in February 2021)
- SEA process guidance and checklists, including Consultation Draft of the EPA's SEA Process Checklist to assist in undertaking a full SEA (EPA, 2008)
- Good practice note on Cumulative Effects Assessment (EPA, 2020),
- Guidance on SEA Statements and Monitoring (EPA, 2020),
- Integrating climatic factors into SEA (EPA, 2019),
- Developing and Assessing Alternatives in SEA (EPA, 2015), and Integrated Biodiversity Impact Assessment (EPA, 2012))

#### 3.3.1 SEA of Local Authority Land Use Plans – EPA Recommendations and Resources

This document provides key EPA recommendations for Local Authorities to consider when carrying out SEA of land-use plans at county and local level. It also includes information on recently published EPA reports and links to other relevant resources. Key Environmental Recommendations to Consider relevant to the Draft Masterplan include:

- Waste water
  - Our Water Quality in Ireland 2013-2018 (EPA, 2019) highlights that one of the key causes of water pollution is from point sources including discharges from waste water treatment plants. The need to provide and maintain adequate and appropriate wastewater treatment infrastructure to service the site should be included as a specific Policy/Objective in the Plan.
  - Regard should be given to the Code of Practice: Wastewater Treatment and Disposal Systems Serving Single Houses (p.e < 10), (EPA, 2009) with regard to any - proposed rural residential development which may arise - or development proposals in un-sewered rural areas - or areas where connection to the public sewer is not feasible.
- Water Framework Directive

- ensure that any specific relevant objectives and measures for individual water bodies, within the Plan area as set out in the existing relevant Water Framework Directive River Basin Management Plan, are provided for in order to ensure water quality is protected/improved/maintained.
- Protection of Groundwater Resources
  - Issues to consider relating to protection of groundwater include; enforcement of planning conditions related to installation, operation and maintenance of on-site wastewater treatment / septic tank systems.
- Climate Change Adaptation
  - Aspects to be considered include the resilience of existing and proposed infrastructure and systems to climate variability. This analysis may include an assessment of responses to recent extreme weather events and the adequacy of existing systems and procedures. Other climate change impacts to be considered include changes in native species and habitats and the spread of invasive species, pests and pathogens.
- Air Quality
  - The EPA manages the national ambient air quality monitoring network and measures the levels of a number of atmospheric pollutants. The pollutants of most concern are those whose main source is traffic such as Particulate Matter and Nitrogen Dioxide.
- Biodiversity
  - The protection of ecological resources is a key consideration which needs to be addressed. Clear Policies/Objectives should be included to conserve and protect all designated sites within, and in the vicinity of the Plan area (including the habitats and/or species for which they have been selected, or which they support), and should also promote the protection of undesignated sites and local biodiversity features.
  - The Plan should also promote the need to protect and where possible improve wider aspects of biodiversity including ecological corridors / linkages / green infrastructure, areas of important local biodiversity, the provision of buffer zones between developments and areas of significant biodiversity and ensuring appropriate control and management measures for invasive species.
  - Plan should refer to and reflect the relevant commitments in Ireland's National Biodiversity Action Plan 2017-21 (DCHG, 2017).
- Green and Blue Infrastructure
  - Where the development of new greenways and blueways is considered, these should look to support rather than replace existing green infrastructure. The EPA report 'Our Environment, Our Health, Our Wellbeing: Access to Blue/Green Spaces in Ireland' and associated toolkit (EPA, 2021) explores the key forces and patterns at work in relation to access to blue/green spaces in Ireland and possible impacts in national, regional and local contexts through data analytics, visualisation and mapping.
- Energy Conservation & Renewable Energy
  - The Plan should support and promote the need for energy conservation measures to be incorporated into buildings. Relevant guidance in this regard, can be found on the website of the Sustainable Energy Authority of Ireland: [www.seai.ie](http://www.seai.ie).
- Landscape
  - Visual linkages between established landmarks and landscape features and views should be taken into account when land is being zoned and when individual development proposals are being assessed / considered.
- Geology / Geomorphology
  - The Plan should protect any designated Geological and Geomorphological NHAs/pNHAs, which may be present/designated within or adjacent to the Plan area in consultation with the Geological Survey of Ireland.
- Human Health / Quality of Life

- In addressing human health and quality of life, the Plan should consider the socioeconomic status of the population within the plan area and in particular should consider any socioeconomic inequalities. This is important to ensure that the Plan does not exacerbate any existing inequalities and ideally promotes and supports the balancing of existing socioeconomic inequalities. The Plan should ensure provision of adequate and appropriate infrastructure and to serve both the existing community and likely future predicted increases in population within the Plan area.
- Transportation
  - The Plan should promote and as appropriate, provide for the provision of sustainable modes of transport. The Plan should include and provide support for appropriate access to public transport, dedicated cycleways and pedestrian pathways, access to rapid charging infrastructure etc.
- Infrastructure Planning
  - The Plan should promote the need for an integrated planning approach to service any development proposed and authorised during the lifetime of the Plan in collaboration with key stakeholders.
  - The potential impact on human health, habitats and species of ecological importance, flood risk and water quality should be taken into account in considering proposed additional infrastructure or in proposed upgrading of existing infrastructure.

In preparing the plan/programme/modification and associated SEA, the recommendations, key issues and challenges described within our State of the Environment Report Ireland's Environment – An Assessment 2020 (EPA, 2020) should also be considered.

### 3.3.2 State of the Environment Report – Ireland's Environment 2020

Key messages, from the state of the environment report, and of note for the masterplan, include:

- Water quality: The water quality in Ireland's rivers, lakes and estuaries needs to be better protected through evidence-based measures, integrated water catchment-based projects and initiatives and by reducing the amount of nutrients ending up in water courses.
- Health and wellbeing: Green and blue spaces as well as quiet areas also need to be protected as they provide social spaces for communities and enable a connection to nature, with evidence showing that spending time in such spaces is good for health.
- Climate: Systemic change is required for Ireland to become the climate-neutral and climate resilient society and economy that it aspires to be.

## 3.4 SEA Methodology

The SEA methodology involves the following key stages:

- Screening
- Scoping

### 3.4.1 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 Masterplan 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.

### 3.4.2 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 Masterplan for Moorehall and Environs 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.

### 3.4.3 Scoping Consultation and Responses

In line with the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435/2004), the Environmental and Planning Authorities were given notice on the 5<sup>th</sup> February 2021 of the intention of Mayo County Council to carry out an environmental assessment. The scoping consultation ran from the 5<sup>th</sup> February 2021 to 05<sup>th</sup> March 2021. There were 3 responses which are outlined in the table below, following. Further detail on the submission responses is provided in Appendix 1.

**Table 1: Record of Scoping Submissions Received**

Agency	Interest	Concerns
Environmental Protection Agency	Statutory Environmental Agency	Overarching comments relating to 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.
Department of Communications Climate Action and Environment (Geological Survey Ireland)	Government Department (the national earth science agency)	Overarching comments relating to Geoheritage, Groundwater, Geohazards, Geothermal Energy, Natural Resources (Minerals/Aggregates).
Waste Policy and Resource Efficiency Division, (a division of the Department of Environment, Climate and Communications)	Government Department (resource efficiency)	In respect of waste in the within documentation, the Waste Policy & Resource Efficiency Division would be obliged if the respective Regional Waste Management Planning Office would be consulted regarding development of the final plans.

### 3.4.4 Environmental Assessment – Preparation of the 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 Masterplan
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
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

### Challenges and Data Gaps

A Masterplan 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.

## Transboundary Consultations

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

### 3.4.5 Consultation on the Masterplan and Environmental Report

The findings of the SEA are explained in this Environmental Report, which accompanies the Draft Masterplan. These documents will be on public display for a period of 4 weeks from Tuesday 4th April 2023 to Tuesday 2nd May 2023, inclusive.

This Environmental Report may be altered in order to take account of submissions received as a result of public display and consultation. It may also be altered and updated to take into account any changes to the Draft Masterplan as a result of submissions received. Mayo County Council have considered the findings of the Environmental Report during the preparation of the Draft Masterplan and again prior to adoption of the Masterplan.

### 3.4.6 Next Steps

When the Masterplan is finalised, an SEA Statement will be prepared which will summarise how environmental considerations and submissions have been considered in the Masterplan and proposed monitoring arrangements.



## 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 masterplan.

### 4.2 A Review of Relevant Plans, Programmes and Policies

As part of the SEA process, the context of the Masterplan 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 Masterplan 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.

Environmental objectives and targets identified in table 4 below will inform the assessment framework which will be used to assess the environmental performance of the Moorehall Masterplan.

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

Level	Name
<b>International</b>	<ul style="list-style-type: none"> <li>UN Sustainable Development Goals</li> </ul>
<b>EU Level</b>	<ul style="list-style-type: none"> <li>A 2030 Framework for Climate and Energy Policies [COM (2013) 169]</li> <li>Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC)</li> <li>Birds Directive [2009/147/EC] and Habitats Directive [92/43/EEC]</li> <li>Bonn Convention [L210, 19/07/1982 (1983)]</li> <li>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</li> <li>EC (Birds and Natural Habitats) Regulations 2011</li> <li>EIA Directive [85/337/EEC] [2014/52/EU]</li> <li>Environmental Liability Directive [2004/35/EC]</li> <li>Environmental Quality Standards Directive [2008/105/EC]</li> <li>EU 2020 Growth Strategy [COM (2010) 2020]</li> <li>EU Biodiversity Strategy to 2030 [COM (2011)244]</li> <li>EU Floods Directive [2007/60/EC]</li> <li>EU Water Framework Directive (2000/60/EC)</li> </ul>

Level	Name
	<ul style="list-style-type: none"> <li>• EU Strategy on Adaption to Climate Change [EC, 2013]</li> <li>• European Landscape Convention [ETS No. 176]</li> <li>• Groundwater Directive (2006/118/EC) (Groundwater Regulations Ireland, 2010)</li> <li>• Invasive Species Regulation [EU/1143/2014]</li> <li>• SEA Directive [2001/42/EC]</li> <li>• Soils Thematic Strategy [COM (2006) 231]</li> <li>• The RAMSAR Strategic Plan (Ramsar Convention Secretariat, 2016)</li> </ul>
<b>National Level</b>	<ul style="list-style-type: none"> <li>• National Planning Framework, 2019</li> <li>• Climate Action Plan 2019: to Tackle Climate Breakdown (Department of Communications, Climate Action &amp; Environment)</li> <li>• Climate Action Plan 2023 (Department of Environment, Climate and Communications)</li> <li>• Ensuring a Sustainable Transport Future: A New Approach to Regional transportation (Department for Regional Development, 2011)</li> <li>• River Basin Management Plan for Ireland 2018-2021</li> <li>• Third Cycle Draft River Basin Management Plan 2022-2027 - Consultation Report</li> <li>• Groundwater Regulations 2010</li> <li>• National Biodiversity Action Plan 2017-2021 (Dept. of Arts, Heritage and the Gaeltacht, 2017)</li> <li>• Ireland's 4th National Biodiversity Action Plan Draft for Public Consultation</li> <li>• Irish Geological Heritage (IGH) Programme (GSI 1998)</li> <li>• National Adaptation Framework, Planning for a Climate Resilient Ireland, 2018</li> <li>• National Climate Change Policy, 2013</li> <li>• National Cycle Policy Framework (Dept. of Transport, Tourism and Sport)</li> <li>• National Landscape Strategy for Ireland (Draft) 2014 – 2024 (DAHG, 2014)</li> <li>• National Mitigation Plan, 2017</li> <li>• Natural Heritage Areas and proposed Natural Heritage Areas</li> <li>• Prioritised Action Framework (PAF) for Natura 2000 for Ireland has been up-dated 2021-2027 (Dept. of the Environment, 2021)</li> <li>• Programme for Government Framework (Northern Ireland Executive, 2016)</li> <li>• Smarter Travel: A Sustainable Transport Future, 2009 – 2020</li> <li>• Strategic Planning Policy Statement (Dept. of the Environment, 2015)</li> <li>• Sustainable Development – A Strategy for Ireland (Dept. of Environment, Heritage and Local Government, 1997)</li> <li>• The National Landscape Strategy for Ireland 2015-2025</li> <li>• The National Mitigation Plan, 2017</li> <li>• The Wildlife Acts 1976 – 2018</li> <li>• The All-Ireland Pollinator Plan 2021- 2025</li> </ul>
<b>Regional Level</b>	<ul style="list-style-type: none"> <li>• Regional Spatial and Economic Strategy for the Northern and Western Region (January 2020)</li> </ul>
<b>County Development Plans</b>	<ul style="list-style-type: none"> <li>• Mayo County Development Plan 2014-2020 (as varied)</li> <li>• Mayo County Development Plan 2022-2028</li> <li>• Destination Mayo 2016-2021</li> </ul>



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

International / National / Regional	Outline of Targets and Objectives	SEA Topic
<b>International Level</b>		
UN Sustainable Development Goals	<p>Since 2015, Ireland has been a signatory to the United Nations Sustainable Development Goals (SDGs), which frame national agendas and policies to 2030. The SDGs build on the UN Millennium Development Goals (MDGs) and have a broader agenda that applies to all countries. The UN SDGs relate to areas such as climate action, clean energy, sustainable cities and communities, economic growth, reduced inequalities and innovation and infrastructure, as well as education and health.</p>	Climate, Air & Human Beings
<b>European Level</b>		
<p><b>A 2030 Framework for Climate and Energy Policies [COM (2013) 169]</b></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"> <li>• At least 40% cuts in greenhouse gas emissions (from 1990 levels);</li> <li>• At least 32% share for renewable energy;</li> <li>• At least 32.5% improvement in energy efficiency</li> </ul> <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.</p> <p>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</p>	Climate, Air & Human Beings

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	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	
<b>Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC)</b>	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 2009. The CAFE Directive outlines set targets on air quality and long term objectives for all known air pollutants to 2030.	Climate, Air & Human Beings
<b>Granada Convention 1985, ratified in Ireland in 1997</b>	Ireland is a signatory to the Council of Europe’s Convention for the Protection of the Architectural Heritage of Europe, known as the ‘Granada Convention’. The Convention was ratified by Ireland on 20 January 1997 and entered into force on 1 May 1997.  In fulfilment of its obligations under the Granada Convention, Ireland legislated for the increased protection of the architectural heritage with the enactments of the Local Government (Planning and Development) Act 1999 (later superseded by Part IV of the Planning and Development Act 2000) and the Architectural Inventory (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999	Cultural Heritage
<b>Birds Directive [2009/147/EC] and Habitats Directive [92/43/EEC]</b>	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) and EU (Birds and Natural Habitats) (Amendment) Regulations 2021. 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:	Biodiversity

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	<ul style="list-style-type: none"> <li>• deliberately capture or kill any specimen of these species in the wild,</li> <li>• deliberately disturb these species particularly during the period of breeding, rearing, hibernation and migration,</li> <li>• deliberately take or destroy eggs of those species from the wild,</li> <li>• damage or destroy a breeding site or resting place of such an animal, or</li> <li>• 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.</li> </ul> <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 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><b>Bonn Convention (Convention on Migratory Species) [L210, 19/07/1982 (1983)]</b></p>	<p>The Bonn Convention provides legislative context for international cooperation for the protection and conservation of migratory species.</p> <p>To avoid any migratory species becoming endangered, the parties must endeavour:</p> <ul style="list-style-type: none"> <li>• to promote, cooperate in or support research relating to migratory species;</li> <li>• to provide immediate protection for migratory species included in Appendix I; and</li> <li>• to conclude Agreements covering the conservation and management of migratory species listed in Appendix II.</li> </ul> <p>To protect endangered migratory species, the parties to the Convention will endeavour:</p> <ul style="list-style-type: none"> <li>• to conserve or restore the habitats of endangered species;</li> <li>• to prevent, remove, compensate for or minimise the adverse effects of activities or obstacles that impede the migration of the species; and</li> </ul>	<p>Biodiversity</p>

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	<ul style="list-style-type: none"> <li>to the extent feasible and appropriate, to prevent, reduce or control factors that are endangering or are likely to further endanger the species.</li> </ul>	
<p><b>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</b></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 % 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>	<p>Human Health and Population</p>

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<p><b>EC (Birds and Natural Habitats) Regulations 2011</b> and EU (Birds and Natural Habitats) (Amendment) Regulations 2021.</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"> <li>• deliberately capture or kill any specimen of these species in the wild,</li> <li>• deliberately disturb these species particularly during the period of breeding, rearing, hibernation and migration,</li> <li>• deliberately take or destroy eggs of those species from the wild,</li> <li>• damage or destroy a breeding site or resting place of such an animal, or</li> <li>• 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.</li> </ul> <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>
<p><b>EIA Directive [85/337/EEC] [2014/52/EU]</b></p>	<p>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</p>	<p>All Topics</p>



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	the proposed development. The public is informed of this decision, and can challenge the decision to ABP, and to the Courts.	
<b>Environmental Liability Directive [2004/35/EC]</b>	This Directive was released in April of 2004 regarding environmental liability and the prevention and remedying of environmental damage.	Biodiversity
<b>Environmental Quality Standards Directive [2008/105/EC]</b>	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
<b>EU 2020 Growth Strategy [COM(2010) 2020]</b>	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
<b>EU Biodiversity Strategy to 2030 [COM(2011)244]</b>	<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"> <li>• Target 1 commits EU Member States to a full and swift implementation of the Birds and Habitats Directives.</li> <li>• Target 2 commits EU Member States to establish green infrastructure and to restore 15% of degraded ecosystems in the EU.</li> <li>• 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</li> <li>• 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.</li> </ul>	Biodiversity

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<ul style="list-style-type: none"> <li>• Target 5 commits the European Commission to combat Invasive Alien Species including through preventing the establishment of these species and through control and eradication.</li> <li>• Target 6 commits the EU to step up its contribution to combatting global biodiversity loss.</li> </ul>	
<b>EU Floods Directive [2007/60/EC]</b>	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.	Climate, Water
<b>EU Water Framework Directive (2000/60/EC)</b>	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 deterioration in existing water status and achieve at least 'good' status for all waters.	Water, Climate

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<p><b>EU Strategy on Adaptation to Climate Change [EC, 2013]</b></p>	<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"> <li>• 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.</li> <li>• 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.</li> <li>• Better informed decision-making by addressing gaps in knowledge about adaptation and further developing the European climate adaptation platform (Climate-ADAPT).</li> </ul> <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>	<p>Climate, Population and Human Health</p>
<p><b>European Landscape Convention [ETS No. 176] (Florence Convention)</b></p>	<p>The European Landscape Convention provides a framework for international cooperation on the protection, management and planning of landscapes and landscape issues.</p>	<p>Landscape</p>

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<p><b>Groundwater Directive (2006/118/EC) (Groundwater Regulations Ireland, 2010)</b></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"> <li>• “prevent or limit, as appropriate, the input of pollutants into groundwater and prevent the deterioration of the status of all bodies of groundwater;</li> <li>• 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;</li> <li>• 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;</li> <li>• 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.”</li> </ul>	<p>Water</p>
<p><b>Invasive Species Regulation [EU/1143/2014]</b></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"> <li>• Prevention: to prevent the intentional or unintentional introduction of Invasive Alien Species of Union concern into the European Union;</li> <li>• 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;</li> </ul>	<p>Biodiversity</p>

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	<ul style="list-style-type: none"> <li>Management – a concerted management action plan required for Member States for the IAS which have already established themselves to prevent the spread of IAS anywhere else and to minimise the harm that they cause.</li> </ul>	
<p><b>SEA Directive [2001/42/EC]</b></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"> <li>agriculture, forestry, fisheries, energy, industry, transport, waste/ water management, telecommunications, tourism, town &amp; country planning or land use and which set the framework for future development consent of projects listed in the EIA Directive.</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>have been determined to require an assessment under the Habitats Directive.</li> </ul> <p>SEA and EIA are very similar, except:</p> <ul style="list-style-type: none"> <li>SEA requires the environmental authorities to be consulted at the screening stage,</li> <li>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.</li> </ul>	<p>All Topics</p>
<p><b>Soils Thematic Strategy [COM (2006) 231]</b></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><b>The RAMSAR Strategic Plan (Ramsar Convention Secretariat, 2016))</b></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</p> <p style="padding-left: 40px;"><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 4<sup>th</sup> 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 4<sup>th</sup> Strategic Plan addresses:</p> <ul style="list-style-type: none"> <li>• The drivers of wetland loss and degradation</li> <li>• Conserving and management of the RAMSAR site network,</li> <li>• Wisely using all wetlands;</li> <li>• Enhancing the implementation of RAMSAR guidance and methodologies.</li> </ul> <p>The 4<sup>th</sup> Strategic Plan includes 19 targets in addition to the 4 overarching goals outlined above. These include:</p> <ul style="list-style-type: none"> <li>• Recognising wetland benefits in several sectoral strategies;</li> <li>• Ensure water for wetland ecosystem needs;</li> <li>• Apply wise use guidelines in private and public sectors;</li> <li>• Control or eradicate invasive alien species;</li> <li>• Maintain ecological character through integrated management;</li> <li>• Increase wetland area under RAMSAR designation;</li> <li>• Address threats to ecological character;</li> <li>• Complete national wetland inventories;</li> <li>• Strengthen wise use through integrated river basin management or coastal zone management;</li> <li>• Respect and use traditional knowledge and practices;</li> <li>• Document wetland services and benefits;</li> </ul>	<p>Biodiversity</p>

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	<ul style="list-style-type: none"> <li>• Restore degraded wetlands;</li> <li>• Enhance sustainability of projects in key sectors;</li> <li>• Develop scientific and policy guidance;</li> <li>• Reinforce RAMSAR Regional Initiatives for implementation of the Convention;</li> <li>• Mainstream wetland conservation and wise use through CEPA;</li> <li>• Mobilise resources for implantation;</li> <li>• Strengthen international cooperation;</li> <li>• Build capacity to implement the Convention and Strategic Plan.</li> </ul>	
<b>National</b>		
<p><b>Climate Action Plan 2019: To Tackle Climate Breakdown (Department of Communications, Climate Action and Environment)</b></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><b>Climate Action Plan 2023</b></p>	<p>Powering renewables is considered a high impact sector to facilitate a large-scale deployment of renewables that will be critical to decarbonising the power sector as well as enabling the electrification of other technologies.</p> <p>The Climate Action Plan 2023 commits to a reduction in greenhouse gas emissions of 75% by 2030 increase the proportion of renewable electricity to up to 80% by 2030. Among the most important measures in the plan is to increase the proportion of renewable electricity to up to 80% by 2030 and a target of 9 GW from onshore wind, 8 GW from solar, and at least 5 GW of offshore wind energy by 2030.</p>	<p>Biodiversity, Population and Human Health, Climate</p>

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<p><b>Ensuring a Sustainable Transport Future: A New Approach to Regional transportation (Department for Regional Development, 2011)</b></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>
<p><b>River Basin Management Plan for Ireland 2018-2021</b></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"> <li>• Stronger and more effective delivery structures have been put in place to build the foundations and momentum for long-term improvements to water quality.</li> <li>• 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.</li> <li>• 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.</li> </ul> <p>Among the main actions that will be taken through the Plan are:</p>	<p>Water</p>



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	<ul style="list-style-type: none"> <li>• 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’.</li> <li>• Conservation and leakage reduction: Irish Water will implement important measures to make water use more sustainable and efficient, reducing leakage in our water network from 45% of all water produced down to 37% by 2021, based on 2017 figures.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• A new Community Water Development Fund: this will enable and support community water initiatives.</li> </ul>	
<p><b>Third Cycle Draft River Basin Management Plan 2022-2027 - Consultation Report (July, 2022)</b></p>	<p>The 3rd cycle of River Basin Management Plan (RBMP) for the period of 2022-2027 is currently being prepared by Department of Housing, Local Government and Heritage</p>	<p>Water</p>

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	(DHLGH) in line with the EU Water Framework Directive (WFD) (2000/60/EC). Following review of the submissions, the DHLGH will commence a review and where necessary update the draft RBMP with a view to finalisation and publication in Q3/Q4 of 2022.	
<b>Ireland's 4th National Biodiversity Action Plan Draft for Public Consultation</b>	The main mechanism by which Parties, such as Ireland, implement the United Nations Convention on Biological Diversity is through the development and implementation of National Biodiversity Strategies and Action Plans, as required under Article 6 of the Convention. Parties are expected to design and regularly review these plans to reflect their national circumstances, and as far as is possible must integrate biodiversity into other relevant sectoral or cross-sectoral plans, programmes and policies.	Biodiversity
<b>National Biodiversity Action Plan 2017-2021</b>	<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.</p> <p>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"> <li>• mainstreaming biodiversity across the decision making process in the State;</li> <li>• strengthening the knowledge base underpinning work on biodiversity issues;</li> <li>• increasing public awareness and participation;</li> <li>• ensuring conservation of biodiversity in the wider countryside;</li> <li>• ensuring conservation of biodiversity in the marine environment;</li> <li>• expanding and improving on the management of protected areas and protected species;</li> <li>• enhancing the contribution to international biodiversity issues.</li> </ul>	Biodiversity

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	The National Biodiversity Plan is aspirational in nature and does not benefit from any policy or legislative support.	
<b>Irish Geological Heritage (IGH) Programme (GSI 1998)</b>	This Programme has been set up to protect and promote Irish sites of international and national geological importance	Soils, Land use and Geology
<b>National Adaptation Framework, Planning for a Climate Resilient Ireland, 2018</b>	<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. 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. 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 individual actions for various Ministers and public bodies to take forward as we move towards implementation.</p>	Climate, Air & Human Beings

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	<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>	
<p><b>National Climate Change Policy, 2013</b></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"> <li>• 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,</li> <li>• 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.</li> </ul>	<p>Climate, Air &amp; Human Beings</p>
<p><b>National Cycle Policy Framework (Dept. of Transport, Tourism and Sport)</b></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,</p>	<p>Air, Population and Human Health</p>

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	<p>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"> <li>• Objective 1: Support the planning, development and design of towns and cities in a cycling and pedestrian friendly way.</li> <li>• 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.</li> <li>• Objective 3: Provide designated rural cycle networks especially for visitors and recreational cycling.</li> <li>• Objective 4: Provide cycling-friendly routes to all schools, adequate cycling parking facilities within schools, and cycling training to all school pupils.</li> <li>• Objective 5: Ensure that all of the surfaces used by cyclists are maintained to a high standard and are well lit.</li> <li>• Objective 6: Ensure that all cycling networks - both urban and rural - are signposted to an agreed standard.</li> <li>• Objective 7: Provide secure parking for bikes;</li> <li>• Objective 8: Ensure proper integration between cycling and public transport.</li> <li>• Objective 9: Provide public bikes in cities.</li> <li>• Objective 10: Improve the image of cycling and promote cycling using “soft interventions” such as promotional campaigns, events etc.</li> <li>• Objective 11: Improve cyclists’ cycling standards and behaviour on the roads.</li> <li>• Objective 12: Improve driver education and driving standards so that there is a greater appreciation for the safety needs of cyclists.</li> <li>• Objective 13: Support the provision of fiscal incentives to cycle.</li> <li>• Objective 14: Provide appropriate levels of, and timely, financial resources towards implementing the NCPF.</li> <li>• Objective 15: Introduce changes to legislation to improve cyclist safety.</li> <li>• Objective 16: Improve enforcement of traffic laws to enhance cyclist safety and respect for cyclists.</li> </ul>	

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	<ul style="list-style-type: none"> <li>Objective 17: Develop a structure that can coordinate the implementation of activities across the many Government Departments, Agencies and NGO's.</li> <li>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.</li> <li>Objective 19: Evaluate the cycling policy and monitor the success as the measures are implemented.</li> </ul>	
<b>National Mitigation Plan, 2017</b>	<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>	Climate, Biodiversity, Population and Human Health
<b>National Planning Framework 2040: Our Plan</b>	<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>	All
<b>Natural Heritage Areas and proposed Natural Heritage Areas</b>	<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</p>	Biodiversity

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	<p>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><b>Prioritised Action Framework (PAF) for Natura 2000 for Ireland (2021-2027)</b></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><b>Programme for Government Framework (Northern Ireland Executive, 2016)</b></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"> <li>• prosper through a strong, competitive, regionally balanced economy</li> <li>• live and work sustainably –protecting the environment</li> <li>• have a more equal society</li> <li>• enjoy long, healthy, active lives</li> <li>• an innovative, creative society, where people can fulfil their potential</li> <li>• more people working in better jobs</li> <li>• a safer community</li> <li>• care for each other and help those in need</li> <li>• a diverse society</li> <li>• create a place where people want to live and work</li> <li>• connect to people and opportunities through infrastructure</li> <li>• give children the best start in life</li> </ul>	<p>Population and Human Health</p>

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<p><b>Smarter Travel: A Sustainable Transport Future, 2009 – 2020</b></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"> <li>• To reduce overall travel demand;</li> <li>• To maximise the efficiency of the transport network;</li> <li>• To reduce reliance on fossil fuels;</li> <li>• To reduce transport emissions; and</li> <li>• To improve accessibility to transport.</li> </ul>	<p>Climate and Air</p>
<p><b>The National Landscape Strategy for Ireland 2015-2025</b></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>
<p><b>The National Mitigation Plan, 2017</b></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</p>	<p>Climate, Air, Population and Human Health</p>



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	<p>much less energy, the mix of fuels providing that energy should be transitioning to a much lower carbon content.'</p>	
<p><b>The Wildlife Acts 1976 – 2018</b></p>	<p>Flora and fauna in Ireland are protected at a national level by the Wildlife Acts 1976 – 2018 and the Flora (Protection) Order 2015.</p> <p><b>Wildlife Act 1976</b>          The Wildlife Act 1976 provides additional protection for certain species. Section 23 makes it an offence to:</p> <ul style="list-style-type: none"> <li>• hunt a protected wild animal,</li> <li>• injure a protected wild animal,</li> <li>• wilfully interfere with or destroy the breeding place of any protected wild animal,</li> <li>• Other than when certain exemptions apply.</li> </ul> <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>Section 23(7) establishes that the offences described under Section 23 shall not apply for a person:</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• who is engaged in these activities interferes with or destroys the breeding place of such an animal, or</li> <li>• 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</li> <li>• 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</li> </ul>	<p>Biodiversity</p>

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	<ul style="list-style-type: none"> <li>• who kills humanely a protected wild animal which is injured.</li> </ul> <p><b>Wildlife (Amendment) Act 2000</b>            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"> <li>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,</li> <li>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;</li> <li>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.</li> <li>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.</li> </ol> <p><b>Flora Protection Order 2015</b>            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>	

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	<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><b>Government of Ireland. Outdoor Recreation Plan for Public Lands and Waters in Ireland 2017-2021:</b> <a href="https://www.coillte.ie/media/2017/06/ORP_Screen.pdf">https://www.coillte.ie/media/2017/06/ORP_Screen.pdf</a></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>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"> <li>i. managing &amp; maintenance of recreational infrastructure; improving recreational facilities;</li> <li>ii. developing consistent standards;</li> <li>iii. promotion of outdoor recreation;</li> <li>iv. professional development of staff;</li> <li>v. developing a culture of outdoor recreation and volunteering in Ireland; and</li> <li>vi. maximising the benefits to communities.</li> </ul> <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>Population and Human Health, Biodiversity</p>
<p>The All-Ireland Pollinator Plan for 2021-2025</p>	<p>The All-Ireland Pollinator Plan for 2021-2025 is a new five-year road map that aims to help bees, other pollinating insects and our wider biodiversity. The new Plan is even more ambitious than the first (2015-2020) – with more partners coming together to deliver</p>	<p>Biodiversity</p>

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	<p>more actions this time around. It is about encouraging a better way of managing our whole landscape to permanently support our struggling biodiversity.</p> <p>The AIPP 2021-2025 has 186 actions spread across six objectives. It was developed by a 16-member steering group who provide oversight, with implementation coordinated by the National Biodiversity Data Centre. Responsibility for delivering the actions contained in this new Plan is shared out between the main partner organisations. The Plan does not have a project budget. Instead, those organisations who have committed to taking action, agree to fund those actions themselves. The All-Ireland Pollinator Plan is voluntary.</p> <p>Plan Objectives:</p> <ul style="list-style-type: none"> <li>• Objective 1: Making farmland pollinator friendly. By working together with the farming community, we want to achieve an increased awareness of pollinators and the resources they need in order to survive on farmland.</li> <li>• Objective 2: Making public land pollinator friendly. By working together with Councils, Transport Authorities, Local Communities and others, we want to better coexist with biodiversity and help return food and shelter for pollinators to our island.</li> <li>• Objective 3: Making private land pollinator friendly. From gardens, to businesses, faith communities and sports clubs, we want to work together to create networks of biodiversity-friendly habitat across our landscape.</li> <li>• Objective 4: All-Ireland Honeybee Strategy. By supporting beekeepers, we want to achieve healthy, sustainable populations, and for honeybees to be part of a cohesive pollinator message that balances managed and wild pollinator populations.</li> <li>• Objective 5: Conserving rare pollinators. By improving our knowledge on rare pollinators, and by raising awareness through dedicated initiatives, we want to achieve a Plan that protects as much wild pollinator diversity as possible.</li> <li>• Objective 6: Strategic coordination of the Plan. By continually raising awareness; addressing gaps in our knowledge through research; and by tracking where pollinators occur and how populations are changing, we want to work from an evidence base that enables us to coordinate a dynamic plan that is targeted and effective.</li> </ul>	

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	<p>Objective 2 is most relevant to the Moorehall Masterplan and Mayo County Council signed up as a partner to the All-Ireland Pollinator Plan in May 2019. The Heritage Office is working with communities throughout the county to help them to make their local areas more pollinator-friendly, through implementing changes in vegetation management, grass cutting regimes, and planting plans.</p>	
<p><b>Regional Spatial and Economic Strategy for the Northern and Western Region (January 2020)</b></p>	<p>The 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%. Castlebar is identified as a key town and one of the key future priorities for the town is to improve cycle and walking tourism/recreational infrastructure and connectivity of the Great Western Greenway at Castlebar to Westport and Wild Atlantic Way and other tourism related infrastructure. The RSES has identified the Moorehall Estate as an amenity attraction with growth potential.</p> <p>The following Regional Policy Objectives are relevant from a <b>tourism development</b> perspective:</p> <ul style="list-style-type: none"> <li>• RPO 4.1 - To support working with relevant landholders and recreational/tourism agencies to increase access to the countryside and our coastal areas, and to ensure maintenance and access to the existing network of trails, paths, ways etc.</li> <li>• RPO 4.2 - To support the maintenance of, and enhanced access to state lands, such as National Parks, Forest Parks, Waterways together with Monuments and Historic Properties, for recreation and tourism purposes.</li> <li>• RPO 4.3 - To support the preparation and implementation of Visitor Experience Development Plans (VEDPs) within the Northern and Western Region, to underpin the overarching regional tourism benefits and to promote the natural and cultural assets of the region.</li> <li>• RPO 4.14 - Promote the development of integrated walking, cycling and bridle routes throughout the region as an activity for both international visitors and</li> </ul>	<p>Population and Human Health                      Biodiversity                      Cultural Heritage</p>

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	<p>local tourists in a manner that is compatible with nature conservation and other environmental policies.</p> <p>The following Regional Policy Objectives are relevant from a <b>natural heritage</b> perspective:</p> <ul style="list-style-type: none"> <li>• RPO 5.5 - Ensure efficient and sustainable use of all our natural resources, including inland waterways, peatlands, and forests in a manner which ensures a healthy society a clean environment and there is <b>no net contribution to biodiversity loss</b> arising from development supported in this strategy. Conserve and protect designated areas and natural heritage area. Conserve and protect European sites and their integrity.</li> <li>• RPO 5.6 - <b>Develop awareness and create a greater appreciation of the benefits of our natural heritage</b>, including on the health, wealth and well-being of the region’s ecosystem services.</li> <li>• RPO 5.7 - <b>Ensure that all plans, projects and activities requiring consent arising from the RSES are subject to the relevant environmental assessment requirements</b> including SEA, EIA and AA as appropriate.</li> </ul> <p>The following Regional Policy Objectives are relevant from a <b>cultural heritage</b> perspective:</p> <ul style="list-style-type: none"> <li>• RPO 5.13 - Protect, enhance and harness the potential of the region’s cultural and heritage assets.</li> <li>• RPO 5.14 - Support the conservation of the region’s National Monuments and built heritage, being structures that are of special architectural, historic, archaeological, artistic, cultural, scientific, social or technical interest that are of Regional Significance or above.</li> </ul>	
<p><b>Mayo County Development Plan 2014 – 2020</b></p>	<p>The Mayo County Development Plan 2014 – 2020 sets out the following policy considerations, relevant to the development of Moorehall.</p> <p><b>Tourism Objectives</b></p>	<p>Population and Human Health</p>

