

SCREENING REPORT

IN SUPPORT OF THE
APPROPRIATE ASSESSMENT
OF THE
DRAFT TUAM LOCAL AREA PLAN
2018-2024

IN ACCORDANCE WITH THE REQUIREMENTS OF
ARTICLE 6(3) OF THE EU HABITATS DIRECTIVE

for: Galway County Council

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1 Introduction

1.1 Background

CAAS has been appointed by Galway County Council to prepare this Screening Report in support of the Appropriate Assessment (AA) of the Draft Tuam Local Area Plan 2018-2024 in accordance with the requirements of Article 6(3) of the EU Habitats Directive¹.

An Appropriate Assessment is a requirement of Article 6 of the Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (hereafter referred to as the "Habitats Directive"). The overall aim of the Habitats Directive is to maintain or restore the "Favourable Conservation Status" of habitats and species of European Community Interest. These habitats and species are listed in the Habitats and Birds Directives (Council Directive 2009/147/EC on the conservation of wild birds) with Special Areas of Conservation and Special Protection Areas designated to afford protection to the most vulnerable of them. These two designations are collectively known as European Sites.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the European Sites at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations (in particular Part XAB of the Planning and Development (Amendment) Act 2010 and the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477) (often referred to as the Habitats Regulations) to ensure the ecological integrity of these sites. Appropriate Assessment (AA) is an assessment of whether a plan or project, alone and in combination with other plans or projects, could have significant effects on a European Site in view of the site's conservation objectives.

A Strategic Environmental Assessment (SEA) has been undertaken to assess the impacts of the Draft LAP on a number of environmental considerations including biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, landscape and the interrelationship between these considerations, whenever applicable.

1.2 Legislative Context

The Appropriate Assessment process (AA) is an assessment of the potential for adverse or negative effects of a plan or project, in combination with other plans or projects, on the conservation objectives of a European Site. These sites consist of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) and provide for the protection and long-term survival of Europe's most valuable and threatened species and habitats.

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as "The Habitats Directive", provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. In Ireland, these are candidate Special Areas of Conservation (cSACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/ECC), hereafter referred to as European Sites.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European Sites. Article 6(3) establishes the requirement for AA:

"Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually

¹ Directive 92/43/EEC

or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

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

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

These requirements are implemented in the Republic of Ireland by the European Communities (Birds and Natural Habitats) Regulations 2011. These regulations consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in judgements of the Court of Justice of the European Union (CJEU).

If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project may nevertheless be carried out for "Imperative Reasons Of Overriding Public Interest", including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of European suite is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

Appropriate Assessment should be based on best scientific knowledge and Planning Authorities should ensure that scientific data (ecological and hydrological expertise) is utilised. This report details a Screening Statement to inform the AA process which is finalised by the statutory authority.

1.3 Guidance

This Screening Statement has been prepared in accordance with the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, 2010.*
- *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission Environment DG, 2002.*
- *Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC: European Commission, 2000.*
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg (EC 2001);*

- *Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. Office for Official Publications of the European Communities, Luxembourg (EC 2007).*
- *Flora (Protection) Order, 1999 (As amended 2015)*

In addition, a detailed online review of published scientific literature and 'grey' literature was conducted. This included a detailed review of the National Parks and Wildlife Website including mapping and available reports for relevant sites and in particular sensitive qualifying interests/special conservation interests described and their conservation objectives. The EPA Envision Map-viewer (www.epa.ie) and available reports were also reviewed.

Definitions of conservation status, integrity and significance used in this assessment are defined in accordance with 'Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC' (EC, 2000).

- The conservation status of a natural habitat is defined as the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species;
- The conservation status of a species is defined as the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its population;
- The integrity of a European Site is defined as the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified;
- Significant effect should be determined in relation to the specific features and environmental conditions of the protected site concerned by the plan or project, taking particular account of the site's conservation objectives.

1.4 Approach

There are four main stages in the AA process; the requirements for each depending on likely impacts to European Sites (SAC/ SPA).

Stage One: Screening

The process which identifies the likely impacts upon a European Site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant.

Stage Two: Appropriate Assessment

The consideration of the impact on the integrity of the European Site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts. If adequate mitigation is proposed to ensure no significant adverse impacts on European Sites, then the process may end at this stage. However, if the likelihood of significant impacts remains, then the process must proceed to Stage 3.

Stage Three: Assessment of Alternative Solutions

The process which examines alternative ways of achieving the objectives of the project or plan that avoids adverse impacts on the integrity of the European Site.

Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain

An assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. First, the plan should aim to avoid any impacts on European Sites by identifying possible impacts early in the plan-making process and writing the plan in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If the plan is still likely to result in impacts on European Sites, and no further practicable mitigation is possible, then it must be rejected. If no alternative solutions are identified and the plan is required for imperative reasons of overriding public interest (IROPI test) under Article 6(4) of the Habitats Directive, then compensation measures are required for any remaining adverse effect.

1.4.1 Source-Pathway-Receptor Model

Ecological impact assessment of potential effects on European Sites is conducted following a standard source-pathway-receptor model, where, in order for an effect to be established all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism is sufficient to conclude that a potential effect is not of any relevance or significance.

- Source(s) – e.g. pollutant run-off from proposed works.
- Pathway(s) – e.g. groundwater connecting to nearby qualifying wetland habitats.
- Receptor(s) – qualifying aquatic habitats and species of European Sites.

In the interest of this report, receptors are the ecological features which are known to be utilised by the qualifying interests or special conservation interests of a European Site. A source is any identifiable element of the Draft LAP provision which is known to have interactions with ecological processes. The pathways are any connections or links between the source and the receptor. This report determines if direct, indirect and cumulative adverse effects (however minor) will arise from the proposed development.

1.4.2 Zone of Influence

Following the source-pathway-receptor process a Zone of Influence (ZOI) will be determined based on the characteristics of the development (detailed in section 3.2) and the foreseen distribution of likely effects through any pathways identified. Once the ZOI is established, all European Sites within it will be assessed with specific reference to the sensitive receptors of each site and pathways for effect that relate to the ecological integrity of the site.

1.5 Relationship between the Appropriate Assessment process and the Plan

Appropriate Assessment (AA) needs to be fully integrated with the various stages of the development plan process in order to ensure that the ecological implications of the Draft LAP do not affect any areas designated as European Sites. As the AA process, has been managed by part of the Forward Planning team, interaction has occurred from the early stages of writing of the Draft LAP to impress the importance of protection of European Sites and that the plan should be formulated to avoid adverse impacts on these sites. In addition, the Strategic Environmental Assessment process has been taken into account in the appropriate assessment process. The screening of objectives and the assessment of objectives in the context of mitigation measures and potential effects of the designated sites, has been an iterative process throughout each stage of the plan-making process.

2 Description and background of the Draft Tuam Local Area Plan 2018-2024

2.1 Galway County Development Plan

The Galway County Development Plan 2015-2021 sets out an overall strategy for the proper planning and sustainable development of the functional area of Galway County Council. This Plan includes the administrative area of what was formerly Ballinasloe Town Council. On foot of a recent amendment to the *Planning and Development Act 2000*, by the Electoral, *Local Government and Planning and Development Act 2013*, the provisions and zonings of the Ballinasloe Development Plan will remain in force to the extent provided for by that Development Plan or until a Local Area Plan is prepared for Ballinasloe, whichever is the earlier. The Plan presents Galway County Council's outlook for future development of the County up to 2021. It sets out the longer-term vision for the development of the County, while protecting and enhancing its environment through employing the principles of sustainable development in the policies and objectives set out therein. Local Area Plans have been or will be prepared for the towns/areas with a population over 1,500 persons; however, the County Development Plan remains the overarching Plan for the County.

Sustainable development can be described as a pattern of resource use that aims to meet human needs while respecting the environment so that these needs can be met not only in the present, but in the indefinite future. Sustainable development is founded on the "three independent and mutually reinforcing pillars" of economic development, social development and environmental protection. Information, integration and participation are key building blocks to help achieve development that recognises these independent pillars. Environmental and social concerns should be integrated into all development processes and broad public participation in decision-making is a fundamental prerequisite for achieving sustainable development.

This Plan builds on the strategies, policies and objectives of the Galway County Development Plan 2009-2015, taking into account recent key development trends and national, regional and local policy developments. In particular, it also takes account of the increased emphasis on flooding, climate change, renewable energy and the need to support economic development. It also takes account of European Union (EU) requirements including the application of Strategic Environmental Assessment and Habitats Directive Assessment to the Plan.

2.1.1 Vision for County Galway

"Enhance the quality of life of the people of Galway and maintain the County as a uniquely attractive place in which to live, work, invest and visit, harnessing the potential of the county's competitive advantages in a sustainable and environmentally sensitive manner."

2.1.2 Previous Assessments

A detailed Natura Impact Report in support of the AA of Galway CDP 2015-2021 was compiled along with a detailed Strategic Impact Assessment and Strategic Flood Risk Assessment. These assessment processes were conducted through an iterative process to ensure their findings were incorporated into the policies and objective of the CDP itself. This process resulted in a robust set of mitigation and monitoring measures to ensure there were no likely significant adverse effects to any European Site arising from the implementation of the CDP.

2.1.3 Existing Policies and Objectives relating to the protection of European Sites

Given the uncertainties that exist with regard to the scale and location of developments facilitated by Galway CDP, it is recognised that the identification of effects is limited and effects to the integrity of European Sites will be further assessed through project-level AA. Table 2.1 detailed the Strategic

Environmental Objectives incorporated into Galway CDP. These were implemented through policies and objectives; those which relate to the protection of ecological processes are listed in Table 2.2.

Table 2.1 Strategic Environmental Objectives in the Galway CDP 2015-2021

SEO Code	SEO
B1	To ensure compliance with the Habitats and Birds Directives with regard to the protection of Natura 2000 Sites and Annexed habitats and species
B2	To ensure compliance with Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function act as stepping stones - are of significant importance for wild fauna and flora and/or essential for the migration, dispersal and genetic exchange of wild species
B3	To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites and to ensure compliance with the Wildlife Acts 1976-2010 with regard to the protection of species listed on Schedule 5 of the principal Act
B4	To sustain existing sustainable rural management practices - and the communities who support them - to ensure the continuation of long established managed landscapes and the flora and fauna that they contain
PHH1	To protect populations and human health from exposure to incompatible landuses
S1	To avoid damage to the hydrogeological and ecological function of the soil resource in County Galway
W1	To maintain and improve, where possible, the quality and status of surface waters
W2	To prevent pollution and contamination of ground water
W3	To comply as appropriate with the provisions of the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG, 2009)
M1	To serve new development with adequate and appropriate waste water treatment
M2	To serve new development with adequate drinking water that is both wholesome and clean
M3	To reduce waste volumes, minimise waste to landfill and increase recycling and reuse.
C1	To reduce travel related emissions to air and to encourage modal change from car to more sustainable forms of transport
CH1	To protect archaeological heritage including entries to the Record of Monuments and Places and/or their context
CH2	To protect architectural heritage including entries to the Record of Protected Structures and Architectural Conservation Areas and their context
L1	To avoid significant adverse impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views

Table 2.2 Policies and Objectives contained within the Galway CDP 2015-2021 that relate to the protection of ecological processes

