



**HABITATS DIRECTIVE ASSESSMENT SCREENING REPORT**  
IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF THE  
EU HABITATS DIRECTIVE FOR THE



**TUAM DRAFT LOCAL AREA PLAN  
2011-2017**



*River Nanny*

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*River Clare*

## TABLE OF CONTENTS

<b>1. INTRODUCTION .....</b>	<b>4</b>
1.1 THE NATURE OF THE PROPOSED PLAN .....	4
1.2 BACKGROUND AND LEGISLATIVE CONTEXT .....	4
1.3 CONSULTATION .....	4
<b>2. METHODOLOGY.....</b>	<b>5</b>
2.1 STAGES OF APPROPRIATE ASSESSMENT .....	5
2.2 DESKTOP REVIEW.....	6
<b>3. THE PLAN .....</b>	<b>6</b>
3.1 DESCRIPTION OF TUAM LAP .....	6
3.1.1 <i>Main aims of Tuam LAP</i> .....	7
3.2 IS THE PLAN NECESSARY TO MANAGEMENT OF NATURA 2000 SITES? .....	8
3.3 MITIGATING MEASURES IN PLAN .....	8
3.4 RELATED PLANS AND PROPOSALS.....	16
3.4.1 <i>Galway County Council Biodiversity Action Plan</i> .....	16
3.4.2 <i>Galway County Development Plan 2009-2015</i> .....	17
3.4.3 <i>Western River Basin District (WRBD) Management Plan</i> .....	18
<b>4. NATURA 2000 SITES .....</b>	<b>18</b>
4.1 NATURA 2000 SITES WITHIN THE BOUNDARY OF THE LOCAL AREA PLAN .....	18
4.2 SPECIAL AREAS OF CONSERVATION .....	18
4.2.1 <i>Lough Corrib SAC</i> .....	18
4.4 NPWS CONSERVATION MANAGEMENT PLAN FOR LOUGH CORRIB CSAC .....	24
<b>5. STAGE 1: SCREENING/TEST OF SIGNIFICANCE .....</b>	<b>24</b>
5.1 RECORDS OF PROTECTED HABITATS / SPECIES WITHIN THE TUAM LAP BOUNDARY .....	24
5.1.1 <i>Habitats for which the Lough Corrib SAC has been designated</i> .....	24
5.1.2 <i>Species for which the Lough Corrib SAC has been designated</i> .....	28
5.1.3 <i>Additional Ecological Interests within the Tuam LAP Study Area</i> .....	30
5.2 WATER QUALITY.....	31
5.3 ASSESSMENT CRITERIA.....	33
5.3.1 <i>Introduction</i> .....	33
5.3.2 <i>Elements of Plan likely to cause impacts</i> .....	33
<b>6. SCREENING CONCLUSIONS.....</b>	<b>39</b>
6.1 CRITERIA FOR ASSESSMENT .....	39
6.2 CONCLUSION.....	39
<b>REFERENCES .....</b>	<b>40</b>
<b>APPENDIX 1 NPWS SITE SYNOPSES .....</b>	<b>41</b>
<b>APPENDIX 2 ASSESSMENT OF POTENTIAL AND RESIDUAL IMPACTS OF POLICIES AND OBJECTIVES 45</b>	
<b>APPENDIX 3 MAP OF PROTECTED AREAS IN RELATION TO THE TUAM LAP BOUNDARY .....</b>	<b>63</b>
<b>APPENDIX 4 MAP 1A LAND USE ZONING .....</b>	<b>64</b>
<b>APPENDIX 5 MAP 2A SPECIFIC OBJECTIVES MAP .....</b>	<b>65</b>

<b>APPENDIX 6 MAP 2B SPECIFIC OBJECTIVES MAP .....</b>	<b>66</b>
<b>APPENDIX 7 MAP 3A OPEN SPACE / AMENITIY, GREEN NETWORK &amp; FLOOD MAP .....</b>	<b>67</b>
<b>APPENDIX 8 MAP 3B OPEN SPACE / AMENITIY, GREEN NETWORK &amp; FLOOD MAP .....</b>	<b>68</b>
<b>APPENDIX 9 MAP 4B SITES &amp; MONUMENTS (ZAP) .....</b>	<b>69</b>
<b>APPENDIX 10 MAP 5A PROTECTED STRUCTURE &amp; ACA.....</b>	<b>70</b>

## 1. INTRODUCTION

### 1.1 The nature of the proposed plan

Galway County Council is currently preparing a Draft Tuam Local Area Plan (LAP) 2011-2017 to replace the existing Tuam Local Area Plan, which expires in 2011. The Plan is being prepared under the provisions of the Planning and Development Act 2000 (as amended) to develop and improve in a sustainable manner the environmental, social, economic and cultural assets of Tuam town.