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	<p>In relation to tourism, the following County Development Plan objectives are stated:</p> <ul style="list-style-type: none"> <li>• TM-02 It is an objective of the Council to support and promote sustainable tourism development, accessible to all throughout the County and to work in partnership with tourism organisations, and adjoining Local Authorities where necessary, in securing the development of tourism enterprises and infrastructure in suitable locations where it can be demonstrated that the development will not have significant adverse effects on the environment, including the integrity of the Natura 2000 network, residential amenity or visual amenity.</li> <li>• TM-02 It is an objective of the Council to ensure that tourism related accommodation such as holiday homes, hotels, caravan/camping parks etc., are located within existing settlements where there is existing infrastructure provision to service the development and where they can contribute to maintenance of essential rural services, unless it is proposed to reuse an existing structure outside a settlement and in such cases where it can be demonstrated that the development will not have significant adverse effects on the environment, including the integrity of the Natura 2000 network, residential amenity or visual amenity.</li> <li>• TM-03 It is an objective of the Council to continue to provide where possible, or encourage the provision of, walkways and cycleways throughout the county where it can be demonstrated that the development will not have significant adverse effects on the environment, including the integrity of the Natura 2000 network or visual amenity, and to promote the County as a premier walking/cycling destination in the Country.</li> </ul> <p><b>Landscape Design</b>                      The following policies of the Mayo County Development Plan 2014-2020 apply:</p> <ul style="list-style-type: none"> <li>• LP-01 It is an objective of the Council, through the Landscape Appraisal of County Mayo, to recognise and facilitate appropriate development in a manner that has regard to the character and sensitivity of the landscape and to ensure that</li> </ul>	<p>Landscape</p>

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	<p>development will not have a disproportionate effect on the existing or future character of a landscape in terms of location, design and visual prominence.</p> <ul style="list-style-type: none"> <li>• LP-02 It is an objective of the Council that all proposed development shall be considered in the context of the Landscape Appraisal of County Mayo with reference to the four Principal Policy Areas shown on Map 3A Landscape Protection Policy Areas and the Landscape Sensitivity Matrix (Figure 3), provided such policies do not conflict with any specific objectives of this Plan.</li> <li>• LP-03 It is an objective of the Council to protect the unique landscape of the County which is a cultural, environmental and economic asset of inestimable value.</li> </ul> <p><b>Views and Prospects</b>                      VP-01 It is an objective of the Council to ensure that development does not adversely interfere with views and prospects worthy of preservation and protection as outlined on Map 4, or on the views to and from places and features of natural beauty or interest (e.g. coastline, lakeshores, protected structures, important historic sites) when viewed from the public realm.                      Relevant views and scenic routes identified in the County Development Plan are identified in Figure 5.</p> <p><b>Natural Heritage</b>                      With respect to Natural Heritage the following objectives apply:</p> <ul style="list-style-type: none"> <li>• NH-01 It is an objective of the Council to protect, enhance, conserve and, where appropriate restore:                             <ul style="list-style-type: none"> <li>○ Candidate Special Areas of Conservation, Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas and proposed National Heritage Areas, Statutory Nature Reserves, Ramsar Sites and Biogenetic Reserves, including those listed in the Environmental Report documenting the Strategic Environmental Assessment of this plan and any modifications or additional areas that may be so designated during the lifetime of the plan.</li> </ul> </li> </ul>	<p>Natural heritage / biodiversity</p>



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	<ul style="list-style-type: none"> <li>○ Natural habitats and plant and animal species identified under the Habitats Directive, Birds Directive, Wildlife Act and the Flora Protection Order, or any other relevant legislation that may be implemented during the lifetime of the plan.</li> <li>○ Features of natural interest and amenity, which provide a unique habitat for wildlife including ecological networks (including ecological corridors and stepping stones), riparian zones, hedgerows, stone walls and shelterbelts.</li> <li>○ Bogs, fens and turloughs listed in the Environmental Report documenting the Strategic Environmental Assessment of this plan.</li> <li>○ Surface waters, aquatic and wetland habitats and freshwater and water dependent species through the implementation of all appropriate and relevant Directives and transposed legislation.</li> <li>○ Trees or groups of trees protected under Tree Preservation Orders listed in the Environmental Report documenting the Strategic Environmental Assessment of this plan, as well as trees and woodlands of particular amenity and nature conservation value, or which make a valuable contribution to the character of the landscape, a settlement or its setting.</li> <li>● NH-04 It is an objective of the Council to fully integrate wildlife and biodiversity considerations into all areas of the Council’s roles and responsibilities and into all its works and operations.</li> <li>● NH-05 It is an objective of the Council to increase awareness of the importance of the natural heritage of the County and to promote education, knowledge and pride in our natural heritage.</li> <li>● NH-06 It is an objective of the Council to support the implementation of the National Biodiversity Plan.</li> <li>● NH-07 It is an objective of the Council to promote best practice in the control of invasive species in the carrying out of both local authority and private development.</li> <li>● NH-08 It is an objective of the Council to assist in the control of native and non native invasive or harmful species which represent a serious threat to our environment, fresh water systems and lakes.</li> </ul>	

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	<ul style="list-style-type: none"> <li>NH-09 It is an objective of the Council to utilise appropriate opportunities to enhance and create wildlife habitats where they arise.</li> </ul> <p><b>Architectural Heritage</b> It is an objective of the Council to protect buildings and structures included in the Record of Protected Structures (RPS) which forms part of the Mayo County Development Plan. Moorehall is identified within this plan as a protected structure and the following policies apply:</p> <ul style="list-style-type: none"> <li><b>AH-03 It is an objective of the Council to ensure that any development, modification, alteration, or extension affecting a Protected Structure and/or its setting is sensitively designed and sited and is appropriate in terms of the proposed materials, scale, density and layout, impact on historic features and junction with the Protected Structure and would not detract from the special interest, character and setting of the Protected Structure.</b></li> <li>AH-04 It is an objective of the Council to promote and improve the understanding of the architectural heritage of Mayo.</li> <li>AH-08 It is an objective of the Council to require that proposals for development within historic gardens, demesnes and estates include an appraisal of the designed landscape prior to the initial design of any development, so that this evaluation informs the design and respects the built heritage and horticultural elements of the site.</li> <li>AH-10 It is an objective of the Council to promote the sympathetic maintenance and re-use of vernacular built heritage and to encourage the retention of original fabric such as windows, doors, renders, pub/shop-fronts, roof coverings and interiors etc.</li> <li>AH-11 It is an objective of the Council to promote the sympathetic maintenance of traditional features and other built heritage such as stone walls and other elements such as post-boxes, water pumps, paving etc.</li> </ul>	Cultural heritage
Mayo County Development Plan 2022- 2028	<p><b>Volume 1 Written Statement</b> The general tourism policies in the Draft Mayo County Development Plan 2021- 2027 are as follows:</p>	Population and Human Health

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<ul style="list-style-type: none"> <li>• TRP 2 To support and promote sustainable tourism development, accessible to all throughout the county and work in partnership with tourism organisations and adjoining Local Authorities where necessary, in securing the development of tourism enterprises and infrastructure; Subject to suitable locations where it can be demonstrated that the development will not have significant adverse effects on the environment, including the integrity of the Natura 2000 network, residential amenity or visual amenity.</li> <li>• TRP 4 To co-operate with Fáilte Ireland, Tourism Ireland, and any other relevant bodies in the implementation of Destination Mayo 2016-2021 by:             <ul style="list-style-type: none"> <li>(a) Encouraging investment in the tourism industry in the county with specific reference to leisure activities (including walking, cycling, equestrian and family focused activities), including connectivity to the Great Western Greenway at Castlebar to Westport and to the Wild Atlantic Way.</li> <li>(b) Encouragement and support of the upgrading of public transport facilities in Destination Towns, including the provision of Transport Hubs/Links.</li> <li>(c) Supporting the development of new and emerging tourism products and facilities or upgrading/extension of existing tourist facilities at tourist sites within the county, within proper planning and sustainable development principles.</li> <li>(d) Require the preparation and assessment of all planning applications arising from the Destination Mayo strategy to have regard to the information, data and requirements of the Appropriate Assessment Natura Impact Report and SEA Environmental Report of the Destination Mayo Strategy.</li> </ul> </li> <li>• TRP 6 To promote and support the continued strategic development of Westport, Ballina and Castlebar as tourist destinations through: (d) Promote the development of Castlebar as a nationally important Sports Tourism and Adventure Hub, including leveraging existing sports assets and existing natural and built facilities at Lough Lannagh Holiday Village.</li> </ul>	

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<ul style="list-style-type: none"> <li>TRO 2 To enable, facilitate and encourage the growth and sustainability of the tourism sector, through supporting the provision of tourism enterprise developments in rural areas including open farms, subject to the provision of adequate infrastructure and compliance with normal planning considerations.</li> </ul> <div data-bbox="1077 461 1812 1179" data-label="Image"> </div> <p data-bbox="1077 1187 1648 1209"><b>Map 5.2: Proposed Spiritual Trail and Timber Trail in County Mayo</b></p> <p data-bbox="904 1262 1910 1358">Moorehall Masterplan (including Trails) is listed as one of the proposed walking and cycling projects in Chapter 6 Movement and Transport of the Draft County Development Plan 2021-2027.</p> <p data-bbox="904 1366 1464 1390"><b>Volume 2 Development Management Standards</b></p>	

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>Section 6.2 sets out development management standards for Tourist Facilities and Projects. It states that,</p> <p>‘Consideration will be given for such developments provided they do not conflict with other strategic objectives in the Plan and meet the following minimum requirements:</p> <ul style="list-style-type: none"> <li>• The development consists of a well-researched, justified and imaginative integrated project.</li> <li>• The development relates sympathetically to the scale and level of activity in the locality.</li> </ul> <p>Section 2.10 sets out development management standards for Effluent Treatment Systems. It states that,</p> <p>“In un-serviced rural areas where a proposed dwelling cannot connect to the public wastewater treatment plant, a site suitability assessment will be required. The assessment must be carried out in accordance with the EPA Code of Practice Wastewater Treatment and Disposal Systems Serving Single Houses and take into account the cumulative effects of existing and proposed developments in the area. The assessment shall be carried out and certified by a suitably qualified person (i.e. the holder of an EPA FETAC certificate or equivalent) with professional indemnity insurance.</p> <p>In coastal/lakeside areas, any effluent disposal system or percolation area for single dwellings shall be located at least 100m from the High-Water of the sea/lake and 100m from any lands liable to flooding along the sea / lake. For developments consisting of more than one dwelling, the effluent disposal systems or percolation areas shall be located at least 400m from the High-Water Mark of the sea/lake and 400m from any lands liable to flooding along the sea /Lake.</p> <p>Where it is proposed to extend/renovate a structure with an existing septic tank system, the applicant may be required to demonstrate to the satisfaction of the Planning Authority that the existing septic tank is in working order and is suitable</p>	

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>for the proposed development. The applicants may be required to upgrade the existing system as required by the Planning Authority.”</p> <p><b>Water Supply</b>                      The water requirements for proposed new single houses to a public supply should as the need may require, undertake a pre-connection enquiry with Irish Water.</p> <p>In exceptional circumstances, single rural houses may be permitted to use wells as a water supply. Exceptional circumstances are where there is no public water supply or public/private Group Water Scheme in the area of the proposed development as demonstrated by a pre-connection enquiry with Irish Water and that connection to the well will not have significant effects on water quality or quantity in the area. In such cases, the location of the proposed well and any other wells in the vicinity of the site shall be indicated on a map, and a water analysis (quality (chemical tests) and quantity (yield)) shall be submitted for consideration by the planning authority.</p> <p>Where a proposed extension/renovation to an existing house that is served by a well will result in a substantial increase in water demand, the planning authority will require the development to connect to a public watersupply or Group Water Scheme, unless the exceptional circumstances outlined above apply.</p> <p><b>Protected Structures</b>                      Structures or part of structures can be added to the Record of Protected Structures (RPS) if they are deemed of special architectural, archaeological, historical, cultural, artistic, scientific, social, and/or technical interest. The designation includes the exterior and interior of the structure, the land lying within its curtilage (boundary), any other structures and their exterior and interiors lying within that curtilage, plus all fixtures and features which form part of the interior or exterior of any of these structures. Works that would materially affect the character of a Protected Structure require planning permission.</p>	

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>The Planning Authority will consider proposals for development or alterations to a Protected Structure based on the conservation principles set out in the Architectural Heritage Protection Guidelines for Planning Authorities, DAHG (2011). Development proposals for works to a Protected Structure or within the curtilage of a Protected Structure may require a method statement that describes the proposed works in appropriate detail. An Architectural Heritage Impact Assessment will also be required in the case of applications for extensive or complex works that have the potential to have a significant impact on a Protected Structure. Assessments should be prepared by a suitably qualified conservation specialist in accordance with the requirements of the Architectural Heritage Protection Guidelines for Planning Authorities, DAHG (2011) and shall assess the likely effects of the proposed development on the special character of the Protected Structure and its setting.</p> <p><b>Architectural Heritage Assessment</b>                      Where deemed necessary, the Planning Authority may require an Architectural Heritage Assessment report, prepared by a qualified and experienced conservation architect as described in Appendix B of the DEHLG Architectural Heritage Protection, Guidelines for Planning Authorities (2004, reissued by DAHG, 2011) which shall accompany planning applications for works to protected structures. This report shall:</p> <ul style="list-style-type: none"> <li>• Outline the significance of the building.</li> <li>• Include a detailed survey of the building, including a photographic survey.</li> <li>• Detail the proposed works it is intended to carry out; and</li> <li>• Contain a full assessment on the materials and method proposed to carry out these works, their impact on the character of the structure and the reversibility of the proposed works.</li> </ul> <p><b>Environmental Assessments</b>                      The following measures shall be applied in respect of designated environmental sites:</p> <ul style="list-style-type: none"> <li>• Appropriate Assessment: Screening for Appropriate Assessment and/or Appropriate Assessment will be required with all applications where it is</li> </ul>	

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>considered that the proposed development may impact (directly and indirectly), or in combination with other projects, on a Natura 2000 designated site i.e., a Special Area of Conservation (SAC) or a Special Protection Area (SPA), to inform decision making. The appropriate assessment shall be carried out in accordance with Article 6 of the Habitats Directive and the European Communities (Birds and Natural Habitats) Regulations 2011 and shall identify and evaluate the direct and indirect effects, which the development would be likely to have upon the designated site.</p> <ul style="list-style-type: none"> <li>• Ecological Assessment: An Ecological Assessment may be required for small scale projects in other areas e.g. (proposed) Natural Heritage Areas, Ramsar Sites, Nature Reserves, National Parks) that may be considered environmentally sensitive and may have direct/indirect impacts on the natural heritage value of the area. The need for an ecological assessment should be discussed with the Planning Section prior to the submission of an application. The assessment should include consideration of impacts in relation to biodiversity, ecological linkages, water quality and drainage.</li> <li>• Environmental Impact Assessment: Under the EIA Directive the assessment of the effects of certain public and private projects on the environment is required. The thresholds for such an assessment are listed in the Planning and Development Regulations 2001 (as amended). An EIAR may also be required for development proposals below the statutory thresholds; EIA Guidance for Consent Authorities on Sub Threshold Development (2003) is available in this regard. The Planning Authority may require the submission of an Environmental Impact Assessment Report (EIAR) in accordance with the provisions of Part 10 of Assessment the Planning and Development Regulations 2001 (as amended).</li> </ul> <p><b>Stone Walls, Trees and Hedgerows</b>                      New developments shall be designed to incorporate, as far as practicable, the amenities offered by existing trees. The retention of existing planted site boundaries will be encouraged within new developments, particularly where it is considered that the existing boundary adds positively to the character/visual amenity of the area.</p>	



International / National / Regional	Outline of Targets and Objectives	SEA Topic
	<p>New planting schemes should consist of local native plant types that are indigenous to the area and can be incorporated into sites to enhance the visual amenity and the biodiversity of the area. Landscaping plans should be submitted with all planning applications and the inclusion of semi-mature trees in larger development schemes will be required. Where sites contain mature trees and/or substantial hedgerow(s) a detailed tree and hedgerow survey should be submitted clearly outlining the extent of what will be retained and replaced. Any existing mature trees must be protected during site development works and incorporated into the scheme design. Stone Walls, fences, and gates used to define spaces can have a significant impact on the visual character of the area and as such should be carefully considered as part of the overall design concept.</p>	
<p><b>Destination Mayo 2016-2021</b></p>	<p>Mayo's Tourism Strategy, Destination Mayo 2016-2021, identifies tourism as a key economic sector for Mayo, with the potential for significant job creation. Its vision is to develop Mayo as a premier tourism destination, in conjunction with world-class activities, exceptional heritage attractions, cultural attractions and high-quality experiences attractive to domestic and international visitors alike. The tourism strategy highlights that Mayo has significant potential for a new high quality, innovative product development, ranging from the Wild Atlantic Way, Monasteries of the Moy Greenway, expansion of the highly successful Great Western Greenway, Blueway Water Trails, VeloRail, Wild Nephin Wilderness Park and the Mary Robinson Centre in Ballina. Initiatives such as interpretation of the Sacred Landscape, Pilgrim Trails across the county, the famine history of Mayo and facilities for adventure activities both land and water-based, offer unique ways for a wide range of visitors to engage with Mayo's landscape, heritage and people.</p> <p>The tourism strategy identifies key assets, attractions, and activities that can be further developed and promoted under the branding of Wild Mayo. The strategy, supported by a Tourism Action Plan, is based around the development of the key tourism pillars identified earlier. The successful implementation of Mayo's Tourism Strategy will ensure a wider distribution of tourists to a range of tourist options that the County has to offer. It will also help extend the tourism season and reduce pressure on existing infrastructure in the more traditional tourist destinations. Mayo County Council seeks to maintain a</p>	<p>Population and Human Health</p>

International / National / Regional	Outline of Targets and Objectives	SEA Topic
	balance between sustainable development of tourism and the preservation of the environment.	
<p><b>Mayo County Council Climate Adaptation Strategy September 2019</b></p>	<p>This Strategy sets out a vision for a Mayo that will be climate ready, a county that understands how climate change will affect our communities and businesses, and a county that works together to reduce the risk and avail of the opportunities that climate change will bring.</p> <p>This Strategy sets out the strategic priorities, measures and responses for adaptation in Mayo County Council over the next 5 years. The Strategy includes a range of actions across five operational themes: Governance, Critical Infrastructure &amp; Buildings, Natural &amp; Cultural Capital, Water Resources &amp; Flood Management and Community Services. The following goals are identified:</p> <ul style="list-style-type: none"> <li>• Goal 1: Establish a Climate Adaptation Governance Structure to Ensure Successful Implementation of the Adaptation Strategy</li> <li>• Goal 2: Increase the resilience of Critical Infrastructure &amp; Buildings to climate change by planning and implementing appropriate adaptation measure</li> <li>• Goal 3: Increase the Resilience of Natural and Cultural Capital.</li> <li>• Goal 4: Increase the resilience of Water Resources and Flood Risk Management.</li> <li>• Goal 5: Increase the Resilience of Community Services</li> </ul>	Climate

## 5.0 Environmental Baseline and Relevant Environmental Issues

### 5.1 Introduction

In order to assess the environmental effects of the Draft Masterplan 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.

#### 5.1.1 Ireland's Environment – An Integrated Assessment (EPA, 2020)

An overview of key environmental issues in Ireland is provided by Ireland's Environment – An Integrated Assessment 2020. It states that there is a need for urgent approaches to address climate change and biodiversity decline but also there are other environmental priorities for Ireland. These include tackling water pollution, investing in water services, improving recycling rates, improving air quality and mitigating radiological risks. In addition, intensive agricultural and land use practices are affecting or posing threats to the environment and human health. The assessment indicates that much better approaches around managing conflicting land uses and practices are needed in order to protect the environment. It provides several examples of managing such conflicts including:

- leaving space for nature,
- maintaining setback spaces along rivers to protect water quality,
- considering nature-based solutions for flood mitigation,
- promoting areas best suited to high nature value farming and areas of bog that should be left and restored as spaces for carbon storage and nature.

### 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).

### 5.2.2 Moore Hall (Lough Carra) Special Area of Conservation (SAC) 000527

The lesser horseshoe bat is the qualifying interest of Moore Hall (Lough Carra) Special Area of Conservation (SAC) 000527. The lesser horseshoe was first recorded at Moore Hall in the mid-1980's (O'Sullivan, 1994; McAney, 2018) and there are three distinct locations used by lesser horseshoe in the ruins of Moore Hall:

- a two-storey former dwelling ("the Coach House") used as a summer breeding site;
- a series of cellars and underground passage used as winter hibernation sites; an underground passage in a small stone building.

The known bat roosts within Moore Hall Estate are located within woodland dominated by coniferous species, although some deciduous species are also present. Much of the Site surrounding the roosts consist of forestry plantation. Tree species present include; Norway spruce *Picea abies* and Sitka spruce *P. sitchensis*, Scot's pine *Pinus sylvestris*, Japanese larch *Larix kaempferi*, ash *Fraxinus excelsior*, beech *Fagus sylvatica*, oak *Quercus* spp. and alder *Alnus glutinosa*. Areas of forestry have been cleared in recent years creating openings in the forested landscape.

### 5.2.3 Lough Carra / Mask Complex Special Area of Conservation (SAC 1774).

Lough Carra is partially located within the Masterplan Boundary and directly adjoins the Moorehall Estate. The lake is of considerable ecological and conservation importance, and forms part of the Lough Carra / Mask Complex Special Area of Conservation (SAC 1774). Lough Carra supports a diverse mosaic of limestone and wetland habitats and species, including the following listed in Annex 1 and 2 of the EU Habitats Directive: hardwater lakes, dry heaths, Great Fen-sedge (*Cladism mariscus*) fen and alkaline fen, limestone pavement and alluvial woodland. In addition to the fen habitats, there are widespread reed swamps, wet grassland and some freshwater marsh communities around the lakeshores, as well as orchid rich calcareous grassland, lesser horseshoe bat and otter populations.

Lough Carra is also designated as a Special Protection Area (SPA 004051) under the EU Birds Directive. According to the SPA site synopsis (NPWS, 2014), Carra has a highly indented shoreline (over 69 km in length), fringed by a diverse complex of limestone and wetland habitats and includes many small islands.

The site is of special conservation interest for the Common Gull and the islands in Lough Carra have traditionally supported nesting gulls. A survey in 1993 recorded Common Gull (72 individuals) and Black-headed Gull (252 individuals). The site was surveyed in 1999 as part of the Seabird 2000 Survey and 65 pairs of Common Gull and 100 pairs of Black-headed Gull were recorded.

The site also supports wintering populations of a number of species including Wigeon (67), Gadwall (26), Teal (63), Mallard (140), Shoveler (38), Pochard (33), Tufted Duck (133), Goldeneye (64), Little Grebe (14) Great Crested Grebe (12) and Lapwing (243) - all figures are mean peaks for four of the five winters in the period 1995/96 - 1999/2000.

The figures below provide an illustration of the Special Area of Conservation.

#### 5.2.4 Lough Carra Special Protection Area (004051)

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Common Gull.

The islands in Lough Carra have traditionally supported nesting gulls. A survey in 1993 recorded Common Gull (72 individuals) and Black-headed Gull (252 individuals). The site was surveyed in 1999 as part of the Seabird 2000 Survey and 65 pairs of Common Gull and 100 pairs of Black-headed Gull were recorded.

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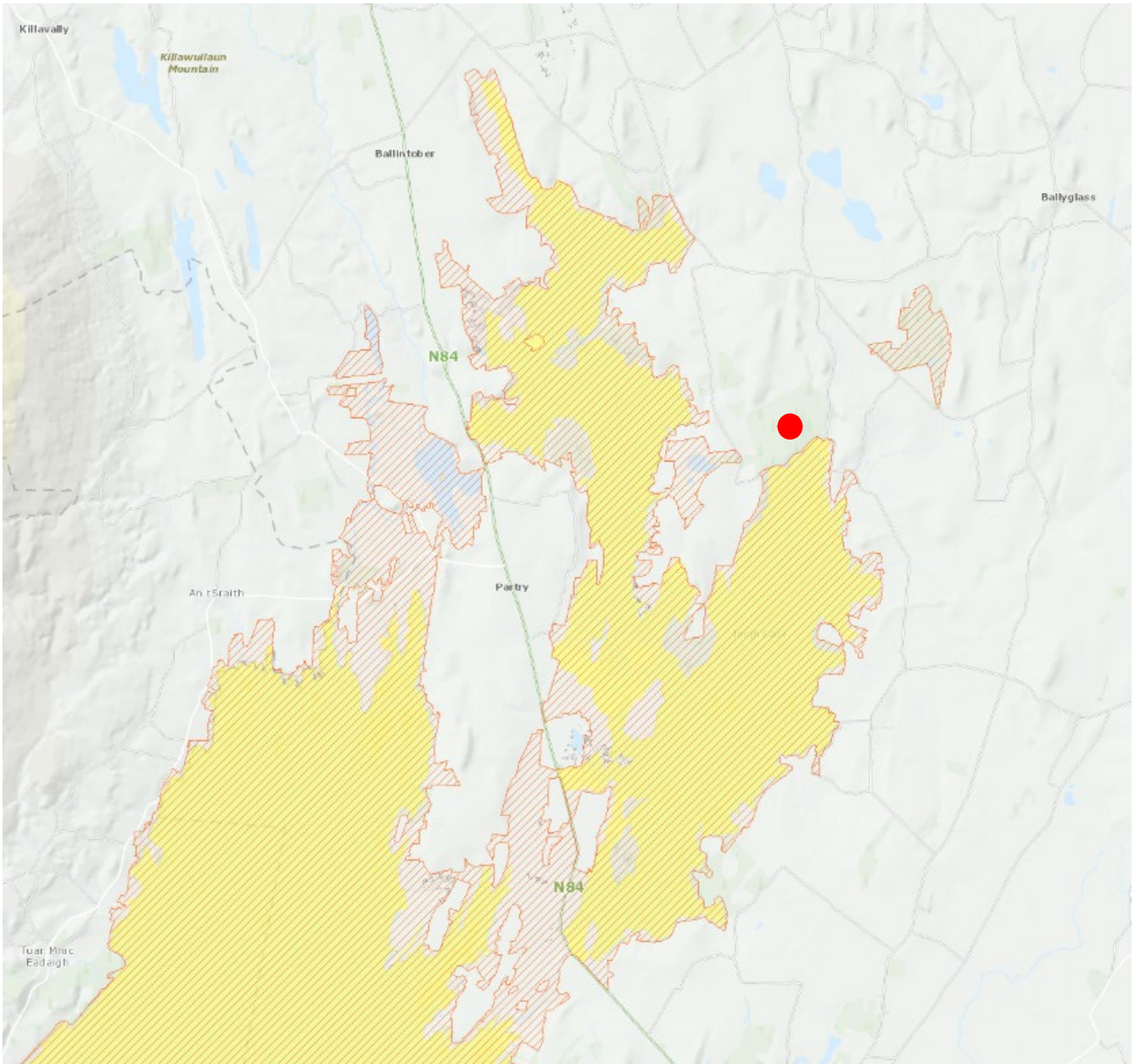
Lough Carra SPA is of considerable ornithological importance for breeding gulls including a nationally important population of Common Gull. Part of Lough Carra SPA is a Wildfowl Sanctuary.

The figures overleaf provide an illustration of the Special Protection Area.

#### 5.2.1 Natural Heritage Areas (NHA)

Flora and fauna in Ireland are protected at a national level by the Wildlife Acts 1976 to 2018 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. The Lough Carra/Mask Complex pNHA (Site Code: 001774) is shown in Figure 7.



**Figure 5 The Natura 2000 Network (SACs are shown in orange hatch/SPAs are shown in yellow) proximate to the Masterplan Study Area<sup>1</sup>. The approximate location of the Moorehall Demesne has been identified by a red dot (Source: GeoHive).**

<sup>1</sup> Refer to Figure 1 Moorehall Masterplan Area for the full outline of the Masterplan Study Area.

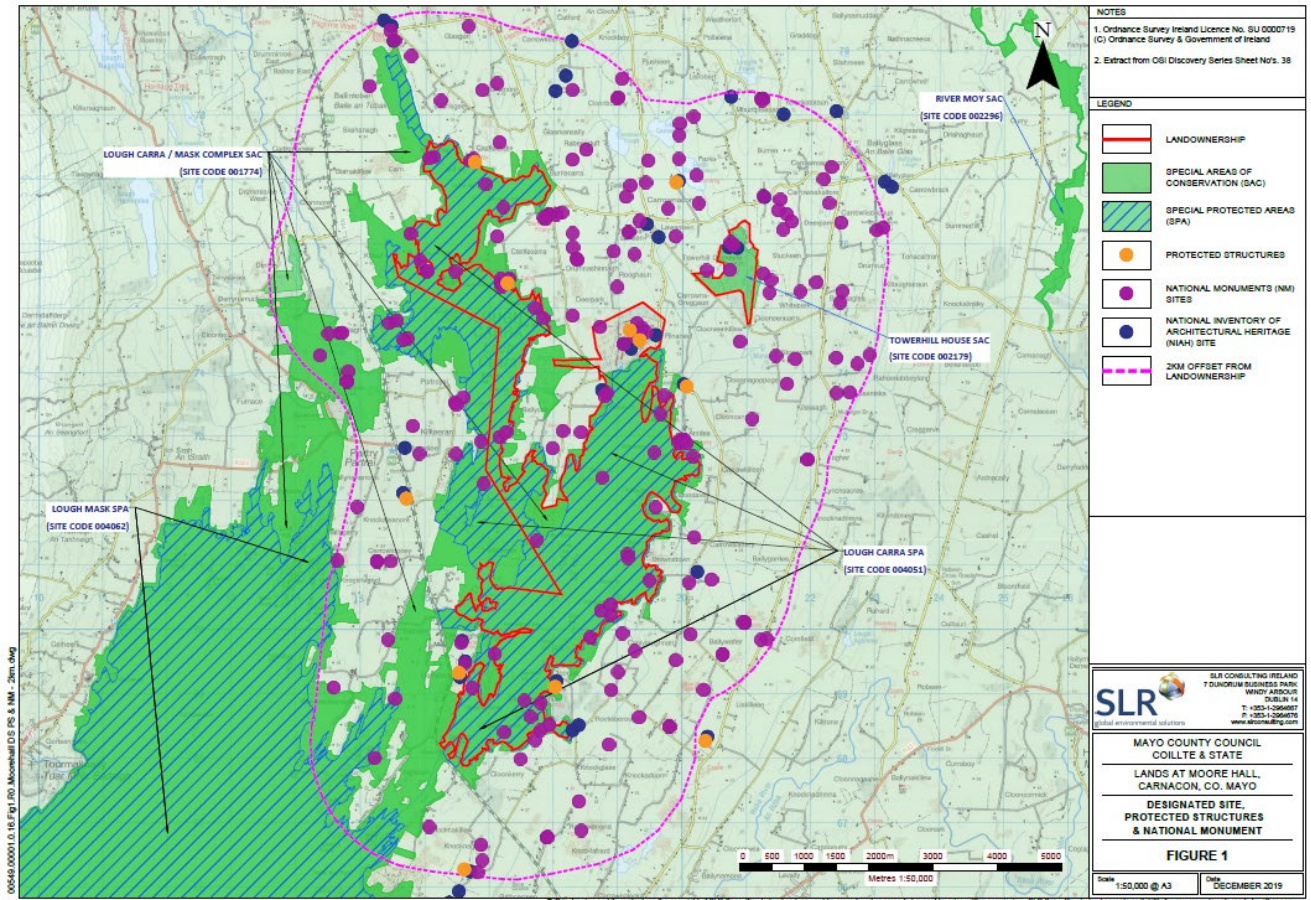
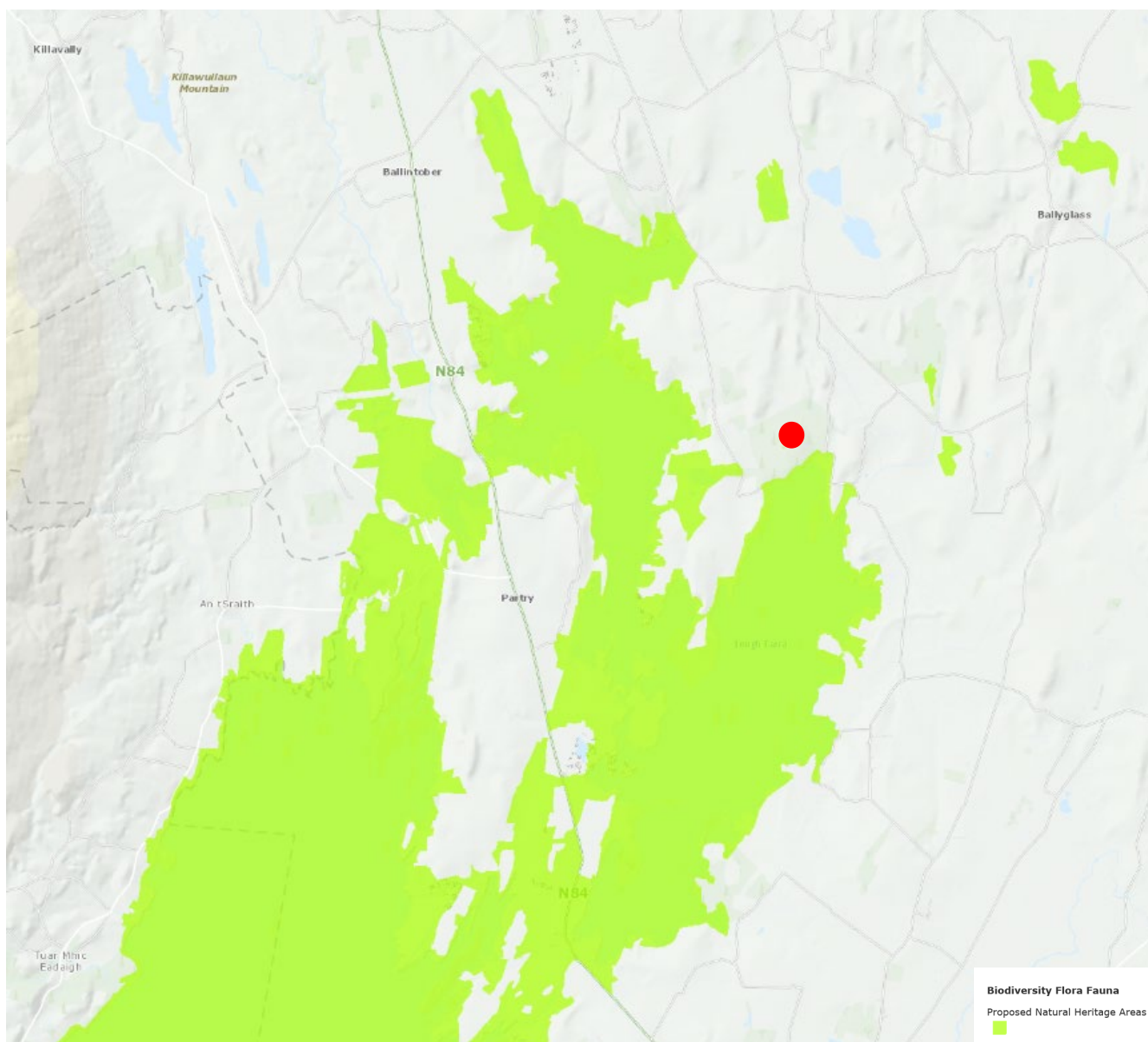


Figure 6 Environmental Designations and Sensitivities



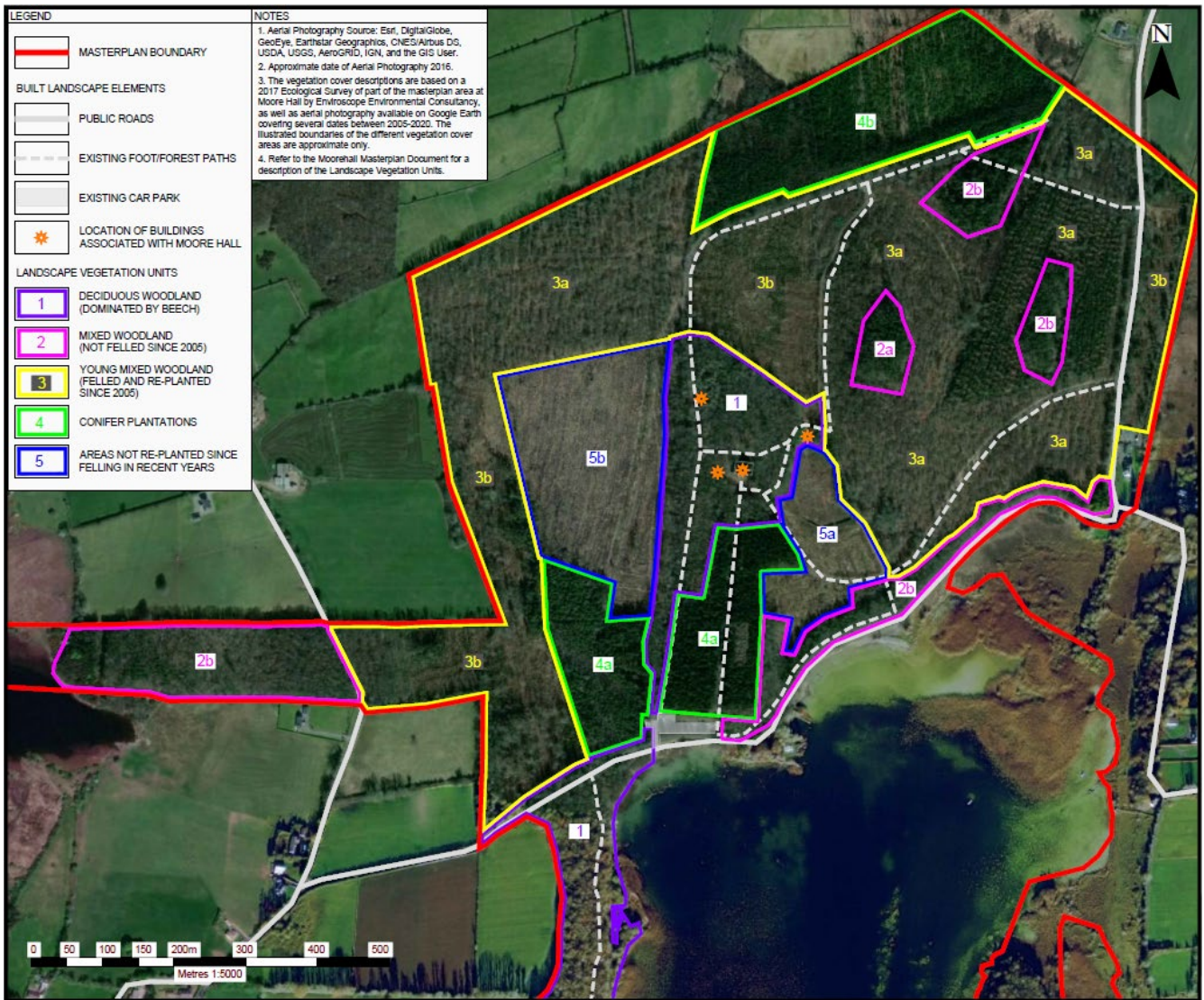
**Figure 7 Proposed Natural Heritage Areas proximate to the Masterplan Study Area<sup>2</sup>. The approximate location of the Moorehall Demesne has been identified by a red dot (Source: *GeoHive*).**

### 5.2.2 Trees and Forestry

The existing landscape within the Moorehall Masterplan boundary consists of a number of deciduous and mixed woodland blocks of different maturity. These are essential elements in consideration of the conservation management of the bat colonies at Moorehall. The approximate boundaries of the different Landscape Vegetation Units and an indication of the existing path system are shown in the Figure 8 overleaf.