<p>Strategic Aim 10 – Heritage: Enhance and protect the built heritage and natural environment, including buildings, archaeology, landscape and biodiversity, within the County.</p>
<p>Objective DS 5 – Protection and Management of the Assets of the County Protect and manage the assets that contribute to the unique visual and environmental character and sense of identity of County Galway, and which underpin tourism, heritage, biodiversity and quality of life.</p>
<p>Objective DS 6 – Natura 2000 Network and Habitats Directive Assessment Protect European sites that form part of the Natura 2000 network (Including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011(SI No.477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any updated or subsequent guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorized after the competent authority (Galway County Council) has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and/or a Habitats Directive Assessment where necessary, that: The Plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European site (either individually or in combination with other plans or projects); or The Plan or project will have significant adverse effects on the integrity of any European site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or The Plan or project will have a significant adverse effect on the integrity of any European site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.</p>
<p>Objective DS 8 – Climate Change Galway County Council shall support the <i>National Climate Change Strategy</i> and follow on document <i>National Climate Change Adaptation Framework Building Resilience to Climate Change 2012</i>, on an ongoing basis through implementation of supporting objectives in this Plan, particularly those supporting the use of alternative and renewable energy sources, sustainable transport, air quality, biodiversity, green infrastructure, coastal zone management, flooding and soil erosion.</p>
<p>Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment Ensure that proposed projects and any associated improvement works or associated infrastructure relating to renewable energy projects; water supply and abstraction; wastewater and discharges; flood alleviation and prevention; roads, power lines and telecommunications; and amenity and recreation provision are subject to Appropriate Assessment where relevant.</p>
<p>Objective DS10- Impacts of Developments on Protected Sites Have regard to any impacts of development on or near existing and proposed Natural Heritage Areas, Special Protection Areas and Special Areas of Conservation, Nature Reserves, Ramsar Sites, Wildfowl Sanctuaries, Salmonid Waters, Refuges for Flora and Fauna, Connemara National Park, shellfish waters, freshwater pearl mussel catchments and any other designated sites including future designations.</p>
<p>Objective DS 13 - SEA Monitoring of the Plan</p>

<p>Carry out SEA monitoring of the Plan to ensure that any potential significant environmental effects of implementing the plan are identified and can be addressed accordingly.</p>
<p>Objective CS 7 – Core Strategy and the Countryside/Rural Areas Galway County Council shall recognize the important role of the rural areas within the County and shall protect and support these areas through the careful management of its key assets, including its physical and environmental resources, while supporting appropriate development in a balanced and sustainable manner and in accordance with the relevant policies and objectives set out throughout the Plan.</p>
<p>Objective UHO 8 – Urban Design Promote the use of sustainable urban design principles and approaches that will help to create high quality built and natural environments appropriate to the context and landscape setting of the specific area, having regard to the guidance contained in the <i>Sustainable Residential Development in Urban Areas Guidelines 2009</i>, the accompanying <i>Urban Design Manual 2009</i> (or any updated version) and the <i>Design Manual for Urban Roads & Streets (2013)</i> (including any superseding document).</p>
<p>Objective EDT 25 – Wild Atlantic Way Support and facilitate the Wild Atlantic Way project in conjunction with the relevant stakeholders and Galway County Council will actively encourage the creation of spurs to link in with the Wild Atlantic Way as was intended, taking into account environmental sensitivities.</p>
<p>Objective TI 12 – Noise Require all new proposed development, which is considered to be noise sensitive within 300m of existing, new or planned national roads, or roadways with traffic volumes greater than 8,200AADT, to include a noise assessment and mitigation measures if necessary with their planning application documentation. The cost of mitigation measures shall be borne by the developer. Mitigation measures in order to protect the noise environment of existing residential development will be facilitated or enforced as necessary.</p>
<p>Policy WS 5 - Water Quality Promote public awareness of water quality issues and the measures required to protect all waters including all surface water and groundwater bodies.</p>
<p>Objective WS 1 – Protection of Ground Waters Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the Groundwater Directive 2006/118/EC, the European Communities Environmental Objectives (groundwater) Regulations, 2010 (S.I. No. 9 of 2010) or any updated legislation and the Groundwater Protection Scheme and source protection plans for water supplies.</p>
<p>Objective WW 1 - EU Policies and Directives Ensure that all wastewater generated is collected, treated and discharged after treatment in a safe and sustainable manner, having regard to the standards and requirements set out in EU and national legislation and guidance and subject to compliance with the provisions and objectives of the EU Water Framework Directive, relevant River Basin Management Plans, Urban Waste Water Directive and the EU Habitats Directive.</p>
<p>Objective WW 6 – Adherence to Environmental Standards Promote the provision of safe and secure wastewater infrastructure to ensure that the public is protected and that permitted development, is within the environmental carrying capacity and does not negatively impact on habitat quality or species diversity.</p>
<p>Objective WW 7 – Surface Water Drainage & Sustainable Drainage Systems (SuDS) Maintain and enhance, as appropriate, existing surface water drainage systems in the County, ensure that new developments are adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems in all new developments.</p>
<p>Objective WW 8 – Substandard Wastewater Treatment Plants Support and facilitate as appropriate the upgrading of substandard public wastewater treatment plants in order to comply with the provisions of the Urban Waste Water Treatment Regulations 2001 and 2004, the Waste Water Discharge (Authorization) Regulations 2007 and implement the relevant recommendations set out in the EPA document <i>Focus on Urban Waste Water Discharges in Ireland</i> (and any subsequent update).</p>

<p>Objective WW9 – Integrated Constructed Wetlands Galway County Council shall support the use of Integrated Constructed Wetlands (ICW) as a low cost and environmentally sustainable alternative having regard to the “Integrated Constructed Wetlands-Guidance Document for Farmyard Soiled Water and Domestic Wastewater Applications” as appropriate.</p>
<p>Objective CC 5 – An Ecosystems Approach and Land Use Galway County Council shall implement an ecosystems approach (holistic approach) to land use and land use change and ensure that climate change adaptation measures are taken into account in planning decisions. The Council shall also a) Have regard to any recommendations and forthcoming recommendations as outlined in the proposed National Raised Bog SAC Management Plan and the National Biodiversity Plan; b) Integrate climate risk into the review of the Biodiversity Action Plan for County Galway 2008 - 2013; c) Seek to control the spread of non-native and alien invasive species on land and water using new regulatory powers.</p>
<p>Objective FL 2 – Surface Water Drainage and Sustainable Drainage Systems (SuDs) Maintain and enhance, as appropriate, the existing surface water drainage system in the County. Ensure that new developments are adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems in all new developments. Surface water runoff from development sites will be limited to pre-development levels and planning applications for new developments will be required to provide details of surface water drainage and Sustainable Drainage Systems proposals.</p>
<p>Objective FL 3 – Protection of Waterbodies and Watercourses Protect waterbodies and watercourses within the County from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include protection buffers in riverine, wetland and coastal areas as appropriate.</p>
<p>Policy NHB 1 – Natural Heritage and Biodiversity It is the policy of Galway County Council to support the protection, conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas proposed Natural Heritage Areas Ramsar Sites, Nature Reserves, Wild Fowl Sanctuaries and Connemara National Park (and other designated sites including any future designations) and the promotion of the development of a green/ecological network within the Plan Area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment.</p>
<p>Policy NHB 2 – Non-Designated Sites Recognize that nature conservation is not just confined to designated sites and acknowledge the need to protect non-designated habitats and landscapes and to conserve the biological diversity in the county.</p>
<p>Policy NHB 3 – Green Infrastructure Protect existing green infrastructure and provide additional green infrastructure where possible such as green roof technology and energy efficiency pumps.</p>
<p>Policy NHB 4 – Water Resources Protect, conserve and enhance the water resources of the county, including, rivers, streams, lakes, wetlands, springs, turloughs, surface water and groundwater quality, as well as surface waters, aquatic and wetland habitats and freshwater and water dependent species and seek to protect and conserve the quality, character and features of inland waterways by controlling developments close to navigable and non-navigable waterways.</p>
<p>Policy NHB 5 – Geological and Geo-Morphological Systems Protect, conserve and enhance important geological and geo-morphological systems in the county and seek to promote access to such sites where possible.</p>
<p>Policy NHB 6 – National Biodiversity Plan, Galway County Heritage Plan and Galway County Biodiversity Plan It is the policy of the Council to support the implementation of the <i>National Biodiversity Plan</i> and <i>Galway County Biodiversity Plan</i> and <i>Galway County Heritage Plan</i> in partnership with relevant stakeholder’s subject to available resources.</p>
<p>Policy NHB 7 – Invasive Species</p>

<p>It is a policy of the Council to support measures for the prevention and eradication of invasive species. This will include the dissemination of information to raise public awareness, the adoption of codes of practices/standard biosecurity measures in normal Local Authority activities consultation with relevant stakeholders, the promotion of the use of native species in amenity planting and landscaping and the recording of invasive/native species as the need arises and resources permit.</p>
<p>Policy NHB 8 – National Parks and Wildlife Service (NPWS) Management Plans It shall be the policy of the Council to ensure that development takes into account relevant Management Plans prepared by NPWS for SACs and SPAs.</p>
<p>Objective NHB 1 – Protected Habitats and Species Support the protection of habitats and species listed in the Annexes to and/or covered by the EU Habitats Directive (92/43/EEC) (as amended) and Birds Directive (2009/147/EC), and regularly occurring-migratory birds and their habitats, and species protected under the Wildlife Acts 1976-2000 and the Flora Protection Order.</p>
<p>Objective NHB 2– Biodiversity and Ecological Networks Support the protection and enhancement of biodiversity and ecological connectivity within the Plan Area, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife where these form part of the ecological network and/or may be considered as ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive.</p>
<p>Objective NHB 3 – Water Resources Protect the water resources in the Plan Area, including rivers, streams, lakes, wetlands, springs, turloughs, surface water and groundwater quality, as well as surface waters, aquatic and wetland habitats and freshwater and water dependent species in accordance with the requirements and guidance in the EU <i>Water Framework Directive 2000 (2000/60/EC)</i>, the <i>European Union (Water Policy) Regulations 2003</i> (as amended), the <i>Western River Basin District Management Plan 2009- 2015</i>, <i>Shannon International River Basin Management Plan 2009-2015</i> and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same) and also have regard to the Freshwater Pearl Mussel Sub-Basin Management Plans.</p>
<p>Objective NHB 4 – Geological and Geo-Morphological Systems Protect and conserve geological and geo-morphological systems, sites and features from inappropriate development that would detract from their heritage value and interpretation and ensure that any Plan or project affecting karst formations, eskers or other important geological and geo-morphological systems are adequately assessed with regard to their potential geophysical, hydrological or ecological impacts on the environment.</p>
<p>Objective NHB 5 – Control of Invasive and Alien Invasive Species Where the potential for spread of invasive species are identified as part of a development proposal the developer will be required to submit an invasive species management plan. A landscaping plan will be required for developments near water bodies and ensure that such plans do not include alien invasive species.</p>
<p>Objective NHB 6 – Protection of Bats and Bats Habitats Seek to protect bats and their roosts, their feeding areas, flight paths and commuting routes. Ensure that development proposals in areas which are potentially important for bats, including areas of woodland, linear features such as hedgerows, stone walls, watercourses and associated riparian vegetation which may provide migratory/foraging uses shall be subject to suitable assessment for potential impacts on bats. This will include an assessment of the cumulative loss of habitat or the impact on bat populations and activity in the area and may include a specific bat survey. Any assessment shall be carried out by a suitably qualified professional and where development is likely to result in significant adverse effects on bat populations or activity in the area, development will be prohibited or require mitigation and/or compensatory measures, as appropriate.</p>
<p>Objective NHB 7 – Eskers Assess applications for quarrying and other proposed developments that are in close proximity to eskers that have the potential to impact on their landscape, scientific or amenity value.</p>
<p>Objective NHB 8 – Coastal Zone</p>