### 1.2 Background and Legislative Context

An important aspect of the development of the Draft Tuam Local Area Plan is how the plan may impact on European Sites designated for nature conservation i.e. Special Areas of Conservation (SAC) and Special Protection Areas (SPA). 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. These are SACs designated under the Habitats Directive and SPAs designated under the Conservation of Wild Birds Directive (79/409/ECC).

Article 6(3) of the Habitats Directive states:

*Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Habitats Directive Assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*

Furthermore, Article 6(4) states:

*If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State 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.*

This document forms part of the Appropriate Assessment process for the Draft Tuam Local Area Plan and has been prepared following the guidance given in the manual 'Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities' prepared by the Department of the Environment, Heritage and Local Government (DOEHLG, 2009, 2010).

### 1.3 Consultation

The following bodies provided information for this report (via publicly available documents):

- National Parks and Wildlife Service (NPWS)
- Environmental Protection Agency (EPA)
- Galway County Council
- Western River Basin District (WRBD) Project Office

## 2. METHODOLOGY

### 2.1 Stages of Appropriate Assessment

This Article 6 Assessment has been prepared in accordance with the European Commission Environment DG document “*Assessment of plans and projects significantly affecting Natura 2000 sites (Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC)*”, referred to as the “EC Article 6 Guidance Document”. The guidance within this document provides a non-mandatory methodology for carrying out assessments required under Article 6 (3) and (4) of the Habitats Directive, and are viewed as an interpretation of the EU Commissions document “*Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC*”, referred to as “MN2000”.

Appropriate Assessment Guidance for Planning Authorities were published by the department of the Environment Heritage and Local Government in December 2009 (DoHELG, 2009) and amended in March 2010 (DEHGL 2009, 2010). Cognisance has been taken of this document in carrying out this assessment.

In complying with the obligations under Article 6 (3) and with reference to these guidelines, the Habitats Directive Assessment Process is a four staged approach described below.

*Stage One: Screening / Test of Significance* - the process which identifies the likely impacts upon a Natura 2000 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 of the project or plan on the integrity of the Natura 2000 site, 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;

*Stage Three: Assessment of Alternative Solutions* - the process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site; and

*Stage Four: Assessment 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 negative impacts on European sites by identifying possible impacts early in the plan-making, and writing the plan in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the Habitats Directive Assessment Process to the point where no adverse impacts on the site(s) remain. If the plan is still likely to result in adverse effects, and no further practicable mitigation is possible, then it is 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.

A section of the River Clare which is designated under the Lough Corrib cSAC is situated within the boundary of the LAP; therefore Stage 1 of this process is required to determine, at an initial level, whether impacts are likely.

## 2.2 Desktop Review

A review was carried out to identify features of ecological importance within the LAP and in the area surrounding the boundary of the LAP within a distance of 15km. A review of areas designated (or being considered for designation) for nature conservation was carried out by consulting the National Parks and Wildlife Service (NPWS). Current water quality data for the study area were identified through consultation with the Environmental Protection Agency (EPA). A range of additional sources of information including scientific reports produced by, and information on the websites of the EPA, NPWS, Galway County Council and other agencies were also reviewed. A full bibliography of information sources reviewed is given in the references section. Ordinance Survey Map 39 and OS aerial photographs were also reviewed during the desk assessment.

## 3. THE PLAN

### 3.1 Description of Tuam LAP

Under Section 18 of the Planning and Development Act, 2000 (as amended 2002) it states that 'A planning authority may at any time, and for any particular area within its functional area, prepare a local area plan in respect of that area'. A LAP is a legal document and must be prepared and adopted in accordance with Part II Section 18, 19 and 20 of the Planning and Development Act, 2000 and as amended 2002. Under Section 19 of this act it states that 'A local area plan shall be consistent with the objectives of the development plan and shall consist of a written statement and a plan or plans indicating the objectives in such detail as may be determined by the planning authority for the proper planning and sustainable development of the area to which it applies, including detail on community facilities and amenities and on standards for the design of developments and structures'. The Draft Tuam LAP 2011-2017 must be consistent with the Galway County Development Plan (GCDP) 2009-2015 and therefore it has been prepared with the overarching policies and objectives of the GCDP in mind.