<sup>2</sup> Refer to Figure 1 Moorehall Masterplan Area for the full outline of the Masterplan Study Area.





**Figure 8 Landscape Vegetation Units**

Descriptions of different Landscape Vegetation Units in Figure 8 are provided in the table below are based on an Ecological Survey of Moorehall, by Enviroscope Environmental Consultancy (2017), as well as aerial photography available on Google Earth (2005-2019). As the ecological survey did not cover all of the area within the masterplan boundary surrounding Moorehall House, the type and maturity of some woodland areas is estimated using aerial photography; there may therefore be some discrepancy on the ground.

**Table 5 Description of Landscape Vegetation Units within the Moorehall Demense**

Landscape Vegetation Unit	Description of Baseline	Key Issue / Recommendation
1 – Deciduous Woodland (Dominated by Beech)	There are two large blocks of deciduous woodland, which is dominated by beech ( <i>Fagus sylvatica</i> ), with occasional ash ( <i>Fraxinus excelsior</i> ), sycamore ( <i>Acer pseudoplatanus</i> ) and holly ( <i>Ilex aquifolium</i> ). Due to the dense stands of	Considering the age of these woodland blocks and their high amenity value, it is recommended to retain as much of these areas as possible, as part of the masterplan proposals.

Landscape Vegetation Unit	Description of Baseline	Key Issue / Recommendation
	<p>beech, the ground flora is quite species poor.</p> <p>The first of the two blocks is located mainly to the north and west of Moorehall House, but also extending a little to the south and east of the ruined building. A narrow band of this woodland extends to the west of one of the paths, all the way to the existing car parking areas beside the Lough Carra. The second deciduous woodland block is located on the western shore of the lake, extending south from the public road. According to the ecological report these woodlands were planted in the 1950's/early 1960's.</p>	
<p>2 – Mixed Woodland (Not Felled since 2005)</p>	<p>There are a number of blocks of mixed broadleaf and conifer woodlands, which the aerial photography shows were not felled since 2005. The 2017 ecological survey indicates that some of these formed part of the Moorehall biodiversity area, which was surveyed by Browne in 2004 (see reference in ecological report).</p> <p>Block '2a', northeast of Moorehall (refer to Figure 8) is described in the 2017 ecological survey as being "dominated by varying proportions of beech and Norway spruce" (<i>Picea abies</i>), with some locally frequent Scots pine (<i>Pinus sylvestris</i>). Four other blocks of mixed woodland were identified as not having been felled since 2005 (i.e. identified as '2b' on Figure 8, two of them further north and east of Block '2a' and one a narrow band on the northern side of the road following the shore of Lough Carra, east of the car parking area. The final block is located within the extension of the masterplan to the west towards Lake Nagovne.</p>	<p>Considering the age of these woodland blocks and their biodiversity value, it is recommended to retain as much of these areas as possible as part of the masterplan proposals.</p>
<p>3 – Young Mixed Woodland (Felled and re-planted since 2005)</p>	<p>The majority of the woodland areas surrounding Moorehall have been felled and re-planted since 2005. Those areas marked on Figure 8 as '3a' were felled</p>	<p>These young mixed woodland blocks appear to consist of a varied, mostly native, species mix, which is developing nicely. It may however be beneficial to carry out</p>

Landscape Vegetation Unit	Description of Baseline	Key Issue / Recommendation
	<p>some time before April 2005 (source: Google Earth), those marked with '3b' after that date. The 2017 ecological survey states that these areas were re-planted in 2008, with a mix of oak (<i>Quercus</i> sp.), ash, birch (<i>Betula</i> sp.) and Scots pine. The majority of these areas have since developed into dense scrub woodland.</p>	<p>some selective felling, in order to keep the canopy open in places, to promote continued natural regenerations.</p> <p>It may be a viable option to create a number of clearings and/or rides, thereby creating different micro-climates and increasing the amount of woodland edge habitat. This may benefit the locally occurring bat species, as it will provide additional commuting routes and feeding habitat.</p> <p>Clear-felling of larger areas of the young mixed woodland blocks is not recommended.</p>
<p>Landscape Vegetation Unit 4 – Conifer Plantation</p>	<p>Three blocks of conifer plantation were identified. One block is located between the beech dominated woodland to the front of Moorehall House and the existing car parking area (i.e. identified as '4a' on Figure 8). The second is located to the northwest of the car parking area (also identified as '4a') and the third within the northern tip of the masterplan boundary (identified as '4b'). The conifer plantation to the front of Moorehall House is described in the 2017 ecological survey as dominated by Norway spruce. The other two blocks are not covered by the ecological survey and are assumed to be similar, due to their appearance on the aerial photography. It is however possible that other conifer species are present. Both areas identified as blocks '4a' have not been felled since 2005. The block identified at '4b' had been clear felled some time before April 2005 (source: Google Earth) and appears to have been re-planted with conifers.</p>	<p>There is little biodiversity or amenity value associated with these conifer plantations.</p> <p>A narrow band of trees should be retained along the existing path (the 'Dark Road') running north from the western end of the car park towards Moorehall, as this route is used as a commuting corridor by the local bat species.</p> <p>Consideration should be given to the stability of a narrow band of conifers, as newly exposed edges of conifer plantations are prone to wind-throw, if only part of a plantation is removed. One solution may be to remove some of the trees facing the track first and re-planting with fast growing native species such as Alder (<i>Alnus</i> sp.), before removing the remainder of the conifer plantation, as recommended by the Vincent Wildlife Trust in their report on 'The Lesser Horseshoe Bat at Moorehall' (McAney 2018).</p>

Landscape Vegetation Unit	Description of Baseline	Key Issue / Recommendation
5 – Areas not re-planted since felling in recent years	<p>Two blocks were identified, which do not appear to have been re-planted since felling. The block identified as '5a' on Figure 8 incorporates the former walled garden and the area to the south of that. This area was clear-felled sometime between 2005 and 2013 and has since started to recolonise with locally occurring tree and shrub species. However, the area within the walled garden has recently been cleared again to facilitate regenerative works to create a distinctive conservation zone within the masterplan area.</p> <p>The second block, identified as '5b' is located to the west of the beech dominated woodland to the west of Moorehall House. This area was clear-felled sometime between April 2015 and November 2016. The 2020 aerial photograph indicates that little natural recolonization has taken place in this area since.</p>	<p>The walled garden and block '5b' have currently little to no biodiversity or amenity value.</p> <p>The value of the area to the south of the walled garden is slightly higher, as some regeneration has taken place. However, since the vegetation cover is still quite young a change of use is feasible.</p>

### 5.2.3 Mosses and Lichen

There ruins of several structures throughout the Moorehall Demense are home to considerable communities of mosses, lichens and ferns which add to the considerable existing biodiversity of the site.

### 5.2.4 Species

Species most under threat in Ireland include those linked to wetlands, uplands or sensitive to water pollution. The current status and trends of Ireland's species are presented in Figure 9 (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. Current assessments of Irish Red List species are outlined in the Figure 9 overleaf.

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)<sup>3</sup>.



**Figure 9 Conservation Status of Ireland's Red List Species; Number of Species Assessed in Brackets (Source: Ireland's Environment 2016 - An Assessment, EPA 2016 / NPWS)**

#### *Birds of Conservation Concern in Ireland (2014)*

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.

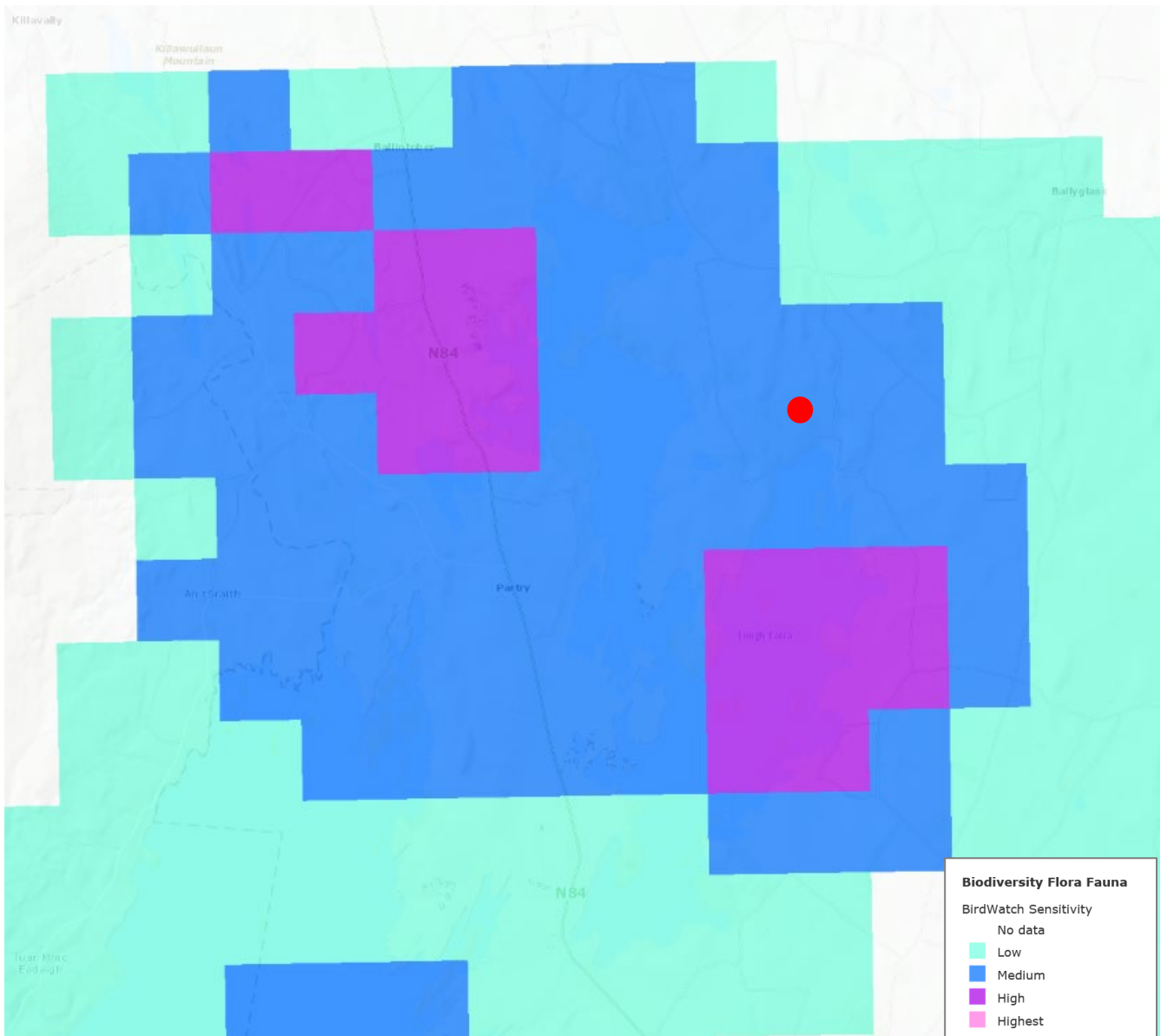
#### *Birds of Conservation Concern in Ireland 4: 2020–2026*

This is the fourth review of the status of birds in Ireland. Two hundred and eleven species were assessed and assigned to the Red, Amber or Green list of conservation concern. Results show 23 species moving onto the Red list and only six leaving it. Twelve species are newly Red-listed due to changed European or global status. Three are Red-listed due to declines within the expanded short-term breeding time period.

54 (25.6%) of Ireland's regularly occurring bird species are now on the Red list. Existing conservation concerns are reinforced, such as the further catastrophic decline of waders with six more wading bird species joining the Red list; and generalist birds of farmland, like Kestrel *Falco tinnunculus* are now Red-listed. When grouped by habitat, upland (50%) and farmland (35%) have the highest proportions of Red-listed species. Snipe *Gallinago gallinago* is now Red-listed with severe declines in its breeding and wintering populations and Swift *Apus apus* is Red-listed due to a decline in its breeding population. Some recovery in the populations of species such as Black-headed Gull *Larus ridibundus* and European Herring Gull *Larus argentatus* which move from Red to Amber.

The figure below illustrates 'BirdWatch Sensitivity' and significant areas of the masterplan are noted as having medium to high sensitivity.

<sup>3</sup> Extract from Ireland's Environment 2016- An Assessment, EPA 2016.



**Figure 10 Birdwatch Sensitivity proximate to the Masterplan Study Area<sup>4</sup>. The approximate location of the Moorehall Demesne has been identified by a red dot (Source: GeoHive).**

### 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

<sup>4</sup> Refer to Figure 1 Moorehall Masterplan Area for the full outline of the Masterplan Study Area.

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.

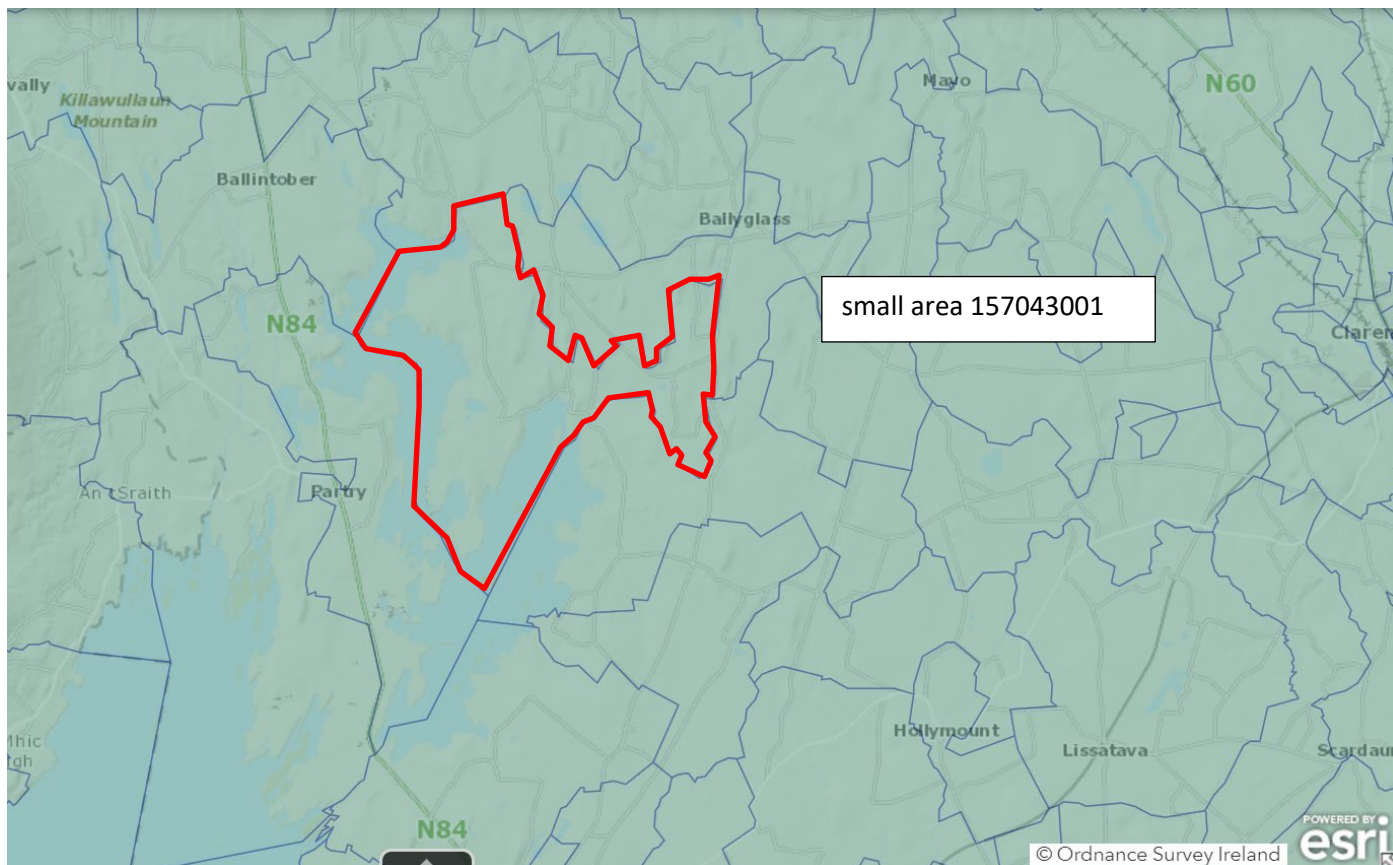
Species such as the zebra mussel was recorded in 70 lakes, which is an increase of 20 lakes from the known populations in the previous report. As one of the identified sectoral Impacts of Climate Change for Ireland, it is anticipated that projected shifts in climate, temperature and precipitation may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

Boats 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.

## 5.3 Population and Human Health

### 5.3.1 Populations by County and Settlement

The masterplan area is located within a sparsely populated rural area. CSO data does not relate exactly to the masterplan boundary, but the population of small area 157043001 is 201 people with a population density per km<sup>2</sup> of 10.85. See Figure 11.



**Figure 11 Small area 157043001 (outlined in Red) (Census 2016 Small Area Population Statistics, CSO)**

Population trends for the following settlements have also been identified in the Table 6 below. Population change between Census data collected in 2011 and 2016 appears to vary across the settlements.

**Table 6: Population of nearby Settlements<sup>5</sup>**

County	Population 2011	Population 2016	% Population Change
<b>County Mayo</b>	130,638	130,507	-0.10%
Castlebar	12,318	11,707	-5.22%
Claremorris	3319	3592	7.60%
Ballinrobe	2630	2712	3.02%
Carnacon / Carrownacon (Townland)	24	31	22.58%
Burriscarra ED	440	423	-4.02%

<sup>5</sup> Source: Central Statistics Office.



### 5.3.1 Electoral District and Townlands

The masterplan area is largely located within the Electoral District of Burriscarra and encompasses several townlands including Muckloon or Moorehall, Ballycally, and Towerhill Demense.

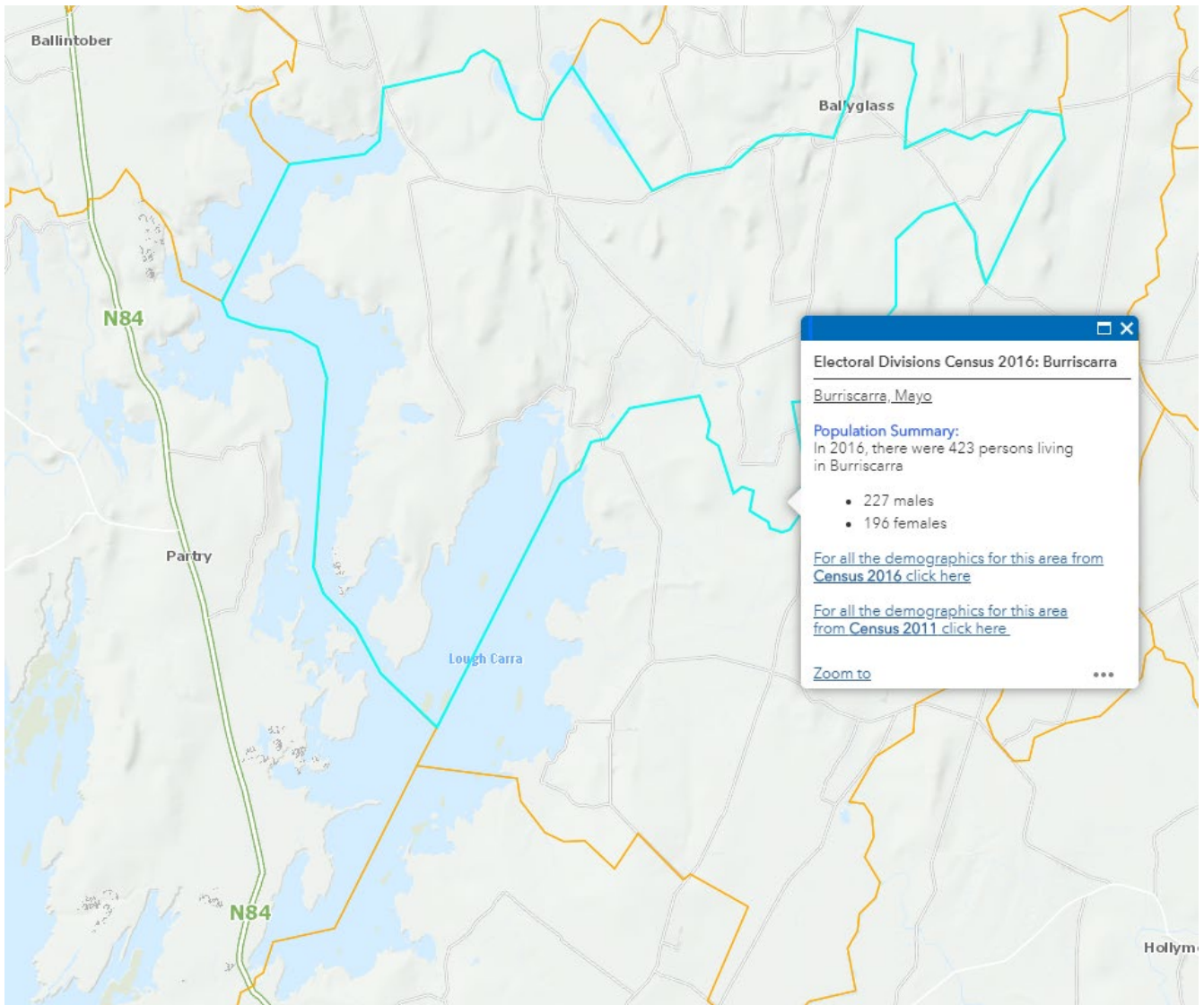
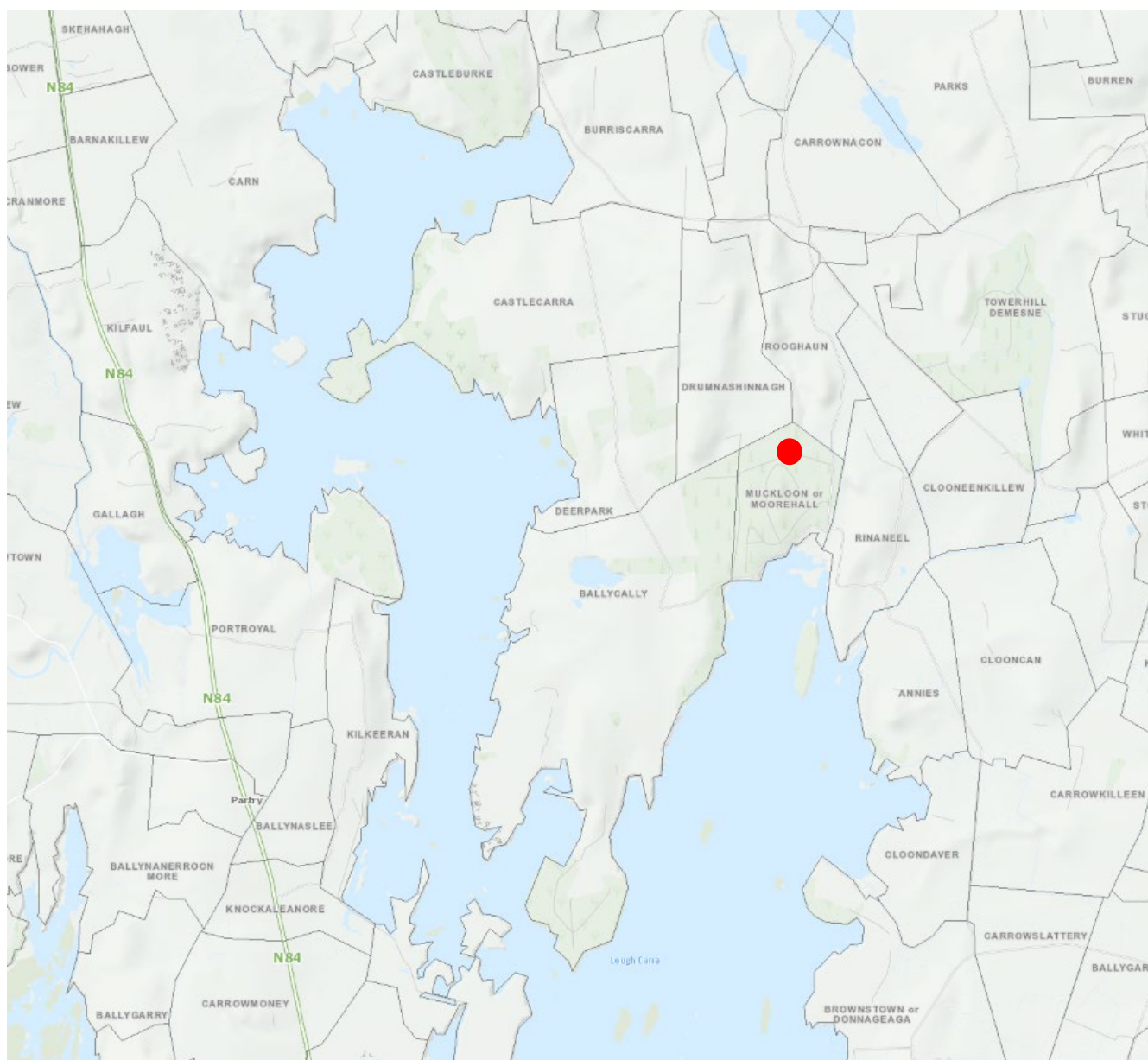


Figure 12 Electoral Districts with the boundary of Burriscarra ED highlighted (Source: Central Statistics Office).



**Figure 13 Townlands proximate to the Masterplan Study Area<sup>6</sup>. The approximate location of the Moorehall Demesne has been identified by a blue dot (Source: GeoHive).**

### 5.3.2 Human Health

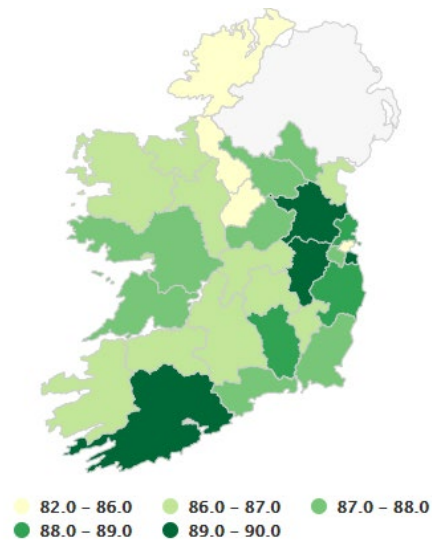
The 2016 Census provided some indicators regarding health. One question on the Census related to how the respondent felt about their overall health. The findings indicate that 87% of the population of Ireland consider themselves to be in “good or very good” health. Only 1.6% of the overall population reported themselves as being in ‘bad or very bad’ health. The figure following, provides a ‘heatmap’ on the self-reporting of health by administrative area. It is noted that in the Mayo County Council area 86.77% of the population consider themselves to be in ‘good or very good’ health which is slightly below the national average. By Increasing opportunities for physical activity, the masterplan is likely to facilitate improvements to physical and mental

<sup>6</sup> Refer to Figure 1 Moorehall Masterplan Area for the full outline of the Masterplan Study Area.

wellbeing within the resident population by improving access to amenities, walking facilities and supporting job creation in the local community.

**Table 7 Population with Good or Very Good Health in Mayo**

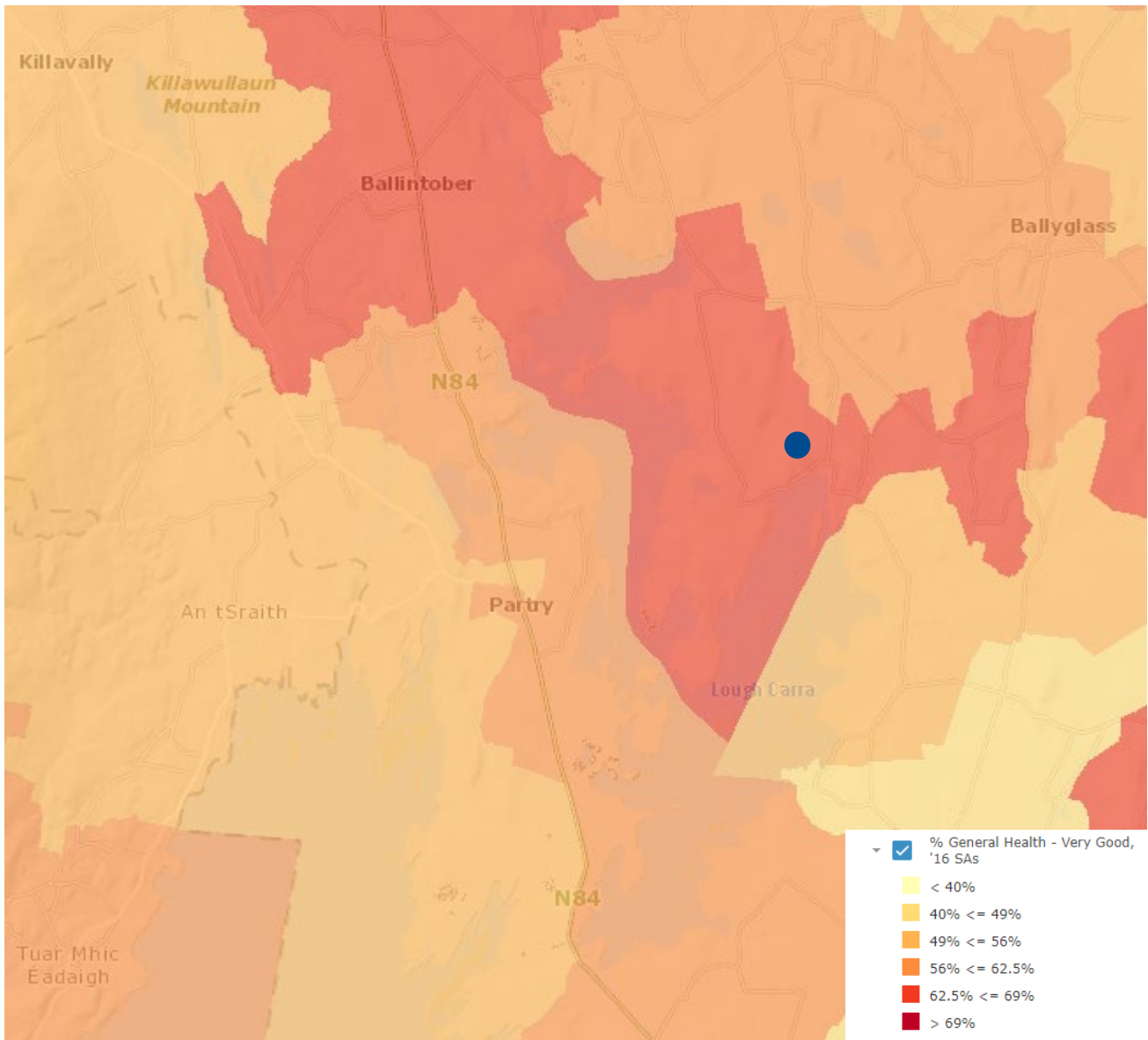
County	Total Population by County	Very good health	Good health	Total	Percentage
Mayo	159,553	91,935	46,506	138,441	86.77%
157043001 (SA)	201	127	56	183	91.04%



**Figure 14 Percentage of persons with very good and good health, 2016 (Source: CSO Profile 9)**

**Table 8 Population and % population with Very Good Health**

Small Area	Total Population	Population in Very good health	% Very good health
157043001 (SA):	201	127	63.20%
Burriscarra (ED)	423	252	59.60%
Castlebar (MD/LEA):	34,169	19,742	57.80%
Mayo (LA)	130,507	73,137	56.00%
State	4,904,000	2,827,544	59.40%



**Figure 15 Population with Very Good Health proximate to the Masterplan Study Area<sup>7</sup>. The approximate location of the Moorehall Demesne has been identified by a blue dot (Source: AIRO Census 2016 Viewer).**

### 5.3.3 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 7 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; and

<sup>7</sup> Refer to Figure 1 Moorehall Masterplan Area for the full outline of the Masterplan Study Area.

- 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 Masterplan.