<p>It is an objective to protect the coastal zone through the following measures: Ensure that conservation works undertaken in coastal areas are in accordance with best practice and measures to protect the coast, the coastal edge and coastal habitats are supported; Seek to prevent the unauthorized removal of sand and related beach material; Protect, enhance and conserve beaches in the County from inappropriate development and seek to maintain the current status of the designated Blue Flag beaches and Green Coasts and to increase the number of beaches and coasts holding this status in the future; Facilitate an Integrated Coastal Zone Management approach to ensure the conservation, management and protection of man-made and natural resources of the coastal zone; Support the preparation of an Integrated Galway Bay Framework Management Plan by all relevant stakeholders to provide for the sustainable and integrated development of the Galway Bay Area in a coordinated manner.</p>
<p>Objective NHB 9 – Inland Waterways Protect the amenity and recreational value of navigable and non-navigable waterways.</p>
<p>Objective NHB 10 – Protection of the Coastal Zone Protect the amenity, character, visual, recreational, economic potential and environmental values of the coast. Ensure that natural coastal defences including sand dunes, beaches and coastal wetlands are not compromised by inappropriate development. Conserve the character, quality and distinctiveness of seascapes.</p>
<p>Objective NHB 11 – Trees, Parkland/Woodland, Stone Walls and Hedgerows Protect important trees, tree clusters and hedgerows within the county and ensure that development proposals take cognisance of significant trees/tree stands. Ensure that all planting schemes use suitable native variety of trees, of Irish provenance. Seek to retain natural boundaries, including stone walls, hedgerows and tree boundaries, wherever possible and replace with a boundary type similar to the existing boundary where removal is unavoidable. Discourage the felling of mature trees to facilitate development and encourage tree surgery rather than felling where possible. All works to be carried out in accordance with the provisions of the Forestry Act, 1946.</p>
<p>Objective NHB12 – Soil/Ground Water Protection Developments shall ensure that adequate soil protection measures are undertaken, where appropriate, including investigations into the nature and extent of any soil/groundwater contamination.</p>
<p>Objective NHB 13 – NPWS & Integrated Management Plans Galway County Council shall seek to engage with and support the National Parks & Wildlife Service to ensure Integrated Management Plans are prepared for all Natura 2000 sites and ensure that that such plans are fully integrated with all land use and water management plans in the county, with the intention that such plans are practical, achievable and sustainable and have regard to all relevant ecological, cultural, social and economic considerations and with special regard to local communities.</p>
<p>Objective NHB 14 – Protection of Riparian Zones Protect the riparian zones of watercourse systems throughout the county, recognizing the benefits they provide in relation to flood risk management and their protection of the ecological integrity of watercourse systems and ensure they are considered in the land use zoning in Local Area Plans.</p>
<p>Policy RA 2 – Protection of sensitive areas Protect the amenity of scenic and environmentally sensitive areas and promote the knowledge and appreciation of the natural amenities of the County.</p>

2.2 Draft Tuam Local Area Plan 2018-2024

2.2.1 Strategic Vision of the Tuam Local Area Plan

To promote Tuam as a thriving vibrant market town, providing a focus for future residential, economic & social development in a sustainable manner, encouraging new development and capitalising on the town's unique historic identity and character, as well as its accessibility, thereby realising Tuam's potential as well as supporting the surrounding rural hinterland.

This is intended to guide the future growth and development of Tuam in a sustainable manner, achieving the strategic objectives set out for the town in the Galway County Development Plan in a way that reflects the existing character and protects the amenity of the area, the surrounding landscape, heritage, environment and improves the quality of life of residents and the local community.

The strategic vision is informed by the following guiding principles:

- Realising the town's potential as the 'Hub Town' as set out in the Galway County Development Plan and attracting the population target established in the Core Strategy up to 2021 and beyond.
- The growth of Tuam for the life of the plan should focus on establishing new sustainable communities adopting a sequential approach to the zoning of residential lands extending outwards from the centre of the Town in line with the Guidelines for Planning Authorities - Sustainable Residential Development in Urban Areas (Cities, Towns & Villages) (2009).
- Ensuring that there are a range of facilities, amenities and supporting services including educational, recreational, religious, social, community and civic requirements for children, youths, adults and the elderly, to serve a growing community, which promote an inclusive and cohesive local community.
- Maintaining a strong and vibrant town centre which attracts new businesses and provides appropriate retailing and service functions to serve the needs of the Town and its surrounding hinterland, in addition to offering a pleasant and attractive environment for shopping, business, recreation and living.
- Capitalising on the compact urban form of Tuam town centre by encouraging greater connectivity for new development which promotes and encourages walking and cycling ensuring that principles of sustainable transportation along with practical design measures become central to the development of new neighbourhoods.
- Promoting sustainable development which minimises negative impacts on the environment and helps to mitigate against the likely effects of Climate Change on present and future generations. Including the promotion of low-carbon technologies, building and water efficiency as well as the use of renewable technologies and sustainable forms of water and wastewater drainage.
- Integration of high quality design into all future development within the Tuam LAP area, promoting innovative, green technologies throughout the plan area which make a positive contribution to the environment.
- Ensuring all new development within the Architectural Conservation Area, reinforces local distinctiveness and creates a sense of place while protecting, conserving and enhancing the historic character of Tuam.
- Encouraging development which is sensitively integrated into the existing landscape which demonstrates an understanding of the intrinsic qualities of the landscape setting and, where possible, promote opportunities to protect and enhance landscape characteristics, features and biodiversity.

2.3 Relationship with other Relevant Plans and Programmes

The Draft LAP must comply with Galway CDP and relevant higher level strategic actions and may, in turn, guide lower level strategic actions. The Draft LAP is subject to a number of high level environmental protection policies and objectives with which it must comply, including those which have been identified as Strategic Environmental Objectives in Section five of Galway County Development Plan 2015-2021. Examples of Environmental Protection Objectives include the aim of the EU Habitats Directive - which is to contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of Member States - and the purpose of the Water Framework Directive - which is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater which, among other things, prevents deterioration in the status of all water bodies and protects, enhances and restores all waters with the aim of achieving good status by 2015.

2.3.1 The National Spatial Strategy

The National Spatial Strategy (NSS) is the national planning framework for Ireland which promotes self-sustaining growth through building up sufficient scale and critical mass through a network of Gateways and Hubs. The Gateways act at national level and the Hubs act at the regional level. The County levels are partnered by the county towns and other larger towns which support the role of smaller towns, villages and rural areas as a focus for business, residential, service and amenity functions.

2.3.2 Regional Planning Guidelines

Ireland is divided into eight regional forward planning regions, Dublin, Midlands, Mid East, Mid-West, South East, South West, West and Border, each with its own regional planning authority composed of Elected Members selected by the constituent local government councils. Regional planning authorities are required, under the Planning and Development (Regional Planning Guidelines) Regulations 2003 (SI No. 175 of 2003), to draw up regional planning guidelines (RPGs), long term strategic planning frameworks, for their relevant region.

The RPGs for the West Region 2010-2022 provide a framework for the long term strategic development of the West Region through setting out goals, policies and objectives in relation to population targets, housing, infrastructure, economic development, environment, amenities, social infrastructure and community development, ensuring the successful implementation of the NSS at regional, county and local level.

2.3.3 Galway County Development Plan 2015-2021

The Galway CDP vision is to "enhance the quality of life of the people of Galway and maintain the County as a uniquely attractive place in which to live, work, invest and visit, harnessing the potential of the county's competitive advantages in a sustainable and environmentally sensitive manner".

2.3.4 Environmental Protection Objectives

The Draft LAP is subject to a number of high level environmental protection policies and objectives with which it must comply. Examples of Environmental Protection Objectives include the aims of the EU Habitats Directive which is to contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of Member States and the purpose of the Water Framework Directive which is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater which, among other things, prevents deterioration in the status of all water bodies and protects, enhances and restores all waters with the aim of achieving good status.

3 Screening for Appropriate Assessment

3.1 Introduction to Screening

3.1.1 Background to Screening

This stage of the process identifies any likely significant effects to European Sites from a project or plan, either alone or in combination with other projects or plans. The screening phase was progressed in the following stages. A series of questions are asked during the Screening Stage of the AA process in order to determine:

- Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of a European Site.
- Whether the project will have a potentially significant effect on a European Site, either alone or in combination with other projects or plans, in view of the site's conservation objectives or if residual uncertainty exists regarding potential impacts.

An important element of the AA process is the identification of the 'conservation objectives', 'Qualifying Interests' and/ or 'Special Conservation Interests' of European Sites requiring assessment. Qualifying Interests (QI's) are the habitat features and species listed in Annex I & II of the EU Habitats Directive (92/43/EEC) for which each European Site has been designated and afforded protection. The 'Special Conservation Interests' (SCI's) are wetland habitats and bird species listed within Annex I & II of the Birds Directive. It is also vital that the threats to the ecological / environmental conditions that are required to support QI's and SCI's are considered as part of the assessment.

Site specific conservation objectives have been designed to define favourable conservation status for a particular habitat or species at that site. According to the European Commission interpretation document 'Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC', paragraph 4.6(3) states:

"The integrity of a site involves its ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the site's conservation objectives."

Favourable conservation status of a habitat is achieved when:

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

The favourable conservation status of a species is achieved when:

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

The screening stage of the Appropriate Assessment takes account of the elements detailed above with regard to the details and characteristics of the project or plan to determine if potential for effects to the integrity of the European Site are likely. The characteristics of the draft plan were constructed through an iterative process, as a result the European Sites which are screened below may differ from those of high level plans, due to refinements in the methods/project details available.

3.1.2 Desktop Studies

The ecological desktop study completed for this Appropriate Assessment of the Draft LAP comprised the following elements:

- Identification of European Sites within 15km with identification of potential pathways links for specific sites (if relevant) greater than 15km from the proposed development study area.;
- Review of the NPWS site synopsis and conservation objectives for European Sites with identification of potential pathways from the proposed development; and
- A series of ecological desk studies were undertaken in December 2017 and January 2018. This included but is not limited to the collation of information on protected species including Bats, Otters, Bird species (including Annex I species), Annex II habitat types, protected and Red Data Book Flora species, invertebrates and amphibians. The results of these studies are included as part of the Appropriate Assessment where they were deemed relevant to the European Sites and their QI's/SCI's.

3.2 Identification of Relevant European Sites

This section of the screening process describes the European Sites which exist within the Zone of Influence of the site. The DoEHLG (2009) Guidance on Appropriate Assessment recommend a 15km buffer zone be considered around the site. A review of all sites within the river basin catchment however, it is foreseen that in the absence of significant hydrological links the characteristics of the Draft LAP (detailed in section 2) will not impose effects beyond the 15km Zone of Influence.