The Draft Tuam LAP is intended to provide for the proper planning and sustainable development of Tuam Town and its environs for the duration of six years from the date on which it is adopted, unless amended or revoked within that period. It is intended that the long-term vision articulated by the Plan will give a degree of continuity and certainty to the future development of the Plan area.

This vision statement which is included in Section 1.3.4 of the Draft Tuam Local Area Plan reads as follows:

*"A Hub town that is vibrant, self sufficient and innovative and which provides a high quality of life, an educated workforce and a high quality built and natural environment through a sustainable development strategy and appropriately zoned and serviced lands in order to attract and anchor smart business ventures/technologies, to nurture and support existing enterprises and to encourage residential growth and consolidation in a manner that is balanced and sustainable for Tuam and the rural hinterland/environs that it serves."*

Galway County Council seeks to achieve this vision through a number of initiatives including:

1. The promotion of Tuam Hub as a strategic location on the Atlantic Corridor (M18/17) and Atlantic Technology Corridor.
2. The establishment in Tuam as an integrated transportation Hub Town by reducing car use and emissions, by increasing the demand for public transport, park and ride facilities and to become fossil fuel free centre as new innovative and green technologies become mainstream.
3. The promotion of Tuam as a 'Green Hub' by:
  - Facilitating and diversifying existing 'green projects' that have already been established within Tuam.
  - Promoting Tuam Hub as a 'sustainable energy zone'.

- Implementing Galway County Council's Energy Action Plan regarding energy efficiencies in relation to Tuam.
  - Reducing the carbon footprint of the community and buildings in the Town.
  - Galway County Council will have regard to best practice in the future proofing of buildings.
  - By implementing a 'Green Network' with local businesses to reduce waste, water and energy usage.
  - Improving the energy efficiency of the business community.
  - Creating employment that is located and connected to Tuam Hub in order to achieve sustainable employment.
  - Encouraging the implementation of the SEI Energy MAP process as the initial step towards achieving the IS393 Energy Management Standard for Tuam Hub.
  - By encouraging and enhancing biodiversity and ecology and in endeavoring to facilitate the majority of the population within 300m of green areas.
  - By supporting the establishment of a 'Green Town Index' – including CO2 emissions, energy, buildings, transportation, water, air quality, waste and land use, and environmental governance;
  - By encouraging public awareness within the general public, schools and the businesses community through workshops and seminars (e.g. the delivery of a 'Green IT Seminar' in order to promote energy efficiency in the IT business sector, Green Schools Programme).
  - To promote Tuam as a Heritage Town with a strong ecclesiastical presence.
4. Creating a high quality sustainable environment through the protection and conservation of the built (Record of Protected Structures/Architectural Conservation Area) and archaeological heritage (Sites and Monuments/Zone of Archaeological Potential) and by encouraging high quality urban design.
5. Implementing the recommendations of the BMW/GCC initiative 'Connecting Tuam, People, Places, Public, Private', the objective of which is to improve connectivity of the Hub Town in a sustainable manner to bring about the economic, cultural and social development of Tuam.

The draft Tuam LAP boundary in respect to protected areas is included in Appendix 3. The River Clare flows south westwards from Ballygaddy Bridge to Lough Corrib and is located to the west of the Plan boundary. The River Nanny flows through the town of Tuam and joins the Clare River to the West of the Plan boundary. The River Clare is part of Lough Corrib cSAC and is therefore afforded protection under the Habitats Directive 92/43/EEC.

### **3.1.1 Main aims of Tuam LAP**

Under Section 1.3.3, the Draft Tuam LAP 2011-2017 aims to:

1. Promote balanced and sustainable economic development that will enable Tuam Hub to fulfil its sub-regional role regarding retail provision, employment and community facilities in particular education and health care as outlined within the National Spatial Strategy (NSS).
2. Improve connectivity of the Hub Town in a sustainable manner to bring about the economic, cultural and social development of Tuam.
3. The establishment in Tuam of an Integrated Public Transport Facility.
4. Support energy efficiencies and renewable energy sources/technologies in order to enable the greening of Tuam and its promotion as a 'Green Hub'.
5. Minimise the consumption of natural, non-renewable resources, including land.
6. Avoid development in flood plains and within areas of significant risk of flooding.
7. Sustain biodiversity and the natural ecology networks within the Plan area.
8. Preserve the quality of the landscape, open space, architectural and cultural heritage, material assets and natural resources.
9. Protect the integrity of the built environment from damage caused by insensitive development proposals
10. Underpin the local community with social inclusion as a positive priority.