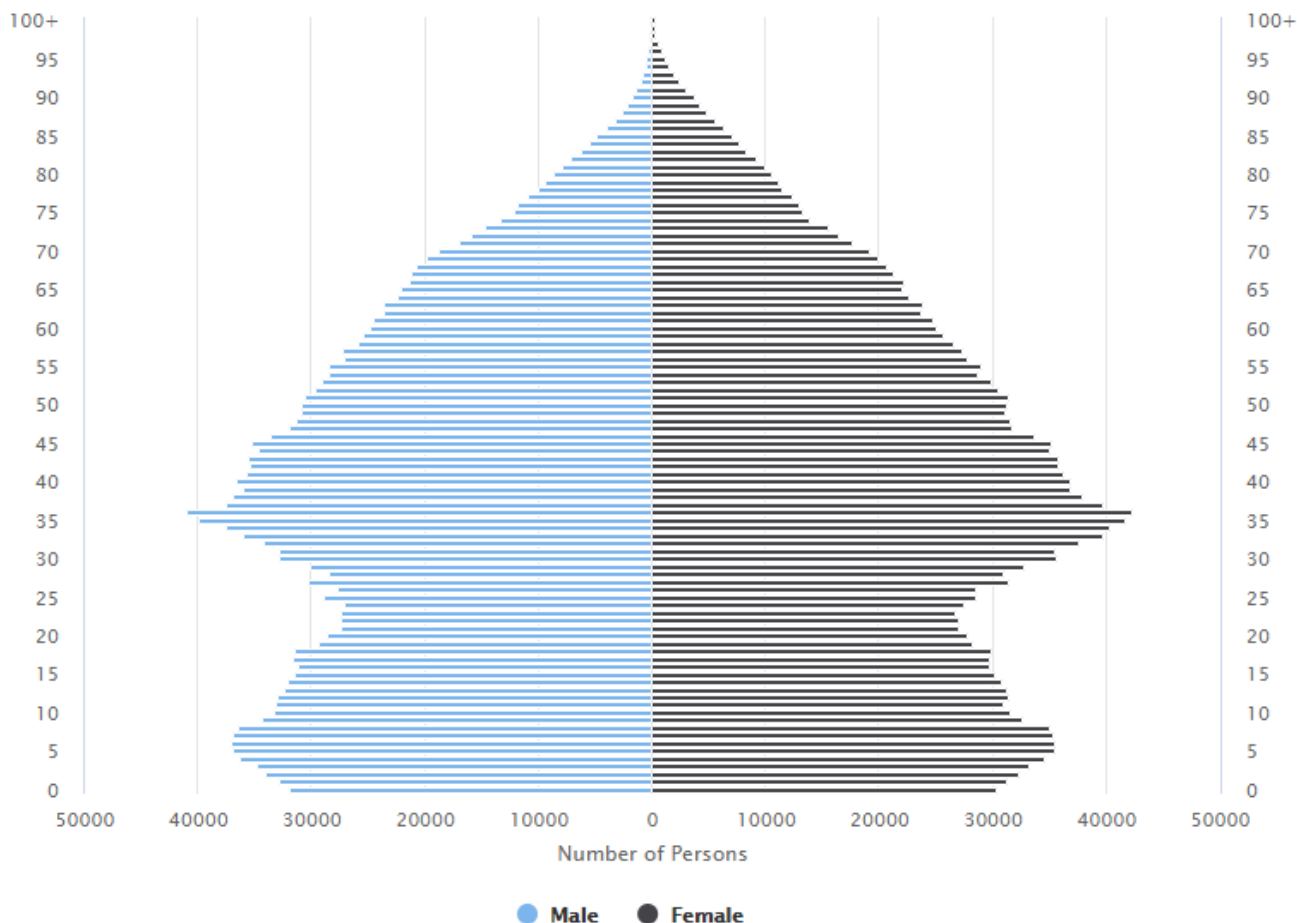


Figure 16 Population Pyramid of Ireland 2016

### 5.3.4 Economic Activity

Table 9 provides census data from Census 2016 relating to Persons at work or unemployed by occupation for County Mayo and the state. It shows that within the County there is a higher proportion of people working in the following occupations:

- Skilled Trades Occupations
- Caring, Leisure and Other Service Occupations
- Process, Plant and Machine Operatives
- Elementary Occupations

It also shows that there is a lower proportion of people working in the following occupations:

- Professional Occupations
- Associate Professional and Technical Occupations

- Administrative and Secretarial Occupations

**Table 9 Persons at work or unemployed by occupation**

Occupation	No. of People	%	No. of People	%
Managers, Directors and Senior Officials	3,964	6.69	169,032	7.44
Professional Occupations	8,632	14.57	393,608	17.32
Associate Professional and Technical Occupations	5,090	8.59	248,413	10.93
Administrative and Secretarial Occupations	5,298	8.94	228,032	10.03
Skilled Trades Occupations	11,858	20.01	316,313	13.92
Caring, Leisure and Other Service Occupations	4,795	8.09	166,163	7.31
Sales and Customer Service Occupations	3,890	6.56	155,030	6.82
Process, Plant and Machine Operatives	5,028	8.48	162,641	7.15
Elementary Occupations	5,556	9.38	200,287	8.81
Not stated	5,151	8.69	233,084	10.25
Total	59,262		2,272,603	4,761,865

Table 10 provides census data from Census 2016 relating to Persons at work by occupation for County Mayo and the state. It shows that there is a higher proportion of people working in the following industries in the County, when compared to figures for the State:

- Agriculture, forestry and fishing
- Building and construction
- Manufacturing industries

It also shows that there is a lower proportion of people working in Commerce and trade.

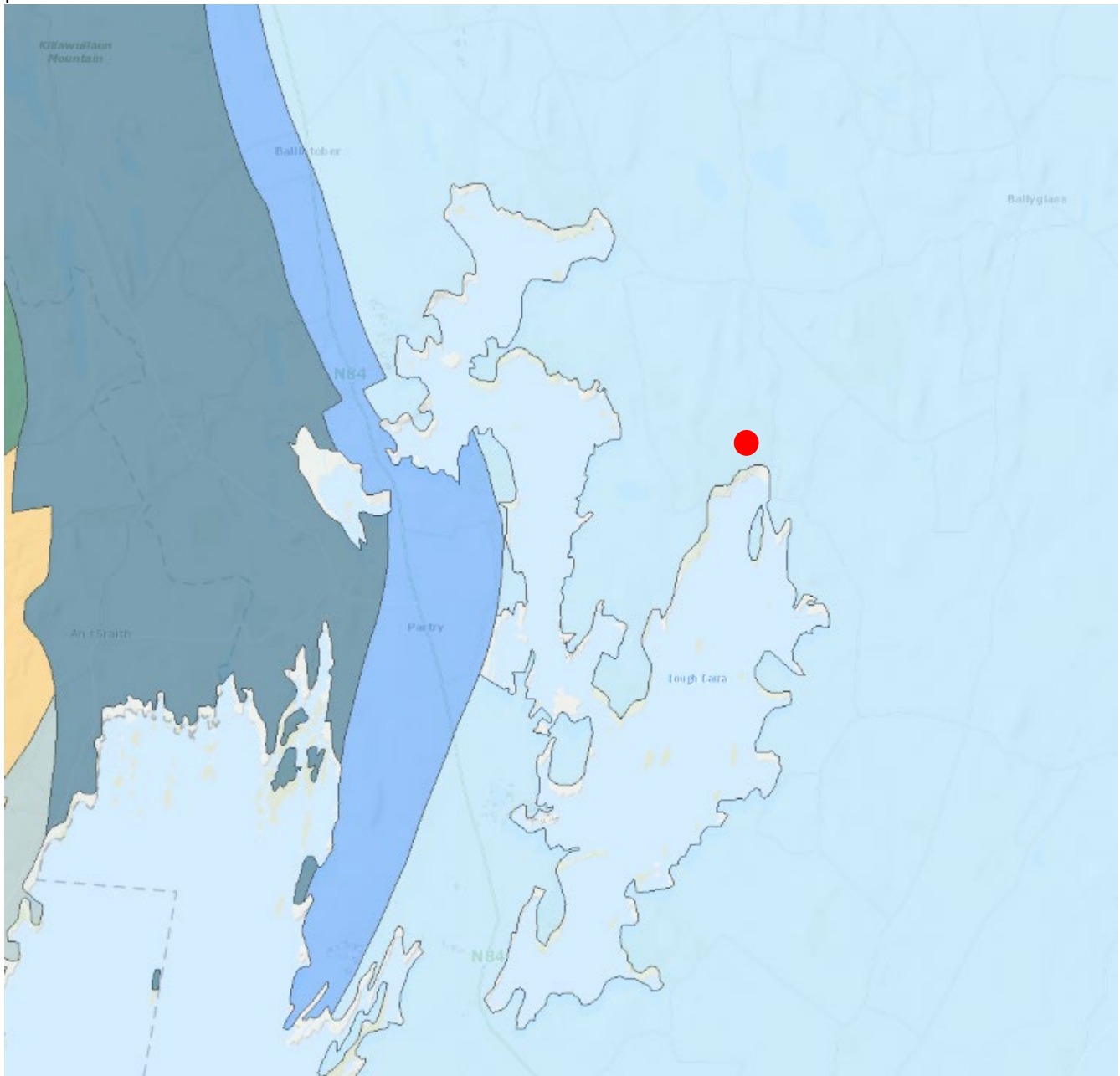
**Table 10 Persons at work by industry**

Industry	Total	%	Total	%
Agriculture, forestry and fishing	4,395	8.54	89,116	4.44
Building and construction	3,235	8.54	101,849	5.08
Manufacturing industries	7,312	14.21	229,548	11.44
Commerce and trade	10,285	19.99	480,117	23.93
Transport and communications	2,278	4.43	171,194	8.53
Public administration	2,886	5.61	106,797	5.32
Professional services	11,985	23.30	471,656	23.50
Other	9,063	17.62	356,364	17.76
Total	51,439		2,006,641	

## 5.4 Geology, Soils and Land Use

### 5.4.1 Geology

The masterplan area is underlain by limestone and calcareous shale from the Carboniferous and Palaeozoic periods.

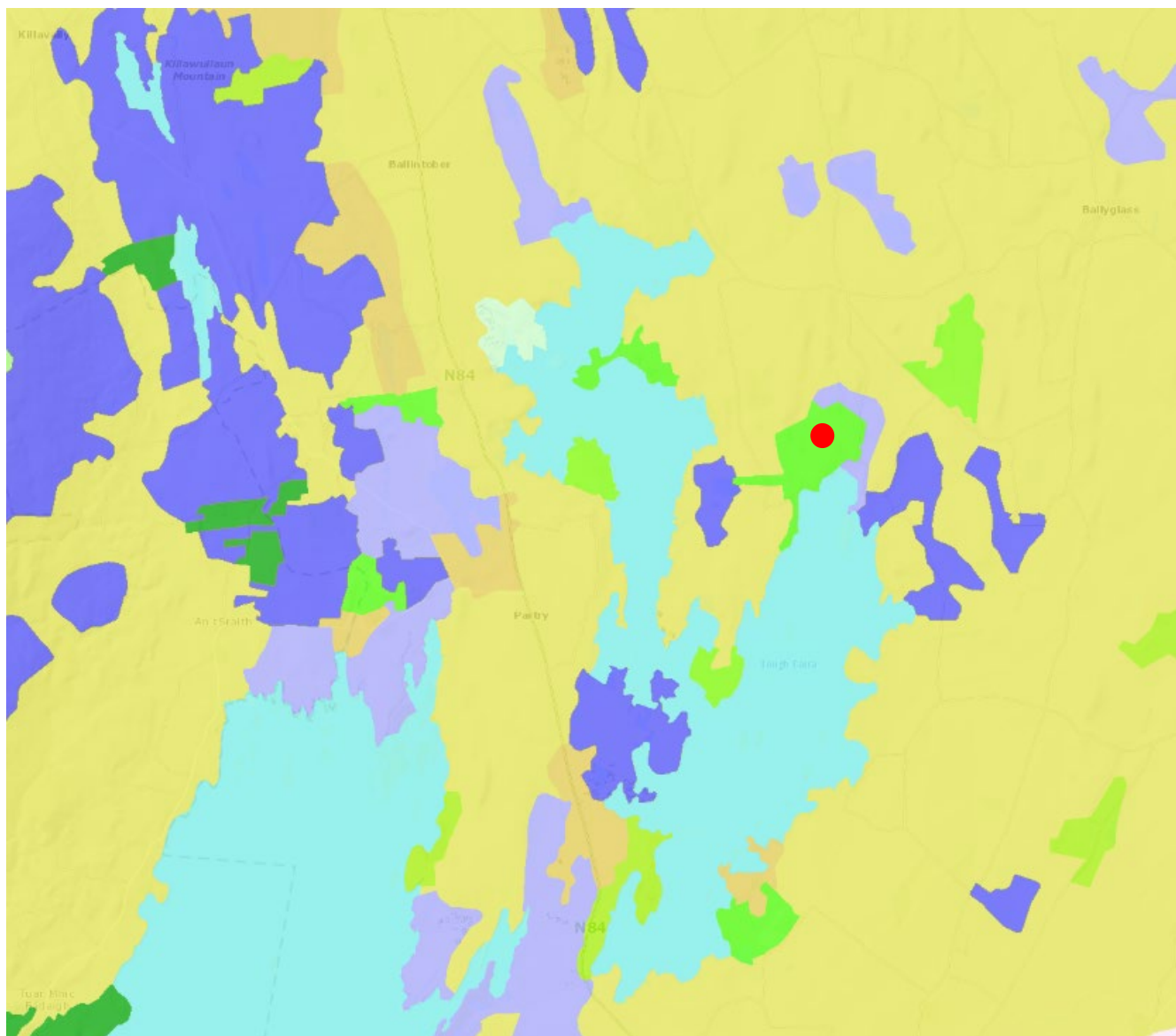


**Figure 17 Bedrock proximate to the Masterplan Study Area<sup>8</sup>. The approximate location of the Moorehall Demesne has been identified by a red dot (Source: GeoHive).**

### 5.4.2 Landcover

The CORINE landcover map in the figure below shows the area of the demesne is covered in mixed forest (green). This is surrounded by inland marshes (light purple) and pockets of peat bog (dark blue). There are large areas of

pasture (yellow) that surround the study area and naturally, the lake areas are characterised as a water body (light blue).



**Figure 18 CORINE Landcover proximate to the Masterplan Study Area<sup>9</sup>. The approximate location of the Moorehall Demesne has been identified by a red dot. (Source: GeoHive).**

### 5.4.3 Soils

The figure below shows mapped data from the Irish Soil Information System, sourced from Teagasc, which provides a new 1:250,000 scale national soil map (<http://soils.teagasc.ie>). The following soil types are located within and surrounding the masterplan area:

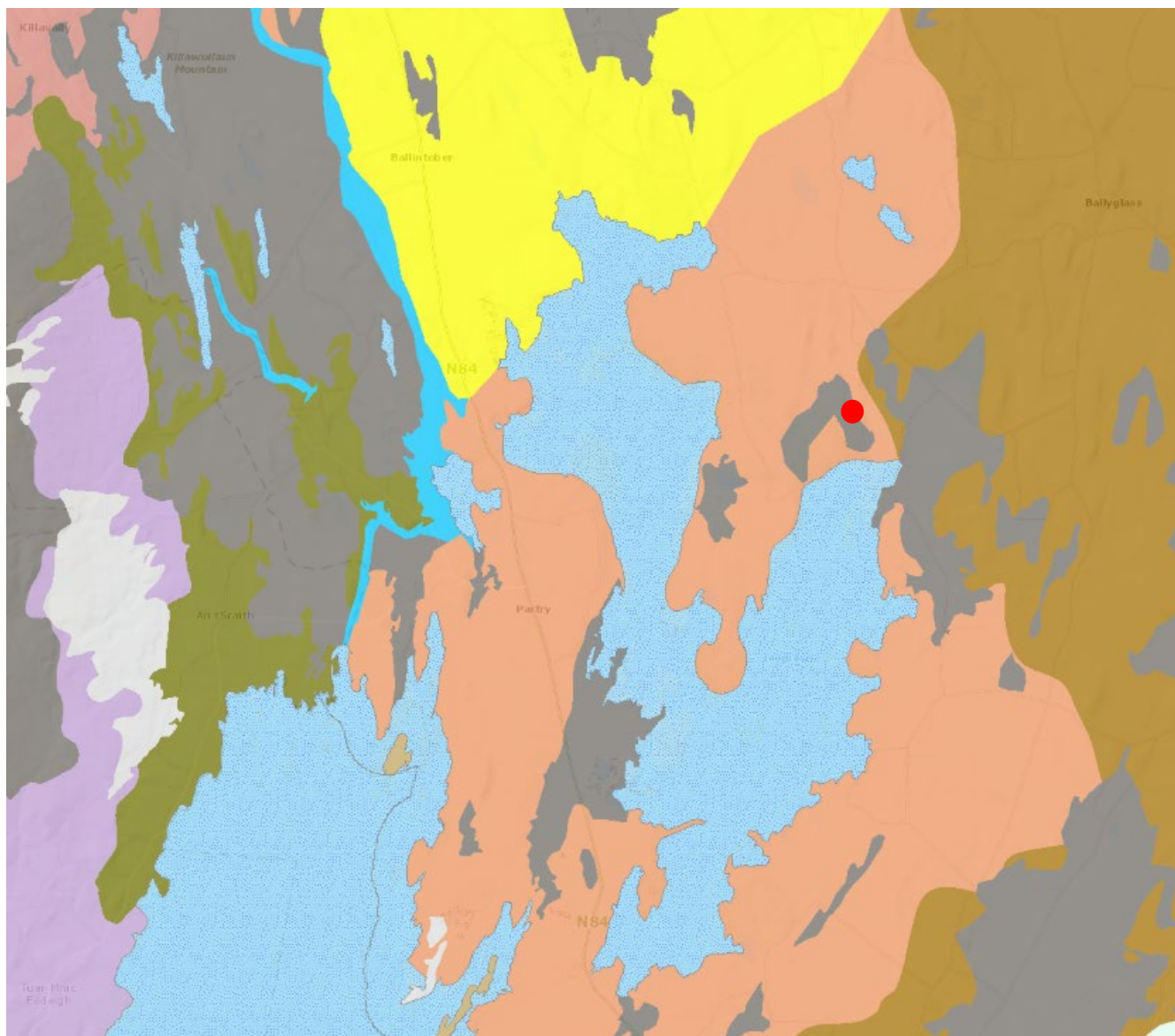
- Elton (light brown/beige) located within the core masterplan area and to the north and south of the Moorehall demesne, is described as a fine loamy soil with moderate drainage.

<sup>8</sup> Refer to Figure 1 Moorehall Masterplan Area for the full outline of the Masterplan Study Area.

<sup>9</sup> Refer to Figure 1 Moorehall Masterplan Area for the full outline of the Masterplan Study Area.



- Peat (grey) to the north and east of Moorehall Demense is a peat soil with poor drainage.
- Burren (yellow) to the north of the masterplan area in the vicinity of Ballintober which is a well-drained loamy soil.



**Figure 19 Irish Soils (Irish Soils Information System) proximate to the Masterplan Study Area<sup>10</sup>. The approximate location of the Moorehall Demesne has been identified by a red dot (Source: GeoHive).**

#### 5.4.4 Geoparks

Geoparks help to tell stories of geological, social, cultural and economic history of specific areas. They also help to promote and secure broad-based, sustainable social and economic development in their specific territories. Elevated to UNESCO status from 2015, Geoparks have equal status to World Heritage sites, but do not carry any legislative weight and do not impose restrictions on people, landowners, farming or industry.

<sup>10</sup> Refer to Figure 1 Moorehall Masterplan Area for the full outline of the Masterplan Study Area.

The Masterplan area is located within the 1000 km<sup>2</sup> Joyce Country and Western Lakes (candidate) Geopark which takes in the majority of the western lakes of Corrib, Mask and Carra. A project team has been established by the Geological Survey of Ireland, working with local agencies and communities, to secure UNESCO status for the project by 2023. An application for full UNESCO Global Geopark status is expected to be made to UNESCO during 2021.

#### 5.4.5 County Geological Sites

Lough Mask, which is located to the south west of the Masterplan area, is a County Geological Site<sup>11</sup>. The site is described as a large shallow solutional lake occupying the limestone lowlands to the east of the Maumtrasna and Partry mountains. (Geological Survey of Ireland, November 2020). The Mayo County Council Development Plan 2014 – 2020, provides the following objective with respect to natural heritage and Geological Sites,

##### NH-01

*It is an objective of the Council to protect, enhance, conserve and, where appropriate restore:*

*e) Features of geological interest as listed in the Audit of County Geological Sites (Mayo County Council).*

### 5.5 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 including surface water, groundwater and transitional 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.

Specifically in relation to groundwater protection, 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."*

<sup>11</sup> IGH14 Fluvial and Lacustrine Geomorphology.

### 5.5.1 River Basin Management

On April 17<sup>th</sup>, 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).

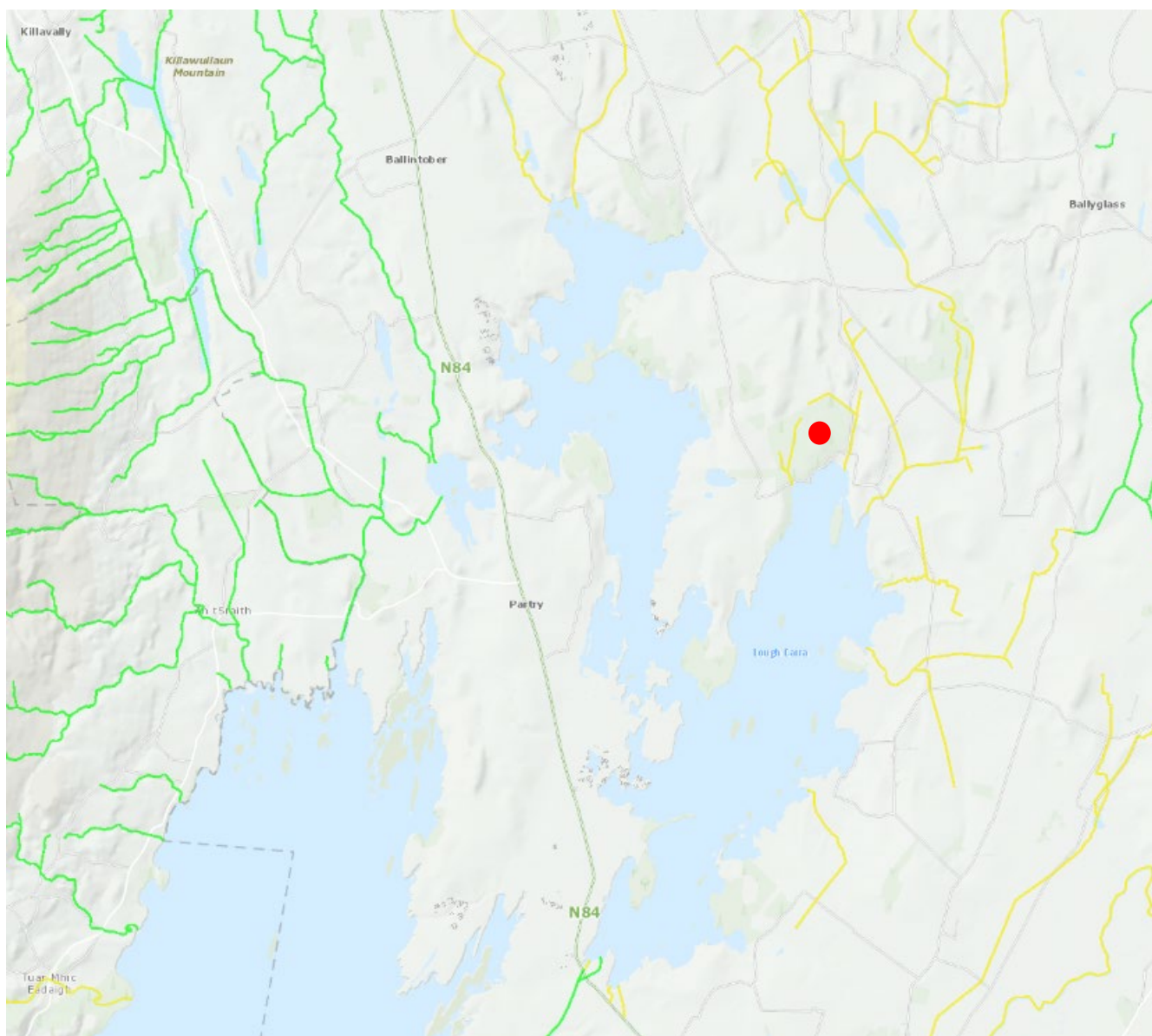
Lough Carra and its catchment are included within the Mask River Water Management Unit. An action plan for the Water Management Unit is available from <http://www.wfdireland.ie>.

This action plan presents an overview of water quality, information relating to potential causes of pollution and actions required to improve water quality to 'good' status within the Mask River Water Management Unit (WMU). Rivers within the Mask River WMU varied in status but were mostly classed as Moderate (11), Poor (25) or Bad (2) status with 17 rivers at a Good status and one at high status. The nine lakes situated within the WMU are classified as being of High (1), Good (5) and Moderate (3) status.

The Mask River WMU Action Plan notes that Lough Carra monitoring data indicated that the lake is of High status for macrophytes, chlorophyll, nutrients and physical chemistry and Good fish status. However, the overall status of the lake was downgraded to Moderate status on the basis of expert opinion.

### 5.5.2 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. The location of the Aghinish\_010 river broadly corresponds with the boundary located in the vicinity of the Moorehall Demense. For the 2013 - 2018 reporting cycle, its WFD status is recorded as moderate.

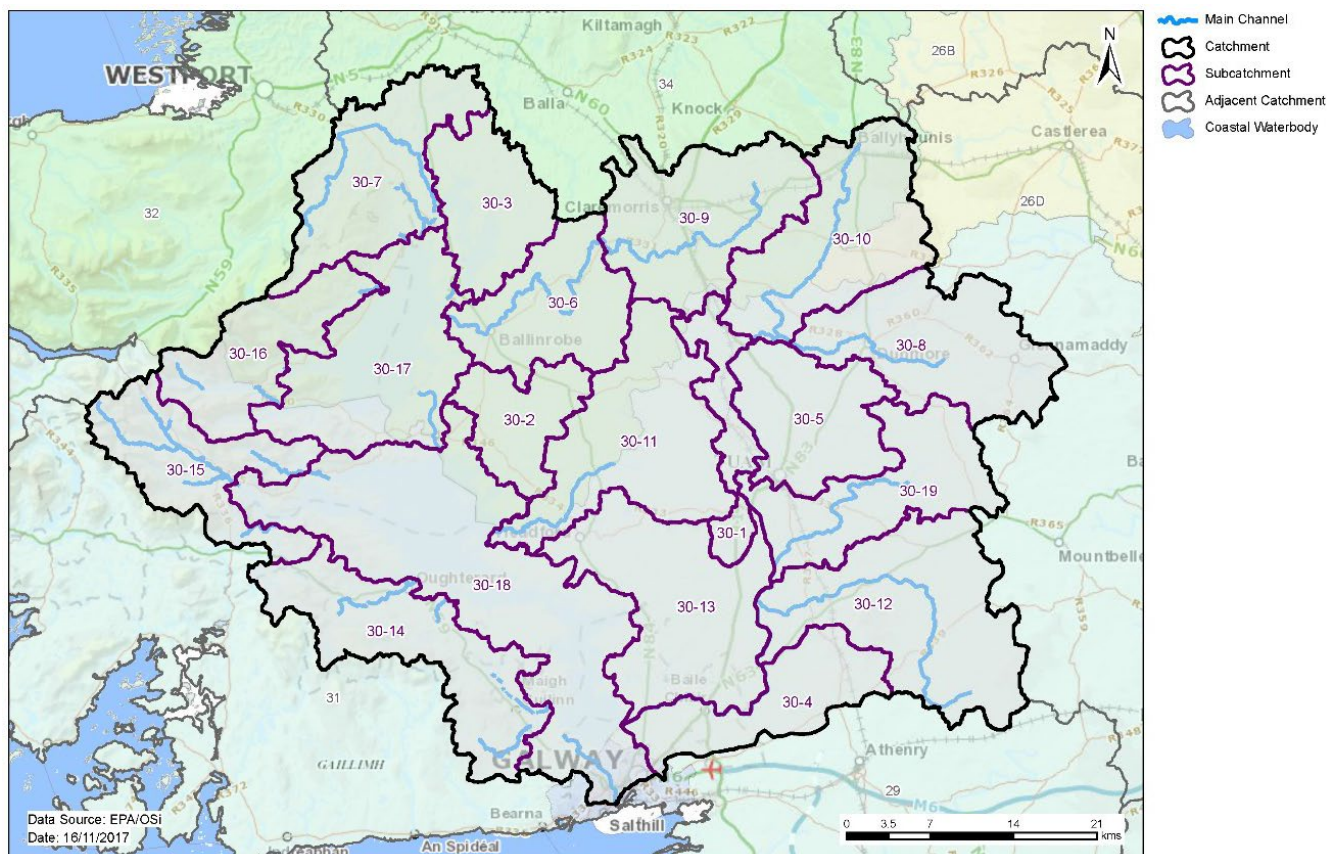


**Figure 20 WFD River Status proximate to the Masterplan Study Area<sup>12</sup>. The approximate location of the Moorehall Demesne has been identified by a red dot (Source: GeoHive).**

The masterplan boundary falls within the Corrib catchment includes the area drained by the River Corrib and all streams entering tidal water between Renmore Point and Nimmo's Pier, Galway, a total area of 3,112 km<sup>2</sup>. The largest urban centre in the catchment is Galway City. The other main urban centres are Tuam, Ballinrobe, Claremorris and Ballyhaunis. The total population of the catchment is approximately 116,900 with a population density of 38 people per km<sup>2</sup>.

This catchment is characterised by a wide, relatively flat, limestone plain occupying the eastern two thirds of the catchment which terminates in the large lakes of Corrib and Mask that abut against the granites of west Galway and the metamorphic uplands of southwest Mayo. The entire area of this catchment east of these lakes is karstified limestone with groundwater and surface water highly interconnected in this region.

<sup>12</sup> Refer to Figure 1 Moorehall Masterplan Area for the full outline of the Masterplan Study Area.



**Figure 21 Overview and Sub catchments of the Corrib Catchment (Source: Environmental Protection Agency, 2018<sup>13</sup>).**

The characterisation outcomes for the water resources of the Corrib Catchment is set out in Corrib Catchment Assessment 2010-2015 published by the EPA in December 2018. With respect to masterplan boundary, it is noted that six groundwater bodies are in Review. Suck South, Clarinbridge, Cong-Robe and Ballyhean groundwater bodies are hydrologically linked to surface waters that are not meeting water quality objectives where it is considered likely that groundwater is a contributing source of phosphorus to the surface waters. The masterplan area is located over the groundwater body of Ballyhean.

### 5.5.3 River Sub Basin

The masterplan area is located within the Corrib Sub catchment of Aghinish\_SC\_010. An assessment has been produced as part of the national characterisation programme undertaken for the Water Framework Directive river basin management planning. The assessment set out in WFD Cycle 2, Catchment Corrib, Subcatchment Aghinish\_SC\_010 was published in May 2020<sup>14</sup>. Under the evaluation of priority subcatchment issues, the report states that:

*“Two out of three river water bodies in the subcatchment, Aghinish\_010 and Cloondaver Stream (North)\_010, are At Risk due to Moderate ecological status. Physical habitat degradation is the significant issue and channelisation is the significant pressure.”*

<sup>13</sup> Environmental Protection Agency (2018), *Corrib Catchment Assessment 2010-2015 (HA 30)*, Catchment Science and Management Unit.

<sup>14</sup> Environmental Protection Agency, *WFD Cycle 2 Catchment Corrib Subcatchment Aghinish\_SC\_010*.

The water quality status of river waterbody ANNIES\_010 is unassigned and is in review pending an investigative assessment. Further characterisation actions have been identified for the following waterbodies in order to understand more fully issues in the subcatchment and their likely cause:

- IE\_WE\_30A030100 AGHINISH\_010
- IE\_WE\_30A030100 AGHINISH\_010 IA3
- IE\_WE\_30A340980 ANNIES\_010 IA3
- IE\_WE\_30C090100 CLOONDAVER STREAM (NORTH)\_010

#### 5.5.4 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, a detailed assessment was 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 exhibited in the figure below.

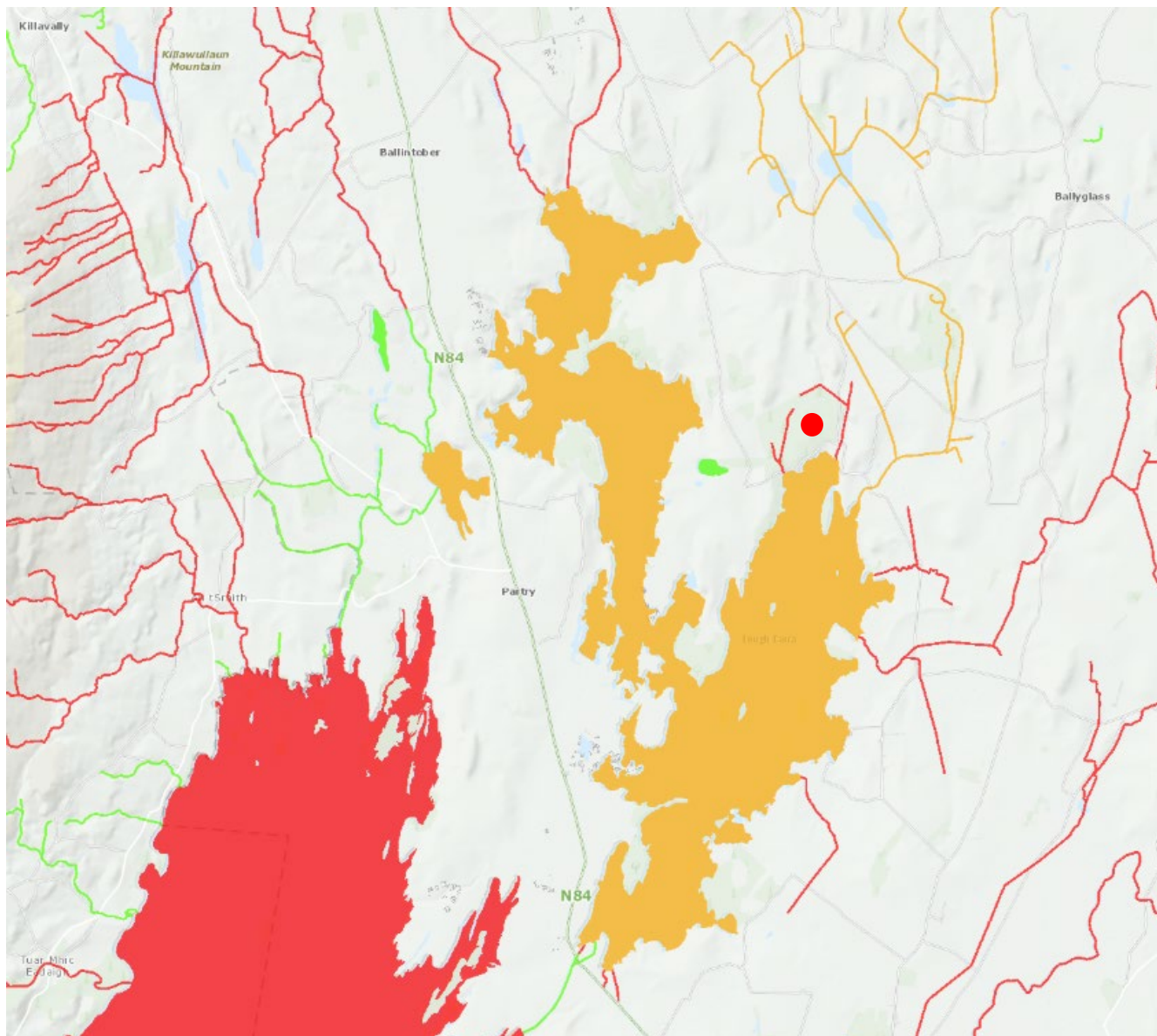
##### *Lough Carra*

Lough Carra is located on the southern extent of the Moorehall Estate. It is the uppermost lake of the extensive Lough Mask / Lough Corrib system that forms a major part of the “Great Western Lakes” of Ireland, whose catchment extends across Counties Mayo and Galway. Although it has a relatively small surface area compared to Loughs Mask and Corrib, Lough Carra’s 1,500 hectares is the best example of a shallow, marl lake in Western Europe.

The Lough Carra catchment lies within the Western River Basin District. Each RBD is subdivided into Water Management Units, and Lough Carra and its catchment are included within the Mask River Water Management Unit.

The lake is of considerable ecological and conservation importance, and forms part of the Lough Carra/ Mask Complex Special Area of Conservation (SAC 1774). Lough Carra supports a diverse mosaic of limestone and wetland habitats and species, including the following listed in Annex 1 and 2 of the EU Habitats Directive: hardwater lakes, dry heaths, Great Fen-sedge (*Cladium mariscus*) fen and alkaline fen, limestone pavement and alluvial woodland. In addition to the fen habitats, there are widespread reed swamps, wet grassland and some freshwater marsh communities around the lakeshores, as well as orchid rich calcareous grassland, lesser horseshoe bat and otter populations.

The overall water quality status of Lough Carra under the WFD is currently unassigned and under review (as per orange colouration in the figure below) pending further information; however, the Lough is currently classified as being of Good ecological status.



**Figure 22 Lake and River Water Bodies at Risk proximate to the Masterplan Study Area<sup>15</sup>. The approximate location of the Moorehall Demesne has been identified by a red dot (Source: GeoHive).**

#### *River Water Body – AGHINISH 010*

As shown in the figure below, Aghinish\_010 and Cloondaver Stream (North)\_010, are currently classified as being At Risk due to their Moderate ecological status. Physical habitat degradation is the significant issue and channelisation of the watercourses in the past is the significant pressure on their quality and status.

#### *Lough Carra LIFE*

The Lough Carra LIFE is a five-year project (2021 to 2026) led by Mayo County Council and funded jointly by the European Commission LIFE Programme and the Project Funding Partners. The Project will take place in the Lough Carra catchment area, and will work with farmers, other landowners, and local community groups;

<sup>15</sup> Refer to Figure 1 Moorehall Masterplan Area for the full outline of the Masterplan Study Area.