European Sites that occur within 15km of the Draft LAP are listed in Table 3.1 and illustrated in Figure 3.1 below. Details on the specific qualifying features and special conservation interests of each European Site are also identified in Table 3.1. The Lough Corrib SAC is located within the plan boundary, therefore mitigation measures related to water quality will be required. Hydrological links to European Sites beyond 15km will be fed through the Lough Corrib river catchment. Thus, no further hydrologically connected sites need to be considered as the effects will be mitigated at source (see section).

In order to determine the potential for effects from the Draft LAP, information on the qualifying features, known vulnerabilities and threats to site integrity pertaining to any potentially affected European Sites was reviewed. Background information on threats to individual sites and vulnerability of habitats and species that was used during this assessment included the following:

- *Ireland's Article 17 Report to the European Commission "Status of EU Protected Habitats and Species in Ireland" (NPWS, 2013).*
- *Site Synopses.*
- *NATURA 2000 Standard Data Forms.*

The assessment takes consideration of the Site-Specific Conservation Objectives (SSCO's) of each of the sites within the ZOI. Since the conservation objectives for the European Sites focus on maintaining the favorable conservation condition of the QI's/SCI's of each site, the screening process concentrated on assessing the potential effects of the Draft LAP against the QI's/SCI's of each site. The site-specific threats and vulnerabilities of each of the sites are detailed in Appendix I.

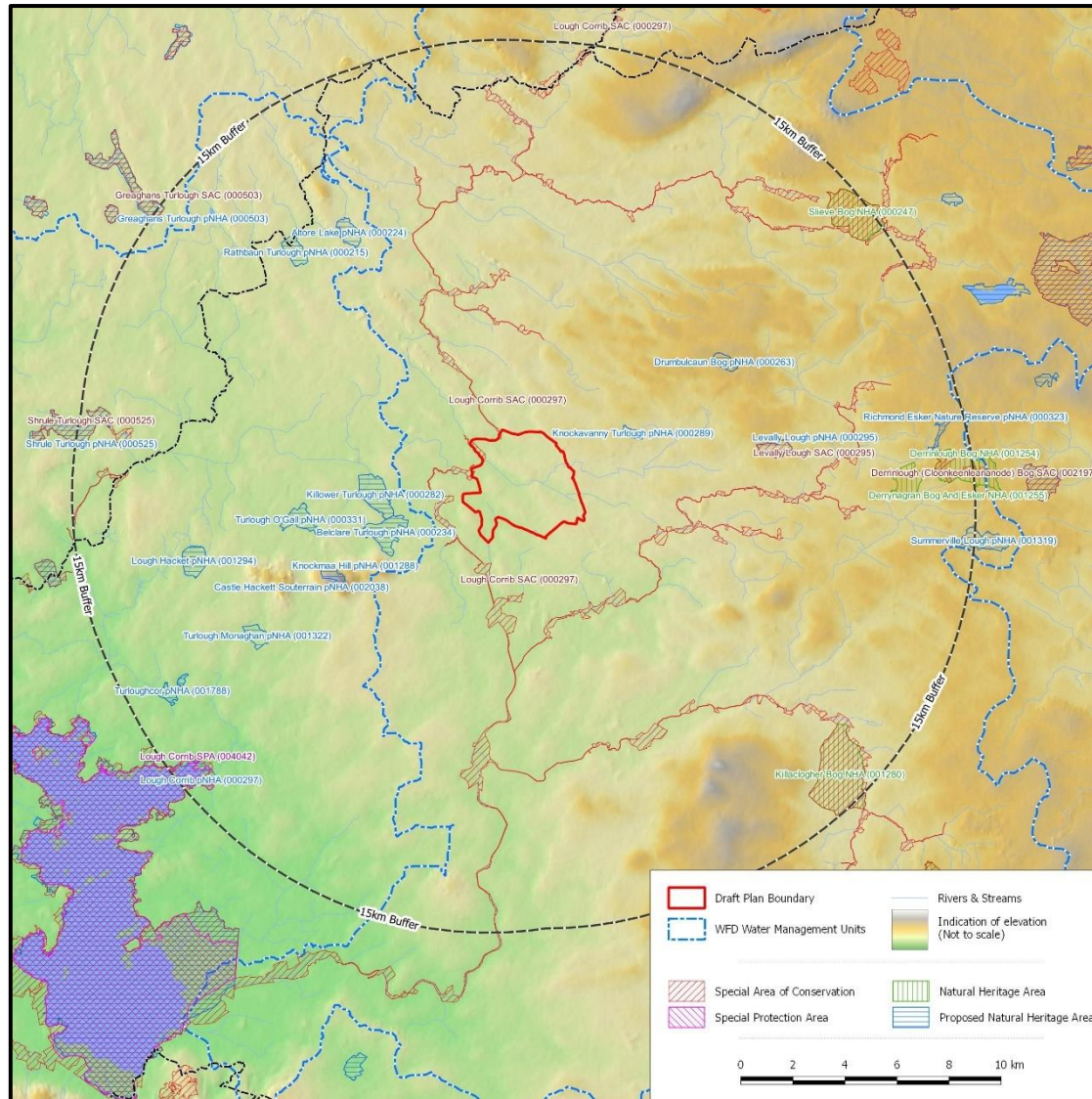


Figure 3.1 European sites within the 15 km ZOI of the Draft LAP boundary

Table 3.1 European Sites within 15 km of the Draft LAP boundary (Listed according to distance); the site-specific threats and vulnerabilities considered for each site are detailed in Appendix I. The conservation objectives for each site were consulted throughout the assessment process.

Site Code	Site Name	Distance	Qualifying Features (Qualifying Interest and Special Conservation Interests)
000297	Lough Corrib SAC ²	0	<p>Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> [3130] Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. [3140] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the <i>Rhynchosporion</i> [7150] Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210] Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220] Alkaline fens [7230] Limestone pavements [8240] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] Bog woodland [91D0] <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092] <i>Petromyzon marinus</i> (Sea Lamprey) [1095] <i>Lampetra planeri</i> (Brook Lamprey) [1096] <i>Salmo salar</i> (Salmon) [1106] <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303] <i>Lutra lutra</i> (Otter) [1355] <i>Drepanocladus vernicosus</i> (Slender Green Feather-moss) [1393] <i>Najas flexilis</i> (Slender Naiad) [1833]</p>
000295	Levally Lough SAC ³	7.05	Turloughs [3180]
000525	Shrule Turlough SAC ⁴	12.88	Turloughs [3180]

² https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000297.pdf

³ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000295.pdf

⁴ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000525.pdf

002197	Derrinlough (Cloonkeenleananode) Bog SAC ⁵	13.53	Degraded Raised Bog [7120]
004042	Lough Corrib SPA ⁶	13.71	Gadwall (<i>Anas strepera</i>) [A051] Shoveler (<i>Anas clypeata</i>) [A056] Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Common Scoter (<i>Melanitta nigra</i>) [A065] Hen Harrier (<i>Circus cyaneus</i>) [A082] Coot (<i>Fulica atra</i>) [A125] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Common Gull (<i>Larus canus</i>) [A182] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999]
000503	Greaghans Turlough SAC ⁷	14.78	Turloughs [3180]

⁵ The NPWS have not set conservation objectives for this site; however, the Activities Requiring Consent (ARC's) are being used in place of the SSCO's by the NPWS. Pers Comm Alison Joyce of the NPWS. The ARC's detail site restoration actions being undertaken on site related to hydrodynamics, water quality control measures and direct vegetation management.

⁶ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004042.pdf

⁷ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000503.pdf

3.3 Assessment Criteria

3.3.1 Is the Plan Necessary to the Management of European Sites?

Under the Habitats Directive, Plans that are directly connected with or necessary to the management of a European Site do not require AA. For this exception to apply, management is required to be interpreted narrowly as nature conservation management in the sense of Article 6(1) of the Habitats Directive. This refers to specific measures to address the ecological requirements of annexed habitats and species (and their habitats) present on a site(s). The relationship should be shown to be direct and not a by-product of the plan, even if this might result in positive or beneficial effects for a site(s).

The primary purpose of the Draft LAP is not the nature conservation management of the sites, but to promote Tuam as a thriving vibrant market town. Therefore, the Draft LAP are not considered by the Habitats Directive to be directly connected with or necessary to the management of European designated sites.

3.3.2 Elements of the Draft LAP with Potential to Give Rise to Effects

The Draft LAP provides for the sustainable development of the Tuam Area. The Development Policies, Objectives and Guidelines relate to the following broad topics:

- Land Use Management
- Residential Development
- Social and Community Development
- Economic Development
- Transportation Infrastructure
- Utilities Infrastructure, Climate Change and Flood Risk Management
- Urban Design and Landscape
- Built and Cultural Heritage
- Natural Heritage & Biodiversity

3.3.3 Identification of Potential Likely Significant Effects

This section documents the final stage of the screening process. It has used the information collected on the sensitivity of each European Site and describes any likely significant effects resulting from the Draft LAP. This assumes the absence of any controls, conditions, or mitigation measures. In determining the potential for significant effects, a number of factors have been taken into account. Firstly, the sensitivity and reported threats to the European Site. Secondly, the individual elements of the Draft LAP and the potential effect they may cause to the site were considered. The elements of the Draft LAP with potential to cause effect to European Sites are presented in Table 3.2 below.

Sites are screened out based on one or a combination of the following criteria:

- where it can be shown that there are significant pathways such as hydrological links between activities of the Draft LAP, and the site to be screened;
- where the site is located at such a distance from Draft LAP that effects are not foreseen;
- where it is that known threats or vulnerabilities at a site cannot be linked to potential impacts that may arise from the Draft LAP.

Table 3.2 Screening of European Sites within 15 km of the Draft LAP boundary

Site Code	European Site	Distance (km)	Potential effects	Pathway for Significant Effects	Potential for In-Combination Effects
000297	Lough Corrib SAC	0	All development within the LAP area has potential to affect the ecological integrity of this site in the absence of mitigation measures. Stage 2 is required.	Yes	Yes
000295	Levally Lough SAC	7.05	<p>Water quality and drainage interactions are the main vectors for potential effects to this site as identified by the NPWS. Lough Levally lies within the Clare[Galway]_SC_030 and feeds into the River Nanny 020 sub-basin. This is upstream of the Tuam LAP area which is in the 030 sub-basin. Therefore, there is no pathway for hydrological effects between the LAP area and the SAC.</p> <p>This site is also sensitive localised management practices such as agricultural grazing. These are localised effects and there are no provisions within the LAP that will introduce any sources for effects such these to the site.</p> <p>As there is no hydrological pathway for effects present and no other sources for potential effects were identified with respect to the conservation objectives and qualifying interests of the site the ecological integrity of the site will not be affected by the implementation of the LAP.</p>	No	No
000525	Shrulle Turlough SAC	12.88	<p>No site-specific threats were identified by the NPWS. However, Turloughs are known to be sensitive to hydrodynamic interactions and alteration of rare and protected vegetation on site.</p> <p>The Schrulle Turlough is in the Black (Shrulle)_SC_010 which is isolated form the Tuam LAP area which is in the Clare[Galway]_SC_030. The Schrulle Turlough feeds into the Mocerha river basin which joins upper lough corrib, while the Tuam LAP feeds into the River Nanny which joins the Clare (Galway) River to the west and flows south. Entering Lough Corrib Lower at the south-east end. Therefore, there is no hydrological pathway for hydrological interactions.</p>	No	No