### 3.2 Is the Plan Necessary to Management of Natura 2000 Sites?

The draft Tuam LAP is not directly connected with or necessary to the management of any Natura 2000 site. However, it does include, inter alia, measures to protect, conserve and manage in a prudent and sustainable manner Tuam’s natural heritage, including Natura 2000 sites and to seek its enhancement where appropriate and feasible (see Section 3.3 below).

### 3.3 Mitigating Measures in Plan

The draft LAP for Tuam town contains numerous measures which will contribute to the conservation of Natura 2000 sites in accordance with the requirements of the Habitats Directive.

Section 9 entitled *Natural Heritage, Environment and Amenity* includes detailed measures in relation to the Natural Heritage & Biodiversity, Landscape, Air Quality and Noise, Open Space, Amenity and Green Networks that are within the draft Tuam LAP boundary.

Section 9.1 entitled *Natural Heritage & Biodiversity* is of particular relevance to this study as it details the ‘ecological networks’ within Tuam and the surrounding area and also discusses the values of trees, urban parkland/woodlands and hedgerows, peatlands/bogs, rivers, streams and groundwater within the Tuam area. Reference is also made to the impacts of invasive species and to threats to biodiversity. Details of the policies and objectives of this section are included in Table 1.

Section 9.2 entitled *Landscape* details policies and objectives (Table 2) proposed to protect the visual and natural amenity of Tuam.

Section 9.3 entitled *Air Quality and Noise* details policies and objectives that will aim to implement the EU Framework Directive on Air Quality Assessment and Management (Table 3). It is anticipated that the Tuam Traffic Management Plan, the pedestrianisation of the town centre and the re-opening of the Western Rail Corridor to Tuam will promote Tuam as a ‘green hub’.

Section 9.4 entitled *Open Space, Amenity and Green Network* highlights the importance of active open space and passive open space and details the amenity, recreational and leisure facilities currently available in the town of Tuam. Walking is given consideration in this section and the plan aims to incorporate pedestrian linkage/cycle lanes as part of the future proposal for the re-opening of the Western Rail Corridor. This section also includes a description of the development of the ‘Green Network’ which is an approach to sustainable use and management of natural heritage areas and recreational and amenity open spaces. The Draft Plan aims to incorporate a walkway/cycle along the River Nanny in order to link the existing town with angling and walking activities and also to enhance the biodiversity and natural setting of the River Nanny and the Mill complex area to enhance the biodiversity and the natural setting of this area for the public. Details of the policies and objectives of this section are included in Table 4.

**Table 1** Natural Heritage & Biodiversity Policies (draft Tuam Local Area Plan 2011-2017).

<b>Policy NH1</b>	Promote awareness and knowledge of the rich natural heritage and biodiversity of Tuam.
<b>Policy NH2</b>	Seek to maintain and enhance, as far as practical and prudent, the natural heritage and amenity of Tuam and its environs by seeking to encourage the preservation and retention of parklands/woodlands, hedgerows, stone walls and wetlands. Where their removal or interference cannot be avoided, appropriate measures to replace like for like should be considered, subject to considerations of safety and practicality.
<b>Policy NH3</b>	Liaise with and support national agencies, local and community groups in the management, conservation, enhancement and protection of the natural heritage and biodiversity
<b>Policy NH4</b>	Support the implementation of the National Heritage and Biodiversity Plans and the Galway County Heritage Plan and Galway County Biodiversity Action Plan.
<b>Policy NH5</b>	Implement the EU Directives and associated national legislation and directives with regard to the protection and enhancement of the natural environment, including the Birds Directive, Habitats Directive, Wildlife Act, Flora Protection Order, Ramsar Sites ,Water Framework Directive and any other directives, Acts or Policies which may be issued during the lifetime of this plan