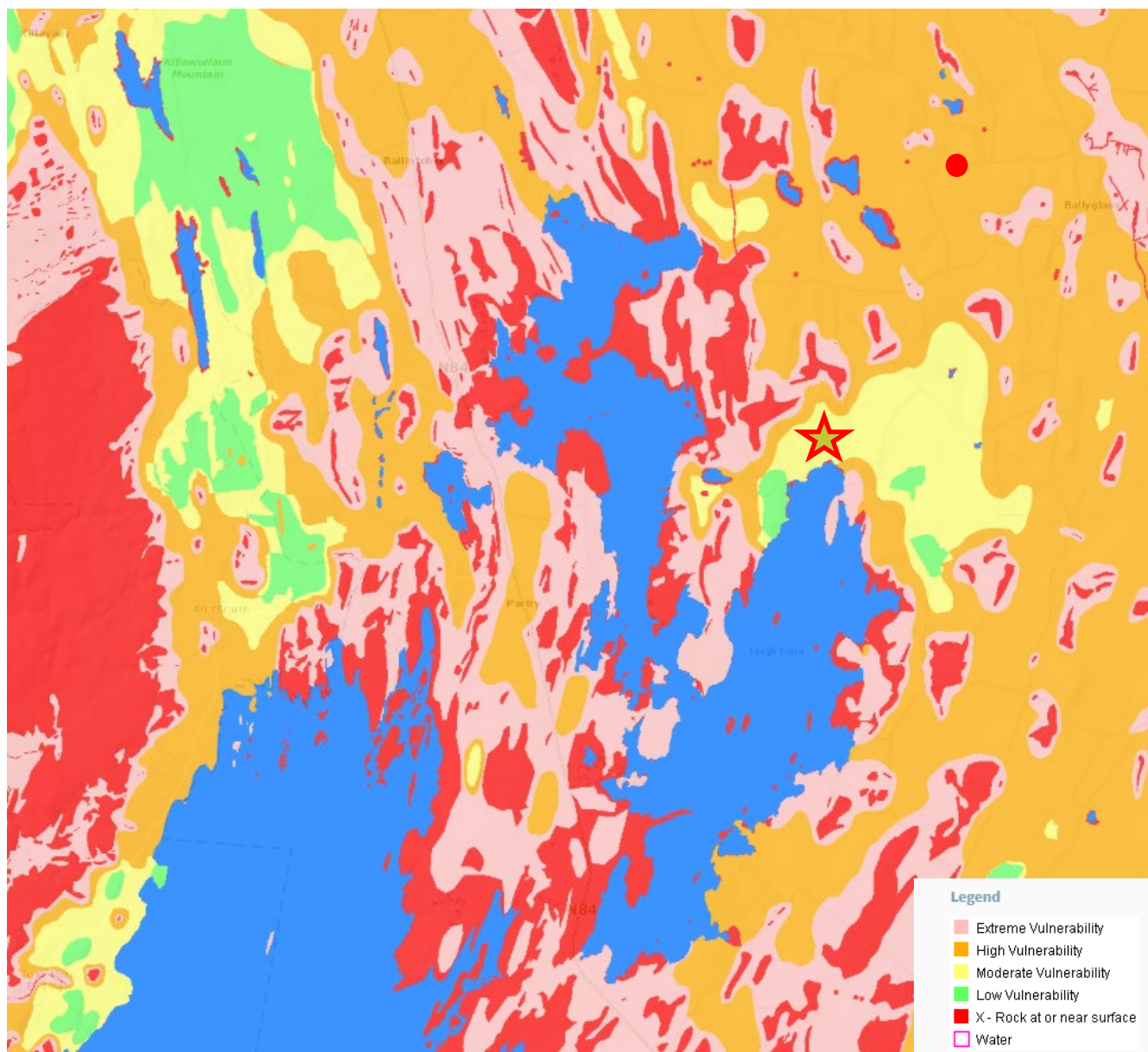
- to improve water quality,
- restore the Marl Lake habitat,
- and raise the conservation status of other habitats and species within the catchment.

### 5.5.5 Groundwater

The Masterplan area is situated above the ground water body of Ballyhean IE\_WE\_G\_0022. The area around the lake and within the Moorehall Masterplan Plan Boundary is entirely underlain by karstified limestone. The area is located within a regionally Important Aquifer - Karstified (conduit). As such, it is noted that the degree of groundwater-surface water interaction is anticipated to be very high. Furthermore, a very significant part of the area is mapped as 'Extreme Groundwater Vulnerability'. Due to the fact that groundwater flow path lengths in karst groundwater systems can be significant (tens of kilometres), it is noted that environmental impacts may originate from further afield, than the 2 km buffer zone around Moorehall and Lough Carra.

Groundwater Vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated by human activities. The Moorehall Demesne is located in an area of moderate vulnerability as shown by the yellow in the figure below.

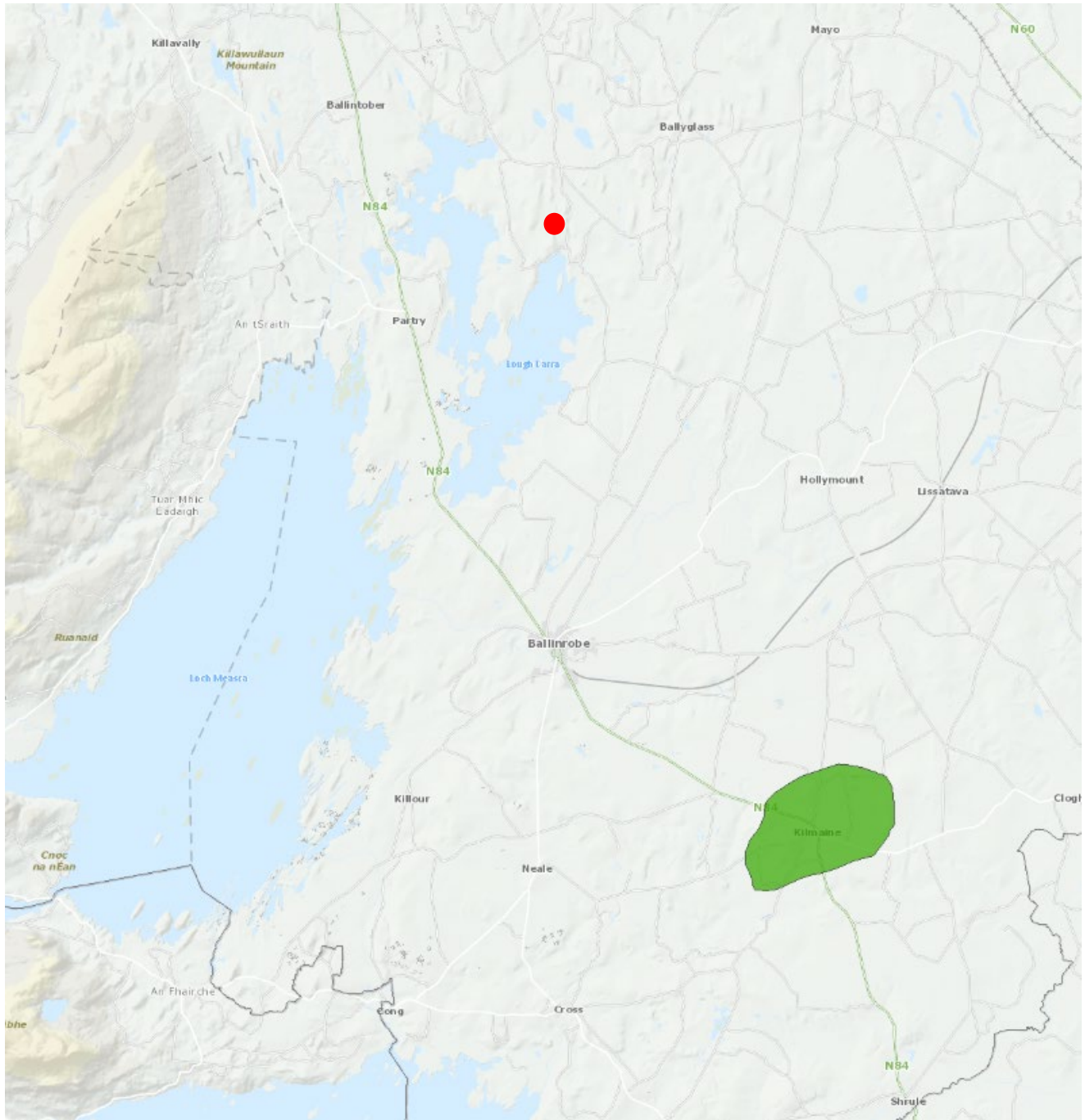




**Figure 23 Groundwater Vulnerability proximate to the Masterplan Study Area<sup>16</sup>. The approximate location of the Moorehall Demesne has been identified by a green and red star (Source: *GeoHive*).**

The masterplan area is not located within or close to any identified groundwater source protection areas for drinking water supplies. The nearest groundwater source protection area is a groundwater source: SI-Inner Protection Area south west of Ballinrobe, which is located approximately 12.5km away from the Masterplan site. The approximate area of Moorehall Demesne in relation to the groundwater source protection area is illustrated in the figure below.

<sup>16</sup> Refer to Figure 1 Moorehall Masterplan Area for the full outline of the Masterplan Study Area.



**Figure 24 Groundwater Source Protection Areas, demonstrating the distance from the Moorehall Demesne highlighted by a red dot and the Groundwater Source Protection Area shown in green (Source: Geological Survey of Ireland).**

### 5.5.6 Flooding

A number of flooding events have occurred to the north of the masterplan area. These events are associated with a turlough associated with the Corrib catchment. The flood name is Turlough - Carrownacon, Mayo. There is no fluvial flooding within or close to the masterplan area.

## 5.6 Air

According to the EPA's Air quality in Ireland in 2019 report, air quality in Ireland is generally good however there are localised issues and Ireland was above World Health Organization (WHO) air quality guideline value levels at 33 monitoring sites – mostly due to the burning of solid fuel in our cities, towns and villages.

Ireland was above the European Environment Agency reference level for PAH, a toxic chemical, at 4 monitoring sites due to the burning of solid fuel.

Problem pollutants include:

- Particulate matter from the burning of solid fuel – is estimated to cause 1300 premature deaths.
- Nitrogen dioxide (NO<sub>2</sub>) from transport emissions is polluting urban areas.

There are indications that EU limit values for NO<sub>2</sub> will be exceeded at further monitoring stations in the future.

Under the Clean Air for Europe Directive, EU member states must designate "Zones" for the purpose of managing air quality. For Ireland, four zones were defined in the Air Quality Standards Regulations (2011). The zones were amended on 1 January 2013 to take account of population counts from the 2011 CSO Census and to align with the coal restricted areas in the 2012 Regulations (S.I. No. 326 of 2012). The masterplan area is located within Zone D.

There are no air quality monitoring stations within the masterplan area and the nearest monitoring locations are in Castlebar and Claremorris.

The masterplan area is within the 'Rural West' Air Quality Index Region and the air quality in this region is classified as '3 - good'.

Air quality within the masterplan 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 regional and local roads with run adjacent to, or in close proximity to the masterplan area and these are a potential source of local anthropogenic air pollution.

## 5.7 Climate

The United Nations Intergovernmental Panel on Climate Change (2007), in its 4<sup>th</sup> assessment report (AR4) has stated that there is unequivocal evidence of climate change and that much of the global temperature increases *"since the mid-20<sup>th</sup> 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 1978-2010 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. The table following provides the averages of sun, wind and rain for the weather station at Shannon Airport and Bellmullet Airport.

**Table 11 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
Belmullet	10.3°C	3.5 hours	12.8m/s	1244.8

\*Figures taken from Met Eireann Historical data 1981-2010

## 5.8 Material Assets

The Masterplan study area is located just north of Lough Carra. The surrounding environment is rural in character, the closest town being Ballinrobe, 3km south east. Castlebar is located 11km to the north. There are only local rural roads and associated treelines and hedgerows that surround the study area. The closest national road is the N84 which is situated approximately 3.9km to the west.

There is existing road access to Moorehall demesne at the point proposed for the new car park (sited by the Visitor Centre), however, appropriate visibility splays have yet to be implemented and any re-design of roads or entrances should consider maintaining hedgerows where there is a span across the road.

Due to the limitations of the local road capacity, it is anticipated that Moorehall will attract mainly independent visitors – car-based individuals / couples, families, walkers and cyclists. It is noted that the forecast visitor draw at Moorehall is some 90,000 visitors per annum and, whilst the site will be open all year, generally peak days will comprise weekdays during the spring/summer and weekends during the autumn/winter. This comprises an average of about 275 typical visitor days per year, and so an average of some 327 visitors per day. Allowing for coach parties (likely to be more during the summer when the numbers will be higher), and an average car party size of 2.5 people, this equates to some 131 car visits per day on average, but in the summer it is considered that this will be higher.

The intensification of use will likely result in the need for capacity improvements and investment in new material assets and new developments should avoid areas at risk of flooding and should focus primarily on improvements that relate to more sustainable forms of transport.

As regards wastewater, Moorehall is an unserviced site, with very limited wastewater services at the existing public toilet block located at the carpark just south of the house. Water supply and wastewater are important

considerations that need to be assessed to ensure that proposals within the masterplan comply with the requirements of the Mayo County Development Plan 2016-2021 in relation to water. The draft Mayo County Development Plan 2021 – 2027 notes that the treatment plants due for completion over the plan period are in Killala (2020) and Newport (2024). There are also upgrade and maintenance planned for the Lough Mask Regional Water Supply Scheme: Srah – Wesport and Kiltimagh.

## 5.9 Cultural, Archaeological and Architectural Heritage

There is a range of existing statutory and regulatory policies which protect archaeological and architectural heritage which are important in relation to the Draft Masterplan. Protection is provided by the following legislation:

- National Monuments (amendment) Acts 1930-2014;
- Record of Monuments and Places (RMP) established under section 12 of the National Monuments; (amendment) Act 1994;
- Planning and Development Acts 2000 (and amendments);
- Heritage Act 1995;
- National Cultural Institutions Act 1997;

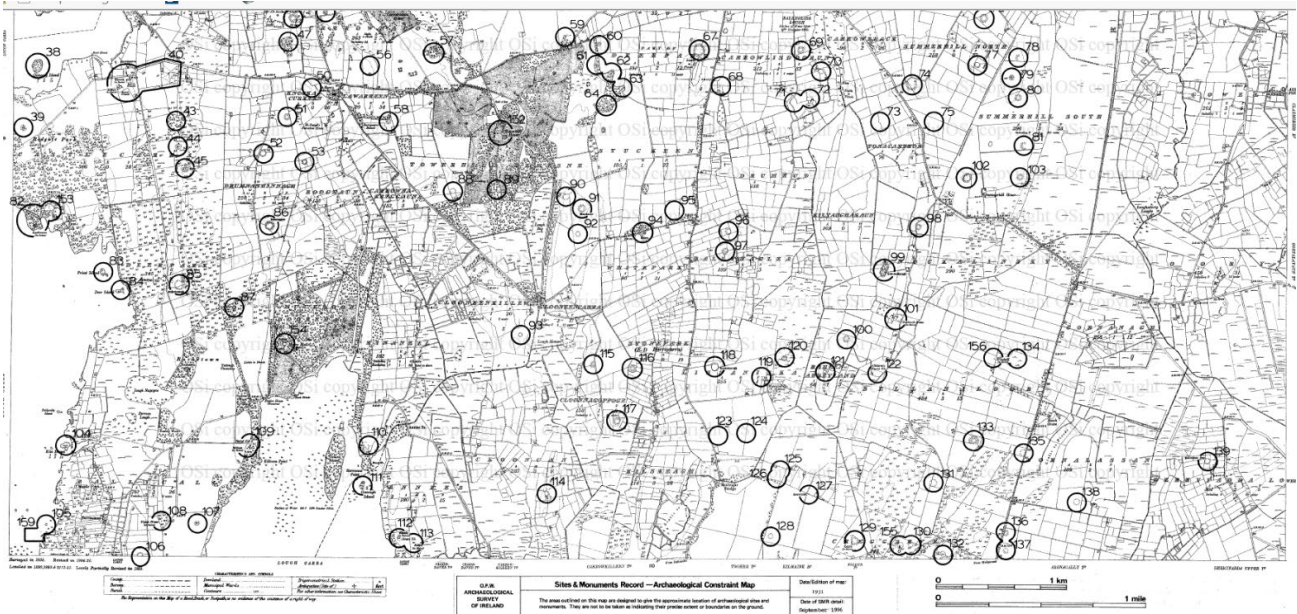
There is the potential for both direct and indirect impacts on archaeological and architectural features and their settings as a result of siting of new tourism facilities and supporting infrastructure. The key issues associated with the development of the masterplan and cultural heritage relates to:

- Potential for effects on protected structures located within the boundary of the Masterplan;
- Potential for effects on archaeological features and setting;
- Potential for effects on unknown archaeological features during construction of new infrastructure and/or land cover changes; and
- Potential for effects on underwater archaeological features during construction of new infrastructure and/ or upgrades.

The sites and features considered as part of the cultural heritage baseline for the draft Masterplan 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.

As demonstrated in the figure below. There are seven sites, recorded on the Sites and Monuments Record (SMR) within the immediate vicinity of Moorehall site, including Moorehall itself.



**Figure 24 Record of Monuments & Places**

The SMR contains details of all monuments and places (sites) where there is a monument pre-dating AD 1700 and also includes a selection of monuments from the post-AD 1700 period. Of these seven, three are recorded archaeological monuments (i.e. RMPs)<sup>17</sup>.

Archaeological features together with protected structures will be retained in situ and their landscape context either protected or enhanced. Under planning legislation, work proposed which affects a monument, which is a National Monument in the ownership or guardianship of the Minister or a local authority, or subject to a preservation order, or included in the Record of Monuments and Places then the owner or occupier undertaking the works will comply with the notification requirements under the National Monuments Acts. Planning permission will also be sought for works affecting the character of a protected structure.

The seven sites, recorded on the SMR within the vicinity of the Moorehall demesne, as well as the demesne itself are detailed in the table below.

**Table 12 Sites recorded on the Sites and Monuments Record**

Archaeological Feature	Status	Description
MA100-154 Class: Country House	Scheduled for inclusion in the next revision of the RMP.	In forestry, situated on elevated ground overlooking the N end of Lough Carra. This house, five-bay, three storey over basement, was built between 1792-95 by George Moore. It was designed by the Waterford architect, John Roberts. The now ruined house was burnt down in 1923 during the Civil War.

<sup>17</sup> National Monuments Service (1996), Record of Monuments and Places, Mayo.

Archaeological Feature	Status	Description
MA100-087 Class: Enclosure	Scheduled for inclusion in the next revision of the RMP: Yes	The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded.
MA100-160002 Class: Enclosure	Scheduled for inclusion in the next revision of the RMP.	The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded.
MA100-160003 Class: Enclosure	Scheduled for inclusion in the next revision of the RMP: Yes	The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded.
MA100-160004 Class: Enclosure	Scheduled for inclusion in the next revision of the RMP: Yes	The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded.
MA100-160001 Class: Enclosure	Scheduled for inclusion in the next revision of the RMP: Yes	The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded.
MA100-160005 Class: Enclosure	Scheduled for inclusion in the next revision of the RMP: Yes	The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded.

### 5.9.1 Architectural Heritage

There are three structures listed on the National Inventory of Architectural Heritage (NIAH) within the boundary of Moorehall Demesne. Moorehall house itself is both a National Monument and identified on the Mayo County Council's Record of Protected Structures (RPS). If a structure is included in the RPS, the protection extends to the interior of the structure; to the land in its curtilage; and to any other structures on that land and their interiors.

The table below provides a description and appraisal of the three aforementioned structures.

**Table 13 Structures Listed on the National Inventory of Architectural Heritage**

NIAH	Description	Appraisal	Categories of Special Interest
31310009	Detached five-bay (three-bay deep) three-storey over part raised basement country house, built 1792-5; dated 1795, on a symmetrical plan centred on single-bay full-height breakfront with (single-storey) prostyle tetrastyle Doric portico to ground floor; six-bay full-height rear (north) elevation. Occupied, 1911. Vacant, 1921. Burnt, 1923. In ruins, 1925. Hipped roof now missing with paired lichen-covered limestone ashlar central chimney stacks on axis with ridge having cut-limestone stringcourses below capping supporting terracotta or yellow terracotta octagonal pots. Part creeper- or ivy-covered fine roughcast walls on lichen-covered tooled cut-limestone chamfered cushion course on fine roughcast base with drag edged rusticated cut-limestone quoins to corners including drag edged rusticated cut-limestone quoins to corners (breakfront) supporting dragged cut-limestone "Cyma Recta" or "Cyma Reversa" cornice on blind frieze below parapet centred on inscribed dragged limestone ashlar "die" date stone ("1795"). Round-headed central door opening in tripartite arrangement behind (single-storey) prostyle tetrastyle Doric portico approached by flight of eleven benchmark-inscribed cut-	The shell of a country house erected to a design attributed to John Roberts (1712-96) of Waterford (DIA) representing an important component of the late eighteenth-century domestic built heritage of County Mayo with the architectural value of the composition, one recalling the Roberts-designed Tyrone House (1779) in County Galway, confirmed by such attributes as the deliberate alignment maximising on panoramic vistas overlooking Lough Carra; the compact near-square plan form centred on a Classically-detailed tripartite breakfront carrying the Moore family motto ("FORTIS CADERE NON POTEST [A Brave Man May Fall But Cannot Yield]"); the definition of the principal floor as a slightly elevated "piano nobile"; the diminishing in scale of the openings on each floor producing a graduated visual impression; and the parapeted roofline. Although reduced to ruins during "The Troubles" (1919-23), an act of vandalism recounted in detail in "The Moores of Moore Hall" (1939), the elementary form and massing survive intact together with remnants of the original fabric, both to the exterior and to the interior including, remarkably, some decorative plasterwork enrichments highlighting the now-modest artistic	Architectural, Artistic, Historical, Scientific, Social, Technical



NIAH	Description	Appraisal	Categories of Special Interest
	<p>limestone steps with dragged limestone ashlar columns having responsive pilasters supporting "Cavetto"-detailed cornice on roundel-detailed frieze below wrought iron parapet. "Venetian Window" (first floor) with drag edged dragged cut-limestone sills, and cut-limestone surround with pilasters supporting "Cyma Recta" or "Cyma Reversa" cornice centred on archivolt. Square-headed window opening in tripartite arrangement (top floor) with drag edged dragged cut-limestone sills, and cut-limestone surround with stop fluted pilasters on fluted consoles supporting "Cavetto" cornice. Square-headed window openings with drag edged dragged cut-limestone sills, and concealed cut-limestone voussoirs with no fittings surviving. Interior in ruins including (basement): groin vaulted cellars; (ground floor): bow-ended central entrance hall with central door openings in segmental-headed recesses retaining decorative plasterwork "fan vaulted" overpanels, and rosette-detailed dentilated plasterwork cornice to ceiling. Set in wooded grounds.</p>	<p>potential of the composition. Furthermore, adjacent outbuildings (extant 1838); a polygonal walled garden (see 31310010); and the nearby "Grand Gate" (see 31310011), all continue to contribute positively to the group and setting values of an estate having historic connections with the Moore family including George Moore (1729-99); John Moore (1767-99), President of the Provisional Government of Connaught (fl. 1798); George Moore (1770-1840), author of "The History of the British Revolution of 1688-9" (1817); George Henry Moore MP (1810-70) of the short-lived Independent Irish Party (formed 1852; dissolved 1858); George Augustus Moore (1852-1933), author of "A Mummer's Wife" (1885), "A Drama in Muslin" (1886) and "Esther Waters" (1894) and assistant founder of the Irish Literary Theatre (1899); and Senator Colonel Maurice George Moore (1854-1939), 'Late First Battalion Connaught Rangers' (cf. 31310012).</p>	
31310010	<p>Walled garden, extant 1838, on a polygonal plan with creeper- or ivy-covered boundary wall to perimeter having overgrown coping. Now disused. Set in wooded grounds shared with Moore Hall.</p>	<p>A walled garden contributing positively to the group and setting values of the Moore Hall estate</p>	Architectural
31310011	<p>Gateway, dated 1821, on a symmetrical plan comprising pair of benchmark-inscribed drag edged rusticated limestone ashlar piers having "Cyma Recta" or "Cyma Reversa" cornices on "Patera"-</p>	<p>A gateway not only making a pleasing visual statement in a sylvan street scene at the principal entrance on to the grounds of the Moore Hall estate, but also clearly illustrating the continued</p>	Architectural, Artistic, Scientific

NIAH	Description	Appraisal	Categories of Special Interest
	detailed panelled friezes below capping supporting wrought iron double gates with drag edged rusticated limestone ashlar outer piers having "Cyma Recta" or "Cyma Reversa" cornices on "Patera"-detailed panelled friezes below capping supporting wrought iron railings. Now disused. Road fronted at entrance to grounds of Moore Hall.	development or "improvement" of the estate with a relic reclaimed from the nearby Newbrook House estate (Moore 1912 II, 254; Moore 1914 III, 307): meanwhile, a benchmark remains of additional interest for the connections with cartography and the preparation of maps by the Ordnance Survey (established 1824).	

### 5.9.2 Protected Structures

A protected structure is a structure or part of a structure that a planning authority considers is of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view. Recorded Structures, Features and Sites at Moorehall (Reg. No. 31310010) are set out in the table below.

Any construction activity has the potential for direct negative impacts on features within the historic environment. 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 enhance the overall preservation and restoration of cultural heritage sites.

**Table 14 Record of Protected Structures**

Record	Title	Description	Appraisal
Record 01	Moorehall House (NIAH record and appraisal from buildingsofireland.ie)	<p>“Detached five-bay (three-bay deep) three-storey over part raised basement country house, built 1792-5; dated 1795, on a symmetrical plan centred on single-bay full-height breakfront with (single-storey) prostyle tetrastyle Doric portico to ground floor; six-bay full-height rear (north) elevation. Occupied, 1911. Vacant, 1921. Burnt, 1923. In ruins, 1925.</p> <p>Hipped roof now missing with paired lichen-covered limestone ashlar central chimney stacks on axis with ridge having cut-limestone stringcourses below capping supporting terracotta or yellow terracotta octagonal pots.</p>	<p>“The shell of a country house erected to a design attributed to John Roberts (1712-96) of Waterford (DIA) representing an important component of the late eighteenth-century domestic built heritage of County Mayo with the architectural value of the composition, one recalling the Roberts-designed Tyrone House (1779) in County Galway, confirmed by such attributes as the deliberate alignment maximising on panoramic vistas overlooking</p>

Record	Title	Description	Appraisal
		<p>Part creeper- or ivy-covered fine roughcast walls on lichen-covered tooled cut-limestone chamfered cushion course on fine roughcast base with drag edged rusticated cut-limestone quoins to corners including drag edged rusticated cut-limestone quoins to corners (breakfront) supporting dragged cut-limestone "Cyma Recta" or "Cyma Reversa" cornice on blind frieze below parapet centred on inscribed dragged limestone ashlar "die" date stone ("1795").</p> <p>Round-headed central door opening in tripartite arrangement behind (single-storey) prostyle tetrastyle Doric portico approached by flight of eleven benchmark-inscribed cut-limestone steps with dragged limestone ashlar columns having responsive pilasters supporting "Cavetto"-detailed cornice on roundel-detailed frieze below wrought iron parapet. "Venetian Window" (first floor) with drag edged dragged cut-limestone sills, and cut-limestone surround with pilasters supporting "Cyma Recta" or "Cyma Reversa" cornice centred on archivolt. Square-headed window opening in tripartite arrangement (top floor) with drag edged dragged cut-limestone sills, and cut-limestone surround with stop fluted pilasters on fluted consoles supporting "Cavetto" cornice.</p> <p>Square-headed window openings with drag edged dragged cut-limestone sills, and concealed cut-limestone voussoirs with no fittings surviving. Interior in ruins including (basement): groin vaulted cellars; (ground floor): bow-ended central entrance hall with central door openings in segmental-headed recesses retaining decorative plasterwork "fan vaulted" overpanels, and rosette-detailed dentilated plasterwork cornice to ceiling. Set in wooded grounds.</p>	<p>Lough Carra; the compact near-square plan form centred on a Classically-detailed tripartite breakfront carrying the Moore family motto ("FORTIS CADERE NON POTES [A Brave Man May Fall But Cannot Yield]"); the definition of the principal floor as a slightly elevated "piano nobile"; the diminishing in scale of the openings on each floor producing a graduated visual impression; and the parapeted roofline. Although reduced to ruins during "The Troubles" (1919-23), an act of vandalism recounted in detail in "The Moores of Moore Hall" (1939), the elementary form and massing survive intact together with remnants of the original fabric, both to the exterior and to the interior including, remarkably, some decorative plasterwork enrichments highlighting the now-modest artistic potential of the composition. Furthermore, adjacent outbuildings (extant 1838); a polygonal walled garden (see 31310010); and the nearby "Grand Gate" (see 31310011), all continue to contribute positively to the group and setting values of an estate having historic connections with the Moore family including George Moore (1729-99); John Moore (1767-99), President of the Provisional Government of Connaught (fl. 1798); George Moore (1770-1840), author of "The History of the British</p>

Record	Title	Description	Appraisal
			<p>Revolution of 1688-9" (1817); George Henry Moore MP (1810-70) of the short-lived Independent Irish Party (formed 1852; dissolved 1858); George Augustus Moore (1852-1933), author of "A Mummer's Wife" (1885), "A Drama in Muslin" (1886) and "Esther Waters" (1894) and assistant founder of the Irish Literary Theatre (1899); and Senator Colonel Maurice George Moore (1854-1939), 'Late First Battalion Connaught Rangers' (cf. 31310012)."</p>
Record 02	Yard to Rear of Moorehall House	<p>Yard to rear of Moorehall House, built c.1795, predating servants tunnel. Yard is accessed from the house's basement level or via the tunnel. Cobbled surface is now covered with soil and vegetation. Yard is bounded to north, east and west by high random-coursed rubble stone walls. A series of outbuildings, now ruinous, were built against each of the walls. A plan of the yard shows that the outbuildings comprised a scullery to west; a store house, turf house against the north wall to the west of the entrance gate; a wood house and brew house against the north wall to the east of the gate; and a hen house against the east wall. Outbuildings have random-coursed rubble stone walls and are now roofless. Roofs would have been lean-to in form.</p> <p>Blocked-up segmental arched window opening near top of north wall within former wood house to east of entrance gate. Segmental-arch with cut stone voussoirs seen above archway which opens to tunnel. This arch would have been the original entrance to the yard, prior to the building of the tunnel, and can be seen just above ground level on the northern side of</p>	<p>The rear yard and roofless outbuildings are in poor repair, but nonetheless, they contribute to the context of the Moorehall and provide an understanding of the daily workings of the Irish country house.</p>

Record	Title	Description	Appraisal
		<p>the wall. Blocked-up openings seen on east elevation of east wall.</p> <p>A square-headed opening affords access from basement level of Moorehall to former scullery at the west side of the yard. A semi-circular niche is set within the scullery's east wall. On the west wall are two blocked-up segmental-headed openings. An opening, formerly blocked up by a 20th-century steel door, opens to a drain that carried waste away from the building.</p>	
Record 03	Servants' Tunnels and Entranceway to East	<p>Sub-ground tunnel, built c.1850, to north of Moorehall's rear yard. Tunnel built to conceal the movement of horses, farm animals and staff from the country house. Ground over tunnel and to north was built up and levelled to create a lawn, however this is now planted with trees.</p> <p>Barrel-vaulted tunnel was built against existing northern wall of rear yard. Ashlar stonework to east and west ends of tunnel with segmental-arched openings. Squared stone blocks built to random courses rise to stone soffit.</p> <p>Segmental-arched tunnel opening to yard. Cut-stone voussoirs to south face of arch. Timber gate. Square-headed door opening to south wall of tunnel to either side of the yard opening, now blocked up.</p> <p>Curving approach to east end of tunnel is lined on either side by moss-covered rubble-stone retaining walls. Some areas have lost stonework.</p>	The tunnel to the rear of Moorehall's domestic yard is a feature of architectural and technical interest. The plant covered retaining walls of the eastern approach is both aesthetically appealing and a feature of ecological interest.
Record 04	Walled Garden, Dovecot and Ruin of Stables	<p>Walled garden, built c.1795, on an irregular, polygonal plan. Random-coursed rubble stone walls. As walls rise there are differing styles of stonework with larger rubble to ground and smaller stones above. Series of breaches around perimeter with collapsed stonework to ground. Square-headed door openings punctuate wall on east and west side. Walls are covered with vegetation.</p>	The irregular plan of the garden's boundary walls give the enclosure a unique architectural character. The walled garden, which appears on an 1795 manuscript map of Moorehall, is an integral feature of the historic demesne and contributes

Record	Title	Description	Appraisal
		<p>Notable moss coverage on west face of west wall.</p> <p>Site of former stables/outbuildings and yard to north, just outside walled garden. Southern gable walls of the outbuildings incorporated into the garden wall. Western stable, c.1795. Eastern stable after 1800. No other walls of these buildings are extant. Opening between gables of stables marks is the remains of a former archway that gave access from the stable yard to the northern end of the garden.</p> <p>Circular-plan former dovecot, c.1795, located along perimeter at the southeast corner of the walled garden. Conical roof is now missing. Random-coursed rubble stonework to cylindrical tower. Pigeon hole niches to interior below roof level. Joist holes for former timber floor below.</p>	<p>greatly to the setting of the country house. The dovecot is an important built element within the garden.</p>
Record 05	Toilet Block to West of Moorehall House	<p>Detached two-bay single-storey former toilet block to west of Moorehall. Single-span hipped roof is now gone. Punch-dressed eaves course with eaves fill comprising mortar and rubble above. Random-coursed rubble stone walls with exposed layers of patches of render layers which include as scratch coat below a roughcast render.</p> <p>Square-headed door openings on north and south sides, each affording access to one of the two privies. Pointed-arch brick window openings to east and west ends having cut-stone sills.</p> <p>Internally, a random-coursed rubble stone spine wall divides the two rooms. A stone-lined latrine/waste channel on the northern side runs through the building, originating at the scullery at Moore Hall and draining towards the turlough to the west.</p> <p>Toilet benches are no longer extant. Holes within the stone walls held the timber</p>	<p>The toilet block or privy and associated drainage channel is one of the original built features at Moorehall and a feature of architectural and technical interest.</p>

Record	Title	Description	Appraisal
		structures in place. Remains of stone floors are now concealed by decayed vegetation.	
Record 06	Former Granary at Farmyard	<p>Detached three-bay two-storey former barn and granary, built c.1796, with return to rear, now used by colony of Lesser Horseshoe Bats. Single-storey room to north gable having vaulted roof. Remains of stone-built dog-leg staircase to north, formerly accessed granary at first floor. Steps are no longer extant.</p> <p>Re-roofed single-span pitched slate roof with terracotta ridge tiles and random-coursed gable chimneys to north and south. Concrete coping to gables. No rainwater goods. End of semi-permeable roofing membrane visible to rear. Cut-stone eaves course. Segmental-headed niche over string-course to return's gable.</p> <p>Random-coursed rubble stone walls with lime mortar pointing. Quoin stones at southwest corner of front elevation are curved. Roughcast render to southern gable. South gable a recess suggesting a former opening in this position. Square-headed window openings to front and rear elevations, now having concrete surrounds. Segmental-arched carriage arch opening to central bay of front elevation having cut-stone voussoirs. Opening blocked up with concrete and steel railings. Recessed timber door. Corresponding carriage arch opening to gable of return. Initially blocked up with stonework with window and door opening inserted. Punch-dressed lintel stone to window and concrete sill. Concrete surrounds added to door and window. Openings subsequently blocked up with concrete blocks.</p>	The granary building at the entrance to the farmyard is one of the best preserved ancillary structures at Moorehall. With its symmetrical exterior and cut-stone dressings, it is a building of architectural interest. The building is marked on the c.1800 manuscript map of Moorehall.
Record 07	Farmyard Building with Bellcot	Ruin of building located at the northwest corner of the farmyard. Detached north-facing four-bay two storey building (possibly a dwelling), built c.1850, with return to rear. Not on 1839 OS map but appears as a roofless structure in 1889 OS	The ruinous building is a feature of the farmyard at Moorehall. It appears to postdate the initial development of the farmyard, as it does not appear on the

Record	Title	Description	Appraisal
		<p>map. Single-span pitched roof is not extant. Bellcot to west gable. Chimneystack to east. Random-coursed rubble stone walls with punch-dressed cut-stone eaves courses to front and rear elevations. Flat-arch window and door openings to front elevation. Punch dressed cut-stone windows sills to first floor. Segmental-arched door opening to rear elevation opens to yard. Directly to east of doorway is the return. Segmental-arched door opening to north end of east gable. Blocked up segmental-arched door opening to west gable.</p> <p>Within, the interior has a spine wall running N-S, but this has largely collapsed. Niche within return. Rubble to interior. Remains of plaster to inner faces of walls. Room to east has a fire opening to gable wall, having a stone lintel. Brick arches within the gable wall and south side wall. Partial brick to spine wall.</p>	<p>first edition OS Map. Its walls, however, are indicated on the second edition of 1889, however, the building on this plan appears to be roofless by this point.</p>
Record 08:	Farmyard Walls and Byres	<p>Farmyard is enclosed to west, north and east by high stone walls of random-coursed rubble. Western wall runs in a north-south direction from the former granary to the bellcot gable. Segmental-arched door opening adjacent to bellcot gable. The lower part of the wall and door opening are contemporary with the bellcot gable building. The upper section appears to have been raised up at a later point. A lean-to outbuilding was erected against this farmyard wall on the western side directly beside an opening in the farmyard wall. The high farmyard wall has what appears to be large crenulations. The wall is covered with vegetation in places.</p> <p>The lean-to outbuilding built against the farmyard wall on the western side comprised random-coursed rubble walls. Doorway to west side. Square-headed window on north side.</p>	<p>The farmyard's northern wall runs in an east-west direction. Random-coursed rubble wall, covered in vegetation. On the south face of the boundary wall is a series of eight square-headed niches. Some stonework has collapsed.</p> <p>The farmyards eastern boundary wall runs in a north-south direction. On the outer side of the northeast corner of the boundary walls is a projecting punch-dressed stone with a line-tooled squared quoin stone above. The wall is built of random-coursed rubble stone and is covered with moss and vegetation on the east side. Towards the north end is a square-headed door opening,</p>



Record	Title	Description	Appraisal
			<p>now blocked up, with a Gibbsian-style block-and-start cut-stone doorcase. Some areas of roughcast render survive. Western, yard-facing elevation of this wall has the remains of two lean-to byres at the north end. Roofs are now gone. These post date the construction of the yard as the spine wall blocks the disused Gibbsian doorcase. A tree has collapsed on top of these former outbuildings.</p> <p>The farmyard's southern wall runs in an east-west direction and is built of random-coursed rubble stonework. Southern face of this wall has remains of roughcast render.</p>
Record 09	Remains of Linear Outbuilding to West Side of Dark Road	High linear wall of random-coursed rubble stonework, built c.1800, to south of farmyard, running in a north-south axis. Wall, which stands at the top of a steep slope that declines westwards to the turlough was formerly part of an outbuilding extant 1838. Squared rubble quoin stones to south end. Elevation extends northwards as a low boundary wall.	The first edition Ordnance Survey map of 1839 shows the linear outbuilding, running north-south. Today, only the western side elevation remains. The wall is part of the historic fabric of the Moorehall Demesne.
Record 10	Stone-Lined Road to East of Turlough	Stretch of straight road running north-south to east side of Turlough. Overgrown roadway is lined to east and west by vegetation-covered stone boundaries. This roadway may be the original approach to Moorehall from the southern entrance by Lough Carra. The roadway runs parallel to the current avenue.	The roadway is part of the early fabric of Moorehall Demesne and as such, it is of architectural interest.
Record 11	Bridge, Walls and Memorial to North of Lake	Roadway to west of public car park flanked by low random-coursed rubble stone walls, now extensively covered by mosses and vegetation. Wall is recessed on southern side to accommodate a square-profiled free-standing memorial with inset marble	The bridge, walls and memorial plaque are group of structures of architectural, social and historical interest. They are part of the historic fabric of Moorehall Demesne

Record	Title	Description	Appraisal
		<p>plaque reading “Kiltoom burial place of the Moores of Moore Hall. This Catholic patriot family is honoured for their famine relief and their refusal to barter principles for English gold. Erected by Ballyglass Cov old IRA 1964.”</p> <p>To the east of the memorial is a recessed gate with random-coursed square-profiled gate piers and a timber gate. Adjacent is a wall stile. Straddling the stream is triple arch road bridge. Bridge appears on manuscript map of 1809. Central archway over stream which flows southwards to Lough Cara. Outer arches cover underpasses. Site of former pump within east underpass. Round arches with cut-stone voussoirs, random coursed stone parapets walls. Concrete repointing to soffits, and bridge walls. Door opening created to archway of eastern underpass at north side.</p>	and contribute to the character of the northern shore of Lough Carra.
Record 12	Path to Kiltoom Cemetery and Kiltoom Point	Path from road leads southwards through woodland, running parallel to the shoreline of Lough Cara. A branch of the path rises to Kiltoom Cemetery, the burial place of the Moore family, and also afford access to the ruin of an ancient church to the southwest in Ballycally Td. (RMP MA100-109001-). Principal road continues south to Kiltoom Point and breaks through an over ground rubble boundary.	The path to Kiltoom Cemetery and Kiltoom Point is a significant landscape feature within the demesne.
Record 13	Moore Family Cemetery at Kiltoom	Quadrangular family burial ground on an elevated site, established c.1840, enclosed by random-coursed rubble stone walls with alternate coping. Double-leaf wrought-iron pedestrian gate to east side is accessed via flight of tool-marked cut-stone steps. Gates forged by Kenan and Sons, Dublin. Inner steps within the gates rise to the higher ground level of the cemetery. Two principal plots. Gravestone to north marks grave of Senator Col M Moore GB. A recumbent concrete slab over the plot has a worn inscription near the headstone.	The family burial ground is of social and historical interest. The carved tomb and inscribed slabs are of artistic and architectural merit.