			As there is no hydrological pathway for effects present and no other sources for potential effects were identified with respect to the conservation objectives and qualifying interests of the site the ecological integrity of the site will not be affected by the implementation of the LAP.		
002197	Derrinlough (Cloonkeenleananode) Bog SAC	13.53	<p>The NPWS have not set conservation objectives for this site; however, the Activities Requiring Consent (ARC's) are being used in place of the SSCOs by the NPWS. Pers Comm Alison Joyce of the NPWS. The ARC's detail site restoration actions being undertaken on site related to hydrodynamics, water quality control measures and direct.</p> <p>The site is hydrologically isolated from the Tuam LAP as it is upstream within the Clare[Galway]_SC_040, feeding into the Levally Stream that meets the Clare(Galway) river to the south of Tuam.</p> <p>The colonization by Downy Birch and conifers poses an ongoing threat to the drier high bog areas which have been recently cleared of conifers and will require some ongoing management to avoid impacts to sensitive areas. Downy birch propagates via seed dispersal and through root or stem cuttings. The Tuam LAP does not provide for any activities or works outside of the LAP boundary which is 13.53km from the site. This distance is sufficient to determine that the spread of downy birch from Tuam to the site is highly unlikely and therefore there is no likely significant effect identified in this regard.</p> <p>The ongoing restoration works are site specific and relate to localised management of habitats and hydrological condition. There is no provision of the plan that will interact with the on-site management of this SAC and there is no hydrological pathway between them. Therefore, there is no likely significant effect for the LAP to adversely affect the ecological integrity of the SAC taking into account the ARC and the Qualifying interests.</p>	No	No
004042	Lough Corrib SPA	13.71	The SSCO for this sites states 'To maintain or restore the favourable conservation condition of the wetland habitat at Lough Corrib SPA as a resource for the regularly-occurring migratory waterbirds that utilize it.'	Yes	Yes

			<p>There are no site-specific threats Identified by the NPWS, therefore the vulnerabilities and sensitivities of the SCI species were used to inform the assessment.</p> <p>Bird species are particularly vulnerable to direct disturbance due to noise and/or vibration. These effects are localised and disturbance effects are foreseen to be low at distances beyond 2km.</p> <p>Hydrological links exist between Tuam and the SPA; however, the NPWS have not identified water quality to be of specific concern for the site. Given the distances involved and the dilution effects of the River Nanny and River Clare(Galway) there are no significant effects foreseen. However, following the precautionary principal the site will be considered in stage 2 to ensure the ecological integrity of the SPA is maintained.</p>		
000503	Greaghans Turlough SAC	14.78	<p>No site-specific threats were identified by the NPWS. However, Turloughs are known to be sensitive to hydrodynamic interactions and alteration of rare and protected vegetation on site.</p> <p>The Greaghans Turlough is in the Black (Shrule)_SC_010 which is isolated form the Tuam LAP area which is in the Clare[Galway]_SC_030. The Greaghans Turlough feeds into the Mocarha river basin which joins upper lough corrib, while the Tuam LAP feeds into the River Nanny which joins the Clare (Galway) River to the west and flows south. Entering Lough Corrib Lower at the south-east end. Therefore, there is no hydrological pathway for hydrological interactions.</p> <p>As there is no hydrological pathway for effects present and no other sources for potential effects were identified with respect to the conservation objectives and qualifying interests of the site the ecological integrity of the site will not be affected by the implementation of the LAP.</p>	No	No

3.4 Other Plans and Programs

Article 6(3) of the Habitats Directive requires an assessment of a plan or project to consider other plans or programmes that might, in combinations with the plan or project, have the potential to adversely impact upon European Sites. Table 3.3 outlines plans or projects that may interact with the Draft LAP to cause in-combination effects to European Sites. The plans or projects are listed according to a spatial hierarchy of National, Regional/Local Projects and Plans, as follows:

- National Spatial Strategy 2002-2020
- Grid 25
- Energy Policy framework 2007-2020, Governments White Paper
- Irish Water's Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan 2014-2016
- Regional Planning Guidelines for the West Region 2010 - 2022
- Galway City Area Transport Strategy 2016
- Smarter Travel – A Sustainable Transport Future – A New Transport Policy for Ireland 2009 – 2020 (2009)
- Ireland's First National Cycle Policy Framework (2009)
- Mayo County Development Plan 2014-2020
- Roscommon County Development Plan 2016-2022
- Offaly County Development Plan 2014-2020
- North Tipperary County Development Plan 2010 – 2016(as extended)
- Clare County Development Plan 2017-2023
- Galway City Council Development Plan 2017-2023
- Co. Galway Wind Energy Strategy
- Headford Local Area Plan 2015-2021
- Portumna Local Area Plan 2016-2022
- Ballinasloe Local Area Plan 2015-2021
- Athenry LAP 2012-2018
- Clifden Local Area Plan 2009-2020 (extended 2014)
- Gaeltacht LAP 2008-2018 (Amended 25th March 2013)
- Oranmore Local Area Plan 2012-2018
- Gort Local Area Plan 2013-2019
- Ballygaddy Road SHD Lodged Dec 2017

Given the uncertainties that exist with regard to the scale and location of developments facilitated by the Draft LAP, it is recognised that the identification of in-combination effects is limited and that the assessment of in-combination effects will need to be undertaken in a more comprehensive manner at the project-level. The assessment considers in combination effects of other plan level strategies, as projects that arise from the plan and other

As the Draft LAP have to comply with the policies and objectives of Galway CDP as well as higher-level plans (detailed above) the potential for effects to European Sites are thought to be very low. Therefore, in-combination effects to the integrity of European Sites are not seen to be likely.

Table 3.3 Plans or projects within the Zone of Influence of the Draft LAP that may have in-combination effects European Sites

Plan or project	Status	Overview	Possible significant effects from plan or project	Is there a risk of in-combination effects	Possible significant in-combination effects
National Spatial Strategy 2002-2020	Published	Objectives of the NSS are to achieve a better balance of social, economic and physical development across Ireland, supported by more effective planning. Objectives in relation to the CDP are discussed above.	This plan was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.	Potential in-combination effect may arise where there is a requirement to provide for new infrastructure or where new development occurs. Provision of infrastructure/development may result in: Habitat loss Alteration of hydrology Deterioration in water quality Disturbance during construction / operation.	No, The mitigation measures contained within both plans prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant.
Grid 25	Published	Grid25 is a high-level strategy outlining how EirGrid intends to undertake the development of the electricity transmission grid in the short, medium and longer terms, to support a long-term sustainable and reliable electricity supply. The Grid25 strategy thereby seeks to implement the provisions of the 2007 Government White Paper on Energy - "Delivering a Sustainable Energy Future for Ireland" in terms of development of electricity transmission infrastructure. The Grid25 Implementation Programme (IP) is a practical strategic overview of how the early stages of Grid25 are intended to be implemented.	This plan was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.	Potential in-combination effects may arise where there is a requirement to provide for new electrical infrastructure or where associated development occurs. Provision of infrastructure/development may result in: Habitat loss Alteration of hydrology Deterioration in water quality Disturbance during construction / operation.	No, The mitigation measures contained within both plans prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant
Energy Policy framework 2007-2020,	Published	This policy states that the Government is committed to	This plan was subject to SEA and AA which incorporated robust	Potential in-combination effects may arise where there is a	No, The mitigation measures

<p>Governments White Paper</p>		<p>delivering a significant growth in renewable energy as a contribution to fuel diversity in power generation with a 2020 target of 33% electricity consumption</p>	<p>mitigation measures into the plan itself to minimise effects.</p>	<p>requirement to provide for new wind energy infrastructure or where new associated development occurs. Provision of infrastructure/development may result in: Habitat loss Alteration of hydrology Deterioration in water quality Disturbance during construction / operation</p>	<p>contained within both plans prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant.</p>
<p>Irish Water's Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan 2014-2016</p>	<p>Published</p>	<p>This Water Services Strategic Plan sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. It details current and future challenges which affect the provision of water services and identifies the priorities to be tackled in the short and medium term.</p>	<p>This plan was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.</p>	<p>Potential in-combination effects may arise where there is a requirement to provide for new water and waste water infrastructure and capacity. Meeting additional potable water demands and waste water treatment demands arising from the proposed increase in population has the potential to adversely affect, in the case of abstractions from and effluent discharges to surface waters, the ecological status of surface waters and, in the case of groundwater abstractions, the quantitative status of groundwaters. Such demands would occur in-combination with those in adjoining counties. Adverse effects on the ecological status of surface waters and on the quantitative status of groundwaters would have the potential to impact upon protected species and habitats.</p>	<p>No, The mitigation measures contained within both plans prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant.</p>

				Provision of infrastructure and increases in capacity may result in: Habitat loss Alteration of hydrology Deterioration in water quality Disturbance during construction / operation	
Regional					
Regional Planning Guidelines for the West Region 2010 - 2022	Published	The RPGs for the West Region 2010-2022 provide a framework for the long term strategic development of the West Region through setting out goals, policies and objectives in relation to population targets, housing, infrastructure, economic development, environment, amenities, social infrastructure and community development, ensuring the successful implementation of the NSS at regional, county and local level.	This plan was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.	Potential in-combination effects may arise where there is a requirement to provide for new infrastructure or where new development occurs. Provision of infrastructure/development may result in: Habitat loss Alteration of hydrology Deterioration in water quality Disturbance during construction / operation	No, The mitigation measures contained within both plans prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant.
Galway City Area Transport Strategy 2016 Smarter Travel – A Sustainable Transport Future – A New Transport Policy for Ireland 2009 – 2020 (2009) Ireland’s First National Cycle Policy Framework (2009)	Published	Outlines policies for how sustainable travel and transport systems can be achieved to create a connected city region driven by smarter mobility.	These plans was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.	Potential for in-combination effects may arise where there is a requirement to provide for new transport infrastructure, or increase capacity of existing infrastructure/services. Provisions for the development of transport infrastructure/associated development may potentially result in: Habitat loss Alteration of hydrology Deterioration in water quality	No, The mitigation measures contained within these plans and the Draft LAP itself prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant.

				Disturbance during construction / operation	
County					
<p>Mayo County Development Plan 2014-2020 Roscommon County Development Plan 2016-2022 Offaly County Development Plan 2014-2020 North Tipperary County Development Plan 2010 – 2016(as extended) Clare County Development Plan 2017-2023 Galway City Council Development Plan 2017-2023 Galway County Development Plan 2015-2021</p>	Published	Overall strategies for the proper planning and sustainable development of the administrative area of the relevant County Authorities.	These plans were subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.	Galway shares its boundary with a number of counties. Furthermore, a number of European sites are located in more than one county. Similar development plans are in existence throughout the region, accordingly these plans acting alone or in combination can have a cumulative impact on European sites located within County Galway. Provision of infrastructure or where new development occurs may result in: Habitat loss Alteration of hydrology Deterioration in water quality Disturbance during construction / operation	No, The mitigation measures contained within these plans and the Draft LAP itself prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant.
Co. Galway Wind Energy Strategy	Published	The Strategy supports a plan led approach to wind energy development in County Galway and sets out a) Strategic Areas, b) Acceptable in Principle Areas, and c) areas Open for Consideration.	This plan was subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.	Potential in-combination impacts may arise where there is a requirement to provide for new infrastructure. Provision of infrastructure may result in: Habitat loss Alteration of hydrology Deterioration in water quality Disturbance during construction / operation	No, The mitigation measures contained within both plans prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant.