Record	Title	Description	Appraisal
		<p>Tomb of George Moore c.1770 to south. Tomb comprises a raised sarcophagus on a stone plinth. Stone lid is inscribed with the family motto and names of those interred within. "Fortis cadere cedere non potest George Moore of Moore Hall b.1770 d.1840 his wife Louisa D. of John Browne d.1861 and their sons John b.1812 d.1829 Augustus b.1817 d. 22 March 1845 George Henry Moore MPLD b.1820 d. 19th April 1870 his wife Mary D. of Maurice Blake of Ballinafad b.1832 d.1895 their son Senator Col Maurice George Moore GL b.1854 d. 8th Sept 1939 Late 1st Batt Connaught Rangers RIP" Makers mark "O'Malley" southeast corner of lid.</p> <p>Side elevations of tomb formed in channelled rustication dressed with line tooling. Recumbent concrete cover over plot to the east of the sarcophagus. Nine yew trees planted within the cemetery alongside boundary walls.</p>	
Record 14	Principal Entrance Gates to Moorehall House (NIAH record and appraisal from <a href="http://buildingsofireland.ie">buildingsofireland.ie</a> )	<p>"Gateway, dated 1821, on a symmetrical plan comprising pair of benchmark-inscribed drag edged rusticated limestone ashlar piers having "Cyma Recta" or "Cyma Reversa" cornices on "Patera"-detailed panelled friezes below capping supporting wrought iron double gates with drag edged rusticated limestone ashlar outer piers having "Cyma Recta" or "Cyma Reversa" cornices on "Patera"-detailed panelled friezes below capping supporting wrought iron railings. Now disused. Road fronted at entrance to grounds of Moore Hall."</p>	<p>"A gateway not only making a pleasing visual statement in a sylvan street scene at the principal entrance on to the grounds of the Moore Hall estate, but also clearly illustrating the continued development or "improvement" of the estate with a relic reclaimed from the nearby Newbrook House estate (Moore 1912 II, 254; Moore 1914 III, 307): meanwhile, a benchmark remains of additional interest for the connections with cartography and the preparation of maps by the Ordnance Survey (established 1824)."</p> <p>Adjacent outbuildings (extant 1838); a polygonal walled garden (see 31310010); and</p>

Record	Title	Description	Appraisal
			the nearby "Grand Gate", all continue to contribute positively to the group and setting values of an estate having historic connections with the Moore family.

### 5.9.3 UNESCO Sites

At present there are no UNESCO sites within or adjacent to the masterplan area.

### 5.9.4 Lough Carra

There are a variety of archaeological features in and around Lough Carra, dating from the prehistoric period. Evidence of the early medieval period is provided in the form of ringforts, souterrains, crannogs and cashels. There are approximately sixty ringforts within the immediate vicinity of Lough Carra and five crannogs are recorded in this location. The extent of archaeological features in this area demonstrates its long-term settlement significance. Further information is available from <https://loughcarra.org/>

### 5.9.5 Underwater Archaeology

Ireland's waterways – both marine and freshwater – have been central to the development of life in Ireland since the first watercraft 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.

Underwater archaeology is unlikely to be affected by the majority of proposals in the Moorehall Masterplan with the possible exception of the development of pontoons on Lough Carra associated with the objective of Improved Access to Lough Carra. The Underwater Archaeology Unit should be consulted at detailed design stage of these proposals.

## 5.10 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.

Moore Hall is located in south County Mayo on the northern shores of Lough Carra. The Landscape Appraisal of County Mayo (LACM), which is a supporting document of the current Mayo County Development Plan 2014-2020, places the landscape surrounding Moore Hall within Landscape Unit M – Lakeland Drumlins. This Unit is described in the LACM as,

“... an area of low-lying drumlins and wetland associated with Lough's Mask, Carra, and Corrib. There is a mixture of wetland land cover around the lakeshores and patches of forestry and moorland to the north and east. A dramatic backdrop of the Partry Mountains falling steeply to the shores of Lough Mask occurs to the west. The eastern parts of this unit appear similar to the pastoral landscape of the unit to the east, however, the overriding feature is the proximity and influence of the Loughs.”

The landscape surrounding Moore Hall includes most of the elements in the above description. A mix of deciduous and evergreen plantations were planted within the estate lands. These are at different stages of maturity, including some areas felled in recent years and not replanted. The southern end of the estate is influenced by Lough Carra and the wetland areas along its shores. Away from the Lough and surrounding the estate, the landscape is dominated by gently undulating pastoral land, made up from mostly small and medium sized fields typically bound by hedgerows, often including hedgerow trees. The landscape therefore generally has a lush green appearance.

The description of the Critical Landscape Factors for Landscape Unit M in the LACM include the following descriptions, relevant to Moore Hall and its environs,

“Mildly undulating topography as represented in this character unit by low drumlins, has the ability to both shelter and absorb the visual impact of development.”

In a similar manner to undulating topography, shelter vegetation has a shielding and absorbing quality in landscape terms. It can provide a natural visual barrier and also adds to the complexity of a vista, breaking it up to provide scale and containment for built forms.

This character unit envelopes large parts of Loughs Carra, Mask and Corrib, around the shores of which, several significant roads pass. Due to the low-lying nature of lakeland environments such as this, low prospect vistas are present from the roads of the Loughs and their shores.

The main concern for natural linear features such as lakeshores, coastlines, and ridgelines is to avoid penetration by development that will interrupt and reduce the integrity of such elements. Given the low viewing points around the loughs, visual intrusion by development is likely to be enhanced.”

The LACM also sets out a number of landscape designations, some of which can be found in the vicinity of Moore Hall. The shore of Lough Carra is designated as vulnerable, while the remainder of the lake is designated as sensitive. Further to that, the local road following the shoreline of Lough Carra in the vicinity of Moore Hall is indicated as a Scenic Route, including a number of Scenic Views, on the ‘Scenic Routes and Protected Views’ map contained in the LACM.

The Policy with regard to Areas Designated as Vulnerable, contained in the LACM, states that,

**“These areas or features designated as vulnerable represent the principal features which create and sustain the character and distinctiveness of the surrounding landscape. To be considered for permission,**

development in the environs of these vulnerable areas must be shown not to impinge in any significant way upon its character, integrity or uniformity when viewed from the surroundings. Particular attention should be given to the preservation of the character and distinctiveness of these areas as viewed from scenic routes and the environs of archaeological and historic sites.”

The Policy with regard to Areas Designated as Sensitive, contained in the LACM, states that,

“These areas have a distinctive, homogenous character, dominated by natural processes. **Development in these areas has the potential to create impacts on the appearance and character of an extensive part of the landscape.** Applications for development in these areas must demonstrate an awareness of these inherent limitations by having a **very high standard of site selection, siting layout, selection of materials and finishes.** Applications in these areas may also be required to consider ecological, archaeological, water quality and noise factors insofar as it affects the preservation of the amenities of the area.”

The Policy with regard to Areas Designated as Scenic Routes, contained in the LACM, states that,

“Scenic routes indicate public roads from which views and prospects of areas of natural beauty and interest can be enjoyed. Sightseeing visitors are more likely to be concentrated along these routes.

The onus should be on the applicant when applying for permission to develop in the environs of a scenic route, to demonstrate that there will be **no obstruction or degradation of the views towards visually vulnerable features nor significant alterations to the appearance or character of sensitive areas.**”

The Policy with regard to Areas Designated as Protected Views, contained in the LACM, states that:

“Highly scenic views or vistas indicate areas along public roads from which views and prospects of areas of high natural beauty and interest can be enjoyed. Sightseeing visitors are more likely to be concentrated along these areas.

Development located between the public road and the seashore, lakeshore or riverside should be subject to strict visual criteria. New development should only be considered where it can be demonstrated that it **does not obstruct of designated highly scenic vistas nor alters** or degrades the character of the surrounding landscape.”

The key issues associated with the development of the Moorehall Masterplan and landscape relate to,

- The potential impacts on designated landscapes, e.g. designation of Lough Carra as vulnerable, while the remainder of the lake is designated as sensitive. Further to that, the local road following the shoreline of Lough Carra in the vicinity of Moore Hall is indicated as a Scenic Route, including a number of Scenic Views, on the ‘Scenic Routes and Protected Views’ map contained in the LACM.
- The potential impacts on landscape character/ Scenic Views relating to the shoreline of Lough Carra due to the visibility of potential new tourism developments or alterations to existing sites;
- Project proposals must demonstrate,
  - a very high standard of site selection, siting layout, selection of materials and finishes
  - consider ecological, archaeological, water quality and noise factors insofar as it affects the preservation of the amenities of the area.
  - that there will be no obstruction or degradation of the views towards visually vulnerable features nor significant alterations to the appearance or character of sensitive areas.”
  - that it does not obstruct of designated highly scenic vistas nor alters or degrades the character of the surrounding landscape.”

## 5.11 Summary of Environmental Issues

**Table 15 Key Environmental Issues**

Environmental Topic	Key Issue
<b>Population and Human health</b>	Public transport availability.
<b>Biodiversity</b>	<p>Wider trends demonstrating continued loss of habitats and species.</p> <p>Species disturbance on the site.</p> <p>Need to maintain elements of the wider ecological network including hedgerows and other linear features such as tree lines and stone walls.</p> <p>Forestry management that maintains high levels of biodiversity</p> <p>The possibility of increased light pollution.</p> <p>Avoiding the introduction and spread of invasive species.</p> <p>The 'need to enhance', e.g. ecological network</p>
<b>Water</b>	<p>There is a need to protect and improve the quality of surface and ground water bodies.</p> <p>WFD water status of surface and groundwaters.</p>
<b>Maintain water levels</b>	Minimise water use.
<b>Climate change</b>	<p>Energy demand of the new visitor centre.</p> <p>Public transport availability.</p> <p>Resilience to climate change.</p>
<b>Cultural heritage</b>	Protection of designated and undesignated cultural heritage features and protect their integrity and authenticity. The impact on archaeology and underwater archaeology of Lough Carra.
<b>Landscape</b>	The potential impacts on the character of designated landscapes, e.g. due to the visibility of potential new tourism developments or alterations to existing sites.
<b>Soil</b>	Area of greenfield land lost/gained with respect to the proposed visitor centre.
<b>Material Assets</b>	<p>Water supply and wastewater infrastructure.</p> <p>Capacity of the local road network.</p>

## 6.0 Assessment Framework

### 6.1.1 SEA Objectives for the Moorehall Masterplan

The Draft Masterplan 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 the table below.

**Table 16 SEA Objectives for Moorehall Masterplan**

Ref	Environmental Objective	Indicator
<b>1 BIO</b>	Conserve and enhance habitats and species, with priority protection afforded to sites and species designated under the Habitats Directive.	<ul style="list-style-type: none"> <li>• Loss of habitats and species.</li> <li>• Quality and range of statutorily protected areas.</li> <li>• Occurrence of invasive species.</li> </ul>
<b>2 BIO</b>	Protect and enhance the wider ecological network including linear elements such as hedgerows.	<ul style="list-style-type: none"> <li>• Increase in hedgerows and ecological features</li> </ul>
<b>3 HEA</b>	Improve health and wellbeing by improving opportunities safe and sustainable transport	<ul style="list-style-type: none"> <li>• Numbers participating in walking and cycling activities.</li> <li>• Number of people using walking, cycling and public transport as a means of transport.</li> </ul>
<b>4 WAT</b>	Protect and improve the quality of surface and ground water bodies.	<ul style="list-style-type: none"> <li>• WFD water status of surface and groundwaters.</li> </ul>
<b>5 WAT</b>	Maintain water levels.	<ul style="list-style-type: none"> <li>• Water use.</li> </ul>
<b>6 CLI</b>	To adapt and mitigate the effects of climate change.	<ul style="list-style-type: none"> <li>• Energy demand in the new visitor centre.</li> <li>• Public transport availability.</li> </ul>
<b>7 HER</b>	To protect the integrity and authenticity of cultural heritage.	<ul style="list-style-type: none"> <li>• Protection of designated and undesignated cultural heritage features.</li> </ul>
<b>8 LAN</b>	To protect landscape character, minimise the loss of historic landscape features such as mature trees and hedgerows and scenic views.	<ul style="list-style-type: none"> <li>• Area of native woodland planted.</li> </ul>
<b>9 SOIL</b>	To protect soil resources and minimise the loss of soil and damage to soil structure	<ul style="list-style-type: none"> <li>• Minimise damage to and loss of soil resource.</li> </ul>



## 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 masterplan, the following alternatives were considered, each focusing on a different spatial approach to the development of the site.

### 7.1 Masterplan Alternatives

Strategic alternatives were explored to test various approaches to the Masterplan strategy and to identify the best performing option for sustainable management and development of the site. They fall into two categories:

1. Alternatives for the siting of the Visitor Centre
2. Alternatives Landscape Design Options

In light of the projected increase of visitor numbers to an estimated 90,000 due to the development of the Lost Treasures Trail as a 'feeder' to the site, and the enhanced visitor facilities at nearby Ballintubber Abbey, the requirement for a Visitor Centre at Moorehall was considered. Its purpose would be to provide a focal point for interpretation and visitor services away from ecologically sensitive locations elsewhere on the site.

Initially consideration was given to the re-development of Moorehall House and farmyards as a potential visitor reception centre. However, this option was discounted due to,

- Its designation as part of a SAC and an international conservation site for the lesser horseshoe bat and the significant sensitivities associated with that, particularly as a result of lighting, additional noise, heating and lack of existing infrastructural visitor services.
- Development restrictions relating to accessibility, fire safety requirements and space restrictions in terms of modern visitor needs (these could be better catered for with dedicated new build);
- It would also be challenging to restore the house empathetically due to the lack of architectural detail apart from those of a single room.
- Cost of full restoration is likely to be prohibitive.

Notwithstanding the above considerations, **partial restoration** of Moorehall House was considered necessary to maintain the structural integrity of the house and thus the conservation of bat habitat. It is considered that re-roofing of the house with specific repairs to the structural arch in the basement will prevent further deterioration of the overall structure.

As part of the design process, consideration will also be given to a strictly limited visitor experience. This could include the restoration of one ground floor room (for which historic details are available) and the provision of a staircase to a refurbished balcony on the first floor which would restore the historic vista to Lough Carra.

#### 7.1.1 Alternatives for the siting of the Visitor Centre

Based on the above constraints with regard to the full restoration of the House, a proposal to develop a standalone visitor centre away from the sensitive areas of the site was considered. This would also ensure that modern state of the art facilities could be delivered and meet contemporary expectations of a visitor centre.

Three distinct options were tested to establish the most appropriate place for a Visitor Centre, with the most sustainable and low impact approach to managing and restoring the remaining features of the historic landscape.

- **Alternative 1:** Visitor Centre to the south of the walled garden;
- **Alternative 2:** Visitor Centre to the north of the walled garden;
- **Alternative 3:** Visitor Centre to north of walled garden plus existing car park to be removed and grassed.

The following table provides an assessment of environmental objectives related to each alternative proposed regarding the siting of the visitor centre.

**Table 17 Assessment of Alternatives relating to the siting of the Visitor Centre**

Ref	Environmental Objective	Alternatives for the siting of the Visitor Centre		
		Alternative 1	Alternative 2	Alternative 3
<b>1 BIO</b>	Conserve and enhance habitats and species, with priority protection afforded to sites and species designated under the Habitats Directive.	✓	✓	✓
<b>2 BIO</b>	Protect and enhance the wider ecological network including linear elements such as hedgerows.	x	x	x
<b>3 HEA</b>	Improve health and wellbeing by improving opportunities safe and sustainable transport.	✓	✓	✓
<b>4 WAT</b>	Protect and improve the quality of surface and ground water bodies	x/✓	x/✓	x/✓
<b>6 WAT</b>	Minimise development in areas of flood risk, where flood risk compatible development is proposed ensure that flood risk does not increase elsewhere.	✓✓	xx	x
<b>6 CLI</b>	To adapt and mitigate the effects of climate change.	-	-	-
<b>7 HER</b>	To protect the integrity and authenticity of cultural heritage	xx	✓	✓✓
<b>8 LAN</b>	To protect landscape character, minimise the loss of historic landscape features such as mature trees and hedgerows and scenic views.	xx	x	✓✓
<b>9 SOIL</b>	To protect soil resources and minimise the loss of the high quality agricultural land.	x	x	x/✓

A visitor centre located south of the walled garden (Alternative 1) would be well placed to take advantage of key views to the lake, Kiltoom point and Castle Island. However, the siting and design of this building would require very careful consideration in order to minimise the impact on the setting of the house, a protected structure, and its grounds which are intrinsic to the setting of the house. The visitor centre would also be located at some distance from the car park and so accessibility to this location would also be limited.

However, the relocation of the car and coach park northwards from its current lakeside location to the northern track access point would focus the approach traffic towards the better route from the north into the site and away from the south, which has some lengths on the approach of a poorer standard.

## 7.2 Landscape Design Options

The following landscape design options were considered:

- **Alternative 4:** Approach to landscape restoration - full restoration of 1839 open parkland areas
- **Alternative 5:** Approach to landscape restoration - partial restoration of 1839 open parkland areas (i.e. retention of some of the existing deciduous and mixed woodland areas)

### Appraisal

The full restoration of the landscape layout surrounding Moorehall House to what is shown on the 1839 mapping was considered. However this would require the removal of all woodland to the front of Moorehall House, as well as removing large areas of woodland to the back of the building, along the main access road and to the north of the original entrance to the estate.

While the majority of the woodland areas to be removed would be conifer plantation and young mixed woodland, notable areas of deciduous woodland, dominated by beech, and mixed woodland not felled since 2006, would be affected as well. Overall, this option is considered to result in the loss of too much good quality, high amenity woodland of biodiversity value. Additionally, the opening up of too many large areas may have a negative effect on the commuting routes and feeding areas of the local bat populations, especially on the lesser horseshoe bats. This option was therefore not brought forward for further detailed consideration.

Opening up the view towards Lough Carra from the front of Moorehall House is considered to be the most significant element of the restoration of the former landscape setting surrounding the building, as this would have previously been one of the main attractions of the house. It is also felt that this would significantly add to the attraction of future visitors to the area. The majority of the woodland areas to the front of the ruined building is made up of a conifer plantation, while only a small area of deciduous woodland dominated by beech would be affected. Therefore, the clear felling of this area is considered a feasible option, without significantly affecting the biodiversity and amenity of this area.

In order to significantly reduce felling within all other woodland areas, it is proposed to create a number of clearings along the existing and proposed paths from the proposed new car parking area to Moorehall House. While some trees will be lost, the increase of woodland edge habitat and addition of small meadow areas within the clearings, will add to the biodiversity value of the site. This will potentially provide new commuting routes and additional feeding areas for the local bat population.

The following requirements will be incorporated into landscape proposals,

- the retention of the important bat commuting corridor along the western track (the 'Dark Road') from the existing car park to the outbuildings of the House, as this is potentially affected by the removal of the conifer plantation to the front of the ruined building.
- ground treatment following the clear-felling of the area to the front of Moorehall House, with regard to how stumps/roots are being removed and the surface levelled, so that these areas can be grassed over and maintained in the future. Also, the effect on the trees to be retained along the newly established forest edges needs to be considered, as such trees are often prone to wind-throw.

All future woodland management must also adhere to the recommendations in Chapter 5 of the Vincent Wildlife Trust report on behalf of the National Parks and Wildlife Service.<sup>18</sup>

<sup>18</sup> Vincent Wildlife Trust (2018), *The Lesser Horseshoe Bat at Moore Hall: a report for National Parks and Wildlife Service.*

The following table provides an assessment of environmental objectives related to each of the alternatives proposed regarding the approach to landscape restoration.

**Table 18 Assessment of Alternatives relating Landscape Restoration**

Ref	Environmental Objective	Landscape Design Options	
		Alternative 4	Alternative 5
1 BIO	Conserve and enhance habitats and species, with priority protection afforded to sites and species designated under the Habitats Directive.	x x	x
2 BIO	Protect and enhance the wider ecological network including linear elements such as hedgerows.	x x	x
3 HEA	Improve health and wellbeing by improving opportunities safe and sustainable transport	✓✓	✓
4 WAT	Protect and improve the quality of surface and ground water bodies	x	x
6 WAT	Minimise development in areas of flood risk, where flood risk compatible development is proposed ensure that flood risk does not increase elsewhere.	-	-
6 CLI	To adapt and mitigate the effects of climate change	✓	✓✓
7 HER	To protect the integrity and authenticity of cultural heritage	✓✓	✓
8 LAN	To protect landscape character, minimise the loss of historic landscape features such as mature trees and hedgerows and scenic views	✓✓	✓
9 SOIL	To protect soil resources and minimise the loss of the high quality agricultural land	✓	✓✓

### 7.3 Summary of the Evaluation of Alternative Scenarios

The Masterplan alternatives have been assessed for their broad impact on each of the strategic environmental objectives. Based on the landscape alternative 5 to reinstate the historic view from the lake to the house, it is recommended that unless there is a specific need to have a small amount of parking near the lough (fishing/boating or for disabled access (as below)), there is no benefit in separating the two areas of parking to serve the Hall itself. The combined alternatives that involve removal the existing car parking at the south and location of new visitor centre and relocated car parking to the north are preferable from the point of view of routing traffic safely and reinstatement of the historic landscape.

The appraisal shows that on balance, the alternative which locates the proposed Visitor Centre to the north of the garden together with the relocation of the car park to the north is the preferred option and performs particularly well on cultural heritage, landscape and visual impact grounds. This location is also a greater distance from Lough Carra SPA and SAC which will minimise disturbance and surface water runoff.

## 8.0 Assessment of Plan Effects and 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 Masterplan, the plan area would be much unchanged from the present circumstances. A natural increases in visitor numbers associated with an increased population would take place.

The development of additional recreational infrastructure would be carried out on an uncoordinated basis. 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 Masterplan, the Moorehall Estate and nearby villages and towns would remain in their current state, without additional investment and maintenance. Without further investment, the condition of Moorehall House itself would deteriorate further and growth of ivy on other elements of the historic built environment would continue to erode their structural integrity.

#### 8.1.1 Biodiversity, Flora and Fauna

The biodiversity, flora and fauna within the Masterplan study area will likely remain in its current state, with the exception of Moorehall house, which requires intervention to maintain its structural integrity and habitat for the lesser horeshore bat. 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 other pressures and development.

#### 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. 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 several reasons. It is considered therefore, that natural population levels in the study area will remain stable in the future.

In relation to service industry, it is likely, in the absence of a Masterplan, that the visitor economy 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 Masterplan, 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 the wider area, there may also be the loss of more natural land to agriculture.

#### 8.1.4 Water

In the absence of a Masterplan, 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.

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 and the visitor economy grows due to other plans and policies in the County.

### 8.1.5 Air

In the current timeframe, the air quality within the Masterplan area is considered to be of good quality. However 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 Masterplan would result in an unlikelihood of any significant changes to the current material assets within the study area. Infrastructural improvements in the future would also be unlikely, 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 Masterplan. Planned energy and transport developments and upgrades would also independently evolve in the absence of the Masterplan.

The most significant impact in the absence of a plan, would be the uncontrolled growth of visitors and their associated impacts on the existing assets and infrastructure within the Masterplan boundary. If uncontrolled, there is a likelihood of a deteriorating water quality due to the continued use of the assets and infrastructure.

### 8.1.8 Cultural, Archaeological and Architectural Heritage

In the absence of the Masterplan, heritage features within the masterplan area would continue to deteriorate. Some heritage features may be lost to nature or in the development process or disturbance as a result of other developments not associated with the Masterplan. Without the development of the Masterplan, there is potential that heritage features in the area may remain inaccessible, unpreserved, undiscovered and potentially unrestored.

### 8.1.9 Landscape and Visual Impact

In the absence of the Masterplan, the value of the landscape within the study area is unlikely to change in any significant manner, with the exception of ongoing forestry management requirements.

## 8.2 Masterplan Appraisal

This section presents an evaluation of the likely significant effects of the Draft Masterplan. This has been provided in the table below.

**Table 19 Evaluation of the Likely Significant Effects of the Draft Masterplan**

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
<b>Vision and Objectives</b>										
<p>The vision for Moorehall is to develop a strategically important centre for nature conservation focused on preservation of the Lesser Horseshoe Bat and other protected species within a national Nature Reserve. Where feasible, appropriate restoration of historic structures on-site will contribute to development of a world class heritage, interpretation and recreational visitor experience.</p> <p>The overarching aim of this masterplan is to set out a framework for the future development of Moorehall and Lough Carra as a national Nature Reserve and cultural heritage attraction. It will guide decision-making for the ‘combined assets’</p>	✓	x/ ✓	x/✓	O	O	x	✓	x/✓	x	<p><u>Appraisal</u></p> <p>The development of Moorehall enhances the appreciation for and engagement with the cultural value of the area, however, such objectives may have an environmental impact.</p> <p><b>Recommendation:</b></p> <p>With a vision to provide a recreational visitor experience, it should be noted that increased visitor numbers, unless appropriately managed, have the potential to significantly effect environmentally sensitive areas (as described). Therefore,</p>

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
sensitive conservation, development and management. Due to the nature of the site, long term commitment on the part of Mayo County Council and the NPWS will be required for delivery of appropriate interventions and proactive management. Involvement of the local community is central to this strategy and their ongoing engagement is a lead action within this plan.										it is recommended that conclusions arising from environmental assessments, and the wider impact of increased visitors and traffic to the area should be considered to reduce environmental harm.
<p><b>Masterplan Guiding principles</b></p> <p>The Masterplan will be guided by the following principles and the stated vision for Moorehall as a world class visitor experience:</p> <ul style="list-style-type: none"> <li>To maintain or restore the favourable conservation condition of Lesser Horseshoe Bat at Moorehall and Lough Carra.</li> <li>Any redevelopment of the built heritage shall promote the conservation of protected species.</li> <li>The development of sustainable and appropriate visitor and recreational infrastructure will be in line with the</li> </ul>	✓	x/✓	o	x/✓	o	o	o	x/✓	x/✓	<p>This objective is focused on protecting environmentally sensitive locations in the masterplan area. Notwithstanding these principles, without mitigation the increase in visitor numbers is likely to have an impact on several of the environmental topics including water quality, soil, cultural heritage and biodiversity.</p> <p><b>Recommendation:</b></p>



Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
conservation objectives of the Special Areas of Conservation and Special Protection Area.										Implementation of the masterplan should be informed by a Conservation Management Plan and any development should only be carried out where it is consistent with this management plan and recommendations arising from Appropriate Assessment and Ecological Impact Assessment, where these are carried out. The Conservation Management Plan should be completed in advance of any development or other site management activities taking place on the site.
<b>Masterplan Strategy:</b> The central approach to the Masterplan strategy is to provide a new Visitor Centre to the north of the Walled Garden, to remove and grass over the existing lakeshore car park and pursue a proactive approach to Landscape Restoration involving partial restoration of 1839 open parkland areas (i.e. retention of some of	x/✓	x/✓	x/✓	o	o	o	o	x/✓	x/✓	The projects proposed in this masterplan could have a significant effect on the environment during construction and operation phases in terms of disturbance, impacts on water quality and vegetation removal. There will

Moorehall Masterplan	SEA Objective									Comments (Including reference to secondary, cumulative, synergistic, short, medium, long-term, permanent, temporary, positive and negative effects and scale (local / regional / national))
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	1 BIO	2 BIO	3 HEA	4 WAT	5 WAT	6 CLI	7 HER	8 LAN	9 SOI	
<p>the existing deciduous and mixed woodland areas).</p> <ul style="list-style-type: none"> <li>• Create a number of clearings along the existing and proposed paths from the proposed new car parking area to Moorehall House; providing commuting routes to bats.</li> <li>• Establish a ‘continuous cover forestry’ (CCF) system throughout the estate, to include selective thinning and reduction of non-native tree species over time.</li> <li>• Retention of the bat commuting corridor along the track from the western end of the existing car park to the outbuildings of Moorehall House.</li> <li>• All proposals to adhere to Chapter 5 recommendations of McAney (2018, VWT) report.</li> <li>• All recommended works should be “planned and carried out with the advice of a suitably qualified forester/woodland ecologist and/or the National Parks and Wildlife Service and the Forest Service”, as per the</li> </ul>										<p>be loss of greenfield area, with impacts on soil and associated vegetation, where the proposed visitor centre and car park will be accommodated but also the removal of hard standing of the existing car park which will impact on noise and air quality on a short term basis.</p> <p><b>Recommendation:</b></p> <p>These proposals should be the subject of project level assessment and construction activity should be carefully managed and timed to ensure that disturbance is minimised. Any lighting proposed will require a specific lighting impact assessment carried out by a suitably qualified professional. The entire plan area should follow all Dark Sky Ireland guidance.</p>

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
recommendation of the 2017 ecological survey of Moorehall.										
<b>Spatial Strategy for Moorehall</b>										
<p><b>The House</b></p> <p>The priority intervention at Moorehall is the repair of the roof. Re-roofing of the house is essential to the maintenance of habitats for the lesser horseshoe bat, to prevent water ingress to the basement and consequent decay of the existing structure, while offering further roosting opportunities.</p> <p>In addition to these restorative measures to secure the bat habitats, detailed designs may be prepared to facilitate limited visitor access to the hall interior and balcony.</p> <p><b>Farm Outbuildings – Designated for Habitat Enhancement</b></p> <p>The designated farmyard and outbuildings are to be restored to enhance their suitability as bat roosts and habitats in line with the</p>	✓	o	o	x/✓	o	o	✓	x/✓	o	<p>The revitalisation and further development of The House and Farm Outbuildings is generally beneficial in that it will support the re use of existing infrastructure whilst enhancing and conserving habitats in line with the conservation management plan.</p> <p><b>Recommendation:</b></p> <p>These proposals, including the preceding survey work, should be the subject of project level assessment and construction activity should be carefully managed and timed to ensure that disturbance is minimised. The input of a conservation architect should also be sought</p>

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
<p>conservation management plan to be prepared for the historic features within the site.</p> <p>Such works will include the provision of a range of artificial hibernation roosts for Vespertilionid species.</p> <p>Visitor access to the area surrounding the designated barn (granary) outbuilding is to be prevented and encouraged elsewhere at less sensitive locations on the site.</p>										for the conservation management plan.
<p><b>Moorehall Visitor Centre –Hub for Visitor Access, Interpretation and Activities</b></p> <p>Due to the rural location of Moorehall and minimal visitor infrastructure in the local area, it is considered appropriate to develop a Visitor Centre to act as a focal point for visitor services.</p> <p>The new Visitor Centre will be easily accessible from an adjacent (new) car park entrance and will accommodate a range of spaces including, but not limited, to:</p> <ul style="list-style-type: none"> <li>Community Research &amp; Learning facility relating to conservation of the lesser horseshoe bat and other species;</li> </ul>	x/✓	x/✓	x	x	o	x/✓	x	x	x	<p>This objective is focused on visitor experience development in environmentally sensitive locations. The number of visitors and the location of services and infrastructure has the potential for significant environmental effects.</p> <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><b>Recommendation:</b></p>

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	✓✓ - Significant beneficial effect ✓ - beneficial effect O – neutral ✗ - Adverse effect / uncertain ✗✗ Significant adverse effect									
	1 BIO	2 BIO	3 HEA	4 WAT	5 WAT	6 CLI	7 HER	8 LAN	9 SOI	
<ul style="list-style-type: none"> <li>Year round exhibitions providing a range of interpretation and educational materials;</li> <li>Access to local guides who are knowledgeable about different aspects of the site and its history.</li> <li>Interpretation that explores links with the Moores and key events in wider Irish history, which will also highlight the significance of the site to children and their families.</li> <li>Options for non-weather dependent indoor activities.</li> </ul>										<p>Visitor experience proposals and interpretation strategy should be developed to reflect environmental sensitivities and specific issues around wildlife disturbance including noise and littering.</p> <p>Proposals should implement the principles of sustainable access and design. Water use and wastewater production should be minimised.</p> <p>Consider innovative solutions to wastewater treatment where access to municipal wastewater treatment is not possible.</p>
<p><b>Proposed Trailhead for Walks and Trails</b></p> <p>Potential walks and trails should vary in length to suit different interests and abilities, in consultation with landowners and land managers, as needs. These could include:</p>	x	x/✓	✓	o	o	o	x	x/✓	x	<p>The objective focuses on the development of trails, which if developed at scale, have the potential for significant environmental effect as this implies a requirement for additional infrastructure.</p>