Local					
<p>Headford Local Area Plan 2015-2021 Portumna Local Area Plan 2016-2022 Ballinasloe Local Area Plan 2015-2021 Athenry LAP 2012-2018 Clifden Local Area Plan 2009-2020 (extended 2014) Gaeltacht LAP 2008-2018 (Amended 25th March 2013) Oranmore Local Area Plan 2012-2018 Gort Local Area Plan 2013-2019</p>	<p>Published</p>	<p>Overall strategies for the proper planning and sustainable development of the administrative area of the relevant Local Authorities.</p>	<p>These plans were subject to SEA and AA which incorporated robust mitigation measures into the plan itself to minimise effects.</p>	<p>Galway and the area around Tuam has a number of local areas that have had Local Area Plans created for them to facilitate cohesive and sustainable development within the county. Provision of infrastructure or where new development occurs may result in: Habitat loss Alteration of hydrology Deterioration in water quality Disturbance during construction / operation</p>	<p>No, The mitigation measures contained within these plans and the Draft LAP itself prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant.</p>
<p>Ballygaddy Road SHD</p>	<p>Application Lodged Dec 2017</p>	<p>This Strategic Housing Development has been lodged with An Bord Pleanála. This project will be subject to compliance with the existing development framework following the SHD process in accordance with national legislation.</p>	<p>This project will be subject to an EIA and project level AA.</p>	<p>If it is granted, it will have to demonstrate compliance with the EU Habitats and Birds Directives. It must be assumed that the project will only go ahead if it demonstrates its ability to comply.</p>	<p>No, The mitigation measures contained within these plans and the Draft LAP itself prioritise the avoidance of effects where possible and provide measures to minimise effects. In combination effects from project which arise from the implementation of these plans will not be significant.</p>

3.5 Conclusion

The likely effects that could arise from the Draft Tuam Local Area Plan 2018-2021 have been examined in the context of a number of factors that could potentially affect the integrity of any European Site. On the basis of the findings of this Screening for AA, it is concluded that the LAP:

- is not directly connected with or necessary to the management of a European Site; and
- may have significant impacts on any European Site.

Therefore, applying the precautionary principle and in accordance with Article 6(3) of the Habitats Directive, a Stage 2 AA is required (see Section 4 of this report).

4 Stage 2 Appropriate Assessment

4.1 Introduction

The main objective of this stage (Stage 2) in the AA is to determine whether the Draft LAP would result in significant adverse impacts on the integrity of any European Site with respect to the site's structure, function, and/or conservation objectives.

The Stage 1 Screening presented above has identified two European Sites with potential to be affected by the Draft LAP (see Table 4.1). Therefore, taking a precautionary approach, Stage 2 AA is required. The potential adverse effects considered at this stage will either be effects occurring as a result of the implementation of the Draft LAP alone or in-combination with other plans, programmes, and/or projects.

Detailed information relevant to the sites that has been reviewed to inform the AA includes the following:

- *NPWS Site Synopsis*
- *Natura 2000 Standard Data Form*
- *Conservation Objectives and supporting documents*

Table 4.1 European Sites Potentially affected by the Draft LAP.

Site Code	European Site	Distance (km)
000297	Lough Corrib SAC	0
004042	Lough Corrib SPA	13.71

4.2 Characterization of European Sites Potentially Affected

The Draft LAP area has a European Site within its boundaries. The Appropriate Assessment Screening identified seven European Sites with pathway receptors for potential impacts. Therefore, it is necessary to characterize each of these sites and the sensitivities of their qualifying interests, special conservation interests or their conservation objectives.

Table 4.2 characterizes each of the qualifying interests of the two European Sites brought forward from stage 1 (Table 4-1). These are described in context of each of the sites vulnerabilities in **Appendix I**. Each of these site characterizations were derived from the NPWS website⁸.

⁸ NPWS (2016), last accessed 20th March 2017; <https://www.npws.ie/protected-sites>

Table 4.2 Characterisation of the qualifying interests/special conservation interests of each of the European Sites potentially impacted upon by the Draft LAP

Site Code	Site Name	Distance (km)	Qualifying features (Qualifying Interests or Special Conservation Interests)
000297	Lough Corrib SAC	0	<p>Active raised bogs [7110] Alkaline fens [7230] Austropotamobius pallipes (White-clawed Crayfish) [1092] Bog woodland [91D0] Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150] Drepanocladus vernicosus (Slender Green Feather-moss) [1393] Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] Lampetra planeri (Brook Lamprey) [1096] Limestone pavements [8240] Lutra lutra (Otter) [1355] Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Najas flexilis (Slender Naiad) [1833] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130] Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110] Petrifying springs with tufa formation (Cratoneurion) [7220] Petromyzon marinus (Sea Lamprey) [1095] Rhinolophus hipposideros (Lesser Horseshoe Bat) [1303] Salmo salar (Salmon) [1106] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]</p>
004042	Lough Corrib SPA	13.71	<p>Gadwall (Anas strepera) [A051] Shoveler (Anas clypeata) [A056] Pochard (Aythya ferina) [A059] Tufted Duck (Aythya fuligula) [A061] Common Scoter (Melanitta nigra) [A065] Hen Harrier (Circus cyaneus) [A082]</p>

Site Code	Site Name	Distance (km)	Qualifying features (Qualifying Interests or Special Conservation Interests)
			Coot (<i>Fulica atra</i>) [A125] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Common Gull (<i>Larus canus</i>) [A182] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999]

4.3 Identifying and Characterising Potential Significant Effects

The following parameters are described when characterising impacts (following CIEEM (2016), EPA (2002) and NRA (2009)):

Direct and Indirect Impacts - An impact can be caused either as a direct or as an indirect consequence of a proposed development.

Magnitude - Magnitude measures the size of an impact, which is described as high, medium, low, very low or negligible.

Extent - The area over which the impact occurs – this should be predicted in a quantified manner.

Duration - The time for which the effect is expected to last prior to recovery or replacement of the resource or feature.

- Temporary: Up to 1 Year;
- Short Term: The effects would take 1-7 years to be mitigated;
- Medium Term: The effects would take 7-15 years to be mitigated;
- Long Term: The effects would take 15-60 years to be mitigated;
- Permanent: The effects would take 60+ years to be mitigated.

Likelihood – The probability of the effect occurring taking into account all available information.

- Certain/Near Certain: >95% chance of occurring as predicted;
- Probable: 50-95% chance as occurring as predicted;
- Unlikely: 5-50% chance as occurring as predicted;
- Extremely Unlikely: <5% chance as occurring as predicted.

The Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines for ecological impact assessment (CIEEM 2016) define an ecologically significant impact as an impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographic area. The integrity of a site is the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified (CIEEM, 2016).

The Habitats Directive requires the focus of the assessment at this stage to be on the integrity of the site as indicated by its Conservation Objectives. It is an aim of NPWS to draw up conservation management plans for all areas designated for nature conservation. These plans will, among other things, set clear objectives for the conservation of the features of interest within a site.

Site-specific conservation objectives (SSCOs) have been prepared for a number of European Sites. These detailed SSCO's aim to define favourable conservation condition for the qualifying habitats and species at that site by setting targets for appropriate attributes which define the character habitat. The maintenance of the favourable condition for these habitats and species at the site level will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a species can be described as being achieved when: 'population data on the species concerned indicate that it is maintaining itself, and the natural range of the species is neither being reduced or likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.'

Favourable conservation status of a habitat can be described as being achieved when: 'its natural range, and area it covers within that range, is stable or increasing, and the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and the conservation status of its typical species is favourable.'

Generic Conservation Objectives for cSACs have been provided as follows:

- *To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.*

One generic Conservation Objective has been provided for SPAs as follows:

- *To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*

4.3.1 Identification of Potential Effects

Potential impacts from the LAP which have, alone and/or in combination, been identified to result in adverse effects upon the QI's/SCI's or integrity of European Sites. Ecological impact assessment of potential impacts on European Sites is conducted utilizing a standard source-pathway-resource process; where, all three elements of this mechanism must be in place to establish an effect arising.

As outlined in the European Commission Environment DG document "*Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*", impacts that could potentially occur through the implementation of the LAP can be categorised under a number of headings:

- Loss / reduction of habitat area (e.g. due to the development of new projects)
- Disturbance to Key Species (e.g. increased public access to protected sites, or during the construction phase of infrastructure projects)
- Habitat or species fragmentation
- Reduction in species density
- Changes in key indicators of conservation value such as decrease in water quality / quantity (e.g. through inadequate wastewater treatment, run-off of pollutants during construction and operation of developments, agricultural runoff)

Each of these elements are considered below with reference to the QI's/SCI's of all of the European Sites brought forward from Stage 1 of the AA process. A detailed analysis of each sites individually can be found below in **Table 4.3**.

The Draft LAP contributes towards the framework for sustainable development within Tuam. The LAP also prescribes particular locations (site specific) of developments of infrastructure. Overall, the LAP, in combination with other plans and programmes, underpins the development of housing, waste water treatment, tourism, communities and the town center with supporting transport, water, energy, and communication infrastructure within the Tuam area.

4.3.1.1 Reduction of Habitat Area

There are no provisions within the Draft LAP to reduce the area or quality of any European Site. The policies and objectives of the plan will aim to support the protection of the River Nanny, River Clare and the Suileen River (Objective NH 5). There are a number of policies and objectives (detailed below) the ensure the protection of habitat condition of aquatic systems by protecting water quality.

There will be no effects to the reduction of Habitat Area of any European Site as a result of the implementation of the plan.

4.3.1.2 Fragmentation

Habitat fragmentation is an issue for biodiversity, the Tuam area is already a highly urbanised area with limited available habitat. The plan contains policies and objectives that focus on the protection of habitat connectivity and ensure that no barriers to the free movement of protected species are introduced.

- Objective NH 5 – Biodiversity & Ecological Networks
- Objective NH 2 – Protected Habitats and Species
- Objective WQ 2 – Groundwater & Aquifers

4.3.1.3 Disturbance to Key Species

The Lough Corrib SPA is designated for a number of bird species which are sensitive to disturbance effects; however, the distance between the Tuam LAP area and SPA negate the potential effects. The Lough Corrib SAC is designated for species and habitat features that are sensitive to hydrological condition. These effects are mitigated for through the following policies and objectives listed below in section 4.3.1.4.

None of the habitat features that the Lough Corrib SAC has been designated for have been identified within the LAP boundary in the maps provided by the NPWS. Similarly, there are no spawning grounds of the aquatic species identified within the River Nanny that runs through Tuam. There is potential for the QI species to be present on site. The Tuam area is highly urbanised, the LAP sets out a development framework for the development of the area in line with the existing condition. Therefore, the operational phase is expected to be consistent with the current receiving environment. Anthropogenic disturbance to key species will be associated with construction phase elements of projects which are temporary effects. There are no known lesser horseshoe roosts within 4.2km of the LAP which is their known distribution around the roost, therefore no disturbance effects are likely to this species. In general, for bats the plan contains an objective to maintain existing flight paths and ensure fragmentation of habitat is avoided.