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	1 BIO	2 BIO	3 HEA	4 WAT	5 WAT	6 CLI	7 HER	8 LAN	9 SOI	
<ul style="list-style-type: none"> <li>• Trails within the Moore Hall estate including historic paths</li> <li>• Development of a double tree-lined trail linking Moore Hall with Towerhill, in consultation with local landowners</li> <li>• Opening of the Walled Garden with formal and informal paths               <ul style="list-style-type: none"> <li>- Kiltoom Point Loop</li> <li>- Carnacon Loop Trail</li> <li>- Doon Peninsula Loop Walk</li> <li>- Night Bat Trail</li> <li>- Ballintubber Abbey and the Pilgrim Trail</li> <li>- Literary Walking Tour with Lough Carra Boat Trip and stop off at Castle Island</li> <li>- Discovery Point on the (proposed) 'Lost Treasures' Trail from Cong to Westport</li> </ul> </li> </ul>										<p>Although the infrastructure is generally small in scale, the cumulative impact of vegetation removal and increased human activity can fragment existing habitats.</p> <p><b>Recommendation:</b></p> <p>New trails and associated infrastructure have the potential to impact on vegetation and increase soil compaction due to the change in surfaces and the increase in use. Therefore, new trails and walks should be planned appropriately and avoid areas of high environmental sensitivity.</p> <p>There is also potential for environmental sensitivities along waterways, due increased use of the same. Project specific ecological / environmental impact assessment should be</p>

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	1 BIO	2 BIO	3 HEA	4 WAT	5 WAT	6 CLI	7 HER	8 LAN	9 SOI	
										carried out order to mitigate negative effects and ensure the most sustainable design solution is put forward.
<p><b>The Historic Landscape and Forestry Management</b></p> <p>It is proposed that, from a landscape and forestry perspective and where ecologically feasible, the current site should be pared back to focus on, and emphasise, the remaining original features of the historic landscape.</p> <p>Additionally, woodlands will be actively managed for bat foraging and habitat creation.</p>	✓	✓	o	x/✓	o	x/✓	x	✓	✓	<p>As set out in the masterplan strategy, there are proposals to:</p> <ul style="list-style-type: none"> <li>• Create a number of clearings along the existing and proposed paths from the proposed new car parking area to Moorehall House; providing commuting routes to bats.</li> <li>• Establish a ‘continuous cover forestry’ (CCF) system throughout the estate, to include selective thinning and reduction of non-native tree species over time.</li> <li>• Retention of the bat commuting corridor</li> </ul>

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	1 BIO	2 BIO	3 HEA	4 WAT	5 WAT	6 CLI	7 HER	8 LAN	9 SOI	
										<p>along the track from the western end of the existing car park to the outbuildings of Moorehall House.</p> <ul style="list-style-type: none"> <li>• All proposals to adhere to Chapter 5 recommendations of McAney (2018, VWT) report.</li> <li>• All recommended works should be “planned and carried out with the advice of a suitably qualified forester/woodland ecologist and/or the National Parks and Wildlife Service and the Forest Service”, as per the recommendation of the 2017 ecological survey of Moorehall.</li> </ul> <p><b>Recommendation:</b></p>



Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
										Woodland management including tree removal and planting should be carried out in accordance with the above requirements as well as the Conservation Management Plan. This plan should be advanced on adoption of the draft masterplan.
<p><b>The Walled Garden</b></p> <p>The garden contains the following features of note which are significant from a historic perspective and should be developed in line with any future conservation management plan developed for the site:</p> <ul style="list-style-type: none"> <li>• The garden’s irregular / polygonal shape</li> <li>• The circular-plan dovecot at the southern corner of the garden.</li> <li>• Height, method of construction of the walls</li> </ul>	x/✓	x/✓	o	o	o	o	✓	✓	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. Works should also be carried out in accordance with the Conservation Management plan and recommendations set out in the All Island Pollinator Plan.</p> <p><b>Recommendation:</b></p> <p>Works/planting/ garden management should also be carried out in accordance with the Conservation Management</p>

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	✓✓ - Significant beneficial effect ✓ - beneficial effect O – neutral ✗ - Adverse effect / uncertain ✗✗ Significant adverse effect									
	1 BIO	2 BIO	3 HEA	4 WAT	5 WAT	6 CLI	7 HER	8 LAN	9 SOI	
<ul style="list-style-type: none"> <li>Unique collection of mosses on the western facing exterior wall, which should be retained and protected.</li> </ul>										plan and recommendations set out in the All Island Pollinator Plan, including no mow and low mow areas.
<p><b>Restoration of the Boat House and Improved Access to Lough Carra</b></p> <p>Subject to appropriate assessment in accordance with the Habitats Directive, the following project should be considered:</p> <ul style="list-style-type: none"> <li>Restoration of the boat house should be considered by Mayo County Council, in agreement with the landowner. This would provide an access point to the Lough, with boating facilities and interpretation points related to Castle Island and aspects of the lake's unique geology and ecology within the 'Joyce Country and Western Lakes Geopark'.</li> <li>With the majority of the car park to be removed from the lake shore, a limited number of parking spaces will be retained to facilitate access to the boat</li> </ul>	x/✓	x	x	x/✓	x/✓	o	x/✓	x/✓	x	<p>Improvements to access points can greatly enhance the visitor experience however, if not management correctly, they may have effects on the environment.</p> <p><b>Recommendation:</b></p> <p>All 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. Biosecurity measures should be enhanced at existing and proposed access points. Pontoon development should</p>

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	1 BIO	2 BIO	3 HEA	4 WAT	5 WAT	6 CLI	7 HER	8 LAN	9 SOI	
<p>house and boating activities on the lake.</p> <ul style="list-style-type: none"> <li>Several small scale pontoons should be provided at key points of interest across the lake e.g. Castle Carra, Castle Bourke, Church Island and Castle Island.</li> </ul>										consider the possibility of impacts on underwater archaeology in Lough Carra.
<b>Access Improvements</b>										
<p>Due to the limitations of the local road capacity, it is anticipated that Moorehall will attract mainly independent visitors - car-based individuals/ couples, families, walkers and cyclists.</p> <p>There is existing road access to Moorehall demesne at the point proposed for the new car park (sited by the Visitor Centre), but it will need the appropriate visibility splays onto the road. Although the road bends in the correct direction to the south, there is a slight kink to the north.</p>	x	x	x/o	x	o	o	o	x/o	x	<p>New access arrangements will be required to reflect the location of the visitor centre and the relocated car park. There is the potential for immediate impacts on the proposed location but also the indirect effects of additional visitors to the site. The fact that public transport in the area is limited, will mean that transport arrangements are more likely to be car based.</p> <p><b>Recommendation:</b></p>

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
										Proposed access improvements should avoid the removal of hedgerows and/or any significant amounts of vegetation. The potential to provide public transport should be considered during peak times. Road development / improvement to facilitate increased traffic should not result in any loss of ecological corridors
<p><b>Strategic Action 1: Conservation Management Plan for Moorehall and Lough Carra (to protect and enhance habitat for Lesser Horseshoe Bat and other species)</b></p> <p><b>Moorehall SAC – targeted conservation measures</b></p> <p>1. Preparation and adoption of Conservation Management Plan (CMP)</p> <p>2. Targeted interventions for Biodiversity Enhancement &amp; Conservation Measures</p>	✓	✓	o	x/✓	o	o	x/✓	x/✓	x/o	<p>The proposal to carry out a Conservation Management Plan is fully supported but should be carried out in advance of any future activities identified in the Draft Masterplan.</p> <p><b>Recommendation:</b></p> <p>The preparation and adoption of a Conservation Management Plan (CMP) should be advanced</p>

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
<ul style="list-style-type: none"> <li>Moorehall building enhancement of hibernation and maternity roosts</li> <li>Restoration and enhancement of outbuildings as favourable bat roosts and habitats</li> <li>Retention and enhancement of linear landscape features</li> <li>Suitable planting of Walled Garden with night scented plants</li> <li>Alteration of tracks and trails in consideration of bat commuting routes</li> <li>Develop bat box scheme (c. 20 boxes) to offset any loss of roost sites.</li> <li>Sensitive treatment of bridges, culverts and tunnels to optimise bat use</li> <li>Assessment of mature tree stands for selective felling in accordance with CMP</li> <li>Avoid lighting on site as it deters bat activity, particularly near roosting sites</li> <li>Building repairs or demolition in accordance with the Conservation Management Plan</li> </ul> <p>3. Any mitigation measures in the development plan should be monitored for effectiveness in</p>										on adoption of the draft masterplan.

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
<p>perpetuity and, based on the results, alterations and/or enhancements should be undertaken.</p> <p><b>Lough Carra SPA/ SAC – targeted conservation measures</b></p> <p>4. Targeted measures to enhance the Lake’s ecological integrity</p> <ul style="list-style-type: none"> <li>• The installation of a number of nesting rafts on the lake;</li> <li>• Vegetation management on islands and rocky shoals for enhanced nesting opportunities;</li> <li>• The construction of a number of bird hides at agreed, discreet locations;</li> <li>• Calcareous grassland&amp; scrub management on important grassland areas &amp; lakeshore;</li> <li>• Woodland management on the islands, removal of invasive species; opening of the canopy</li> <li>• Installation of an array of different bird boxes to support breeding avifauna around Lough Carra.</li> </ul>										

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
<p><b>Strategic Action 2: Development of the Visitor Experience</b></p> <p><u>Project Priorities</u></p> <p>The following projects should be prioritised for the historic environment:</p> <ol style="list-style-type: none"> <li>1. Carry out a survey of historic built elements on the site</li> <li>2. The preparation of a conservation management plan and detail design proposals for the restoration/conservation of the following historic features: <ul style="list-style-type: none"> <li>• House, walled garden, avenues, farmyard, view corridor</li> <li>• Historic landscape – returning some parts of Moorehall environs to original layout</li> </ul> </li> <li>3. Carry out a detailed tree survey to be undertaken by a qualified arboriculturist.</li> <li>4. Prepare a detailed planting Plan, involving a phased strategy for tree clearance (based on bat conservation requirements) and selective clearing of the view corridor to the front of the</li> </ol>	x/✓	x	o	x/o	o	x/o	x/✓	x	x	<p>The project priorities associated with this strategic action provide for several significant measures to afford protection of the environment.</p> <p><b>Recommendation:</b></p> <p>The preparation and adoption of a Conservation Management Plan (CMP) should be advanced on adoption of the draft masterplan. Any licence for felling of trees should be the subject of an ecological impact assessment and a detailed method statement should also be prepared in consultation with an ecologist.</p> <p>It is preferential that a Native Woodland Scheme e.g. Native Woodland on Public Lands, is considered as the principle plan for woodland management.</p>

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
<p>house, selective clearance of trees along the main entrance</p> <p>5. Apply for licence under the Forestry Act 2014 for tree felling in the area in front of the house and identify areas where compensatory replanting is possible and prepare planting plans for same.</p> <p>6. Designation of the site as a Nature Reserve by Ministerial Order.</p>										
<p><b>Strategic Action 3: Development of the Visitor Experience</b></p> <p><u>Priority Projects</u></p> <p>1. Consider the development of a world class, innovative Visitor Centre, subject to servicing and requirements of the integrated Conservation Management Plan</p> <p>2. Restoration of key elements of Moorehall, house, garden, farm, historic tracks and trails subject to requirements of the integrated Conservation Management Plan</p>	x	x	x/✓	x/o	o	x/✓	x/✓	x	x	<p>Improvements to the visitor experience will increase visitor numbers and, if not management correctly, this will have significant effects on the environment.</p> <p><b>Recommendation:</b></p> <p>All proposals should be supported by the necessary technical and environmental impact assessments, in order to ensure a sustainable design solution is achieved and any</p>



Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
<p>3. Refinement of the Experience Opportunity framework to inform detailed Thematic Interpretation Plans</p> <p>4. Development of linkages with Towerhill, Ballintubber Abbey, Burriscarra Abbey and other historic attractions</p> <p>5. Work with local service providers to provide excellent ancillary experiences.</p>										environmental impacts are appropriately mitigated.
<p><b>Strategic Action 4: Building Strategic Linkages; Interpretation &amp; Signage</b></p> <p><b>Priority Projects</b></p> <p>1. Work with destination hub towns of Castlebar and Ballinrobe to identity visitor servicing requirement and sustainable transport links where feasible.</p> <p>2. Develop improved linkages from Moorehall to wider visitor heritage attractions through creation of recreational walking and cycling / e-cycling trails, in consultation with local communities.</p>	x	x	✓	o	o	✓	x/✓	x	x/✓	<p>With the exception of points 3 and 4, these projects are unlikely to have a significant effect on the environment beyond increasing visitor numbers more generally.</p> <p><b>Recommendation:</b></p> <p>The Interpretation Framework and Plan should have regard to the environmental sensitivities of the site and avoid encouraging significant activities in these areas where possible. This can be achieved through the</p>

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
<p>3. Design a detailed Interpretation Plan to inform experience development and engagement with visitors</p> <p>4. Develop and refine the Interpretation Framework for Moorehall and Lough Carra in its wider context.</p> <p>5. Training of staff and guides in use of the Interpretative Framework</p> <p>6. Create linkages with the candidate UNESCO Joyce Country &amp; Western Lakes Geopark with specific reference to the unique geology and ecology of Lough Carra</p> <p>7. Devise an appropriate branded signage strategy in line with Mayo County Council guidelines.</p> <p>8. Create dedicated website for the Moorehall and Lough Carra Nature Reserve (name to be confirmed) to signpost visitors to the site. MCC to lock down the domain names as soon as possible.</p>										<p>appropriate location of signage and interpretation.</p> <ul style="list-style-type: none"> <li>Strategic Action 4 (2), has potential for significant effects on the environment. The development of new cycleways and trails can be significant infrastructural developments and will require project specific assessment.</li> </ul>

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
9. Prepare a transport assessment / sustainable transport strategy based on the projected visitor numbers of 90,000 per annum										
<b>Strategic Action 5: Infrastructure Planning &amp; Business Case</b> <b>Priority Projects</b> 1. Assess servicing options for new build elements in the masterplan. 2. Preparation of a detailed site Infrastructure Plan 3. Consider the capital costing requirements 4. Consider and agree the preferred operational model in collaboration with the community 5. Prepare a business case for shortlisted proposals based on this model. 6. Establish potential revenue streams 7. Develop an integrated Business Plan for Moorehall	o	o	o	o	o	o	o	o	o	These objectives relate to information gathering and sharing processes which will have no direct environmental consequences, with the exception of items 1 and 2.  Assess servicing options for new build elements in the masterplan and the preparation of a detailed site Infrastructure Plan should be the subject of environmental feasibility considerations.  <b>Recommendation:</b>  <b>These objectives will have little to no impact on the environment.</b>  <b>Assess servicing options for new build elements in the</b>

Moorehall Masterplan	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 CLI	7 HER	8 LAN	9 SOI	
										<p>masterplan and the preparation of a detailed site Infrastructure Plan should be the subject of environmental feasibility considerations. Proposals generated from these assessments will require assessment in accordance with the Article 6 of the Habitats Directive.</p>

## 8.3 Appropriate Assessment Screening Report and Natura Impact Statement

The Appropriate Assessment Screening Report and Natura Impact Statement should be read alongside this Environmental Report.

### 8.3.1 Appropriate Assessment Screening

As stated in the Appropriate Assessment Screening,

*'the potential impacts of the Draft Masterplan on the five Natura 2000 sites within 5 km of the plan boundary are discussed in this section. Potential impacts of the implementation of the strategic objectives of Moorehall Masterplan on Natura 2000 sites within the zone of influence are listed below:*

- *Habitat loss and fragmentation.*
- *Disturbance/ displacement.*
- *Introduction and/ or spread of invasive species.*
- *Aquatic pollution.*
- *Mortality of species listed as qualifying interests.'*

### 8.3.2 Natura Impact Statement (NIS)

The aim of the Natura Impact Statement (NIS) is to provide supporting information to assist the competent authority, in this case Mayo County Council, to determine if the proposed Moorehall Masterplan will adversely affect the integrity of the following Natura 2000 sites:

- Moore Hall House (Lough Carra) SAC.
- Lough Carra/ Mask Complex SAC.
- Lough Carra SPA.
- Lough Mask SPA.
- Towerhill House SAC.

The significance of the effects of the Masterplan on the above sites was deemed to be uncertain and progression to 'appropriate assessment' required as a result.

The elements of the Moorehall Masterplan likely to give rise to significant effects on the environment are the strategic actions and objectives relating to the development of tourism infrastructure such as partial restoration of buildings designated for lesser horseshoe bat; removal of vegetation in areas important for lesser horseshoe bat foraging and commuting; increased visitor pressure due to recreational activities on or surrounding Lough Carra.

Please refer to Natura Impact Statement for proposed mitigation.

## 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 demonstrated in the table below.

**Table 20 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 to 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 Masterplan are as follows:

1. **Population and Human Health:** Cumulative impacts to PHH will be primarily related to the increase in the number of visitors and demand for visitor services. The cumulative benefits for PHH can be achieved where demand for visitor services can be met in nearby villages and towns, whereby any new facilities implemented can also be used by the local community.

Minor negative cumulative impacts might occur during peak season where traffic numbers cause congestion on local roads. The table below considers the cumulative impact to PHH with respect to plans and projects.

**Table 21 Cumulative Impact – Population and Human Health**

Plan / Project	Summary of Relevant Policies / Projects	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"> <li>• 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;</li> <li>• Secure more compact forms of urban development in all types of settlements.</li> <li>• Regenerate rural Ireland by promoting environmentally sustainable growth patterns;</li> <li>• Plan for and implement a better distribution of regional growth, in terms of jobs and prosperity;</li> <li>• Transform settlements of all sizes through imaginative urban regeneration and bring life / jobs back into cities, towns and villages;</li> <li>• 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.</li> </ul>	Population increase in visitors
Regional Spatial and Economic Strategy for the Northern and Western Region (January 2020)	<ul style="list-style-type: none"> <li>• The RSES for the Northern and Western Region identifies Castlebar as a key town within the settlement hierarchy of the region. It is stated that the town of Castlebar has significant tourism potential, as home to a nationally significant tourism attractions including the National Museum of Ireland Country Life, Lannagh Holiday Village, greenway link to Westport. Castlebar as well as a broad range of public amenity, sports and recreational facilities. The town has significant potential to build on ongoing investment in a national outdoor pursuit's facility and to position Castlebar as a location for sports tourism.</li> </ul>	Population increase in visitors
Draft Mayo County Development Plan 2021- 2027	<p>Volume 1 Written Statement</p> <p>The general tourism policies in the Draft Mayo County Development Plan 2021- 2027 are as follows:</p> <ul style="list-style-type: none"> <li>• TRP 2 To support and promote sustainable tourism development, accessible to all throughout the county and work in partnership with tourism organisations and adjoining Local Authorities where necessary, in securing the development of tourism enterprises and</li> </ul>	Population and Human Health

infrastructure; Subject to suitable locations where it can be demonstrated that the development will not have significant adverse effects on the environment, including the integrity of the Natura 2000 network, residential amenity or visual amenity.

- TRP 6 To promote and support the continued strategic development of Westport, Ballina and Castlebar as tourist destinations through: (d) Promote the development of Castlebar as a nationally important Sports Tourism and Adventure Hub, including leveraging existing sports assets and existing natural and built facilities at Lough Lannagh Holiday Village.

Moorehall Masterplan (including Trails) is listed as one of the proposed walking and cycling projects in Chapter 6 Movement and Transport of the Draft County Development Plan 2021-2027.



Map 5.2: Proposed Spiritual Trail and Timber Trail in County Mayo

2. **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.

The table below considers the cumulative impact to Biodiversity Flora and Fauna with respect to plans and projects.

Table 22 Cumulative Impact - Biodiversity Flora and Fauna

Plan / Project	Summary of Relevant Policies/ Project	Potential Cumulative effect
Ballintubber Abbey Culture and Heritage Visitor Centre.	The proposal for Ballintubber Abbey will allow the Abbey to cater for a much larger visitor audience of up to 80,000 per year.	There is potential for this project to



		give rise to cumulative effects due to disturbance, fragmentation and damage to habitats and reduction of water quality due to increased visitor pressures.
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3. **Soils:** Potential for cumulative impacts as a result of additional and incremental development (outside the masterplan area) particularly where this occurs on greenfield sites.
4. **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.

The table below considers the cumulative impact to soil and water with respect to plans and projects.

**Table 23 Cumulative Impact – Soil and Water**

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

5. **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.

The table below considers the cumulative impact to air quality and climate with respect to proposed legislation.

**Table 24 Cumulative Impact – Air Quality and Climate**

Plan / Project	Summary of Relevant Policies/ Project	Potential Cumulative effect
<p>Mayo County Council Climate Adaptation Strategy September 2019</p>	<p>This Strategy sets out a vision for a Mayo that will be climate ready, a county that understands how climate change will affect our communities and businesses, and a county that works together to reduce the risk and avail of the opportunities that climate change will bring.</p> <p>This Strategy sets out the strategic priorities, measures and responses for adaptation in Mayo County Council over the next 5 years. The Strategy includes a range of actions across five operational themes: Governance, Critical Infrastructure &amp; Buildings, Natural &amp; Cultural Capital, Water Resources &amp; Flood Management and Community Services.</p> <p>Goal 1: Establish a Climate Adaptation Governance Structure to Ensure Successful Implementation of the Adaptation Strategy            Goal 2: Increase the resilience of Critical Infrastructure &amp; Buildings to climate change by planning and implementing appropriate adaptation measure            Goal 3: Increase the Resilience of Natural and Cultural Capital.            Goal 4: Increase the resilience of Water Resources and Flood Risk Management.            Goal 5: Increase the Resilience of Community Services</p>	<p>Strategic priorities, measures and responses for adapting to Climate Change.</p>

6. **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.

**Table 25 Cumulative Impact – Material Assets**

Plan / Project	Summary of Relevant Policies/ Projects	Potential Cumulative effect
<p>Destination Mayo 2016-2021</p>	<p>Mayo's Tourism Strategy, Destination Mayo 2016-2021, identifies tourism as a key economic sector for Mayo, with the potential for significant job creation. Its vision is to develop Mayo as a premier tourism destination, in conjunction with world-class activities, exceptional heritage attractions, cultural attractions and high-quality experiences attractive to domestic and international visitors alike. The tourism strategy highlights that Mayo has significant potential for a new high quality, innovative product development. The tourism strategy identifies key assets, attractions, and activities that can be further developed and promoted under the branding of Wild Mayo.</p>	<p>Population and Human Health</p>

	The strategy, supported by a Tourism Action Plan, is based around the development of the key tourism pillars.	
Extension to the visitor centre at Ballintubber Abbey (2020-2021)	<p>Ballintubber Abbey is an 800 year old abbey located approximately 6.5km from the Moorehall Demense and along the chariot trail, the ancient pilgrim path used by St Patrick to reach Croagh Patrick. Parts of the Abbey has been continuously restored over the past 200 years and it is now a cultural, heritage and spiritual based visitor attraction attracting up to 35,000 visitors per year.</p> <p>The project involves the restoration and reconstruction of the East Wing of the 800 year old Ballintubber Abbey to its former state. The redeveloped East Wing will house a new three floor cultural and heritage based visitor attraction. This proposal will allow the Abbey to cater for a much larger visitor audience of up to 80,000 per year.</p>	Increase in visitor numbers and traffic on local roads

7. **Cultural Heritage and Landscape:** The objectives proposed in the Draft Masterplan 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.

The table below considers the cumulative impact to Cultural Heritage and Landscape with respect to plans and projects.

**Table 26 Cumulative Impact - Cultural Heritage and Landscape**

Plan / Project	Summary of Relevant Policies/ Project	Potential Cumulative effect
Extension to the visitor centre at Ballintubber Abbey	<p>Ballintubber Abbey is an 800 year old abbey located approximately 6.5km from the Moorehall Demense and along the chariot trail, the ancient pilgrim path used by St Patrick to reach Croagh Patrick. Parts of the Abbey has been continuously restored over the past 200 years and it is now a cultural, heritage and spiritual based visitor attraction attracting up to 35,000 visitors per year.</p> <p>The project involves the restoration and reconstruction of the East Wing of the 800 year old Ballintubber Abbey to its former state. The redeveloped East Wing will house a new three floor cultural and heritage based visitor attraction. This proposal will allow the Abbey to cater for a much larger visitor audience of up to 80,000 per year.</p>	Increase in visitor numbers

### 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, built and natural heritage, transport, services (e.g. water and wastewater) and climate change. Critical to this, is role of the statutory plan i.e. Mayo County Development Plans.

## 8.6 Likely significant effects of the Moorehall Masterplan

Schedule 2 of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 states that the environmental report must include 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.

The table below summarises the likely significant effects of the Moorehall Masterplan (without mitigation).

**Table 27 Likely Significant Effects of the Moorehall Masterplan (without mitigation)**

Environmental Topic	Likely significant effects
<b>Population and Human Health</b>	<ul style="list-style-type: none"> <li>• Number of visitors that will need to access the site by car that may indirectly adversely affect the local population and human health.</li> <li>• Additional employment opportunities will be beneficial to human health.</li> </ul>
<b>Biodiversity</b>	<ul style="list-style-type: none"> <li>• Possible loss of habitats and species.</li> <li>• Species disturbance.</li> <li>• Possible loss of elements of the wider ecological network including hedgerows and other linear features such as tree lines and stone walls.</li> <li>• Forestry management that impacts on biodiversity.</li> <li>• The possibility of increased light pollution.</li> <li>• The possible introduction and spread of invasive species.</li> </ul>
<b>Soil</b>	<ul style="list-style-type: none"> <li>• Area of greenfield land lost/gained with respect to the proposed visitor centre and car park.</li> <li>• Soil compaction/erosion of the proposed trail network.</li> </ul>
<b>Water</b>	<ul style="list-style-type: none"> <li>• Surface water runoff and waste water servicing which has an adverse effect on water quality of surface and ground water bodies.</li> </ul>
<b>Water levels</b>	<ul style="list-style-type: none"> <li>• Increased water use at the site which might impact on groundwater levels.</li> </ul>
<b>Air</b>	<ul style="list-style-type: none"> <li>• Visitors accessing the site by car may impact on local air quality.</li> </ul>
<b>Climate change</b>	<ul style="list-style-type: none"> <li>• High energy demand of the new visitor centre.</li> <li>• Number of visitors that will need to access the site by car.</li> <li>• The sites resilience/vulnerability to climate change.</li> </ul>
<b>Cultural heritage</b>	<ul style="list-style-type: none"> <li>• Possible significant effects on designated and undesignated cultural heritage features. Possible significant effects on known and unknown archaeological features including the underwater archaeology of Lough Carra.</li> </ul>
<b>Material Assets</b>	<ul style="list-style-type: none"> <li>• Water supply and wastewater infrastructure.</li> <li>• Capacity of the local road network.</li> </ul>
<b>Landscape</b>	<ul style="list-style-type: none"> <li>• The potential effect on the character of designated landscapes, e.g. the shoreline of Lough Carra and the setting of Moorehall Demense.</li> </ul>

## 9.0 Mitigation and Monitoring Measures

Mitigation measures have been recommended where potential negative impacts from development in the Masterplan 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 Masterplan 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 Masterplan will be assessed. Implementation will also have to comply with the 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 Masterplan

Mitigation involves avoiding and /or reducing significant negative effects of the Draft Masterplan. 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 Masterplan preparation. This section outlines the general mitigation measures currently integrated into the Draft Masterplan that will prevent, reduce, and offset as much as possible any significant adverse effects on the environment resulting from the implementation of the masterplan.

The Draft Masterplan was informed by the preparation of a Radio-Telemetry Survey of the Lesser Horseshoe Bat which was carried out at Moore Hall during August and September 2019. The scope of this study was to:

- Identify commuting routes used by the colony;
- Identify foraging area; and
- Identify night/day roosts.

The report also provides recommendations on mitigation and habitat enhancement measures to be used in the Draft Masterplan in relation to bat species.

Chapter 5 of the Draft Masterplan considers the site context including its history, landscape, location, access, availability of services as well as environmental sensitivity. The description in the Draft Masterplan includes the environmental and cultural characteristics of the site and the surrounding areas are significant and include several noteworthy designations:

- Designation of Moorehall House as a protected structure;
- Presence of European Protected Species and Natura 2000 sites, at Moorehall as well as Lough Carra;
- Presence of a number of National Monuments on the site;
- Designation of scenic routes and highly scenic views.

Section 5.3 of the Draft Masterplan, states that all recommended works within any of the landscape vegetation units should be planned and carried out with the advice of a suitably qualified forester/woodland ecologist and/or the National Parks and Wildlife Service and the Forest Service, as per the recommendation of the 2017 ecological survey of Moorehall.

Section 5.3 also states that 'All future woodland management will adhere to the recommendations in Chapter 5 of the Vincent Wildlife Trust report on behalf of the National Parks and Wildlife Service (McAney 2018<sup>12</sup> ). These hinge on two key principles:

- i. no significant decline in potential foraging habitats within 2.5km; and
- ii. no significant loss of linear features within 2.5km. It notes that even small changes to its habitats can have a significant impact on the colonies.

Chapter 8 of the Draft Moorehall Masterplan describes the proposed implementation plan and identifies priority actions. Priority actions are those that are required to be 'frontloaded' at the earliest stages of implementation to secure the habitats of internationally protected bat species. It states that these priority actions should be incorporated into a larger Conservation Management Plan but will be delivered irrespective of plans regarding the conservation interest of the entire complex. Specific priority actions for Moorehall and Lough Carra are listed below.

### **Priority Actions for Moore Hall**

#### Moorehall House

- Proposals will integrate the hibernation requirements of bat colony and will recognise limitations on the timing of any works.

#### Restoration/enhancement of the basement of the house

- Monitoring of temperature, humidity, air flows in basement over one year, prior to design of detailed works.
- Restoration/enhancement will address water ingress, structural integrity of the basement
- Maintenance of all flight paths to Room 6, re-plastering of ceiling where required,
- Installation of bat boxes as alternative roosts prior to and during any construction work (for other bat species)
- Use of passive detectors as part of a year-long study of the horseshoe bats to provide information on the activities of the bats in advance of any works.

#### Moorehall Farmyards & Barns

- Proposals will recognise limitations on the timing of any work during the sensitive breeding season.

#### Enhancement of the barn/granary

- Detailed plan to develop the entire farmyard for bat conservation.
- Additional access and security measures will be delivered at the barn (granary)
- Securing of farmyard wall and selective planting of internal courtyard to create additional habitat for bats
- Walks and trails will be diverted away from the farmyard and farm buildings and this area will be developed solely as a refuge for bat species.

#### Retention, Enhancement & Security of underground passages at Moorehall

- Retention and enhancement, including security measures for the internal underground passage.

#### Reroofing of Moore Hall House.

Action must be developed gradually to integrate the hibernation requirements of the bat colony and will recognise the limitations on the timing of any works.

- Reroofing of Moorehall house to address water ingress into the basement, to prevent arch collapse and deterioration of the winter roosting site.
- Create new roosting opportunities for bats under re-roofed house

#### Provision of new Hibernation Roosts

- Provision of new underground hibernation roosts
- Provision of new overground hibernation roosts

### Protection of Commuting & Foraging routes

- Protect and enhance existing commuting routes, in particular commuting routes between Moorehall and Towerhill
- Maintain linear features to protect and enhance foraging routes within 4km of Moorehall and Lough Carra

### Emplacement of Data-loggers in Roost Sites to measure and monitor habitat condition

- Installation of monitoring equipment (incl. cameras) and data loggers into roost sites (monitoring temperature, humidity & noise).

### **Priority Actions for Lough Carra**

#### Nesting Rafts to support bird species on Lough Carra

- Install of a number of nesting rafts on the lake to create better nesting opportunities for ground nesting lake birds, in particular, the Common Gull;

#### Vegetation Management of Islands/ Shoals

- Vegetation management on some small islands and rocky shoals to create better nesting opportunities for ground nesting lake birds, in particularly Common Gull;

#### Grassland Management

- Calcareous grassland management including management of scrub encroachment on important grassland areas, especially on the lakeshore;

#### Woodland Management

- Woodland management on the islands, including the removal of exotics and invasive species and the opening of the canopy to the develop the ground and shrub layers;

#### Birdwatching/ Educational Measures

- The construction of a number of bird hides at agreed (with the NPWS) and discreet locations, to allow visitors and birds enthusiast to appreciate the importance of Lough Carra in relation to breeding and wintering waterbirds;

In addition to the preparation of a robust evidence base, the following measures to avoid significant effects on the environment are currently incorporated into the draft Moorehall masterplan:

- Location of the visitor centre away from the house and to the north of the site
- Identifying the need for further environmental feasibility work regarding servicing arrangements for Proposed Visitor Centre

## 9.2 Further Mitigation Measures to be included in the Adopted Masterplan

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

1. An overarching statement and commitment to compliance with existing environmental legislation. This statement can be included in Chapter 01 Introduction.
2. Inclusion of an Environmental Management Section in Chapter 08, Implementation Plan
3. 'Next steps' as set out in Chapter 9 to be revised to include Adoption of the Moorehall Masterplan and SEA Statement as Stage IV and completion of the conservation management Plan as Stage V.
4. Further details on the Implementation Structures should be set out in Chapter 8.

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

The Draft Masterplan 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 Plan of Mayo County Council.

Project proposals and other proposed plans, referred to in this Masterplan 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](http://www.enviromap.ie)).

### 9.2.2 General Mitigation

Is it recommended that the following mitigation measures are incorporated into the existing Implementation Plan, which is set out in Chapter 8.

#### 3.9.1.1. Conservation Management Plan

Implementation of the masterplan should be informed by two Conservation Management Plans for the Masterplan area to address both the natural and built heritage features of the site. Development should only be carried out where it is consistent with these management plans and recommendations arising from Appropriate Assessment and Ecological Impact Assessment of future projects, where these are carried out.

The Conservation Management Plans should be completed in advance of any development or other site management activities taking place on the site. The preparation and adoption of a Conservation Management Plan s(CMP) should be advanced on adoption of the draft masterplan. The input of a conservation architect and other specialists where required such as Landscape Architects should also be sought for the conservation management plan for the built heritage aspects.

#### 3.9.1.2. Masterplan Projects

Any subsequent project proposals should be the subject of Appropriate Assessment and Ecological Impact Assessment and construction activity should be carefully managed and timed to ensure that disturbance is minimised. Site specific construction method statements and CEMP should be completed etc.

Minor works could be identified and grouped together in order to manage impact assessment requirements more effectively.

Proposals for re-roofing the house, including the preceding survey work, should be the subject of project level assessment and construction activity should be carefully managed and timed to ensure that disturbance is minimised.

Proposals should have regard to development management standards in the Mayo County Development Plan, the Architectural Heritage Protection Guidelines and Guidelines on Archaeology in the Planning Process.

#### 3.9.1.3. Visitor Experience Development

Visitor experience proposals and interpretation strategy should be developed to reflect environmental sensitivities and specific issues around wildlife disturbance including noise and littering.

Visitor centre new build elements should implement the principles of sustainable access and design. Water use and wastewater production should be minimised and innovative solutions to wastewater treatment should be considered where access to municipal wastewater treatment is not possible.

Lighting of buildings and features across the Moorehall masterplan area should be avoided wherever possible. If lighting is required it should be designed in consultation with an appropriately qualified ecologist.



A transport assessment should be completed to determine the feasibility of public transport provision, capacity of the local road network and car parking design as well as improvements to the surrounding road network should these be required.

New trails and associated infrastructure have the potential to impact on vegetation and increase soil compaction due to the change in surfaces and the increase in use. Therefore, new trails and walks should be planned appropriately and avoid areas of high environmental sensitivity. Tarmac and impermeable surfaces should be avoided. Hedgerow removal and removal of woody vegetation removal should also be avoided in all but exceptional circumstances.

The Interpretation Framework and Plan should have regard to the environmental sensitivities of the site and avoid encouraging significant activities in these areas where possible. This can be achieved through the appropriate location of signage and interpretation. Signs to encourage appropriate behaviour should be included. Bins /waste disposal should be accommodated centrally at the VC away from the lake shore.

All infrastructure 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. Water supply and waste water treatment requires further investigations in advance of any measures to encourage an increase in visitor numbers, to demonstrate sufficient capacity/ feasibility. Existing toilet facilities should be removed.

Assess servicing options for new build elements in the masterplan and the preparation of a detailed site Infrastructure Plan should be the subject of environmental feasibility considerations. Proposals generated from these assessments will require assessment in accordance with the Article 6 of the Habitats Directive.

#### 3.9.1.4. Lesser Horseshoe Bat

Proposed access improvements should avoid the removal of hedgerows and/or any significant amounts of vegetation. The potential to provide public transport should be considered during peak times and cycle access and parking should be provided together with electric car charging points/electric bike rental.

In order to reduce the impacts of artificial lighting on bats the following should be considered,

1. Hours of illumination – provide some hours of darkness, if possible, through the use of timers.
2. Light levels – install lighting that meets the lowest light levels permitted under health and safety.
3. Specification and colour of light treatments - Use low-pressure sodium lights instead of high-pressure sodium lights or mercury lamps. If mercury lamps are to be used, fit them with UV filters.

#### 3.9.1.5. Lough Carra

There is also potential for environmental sensitivities along the shoreline of Lough Carra, due increased use and human activity. Project specific ecological / environmental impact assessment should be carried out order to mitigate negative effects and ensure the most sustainable design solution is put forward. Underwater archaeology should be considered where relevant. E.g. regarding pontoon development.

Biosecurity measures should be enhanced at existing and proposed access points to the Lough Carra. A management plan for IAS should be developed as part of the management plan.

#### 3.9.1.6. Woodland and Landscape Management

Woodland management including tree removal and planting should be carried out in accordance with the above requirements as well as the Conservation Management Plan. This plan should be advanced on adoption of the draft masterplan. Site Management should implement recommendations in the All-Island Pollinator Plan.

Works/planting/ garden management should also be carried out in accordance with the Conservation Management plan and recommendations set out in the All Island Pollinator Plan.

Any licence for felling of trees should be the subject of an ecological impact assessment and a detailed method statement should also be prepared in consultation with an ecologist and the NPWS.

### 9.3 Mitigation by SEA Topic

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

**Table 28 Mitigation by SEA Topic**

SEA Topic Areas	Likely Significant Effects	Proposed Mitigation
Population and Human Health	<ul style="list-style-type: none"> <li>Improving recreational infrastructure within the Moorehall Demense.</li> <li>Increasing the availability of open space for the local community.</li> <li>Ensuring tourism potential is linked to economic opportunities in nearby settlements.</li> <li>Improved health and well-being by encouraging physical activity.</li> <li>Better integration of visitor services with existing infrastructure.</li> <li>Number of visitors that will need to access the site by car that may indirectly effect the local population and human health.</li> </ul>	<p>A transport assessment should be completed to determine the feasibility of public transport provision, capacity of the local road network and car parking design as well as improvements to the surrounding road network should these be required.</p>
Biodiversity	<ul style="list-style-type: none"> <li>Possible loss of habitats and species.</li> <li>Species disturbance.</li> <li>Possible loss of elements of the wider ecological network including hedgerows and other linear features such as tree lines and stone walls.</li> <li>Forestry management that impacts on biodiversity.</li> <li>The possibility of increased light pollution.</li> </ul>	<p>Implementation of the masterplan should be informed by two Conservation Management Plans for the Masterplan area to address both the natural and built heritage features of the site. Development should only be carried out where it is consistent with these management plans and recommendations arising from Appropriate Assessment and Ecological Impact Assessment of future projects, where these are carried out.</p>

SEA Topic Areas	Likely Significant Effects	Proposed Mitigation
	<ul style="list-style-type: none"> <li>The possible introduction and spread of invasive species</li> </ul>	<p>The Conservation Management Plans should be completed in advance of any development or other site management activities taking place on the site. The preparation and adoption of a Conservation Management Plan (CMP) should be advanced on adoption of the draft masterplan. The input of a conservation architect and other specialists where required such as Landscape Architects should also be sought for the conservation management plan for the built heritage aspects.</p> <p>Visitor experience proposals and interpretation strategy should be developed to reflect environmental sensitivities and specific issues around wildlife disturbance including noise and littering.</p> <p>Any subsequent project proposals should be the subject of Appropriate Assessment and Ecological Impact Assessment and construction activity should be carefully managed and timed to ensure that disturbance is minimised. Site specific construction method statements and CEMP should be completed etc.</p> <p>Minor works are identified and grouped together in order to manage impact assessment requirements more effectively.</p> <p>Proposals for re-roofing the house, including the preceding survey work, should be the subject of project level assessment and construction activity should be carefully managed and timed to ensure that disturbance is minimised.</p> <p>Visitor centre new build elements should implement the principles of sustainable access and design. Water use and wastewater production should be minimised and innovative solutions to wastewater treatment should be considered where access to municipal wastewater treatment is not possible.</p> <p>Proposed access improvements should avoid the removal of hedgerows and/or any significant amounts of vegetation.</p>

SEA Topic Areas	Likely Significant Effects	Proposed Mitigation
		<p>Lighting of buildings and features across the Moorehall masterplan area should be avoided wherever possible. If lighting is required it should be designed in consultation with an appropriately qualified ecologist.</p> <p>New trails and associated infrastructure have the potential to impact on vegetation and increase soil compaction due to the change in surfaces and the increase in use. Therefore, new trails and walks should be planned appropriately and avoid areas of high environmental sensitivity. Tarmac and impermeable surfaces should be avoided. Hedgerow removal and removal of woody vegetation removal should also be avoided in all but exceptional circumstances.</p> <p>The Interpretation Framework and Plan should have regard to the environmental sensitivities of the site and avoid encouraging significant activities in these areas where possible. This can be achieved through the appropriate location of signage and interpretation. Signs to encourage appropriate behaviour should be included. Bins /waste disposal should be accommodated centrally at the VC away from the lake shore.</p> <p>Works/planting/ garden management should also be carried out in accordance with the Conservation Management plan and recommendations set out in the All Island Pollinator Plan – this should identify no mow areas.</p> <p>Any licence for felling of trees should be the subject of an ecological impact assessment and a detailed method statement should also be prepared in consultation with an ecologist and the NPWS.</p> <p>Biosecurity measures should be enhanced at existing and proposed access points to the Lough Carra. A management plan for IAS should be developed as part of the management plan.</p>
Soil	<ul style="list-style-type: none"> <li>Area of greenfield land lost/gained with respect to the proposed visitor centre and car park.</li> </ul>	<p>New trails and associated infrastructure have the potential to impact on vegetation and increase soil compaction due to the change in surfaces and</p>

SEA Topic Areas	Likely Significant Effects	Proposed Mitigation
	<ul style="list-style-type: none"> <li>Soil compaction/erosion of the proposed trail network.</li> </ul>	<p>the increase in use. Therefore, new trails and walks should be planned appropriately and avoid areas of high environmental sensitivity. Tarmac and impermeable surfaces should be avoided. Hedgerow removal and removal of woody vegetation removal should also be avoided in all but exceptional circumstances.</p>
Water	<ul style="list-style-type: none"> <li>Surface water runoff and wastewater servicing which has an adverse effect on water quality of surface and ground water bodies.</li> <li>Increased water use at the site which might impact on groundwater levels.</li> </ul>	<p>All infrastructure 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. Water supply and waste water treatment requires further investigations in advance of any measures to encourage an increase in visitor numbers, to demonstrate sufficient capacity/ feasibility. Existing toilet facilities should be removed.</p> <p>Assess servicing options for new build elements in the masterplan and the preparation of a detailed site Infrastructure Plan should be the subject of environmental feasibility considerations. Proposals generated from these assessments will require assessment in accordance with the Article 6 of the Habitats Directive.</p>
Air Quality	<ul style="list-style-type: none"> <li>Number of visitors that will need to access the site by car may impact on local air quality.</li> </ul>	<p>As part of the transport assessment, the potential to provide public transport should be considered during peak times and cycle access and parking should be provided together with electric car charging points/electric bike rental.</p>
Climate Change	<ul style="list-style-type: none"> <li>High energy demand of the new visitor centre.</li> <li>Number of visitors that will need to access the site by car.</li> <li>The sites resilience/vulnerability to climate change.</li> </ul>	<p>Visitor centre new build elements should implement the principles of sustainable access and design. Water use and wastewater production should be minimised and innovative solutions to wastewater treatment should be considered where access to municipal wastewater treatment is not possible.</p> <p>As part of the transport assessment, the potential to provide public transport should be considered during peak times and cycle access and</p>

SEA Topic Areas	Likely Significant Effects	Proposed Mitigation
		parking should be provided together with electric car charging points/electric bike rental.
Cultural Heritage	<ul style="list-style-type: none"> <li>• Possible significant effects on designated and undesignated cultural heritage features.</li> <li>• Possible significant effects on known and unknown archaeological features including the underwater archaeology of Lough Carra.</li> </ul>	Proposals should have regard to development management standards in the Mayo County Development Plan, the Architectural Heritage Protection Guidelines and Guidelines on Archaeology in the Planning Process.
Material Assets	<ul style="list-style-type: none"> <li>• Water supply and wastewater infrastructure.</li> <li>• Capacity of the local road network.</li> </ul>	A transport assessment should be completed to determine the feasibility of public transport provision, capacity of the local road network and car parking design as well as improvements to the surrounding road network should these be required.
Landscape	<ul style="list-style-type: none"> <li>• The potential effect on the character of designated landscapes, e.g. the shoreline of Lough Carra and the setting of Moorehall Demense.</li> </ul>	<p>Siting of the proposed visitor centre. Already incorporated into the Masterplan Strategy.</p> <p>Woodland management including tree removal and planting should be carried out in accordance with the above requirements as well as the Conservation Management Plan. This plan should be advanced on adoption of the draft masterplan. Site Management should implement recommendations in the All-Island Pollinator Plan.</p> <p>Works/planting/ garden management should also be carried out in accordance with the Conservation Management plan and recommendations set out in the All Island Pollinator Plan.</p> <p>Any licence for felling of trees should be the subject of an ecological impact assessment and a detailed method statement should also be prepared in consultation with an ecologist and the NPWS.</p>

## 9.4 Monitoring

The SEA Directive requires the monitoring of a plan as part of its implementation to identify any unforeseen significant adverse environmental effects and to take the appropriate remedial action.

Article 17 of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435/2004) states that the competent authority shall monitor the significant environmental effects of implementation of the plan or programme, or modification to a plan or programme in order, inter alia, to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action and, for this purpose, existing monitoring arrangements may be used, if appropriate, with a view to avoiding duplication of monitoring.

The following monitoring framework as outlined in table below is proposed and will be finalised on adoption of the Draft Masterplan.

**Table 29 Proposed Monitoring Framework for the Draft Masterplan**

Ref	Environmental Objective	Indicator	Topic	International, European, National policy documents / strategies / guidelines	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"> <li>Loss of habitats and species.</li> <li>Quality and range of statutorily protected areas.</li> <li>Occurrence of invasive species.</li> </ol>	Biodiversity	<ul style="list-style-type: none"> <li>EU Habitats Directive (92/43/EEC).</li> <li>EU Birds Directive (79/409/EEC).</li> <li>UN Convention on Biological Diversity Actions for Biodiversity 2011-2016, Ireland's National Biodiversity Plan (2011).</li> </ul>	<ol style="list-style-type: none"> <li>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).</li> <li>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).</li> <li>National Biodiversity Data Centre Examine records of <a href="http://invasives.biodiversityireland.ie">http://invasives.biodiversityireland.ie</a> /</li> </ol>



Ref	Environmental Objective	Indicator	Topic	International, European, National policy documents / strategies / guidelines	Source of Information
				<ul style="list-style-type: none"> <li>National Wildlife Act 1976-2000.</li> </ul>	<p>Heritage/biodiversity officers of local authorities.</p> <p>4. Annual winter and summer roost counts for Lesser Horseshoe Bat, carried out by NPWS and VWT.</p> <p>5. As a core part of the development of the Masterplan, it is recommended that a specific biodiversity monitoring programme is developed as part of the overall Masterplan and incorporated into the Plan strategy with annual surveys and three year reviews of data and reporting.</p>
2 BIO	Protect the wider ecological network including linear elements such as hedgerows	1. Removal of linear elements in the masterplan area e.g. loss of hedgerows.	Biodiversity	<ul style="list-style-type: none"> <li>EU Habitats Directive (92/43/EEC).</li> <li>EU Birds Directive (79/409/EEC).</li> <li>UN Convention on Biological Diversity Actions for Biodiversity 2011-2016, Ireland's National Biodiversity Plan (2011).</li> <li>National Wildlife Act 1976-2000.</li> </ul>	Development Management Team at Mayo County Council.

Ref	Environmental Objective	Indicator	Topic	International, European, National policy documents / strategies / guidelines	Source of Information
3 HEA	Improve health and wellbeing by improving opportunities safe and sustainable transport	<ol style="list-style-type: none"> <li>1. Numbers using the site / participating in walking and cycling activities.</li> <li>2. Number of people using walking, cycling and public transport as a means of transport to the site.</li> </ol>	Population and Human Health	<ul style="list-style-type: none"> <li>• Ireland 2040 – The National Planning Framework (2018).</li> <li>• People, Place and Policy Growing Tourism to 2025.</li> <li>• Directive 2002/49/EC of 25 June 2002 relating to the assessment and management of environmental noise.</li> <li>• Directive 96/62/EC – Air Quality Framework Directive.</li> <li>• Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC).</li> </ul>	Area Engineers at Mayo County Council / Visitor Centre Manager.
4 WAT	Protect and improve the quality of surface and ground water bodies	<ol style="list-style-type: none"> <li>1. WFD water status of surface and groundwaters</li> </ol>	Water	<ul style="list-style-type: none"> <li>• European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94 of 1997)</li> </ul>	Environmental Protection Agency

Ref	Environmental Objective	Indicator	Topic	International, European, National policy documents / strategies / guidelines	Source of Information
				<p>as amended by S.I. No. 233 of 1998 and S.I. 378 of 2005).</p> <ul style="list-style-type: none"> <li>• European Communities Environmental Objectives (Surface Water) Regulations, 2009 (S.I. No. 272 of 2009).</li> <li>• European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010).</li> <li>• European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2010 (S.I. No. 610 of 2010).</li> </ul> <p>EU Water Framework</p>	

Ref	Environmental Objective	Indicator	Topic	International, European, National policy documents / strategies / guidelines	Source of Information
				Directive (2000/60/EC) Bathing Water Quality Regulations (SI No. 79 of 2008). <ul style="list-style-type: none"> <li>European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009).</li> </ul>	
5 WAT	Protect water levels	1. Water Use	Water	<ul style="list-style-type: none"> <li>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).</li> <li>European Communities Environmental Objectives (Surface Water) Regulations, 2009 (S.I. No. 272 of 2009);</li> </ul>	Area Engineers at Mayo County Council / Visitor Centre Manager

Ref	Environmental Objective	Indicator	Topic	International, European, National policy documents / strategies / guidelines	Source of Information
				<ul style="list-style-type: none"> <li>• European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010).</li> <li>• European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2010 (S.I. No. 610 of 2010).</li> <li>• EU Water Framework Directive (2000/60/EC) Bathing Water Quality Regulations (SI No. 79 of 2008)</li> <li>• European Communities Environmental Objectives (Surface Waters)</li> </ul>	

Ref	Environmental Objective	Indicator	Topic	International, European, National policy documents / strategies / guidelines	Source of Information
				Regulations 2009 (SI No. 272 of 2009).	
6 CLI	To adapt and mitigate the effects of climate change	<ol style="list-style-type: none"> <li>1. Energy rating of new visitor centre (indicator to be confirmed).</li> <li>2. Public transport availability.</li> </ol>	Climate	<ul style="list-style-type: none"> <li>• EU Directive on the assessment and management of flood risks [2007/60/EC].</li> <li>• The Planning System and Flood Risk Management Guidelines for Planning Authorities (2009).</li> <li>• National Adaptation Framework, Planning for a Climate Resilient Ireland, 2018.</li> <li>• A 2030 Framework for Climate and Energy Policies [COM (2013) 169].</li> <li>• EU 2020 Climate and Energy Package 2013-2020.</li> </ul>	Mayo County Council development team.

Ref	Environmental Objective	Indicator	Topic	International, European, National policy documents / strategies / guidelines	Source of Information
				<ul style="list-style-type: none"> <li>National Planning Framework 2040.</li> <li>National Mitigation Plan 2017</li> <li>Climate Act 2015.</li> </ul>	
8 HER	To protect the integrity and authenticity of cultural heritage	1. Features of the historic environment which are damaged or removed.	Cultural heritage	<ul style="list-style-type: none"> <li>National Monuments Act, 2004.</li> <li>Planning and Development Act, 2000. S.I. 229/2005 - National Monuments Act 1930 (Section 14B) Regulations 2005.</li> <li>Government Policy on Architecture 2009 – 2015.</li> </ul>	Conservation / Heritage Officer at Mayo County Council
9 LAN	To protect landscape character, minimise the loss of historic landscape features such as mature trees and	Area of native woodland planted.	Landscape	<ul style="list-style-type: none"> <li>The European Convention on Landscape, 2000 A National Landscape Strategy for Ireland Strategy Issues paper for consultation (2011).</li> </ul>	Mayo County Council development team

Ref	Environmental Objective	Indicator	Topic	International, European, National policy documents / strategies / guidelines	Source of Information
	hedgerows and scenic views				
10 SOIL	To protect soil resources and minimise the loss of soil and damage to soil structure	Minimise damage to and loss of soil resource.	Soil, Geology	<ul style="list-style-type: none"> <li>A Resource Opportunity, Waste Management Policy in Ireland. Department of the Environment, Community and Local Government July 2012.</li> </ul>	Mayo County Council development team



## APPENDIX 01

### SEA Scoping Responses

Statutory environmental authorities	Submission	Scoping Report for the Moorehall Masterplan (the 'Masterplan').
EPA	<p>The EPA is one of the statutory environmental authorities under the SEA Regulations. In our role as an SEA environmental authority, we focus on promoting the full and transparent integration of the findings of the Environmental Assessment into the Masterplan and advocating that the key environmental challenges for Ireland are addressed as relevant and appropriate to the Masterplan. Our functions as an SEA environmental authority do not include approving or enforcing SEAs or plans.</p> <p>As a priority, we focus our efforts on reviewing and commenting on key sector plans. For land use plans at county and local level, we provide a 'self-service approach' via the attached guidance document 'SEA of Local Authority Land Use Plans – EPA Recommendations and Resources'. This document is updated regularly and sets out our key recommendations for integrating environmental considerations into Local Authority land use Plans. We recommend that you take this guidance document into account in preparing the Masterplan and SEA.</p> <p>In preparing the Masterplan, Mayo County Council should also ensure that the Masterplan aligns with key relevant higher-level plans and programmes and is consistent with the relevant objectives and policy commitments of the National Planning Framework and the Regional Spatial and Economic Strategy for the Northern &amp; Western/Eastern and Midlands Region.</p> <p>Sustainable Development Goals &amp; Key Actions for Ireland</p>	<ol style="list-style-type: none"> <li>1. SEA of Local Authority Land Use Plans – EPA Recommendations and Resources'. This document is updated regularly and sets out our key recommendations for integrating environmental considerations into Local Authority land use Plans. We recommend that you take this guidance document into account in preparing the Masterplan and SEA.</li> <li>2. Ensure that the Masterplan aligns with key relevant higher-level plans and programmes and is consistent with the relevant objectives and policy commitments of the National Planning Framework and the Regional Spatial and Economic Strategy for the Northern &amp; Western/Eastern and Midlands Region</li> <li>3. Have regard to the Sustainable Development Goals &amp; Key Actions for Ireland Our State of Environment Report Ireland's Environment - An Assessment 2020 (EPA, 2020) identifies thirteen Key Messages for Ireland which align with many of the UN Sustainable Development Goals (SDGs).</li> <li>4. The Masterplan should include commitments to protect designated habitats and protected species (and associated ecological corridors/linkages) within, and adjacent to, the Plan area.</li> <li>5. Biodiversity -The Masterplan should include commitments to protect designated habitats and protected species (and associated ecological corridors/linkages) within, and adjacent to, the Plan</li> </ol>

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	<p>Our State of Environment Report Ireland's Environment - An Assessment 2020 (EPA, 2020) identifies thirteen Key Messages for Ireland which align with many of the UN Sustainable Development Goals (SDGs). Delivering Ireland's long-term sustainable development and environmental protection goals will require a concerted effort by government departments to address these key actions:</p> <ol style="list-style-type: none"> <li>1. National Policy Position for Ireland's Environment - Recognition of the need for an integrated policy position given the many interlinkages and dependencies.</li> <li>2. Full Implementation of existing environmental legislation and review of governance/coordination on environmental protection across public bodies.</li> <li>3. Promote the benefits of a clean environment for health and wellbeing.</li> <li>4. Systematic change is needed for Ireland to become climate neutral and a climate resilient society and economy.</li> <li>5. WHO clean air quality guideline values to be adopted within the Clear Air Strategy as specific targets to achieve.</li> <li>6. Safeguard nature and wild places as a national priority to preserve its legacy for future generations.</li> <li>7. Improve the water environment and tackle water pollution water quality locally at a water catchment level.</li> </ol>	<p>area. Have regard to Integrated Biodiversity Impact Assessment - Streamlining AA, SEA and EIA Processes. Best Practice Guidance.</p> <ol style="list-style-type: none"> <li>6. Invasive Alien Species Control and Management – a clear commitment should be included.</li> <li>7. EPA website containing various SEA resources and guidance.</li> <li>8. Use the following web based tools: Environmental Sensitivity Mapping (ESM) Webtool available at <a href="http://www.enviromap.ie/">www.enviromap.ie/</a> EPA SEA WebGIS Tool <a href="https://gis.epa.ie/EPAMaps/SEA">https://gis.epa.ie/EPAMaps/SEA</a>. EPA WFD Application <a href="https://wfd.edenireland.ie/">https://wfd.edenireland.ie/</a> and is available to public agencies. Publicly available data can be accessed via the Catchments.ie website / EPA AA GeoTool.</li> <li>9. ensure that the Masterplan aligns with national commitments on climate change mitigation and adaptation.</li> </ol>

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	<p>8. Reduce human induced pressures on the marine environment.</p> <p>9. Move away rapidly from extensive use of fossil fuels to the use of clean energy systems.</p> <p>10. An agriculture-food sector that demonstrates validated performance around producing food with a low environmental footprint.</p> <p>11. Drinking water and wastewater infrastructure must meet the needs of our society.</p> <p>12. Move to a less wasteful and circular economy where the priority is waste prevention, reuse, repair and recycle.</p> <p>13. Promote integrated land mapping approaches to support decision making on sustainable land use.</p> <p>Where relevant, aspects of these Key Actions and the SDGs should be taken into account in preparing the Masterplan to ensure that these align with achieving Ireland's sustainable development and environmental protection ambitions.</p> <p><b>Specific Comments on the Masterplan</b></p> <p><b>Biodiversity</b></p> <p>The Masterplan should include commitments to protect designated habitats and protected species (and associated ecological corridors/linkages) within, and adjacent to, the Plan area. The EPA has published guidance on Integrated Biodiversity Impact Assessment - Streamlining AA, SEA and EIA Processes. Best Practice Guidance. The aim of this guidance is to inform</p>	

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	<p>practitioners, plan/project proponents and consent authorities on integrating SEA, EIA and AA processes and requirements to streamline biodiversity considerations. This may be useful to consider in preparing the Masterplan and SEA.</p> <p><b>Invasive Alien Species Control and Management</b></p> <p>A clear commitment should be included to ensure that implementation of the Masterplan, in particular, any proposed development associated with the Plan, addresses the control and management of invasive species.</p> <p><b>Available Guidance &amp; Resources</b></p> <p>The EPA website contains various SEA resources and guidance, including:</p> <ul style="list-style-type: none"> <li>• SEA process guidance and checklists.</li> <li>• Inventory of spatial datasets relevant to SEA.</li> <li>• topic specific SEA guidance (including Good practice note on Cumulative Effects Assessment (EPA, 2020), Guidance on SEA Statements and Monitoring (EPA, 2020), Integrating climatic factors into SEA (EPA, 2019), Developing and Assessing Alternatives in SEA (EPA, 2015), and Integrated Biodiversity Impact Assessment (EPA, 2012)).</li> </ul> <p>You can access these resources at:  <a href="http://www.epa.ie/monitoringassessment/assessment/sea/">www.epa.ie/monitoringassessment/assessment/sea/</a></p> <p><b>Environmental Sensitivity Mapping (ESM) Webtool</b></p> <p>The ESM Webtool is a new decision support tool to assist SEA and planning processes in Ireland. The tool brings together over 100</p>	

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	<p>datasets and allows users to explore environmental considerations within a particular area and create plan-specific environmental sensitivity maps. These maps can help planners anticipate potential land-use conflicts and help identify suitable development locations, while also protecting the environment. The ESM Webtool is available at <a href="http://www.enviromap.ie">www.enviromap.ie</a>.</p> <p><b>EPA SEA WebGIS Tool</b></p> <p>Our SEA WebGIS Tool has been updated recently and is now publicly available at <a href="https://gis.epa.ie/EPAMaps/SEA">https://gis.epa.ie/EPAMaps/SEA</a>. It allows public authorities to produce an indicative report on key aspects of the environment in a specific geographic area. It is intended to assist public authorities in SEA screening and scoping exercises.</p> <p><b>EPA WFD Application</b></p> <p>Our WFD Application provides a single point of access to water quality and catchment data from the national WFD monitoring programme. The Application is accessed through EDEN <a href="https://wfd.edenireland.ie/">https://wfd.edenireland.ie/</a> and is available to public agencies. Publicly available data can be accessed via the <a href="http://Catchments.ie">Catchments.ie</a> website.</p> <p><b>EPA AA GeoTool</b></p> <p>Our AA GeoTool application has been developed in partnership with the NPWS. It allows users to select a location, specify a search area and gather available information for each European Site within the area. It is available at: <a href="http://www.epa.ie/terminalfour/ApproAssess/index.jsp">http://www.epa.ie/terminalfour/ApproAssess/index.jsp</a></p>	

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	<p>Transition to a low carbon climate resilient economy and society</p> <p>You should <b>ensure that the Masterplan aligns with national commitments on climate change mitigation and adaptation</b>, as well as relevant sectoral, regional and local adaptation plans.</p> <p><b>Environmental Authorities</b></p> <p>Under the SEA Regulations, you should consult with:</p> <ul style="list-style-type: none"> <li>• Environmental Protection Agency;</li> <li>• Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media (formerly Minister for Culture, Heritage and the Gaeltacht (functions transferred from Minister for Environment, Heritage and Local Government/ Minister for Housing, Planning and Local Government to Minister for Culture, Heritage and the Gaeltacht by S.I. 192 of 2011));</li> <li>• Minister for Environment, Climate and Communications (formerly Minister of Communications, Climate Change and the Environment);</li> <li>• Minister for Agriculture, Food and the Marine; and</li> <li>• any adjoining planning authority whose area is contiguous to the area of a planning authority which prepared a draft plan, proposed variation or local area plan.</li> </ul> <p>If you have any queries or need further information in relation to this submission, please contact me directly. I would be grateful if</p>	

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	<p>you could send an email confirming receipt of this submission to: sea@epa.ie.</p>	
<p>Geological Survey Ireland</p>	<p><b>Geoheritage</b></p> <p>Geological Survey Ireland is in partnership with the National Parks and Wildlife Service (NPWS, Department of Housing, Local Government and Heritage), to identify and select important geological and geomorphological sites throughout the country for designation as geological NHAs (Natural Heritage Areas). This is addressed by the Geoheritage Programme of Geological Survey Ireland, under 16 different geological themes, in which the minimum number of scientifically significant sites that best represent the theme are rigorously selected by a panel of theme experts.</p> <p>County Geological Sites (CGS), as adopted under the National Heritage Plan, include additional sites that may also be of national importance, but which were not selected as the very best examples for NHA designation. All geological heritage sites identified by GSI are categorised as CGS pending any further NHA designation by NPWS. CGS are now routinely included in County Development Plans and in the GIS of planning departments, to ensure the recognition and appropriate protection of geological heritage within the planning system. CGSs can be viewed online under the Geological Heritage tab on the online Map Viewer.</p> <p><b>The audit of County Geological Sites of County Mayo was completed in 2014, revised in 2019 and published in November 2020. The full report details can be found here. Our records show</b></p>	<ol style="list-style-type: none"> <li>1. The audit of County Geological Sites of County Mayo was completed in 2014, revised in 2019 and published in November 2020. The full report details can be found here. Our records show that there are no CGSs in the vicinity of the Moorehall Estate and plan boundary.</li> <li>2. Welcomes listing of Lough Carra as part of one of the five priority elements for the future development of Moorehall.</li> <li>3. Proposed developments need to consider any potential impact on specific groundwater abstractions and on groundwater resources in general. We recommend using the groundwater maps on our Map viewer. which should include: wells; drinking water source protection areas; the national map suite - aquifer, groundwater vulnerability, groundwater recharge and subsoil permeability maps. For areas underlain by limestone, please refer to the karst specific data layers (karst features, tracer test database; turlough water levels (gwlevel.ie). Background information is also provided in the Groundwater Body Descriptions. Please read all disclaimers carefully when using Geological Survey Ireland data.</li> <li>4. The area around the lake and within the Moorehall Masterplan Plan Boundary is entirely underlain by</li> </ol>



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	<p><b>that there are no CGSs in the vicinity of the Moorehall Estate and plan boundary.</b></p> <p>Although there are no CGSs within the vicinity, we note that the geology of Lough Carra is listed as part of one of the five priority elements for the future development of Moorehall, which is a welcomed inclusion by us.</p> <p>Geological Survey Ireland is the national earth science agency and has datasets including Bedrock Geology, Quaternary Geology, Geological Heritage Sites, Mineral deposits, Groundwater Resources, Geohazards and the Irish Seabed. These comprise maps, reports and extensive databases that include mineral occurrences, bedrock/mineral exploration groundwater/site investigation boreholes, karst features, wells and springs. Please see our website for data availability and we recommend using these various data sets, when undergoing the EIAR, planning and scoping processes. Geological Survey Ireland should be referenced to as such and should any data or geological maps be used, they should be attributed correctly to Geological Survey Ireland.</p> <p>We also note reference in the scoping report to the candidate UNESCO Joyce Country and Western Lakes Geopark, which incorporates Lough Carra and the surrounding areas. Please note that an application for full UNESCO Global Geopark status is expected to be made to UNESCO during 2021. We would encourage geology to be a significant part of any development that may be introduced. As always, we are available if you require any further information, please feel free to contact Clare Glanville (Clare.Glanville@gsi.ie).</p>	<p>karstified limestone. As such, the degree of groundwater-surface water interaction is anticipated to be very high. Furthermore, a very significant part of the area is mapped as Extreme Groundwater Vulnerability.</p> <ol style="list-style-type: none"> <li>5. The SEA scoping report, whilst referring to the WFD and Groundwater Directives, may be under-representing the groundwater challenges, either potential impacts on groundwater and the linked surface waters caused by the Plan, or impacts on the Plan caused by groundwater. Because groundwater flow path lengths in karst groundwater systems can be significant (tens of kilometres), it should be noted that impacts on the Plan or environmental impacts may originate from further afield than the 2 km buffer zone around Moorehall and Lough Carra.</li> <li>6. We would recommend that hydrogeology/groundwater is assessed within a dedicated chapter of the EIS, as outlined in the IGI EIS guidelines. At an absolute minimum, Table 3 (Scoping Report) should include "Improve the understanding of groundwater-surface water interactions within the study area" and "protect groundwater" as key considerations in the Water section.</li> <li>7. Encourage the use of databases as part of any baseline geological assessment of the proposed development as it can provide invaluable baseline data for the region or vicinity of proposed development areas</li> </ol>

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	<p><b>Groundwater</b></p> <p>Geological Survey Ireland’s Groundwater and Geothermal Unit, provides advice, data and maps relating to groundwater distribution, quality and use, which is especially relevant for safe and secure drinking water supplies and healthy ecosystems.</p> <p>Proposed developments need to consider any potential impact on specific groundwater abstractions and on groundwater resources in general. We recommend using the groundwater maps on our Map viewer. which should include: wells; drinking water source protection areas; the national map suite - aquifer, groundwater vulnerability, groundwater recharge and subsoil permeability maps. For areas underlain by limestone, please refer to the karst specific data layers (karst features, tracer test database; turlough water levels (gwlevel.ie). Background information is also provided in the Groundwater Body Descriptions. Please read all disclaimers carefully when using Geological Survey Ireland data.</p> <p>The area around the lake and within the Moorehall Masterplan Plan Boundary is entirely underlain by karstified limestone. As such, the degree of groundwater-surface water interaction is anticipated to be very high. Furthermore, a very significant part of the area is mapped as Extreme Groundwater Vulnerability.</p> <p>The SEA scoping report, whilst referring to the WFD and Groundwater Directives, may be under-representing the groundwater challenges, either potential impacts on groundwater and the linked surface waters caused by the Plan, or impacts on the Plan caused by groundwater. Because groundwater flow path lengths in karst groundwater systems can be significant (tens of</p>	

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	<p>kilometres), it should be noted that impacts on the Plan or environmental impacts may originate from further afield than the 2 km buffer zone around Moorehall and Lough Carra.</p> <p>As such, we would recommend that hydrogeology/groundwater is assessed within a dedicated chapter of the EIS, as outlined in the IGI EIS guidelines. At an absolute minimum, Table 3 of the Scoping Report should include “Improve the understanding of groundwater-surface water interactions within the study area” and “protect groundwater” as key considerations in the Water section.</p> <p>Groundwater flooding maps (historic &amp; predictive) are available through our web viewers. The historic flood maps provide information of historic flooding, both surface water and groundwater. The predictive groundwater flood map provides information on the probability of future karst groundwater flooding (where available). For information on the development and limitations of these flood maps, please check the user guidance notes on our website.</p> <p><b>Geological Mapping</b></p> <p>Geological Survey Ireland (GSI) maintains online datasets of bedrock and subsoils geological mapping that is reliable, accessible and meets the requirements of all users including depth to bedrock and physiographic maps. These datasets include depth to bedrock data and subsoil classifications. We would encourage you to use these data which can be found here, in your future assessments.</p> <p><b>Geohazards</b></p>	

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	<p>Geohazards can cause widespread damage to landscapes, wildlife, human property and human life. In Ireland, landslides are the most prevalent of these hazards. Geological Survey Ireland has information available on past landslides for viewing as a layer on our Map Viewer. Geological Survey Ireland also engages in national projects such as Landslide Susceptibility Mapping and GWFlood Groundwater Flooding. We recommend that geohazards be taken into consideration, especially when developing areas where these risks are prevalent, and we encourage the use of our data when doing so.</p> <p><b>Geotechnical Database Resources</b></p> <p>Geological Survey Ireland continues to populate and develop our national geotechnical database and viewer with site investigation data submitted voluntarily by industry. The current database holding is over 7500 reports with 134,000 boreholes; 31,000 of which are digitised which can be accessed through downloads from our Geotechnical Map Viewer. We would encourage the use of this database as part of any baseline geological assessment of the proposed development as it can provide invaluable baseline data for the region or vicinity of proposed development areas. This information may be beneficial and cost saving for any site-specific investigations that may be designed as part of the project.</p> <p><b>Other Comments</b></p> <p>Should development go ahead, all other factors considered, Geological Survey Ireland would much appreciate a copy of reports detailing any site investigations carried out. This measure would permit on-going improvement of geological knowledge of the</p>	

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	<p>subsurface and could be included as additional sites of the geoheritage dataset, if appropriate.</p> <p>The data would be added to Geological Survey Ireland's national database of site investigation boreholes, implemented to provide a better service to the civil engineering sector. Data can be sent to Beatriz Mozo, Land Mapping Unit, at Beatriz.Mozo@gsi.ie, 01-678 2795.</p>	
<p>Waste Policy and Resource Efficiency Division, (a division of the Department of Environment, Climate and Communications</p>	<p>In respect of waste in the within documentation, we would be obliged if the respective Regional Waste Management Planning Office would be consulted regarding development of the final plans.</p>	<ol style="list-style-type: none"> <li>1. On behalf of the Waste Policy &amp; Resource Efficiency Division. In respect of waste in the within documentation, the office would be obliged if the respective Regional Waste Management Planning Office would be consulted regarding development of the final plans</li> </ol>



## EUROPEAN OFFICES

### United Kingdom

#### AYLESBURY

T: +44 (0)1844 337380

#### BELFAST

T: +44 (0)28 9073 2493

#### BRADFORD-ON-AVON

T: +44 (0)1225 309400

#### BRISTOL

T: +44 (0)117 906 4280

#### CAMBRIDGE

T: +44 (0)1223 813805

#### CARDIFF

T: +44 (0)29 2049 1010

#### CHELMSFORD

T: +44 (0)1245 392170

#### EDINBURGH

T: +44 (0)131 335 6830

#### EXETER

T: +44 (0)1392 490152

#### GLASGOW

T: +44 (0)141 353 5037

#### GUILDFORD

T: +44 (0)1483 889800

#### LEEDS

T: +44 (0)113 258 0650

#### LONDON

T: +44 (0)203 691 5810

#### MAIDSTONE

T: +44 (0)1622 609242

#### MANCHESTER

T: +44 (0)161 872 7564

#### NEWCASTLE UPON TYNE

T: +44 (0)191 261 1966

#### NOTTINGHAM

T: +44 (0)115 964 7280

#### SHEFFIELD

T: +44 (0)114 245 5153

#### SHREWSBURY

T: +44 (0)1743 23 9250

#### STIRLING

T: +44 (0)1786 239900

#### WORCESTER

T: +44 (0)1905 751310

### Ireland

#### DUBLIN

T: +353 (0)1 296 4667

### France

#### GRENOBLE

T: +33 (0)4 76 70 93 41