4.3.1.4 Changes of Indicators of Conservation Value

Water quality is a key indicator of conservation value will be mitigated through the following objectives:

Measures from the Draft Local Area Plan

- Objective NH 6 – Water Resources
- Objective NH 7 – Wetlands, Springs, Rivers and Streams
- Objective NH 8 – Riparian Zones
- Objective DS 7 – Flood Risk Management and Assessment
- Objective DS 8 – Climate Change & Adaptation
- Objective LU 8 – Constrained Land Use Zone (CL)
- Objective LU 9 – Flood Risk Areas and Land Use Zones (Refer to Map 1, 2 and Map 5)
- Policy FL 1 – Flood Risk Management
- Objective FL 1 – Flood Risk Management and Assessment
- Objective FL 2 – Flood Zones and Appropriate Land Uses
- Objective FL 3 – Structural and Non-Structural Risk Management Measures in Flood Vulnerable Zones
- Objective FL 4 – Flood Risk Assessment for Planning Applications and CFRAMS
- Objective FL 5 – Strategic Flood Risk Assessment and Flood Risk Assessments
- Objective FL 6 – Environmental Impact Assessment/Statement (EIA/EIS) & Flood Risk Assessment
- Objective FL 7 – Pluvial and Groundwater Flood Risk
- Objective FL 8 – New and Emerging Data
- Objective FL 9 – Water Bodies and Watercourses
- Objective FL 10 – Arterial Drainage Scheme
- Objective FL 11 – Improvement &/Or Restoration of Natural Flood Risk Management Functions
- DM Guideline FL 1 – Flood Zones and Appropriate Land Uses
- DM Guideline FL 2 – Structural and Non-Structural Risk Management Measures in Flood Vulnerable Zones
- DM Guideline WQ 1 – Water Bodies and Watercourses

Measures from the Galway County Development Plan as varied

- Policies NHB 4, FL 1, FL 2, FL 3, FL 4 and FL 5
- Objectives NHB 3, NHB12, NHB 14, EQ1, AFF 5, AFF 6, AFF9, CS 4, WS 1, WS 2, WS 7, WS 9, WS 11, WW 1, WW 7, FL 1, FL 2, FL 3, FL 4, FL 5, FL 6, DS 7, DS 8, DS 9 and RA 1
- DM Standard 27: Surface Water Drainage & Flooding

Table 4.3 Characterisation of Potentially Impacted from the LAP to the Qualifying Interests/Special Conservation Interests of the European Sites brought forward from Stage 1; the assessment was made with regard to the SSCO's of the sites as provided by the NPWS

Site Code	Site Name	Distance (km)	Qualifying features (Qualifying Interests or Special Conservation Interests)	Characterization of Potential Effects	Potential Significant Effects	Mitigation Required
000297	Lough Corrib SAC	Within	<p>Active raised bogs [7110] Alkaline fens [7230] Austropotamobius pallipes (White-clawed Crayfish) [1092] Bog woodland [91D0] Calcareous fens with Cladium mariscus and species of the Caricion davalliana [7210] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150] Drepanocladus vernicosus (Slender Green Feather-moss) [1393] Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] Lampetra planeri (Brook Lamprey) [1096] Limestone pavements [8240] Lutra lutra (Otter) [1355]</p>	<p>The main threats to the quality of this site are from water polluting activities resulting from intensification of agricultural activities on the eastern side of the lake, uncontrolled discharge of sewage which is causing localised eutrophication of the lake, and housing and boating development, which is causing the loss of native lakeshore vegetation. Objectives NH6, 7 and 8 accounts for these effects.</p> <p>None of the designated habitat features are recorded within the LAP area according to the maps within the SSCO's. These features are hydrologically sensitive however, these effects are mitigated for through the following policies and objectives listed above in section 4.3.1.4.</p> <p>There are no known lesser horseshoe roosts within 4.2km of the LAP which is their known distribution around the roost, therefore no disturbance effects are likely to this species.</p> <p>The Site Synopsis identified a specific threat to the site is as a result of effects due to residential development. Objective NH13 was inserted into the Plan to ensure that the plan will not have any adverse effects on the ecological integrity of any European Sites.</p> <p>Objective NH 13 - Construction Environmental Management Plan</p>	Yes	Yes

Site Code	Site Name	Distance (km)	Qualifying features (Qualifying Interests or Special Conservation Interests)	Characterization of Potential Effects	Potential Significant Effects	Mitigation Required
			<p>Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Najas flexilis (Slender Naiad) [1833] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130] Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110] Petrifying springs with tufa formation (Cratoneurion) [7220] Petromyzon marinus (Sea Lamprey) [1095] Rhinolophus hipposideros (Lesser Horseshoe Bat) [1303]</p>	<p>All significant developments such as large residential development projects will be required to produce a Construction Environmental Management Plan (CEMP) to, inter alia, ensure the conservation of ecological features designated under the EU Habitats Directive 1992 (92/43/EEC) and the Birds Directive (2009/147/EC). The CEMP will detail methods relating to the control of potential impacts such as:</p> <p>DM Guideline NH 1 – Control of Invasive Species & Bio-Security Measures Ensure larger developments include the relevant documentation with their planning application to demonstrate the bio-security measures proposed to ensure that invasive species will not be introduced and/or spread within the development site.</p> <p>Objective NH 6 – Water Resources Protect all water resources in the plan area, including rivers, streams, springs, wetlands, surface waters and groundwater quality, in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the Western River Basin Management Plan 2009-2015 (and subsequent National River Basin Management Plan) and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same). Support the application and implementation of a catchment planning and management approach to development and conservation, including the</p>		

Site Code	Site Name	Distance (km)	Qualifying features (Qualifying Interests or Special Conservation Interests)	Characterization of Potential Effects	Potential Significant Effects	Mitigation Required
			<p>Salmo salar (Salmon) [1106] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]</p>	<p>implementation of Sustainable Drainage System techniques for new development in the plan area.</p> <p>Objective NH 7 – Wetlands, Springs, Rivers and Streams Seek to preserve the wetlands of Tuam, identify and protect natural springs, streams/rivers, where possible and ensure that any plans/projects with the potential to adversely affect groundwater, springs, streams or rivers, identify the presence of these features and adequately assess the impacts to them. Protect springs identified on Ordnance Survey mapping or any springs newly identified during project assessment, so that they are not impeded.</p> <p>Objective NH 8 – Riparian Zones Protect the riparian zones of watercourse systems throughout the plan area, recognising the benefits they provide in relation to flood risk management and in relation to the ecological integrity of watercourse systems. This will include a general 10 metre protection buffer from rivers within the plan area as measured from the near river bank, (this distance may be increased and decreased on a site by site basis, as appropriate).</p> <p>Objective DS 5 – Service Led Development Development under the plan shall be preceded by sufficient capacity in the public waste water infrastructure and potable water infrastructure.</p> <p>Objective NH 5 – Biodiversity & Ecological Networks</p>		

Site Code	Site Name	Distance (km)	Qualifying features (Qualifying Interests or Special Conservation Interests)	Characterization of Potential Effects	Potential Significant Effects	Mitigation Required
				<p>Support the protection of biodiversity and ecological connectivity within the plan area including woodlands, trees, hedgerows, roadside verge vegetation, rivers, streams, natural springs, wetlands, stonewalls, fens, geological and geo-morphological systems, other landscape features and associated wildlife, where these form part of the ecological network. Seek to retain and incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive:</p> <ul style="list-style-type: none"> a) Seek to retain and incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors and stepping stones. b) Protect and enhance the water quality and ecology of the River Nanny, the River Clare and the Suileen River in the plan area and their function of as ecological corridors, by maintaining the existing banks and channel and ensuring that new developments are generally set back at least 10m as measured from the near river bank (this distance may be increased and decreased on a site by site basis, as appropriate). c) Maintain and enhance biodiversity through the appropriate planting of native trees, shrubs and hedgerows indigenous to the area and of 		

Site Code	Site Name	Distance (km)	Qualifying features (Qualifying Interests or Special Conservation Interests)	Characterization of Potential Effects	Potential Significant Effects	Mitigation Required
				<p>Irish provenance in public and private areas and in new developments.</p> <p>d) Seek to prevent the introduction of imported ash trees/plants or other such species into the plan area in line with the Plant Health Directive and any updated legislation.</p> <p>Objective NH 2 – Protected Habitats and Species Support the protection of protected habitats and species listed in the annexes to the EU Habitats Directive 1992 (92/43/EEC) and the Birds Directive (2009/147/EC) and regularly occurring-migratory birds and their habitats, species protected under the Wildlife Acts and the Flora Protection Order. This includes the protection of the barn owl, otters, salmon, brook lamprey, bats and their roosts and the maintenance of woodland, hedgerows, tree lines, waterways and ecological networks and corridors which serve as feeding areas, flight paths and community routes for bats.</p> <p>Objective WQ 2 – Groundwater & Aquifers Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010) as amended by the European Communities Environmental Objectives (Groundwater) (Amendment) Regulations 2012 or any other updates. In addition, protect the regionally important aquifer that underlays the plan area from risk of</p>		

Site Code	Site Name	Distance (km)	Qualifying features (Qualifying Interests or Special Conservation Interests)	Characterization of Potential Effects	Potential Significant Effects	Mitigation Required
				environmental pollution and have regard to any groundwater protection schemes and groundwater source protection zones where data has been made available by the Geological Survey of Ireland.		
004042	Lough Corrib SPA	13.71	Gadwall (<i>Anas strepera</i>) [A051] Shoveler (<i>Anas clypeata</i>) [A056] Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Common Scoter (<i>Melanitta nigra</i>) [A065] Hen Harrier (<i>Circus cyaneus</i>) [A082] Coot (<i>Fulica atra</i>) [A125] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Common Gull (<i>Larus canus</i>) [A182] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999]	<p>Bird species are particularly vulnerable to direct disturbance due to noise and/or vibration. These effects are localised and disturbance effects are foreseen to be low at distances beyond 2km.</p> <p>The hydrological link between the sites presents a risk of effects to the Wetland and Waterbirds [A999] habitat quality. However, as demonstrated above there are numerous objectives within the plan to ensure there are no effects to hydrological condition. Therefore, no effects to the ecological integrity of this site are identified.</p>	No	No

5 Mitigation Measures

5.1 Introduction

This section outlines measures that have been incorporated into the Draft LAP in order to mitigate against potential effects to European Sites as identified above.

The Draft LAP was prepared in an iterative manner whereby Galway Council prepared the first draft of the LAP which was provided to CAAS who made suggestions for integration into the Plan. Galway County Council then reviewed the LAP to take account of the SEA/AA suggestions and sent the following revision back to CAAS for comment. A similar process was conducted with the NPWS and EPA, who's consideration and concerns were incorporated into the Draft LAP. The Draft Tuam LAP, as detailed above, is part of the hierarchy of planning development under the higher-level Galway CDP and therefore all measures, development principals, policies, aims and objectives contained within it must be adhered to by the Draft LAP.

In order to demonstrate that there will be no adverse effects from the LAP, mitigation measures have been devised and incorporated into the text of the Plan, described below. The measures that have been incorporated with those proposed by the SEA Environmental Report and with other relevant plans and programmes such as the programme of measures proposed by the Transport Strategy for Galway and the River Basin Management Plans along with their associated SEAs.

Based on the types of effects identified above, the mitigation measures presented below are split into three main categories, Measures to Protect Habitats and Species, Protection of Soil Quality and Measures to Protect Water Quality. As mentioned previously, the Draft LAP is a lower tier Plan of the Galway CDP, therefore environmental protection measures included in the Galway CDP must also be adhered to during developments of the Draft LAP.

5.2 Measures incorporated into the text of Draft Tuam LAP

5.2.1 Mitigation

As outlined in Section 4.3 of this assessment a number of significant effects that could impact on habitats and species have been identified. No zoning or specific projects are proposed by the Draft LAP that would result in direct effects on any European Site.

Measures have been included in the policies and objectives of the Draft LAP that will ensure these impacts are avoided. The Draft LAP sits within a hierarchy of development plans in County Galway, it is a lower tier plan under the Galway County Development Plan 2015 – 2021, therefore mitigation measures included in the Galway CDP also apply to development and land use in the Draft LAP area.

A number of objectives were added to the plan as a result of the AA process. The AA identified a specific threat to a European Site as a result of effects due to residential development. Objective NH13 was inserted into the Plan to ensure that the plan will not have any adverse effects on the ecological integrity of any European Sites.

As a result of the AA and SEA of the Draft LAP, a number of policies and objectives have been developed and existing policies amended to strengthen the protection afforded to European Sites. Amongst other things, these policies and objectives will ensure that appropriate assessments are carried out on all developments. This will ensure that project level effects, which cannot be predicted at the Plan level, will be mitigated and impacts on protected sites through inappropriate development will be avoided. The Draft LAP will also comply with measures listed in Section 9 (Table 9.1) of then SEA Environmental Report, which will further mitigate potential adverse effects on the environment. Those measures relevant to the safeguarding all European Sites are reproduced in Table 5.1.

Table 5.1 Measures detailed in Table 9.2 of the SEA Environmental Report relevant to the protection of European Sites

Environmental Component	Likely Significant Effect, if unmitigated	Mitigation Measures, including:
Biodiversity and Flora and Fauna	<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> • Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species. 	<p>Measures from the Draft Local Area Plan</p> <ul style="list-style-type: none"> • Objective DS 3 – European Sites Network and Habitats Directive Assessment • Objective CF 9 – Amenity Network • Objective ED 6 – Tourism Development • Objective UD 4 – Green Network and Landscaping • Policy NH 1 – Natural Heritage, Landscape and Environment • Objective NH 1 – European Sites • Objective NH 2 – Protected Habitats and Species • Objective NH 3 – Natural Heritage Areas and Proposed Natural Heritage Areas • Objective NH 4 – Impact Assessments • Objective NH 5 – Biodiversity & Ecological Networks • Objective NH 6 – Water Resources • Objective NH 7 – Wetlands, Springs, Rivers and Streams • Objective NH 8 – Riparian Zones • Objective NH 9 – Trees and Hedgerows • Objective NH 10 – Geological and Geo-Morphological Systems • Objective NH 11 – Control of Invasive and Alien Species • Objective NH 12 – Consultation with Environmental Authorities • DM Guideline NH 1 – Control of Invasive Species & Bio-Security Measures • Objective NH 13 - Construction Environmental Management Plan <p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Policies NHB 1, NHB 2, NHB 3, NHB 5, NHB 6 and NHB 7 • Objectives DS 6, DS 9, EQ1, EQ 4, ICT 1, NHB 1, NHB 2, NHB 4, NHB 5, NHB 6, NHB 7, NHB 11, NHB 13, AFF 6 and DS10 <p>Also see various measures providing for populations in rural and supporting areas.</p>
	Potential interactions if effects upon environmental vectors such as water and air are not mitigated	<p>Measures from the Draft Local Area Plan</p> <ul style="list-style-type: none"> • Objective TI 7 – Noise <p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Policy CC 8 • Objectives TI 12 and EQ 2 <p>Also see measures related to soil, water quality, flooding, waste water treatment and drinking water supply and quality.</p>

Environmental Component	Likely Significant Effect, if unmitigated	Mitigation Measures, including:
Soils	Damage to the hydrogeological and ecological function of the soil resource	<p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Objective NHB12 Soil/Ground Water Protection • Objective NH 10 – Geological and Geo-Morphological Systems <p>Also see measures related to water quality and waste water treatment.</p>
Water	<p>Adverse impacts upon the status of water bodies arising from changes in quality, flow and/or morphology</p> <p>Increase in the risk of flooding</p>	<p>Measures from the Draft Local Area Plan</p> <ul style="list-style-type: none"> • Objective NH 6 – Water Resources • Objective NH 7 – Wetlands, Springs, Rivers and Streams • Objective NH 8 – Riparian Zones • Objective DS 7 – Flood Risk Management and Assessment • Objective DS 8 – Climate Change & Adaptation • Objective LU 8 – Constrained Land Use Zone (CL) • Objective LU 9 – Flood Risk Areas and Land Use Zones (Refer to Map 1, 2 and Map 5) • Policy FL 1 – Flood Risk Management • Objective FL 1 – Flood Risk Management and Assessment • Objective FL 2 – Flood Zones and Appropriate Land Uses • Objective FL 3 – Structural and Non-Structural Risk Management Measures in Flood Vulnerable Zones • Objective FL 4 – Flood Risk Assessment for Planning Applications and CFRAMS • Objective FL 5 – Strategic Flood Risk Assessment and Flood Risk Assessments • Objective FL 6 – Environmental Impact Assessment/Statement (EIA/EIS) & Flood Risk Assessment • Objective FL 7 – Pluvial and Groundwater Flood Risk • Objective FL 8 – New and Emerging Data • Objective FL 9 – Water Bodies and Watercourses • Objective FL 10 – Arterial Drainage Scheme • Objective FL 11 – Improvement &/Or Restoration of Natural Flood Risk Management Functions • DM Guideline FL 1 – Flood Zones and Appropriate Land Uses • DM Guideline FL 2 – Structural and Non-Structural Risk Management Measures in Flood Vulnerable Zones • DM Guideline WQ 1 – Water Bodies and Watercourses <p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Policies NHB 4, FL 1, FL 2, FL 3, FL 4 and FL 5 • Objectives NHB 3, NHB12, NHB 14, EQ1, AFF 5, AFF 6, AFF9, CS 4, WS 1, WS 2, WS 7, WS 9, WS 11, WW 1, WW 7, FL 1, FL 2, FL 3, FL 4, FL 5, FL 6, DS 7, DS 8, DS 9 and RA 1 • DM Standard 27: Surface Water Drainage & Flooding

5.2.2 Monitoring Programme

As part of the SEA and AA process a Monitoring Programme has been developed with the aim of monitoring the environmental effects of Tuam Draft LAP. The full details of the environmental monitoring programme are presented in Section 10 of the SEA Environmental Report. Monitoring can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

Monitoring is based around indicators which allow quantitative measures of trends. Each indicator to be monitored is accompanied by the target(s) which were identified with regard to the relevant strategic actions. Table 5.2 below shows the indicators and targets relevant to any European Sites which have been selected for monitoring the likely significant effects of the implementation of the Draft LAP. The source of data and frequency is also indicated. In addition to existing monitoring datasets, the output of lower-tier environmental assessment and decision making, including a review of project approvals granted and associated documents, will also be utilised as part of the Monitoring Programme. Where significant effects, including positive, negative, cumulative and indirect, have the potential to occur as a result of the undertaking of individual projects or multiple individual projects such instances should be identified and recorded and should feed into the monitoring evaluation.

Monitoring is an ongoing process and the programme allows for flexibility and the further refinement of indicators and targets. The Monitoring Programme may also be updated to deal with specific environmental issues, including unforeseen effects, as they arise. A stand-alone Monitoring Report on the significant environmental effects of the LAP will be prepared in advance of the review of the Plan.

Table 5.2 Extracted from the SEA report section 10; Table 10.4 Selected Indicators, Targets and Monitoring Sources

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Biodiversity, Flora and Fauna	B1: Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive	B1: Maintenance of favourable conservation status for all habitats and species protected under national and international legislation to be unaffected by implementation of the Plan ⁹	<ul style="list-style-type: none"> Internal monitoring of environmental likely significant effects of grants of permission (grant by grant). 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). National Monitoring Report under Article 12 of the Birds Directive. Consultations with the NPWS.
	B2: Percentage loss of functional connectivity without remediation resulting from development provided for by the Plan	B2: No significant ecological networks or parts thereof which provide functional connectivity to be lost without remediation resulting from development provided for in the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). CORINE mapping resurvey (every c. 5 years).
	B3i: Number of significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan B3ii: Number of significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976	B3i: Avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan B3ii: No significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Consultations with the NPWS
	B4: Population involved in land management	B4: Sustain the population involved in land management	<ul style="list-style-type: none"> CSO Population Data (every c. 5 years).
Soil	S1: Soil extent and hydraulic connectivity	S1: To minimise reductions in soil extent and hydraulic connectivity	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).

⁹ Except as provided for in Section 6(4) of the Habitats Directive, viz. There must be:
(a) no alternative solution available;
(b) imperative reasons of overriding public interest for the plan to proceed; and
(c) adequate compensatory measures in place.

Water	W1i: Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009) W1ii: Mandatory and Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)	W1i: Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve <i>good status</i> ¹⁰ W1ii: To achieve - as a minimum - Mandatory values and, where possible, to achieve Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland. EPA Quality of Bathing Water in Ireland reports.
	W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	W2: Not to affect the ability of groundwaters to comply with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland (multi-annual).
	W3: Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk	W3: Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk in compliance with <i>The Planning System and Flood Risk Management Guidelines for Planning Authorities</i>	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).
Air and Climatic Factors	C1: Percentage of population travelling to work, school or college by public transport or non-mechanical means	C1: An increase in the percentage of the population travelling to work, school or college by public transport or non-mechanical means	<ul style="list-style-type: none"> CSO Population Data (every c. 5 years).

¹⁰ Good status as defined by the WFD equates to approximately the following in the current national schemes of classification as set out by the EPA:

- *Q4* in the biological classification of *rivers*;
- *Mesotrophic* in the classification of *lakes*; and
- *Unpolluted status* in the Assessment of Trophic Status of Estuaries and Bays in Ireland (ATSEBI).

6 Conclusion

Stage 1 Screening and Stage 2 AA of the Draft LAP to the Galway County Development Plan 2015-2021 has been carried out. Implementation of the Draft LAP has the potential to result in effects to the integrity of any European Sites, if unmitigated.

The risks to the safeguarding and integrity of the qualifying interests, special conservation interests and conservation objectives of the European Sites have been addressed by the inclusion of mitigation measures that will prioritise the avoidance of effects in the first place and mitigate effects where these cannot be avoided. In addition, all lower level plans and projects arising through the implementation of the LAP will themselves be subject to AA when further details of design and location are known.

In-combination effects from interactions with other plans and projects was considered in the assessment and the mitigation measures incorporated into the plan are seen to be robust to ensure there will be no significant adverse effects as a result of the implementation of the Draft LAP either alone or in-combination with other plans/projects.

Having incorporated mitigation measures, it is concluded that the Tuam Draft is not foreseen to give rise to any significant adverse effects on designated European sites, alone or in combination with other plans or projects¹¹. This evaluation is made in view of the conservation objectives of the habitats or species for which these sites have been designated.

¹¹ Except as provided for in Section 6(4) of the Habitats Directive, viz. There must be:
a) no alternative solution available,
b) imperative reasons of overriding public interest for the plan to proceed; and
c) Adequate compensatory measures in place.