<b>Policy NH6</b>	Seek to integrate biodiversity and natural heritage considerations into all of the Council's activities
<b>Policy NH7</b>	Facilitate the identification and protection of the main elements of the ecological network in the plan area, including core areas of biodiversity, wildlife corridors and stepping stones, and provide for their appropriate and sustainable use
<b>Policy NH8</b>	Protect and conserve geological and geo-morphological systems, sites and features from inappropriate development that would detract from their heritage value and interpretation.
<b>Policy NH9</b>	Promote greater habitat and species biodiversity through appropriate planting of native trees and shrubs and promote the planting of native broadleaf woodland/parklands where such planting is environmentally acceptable.
<b>Policy NH10</b>	Seek to retain and properly protect individual trees, groups of trees, hedgerows, stone walls, and other associated features such as streams and wetlands and consider the use of tree preservation orders or other suitable mechanism to protect important trees or groups of trees.
<b>Policy NH11</b>	Encourage the creation, development and maintenance of ecological corridors where possible.
<b>Policy NH12</b>	Protect bats and their roosts by maintaining woodlands, hedgerows and treelines that serve as feeding areas, flight paths and commuting routes. Seek advice from bat experts in relation to the conservation, restoration and demolition of buildings and structures that may be used as roost sites.
<b>Policy NH13</b>	Seek to prevent and promote measures to prevent the spread of invasive and alien invasive species. Require a landscaping plan to be produced for developments near water bodies and ensure that such plans do not include alien invasive species.
<b>Policy NH14</b>	It is the policy of Galway County Council to implement Article 6(3) of the EU Habitats Directive, and to subject proposed projects likely to impact on Natura 2000 or European Sites (SAC's, SPA's), whether directly (in situ), indirectly (ex-situ) or in combination with other plans or projects, to an Appropriate Assessment/Screening in order to inform decision making.
<b>Policy NH15</b>	Consult with the DEHLG in relation to proposed developments within or adjoining designated conservation sites.
<b>Policy NH16</b>	Have regard to the joint publication by Galway County Council and the Heritage Council entitled 'The Hedgerows of County Galway' and any other relevant publications by Galway County Council and the Heritage Council over the lifetime of the plan.
<b>Policy NH17</b>	Maintain protect and preserve the aesthetic value of all waterways and their corridors within the Plan area from the impacts of highly visible development and also protect their water quality.
<b>Policy NH18</b>	Seek to restrict agricultural or forestry practices which contribute to nutrient enrichment.
<b>Policy NH19</b>	Seek to identify, create and develop opportunities for the enhancement of natural heritage and biodiversity within the Tuam LAP area and have cognisance to the National Biodiversity Data Centre (NBDC) where high quality information on all aspects of biodiversity can be obtain.
<b>Policy NH20</b>	Prepare a Biodiversity Action Plan for Tuam and its environs.
<b>Policy NH21</b>	Establish a tree planting programme for the town in conjunction with the Border Midland and Western Assembly/Galway County Council initiative 'Connecting Tuam, People, Places, Public, Private' programme of works and other such initiatives.
<b>Policy NH22</b>	Continue to promote partnership with the local community or the management and improvement of local open spaces through schemes such as a community planting initiative.
<b>Policy NH23</b>	Ensure that, wherever appropriate, local rivers, streams and watercourses within the Plan area are sustainably promoted for heritage, amenity and recreational benefits for the local community.
<b>Policy NH24</b>	Seek to enhance public access to inland waterways.
<b>Policy NH25</b>	Have regard to Guidance Documents by Inland Fisheries Ireland (Regional Fisheries Boards) which promote sustainable development within and adjacent to watercourses of fisheries importance.
<b>Policy NH26</b>	<p>Have regard to Guidance Documents</p> <ul style="list-style-type: none"> <li>• <i>Fishery Guidelines for Local Authority Works</i> (DCENR, 2008) where relevant and appropriate. See: <a href="http://www.nrfb.ie/environment/las.htm">http://www.nrfb.ie/environment/las.htm</a></li> <li>• <i>Guidelines on the Planning, Design, Construction &amp; Operation of Small-Scale Hydro-Electric Schemes and Fisheries</i> (DCENR, 2007). See: <a href="http://www.cfb.ie/publications/hydro.htm">http://www.cfb.ie/publications/hydro.htm</a></li> <li>• Eastern Regional Fisheries Board Guidance Notes '<i>Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites</i>' (Eastern Regional Fisheries Board, 2006). See:<a href="http://www.fishingireland.net/environment/constructionanddevelopment.htm">http://www.fishingireland.net/environment/constructionanddevelopment.htm</a></li> </ul> <p><i>Maintenance and Protection of the Inland Fisheries Resource during Road Construction and Improvement Works - Requirements of the Southern Regional Fisheries Board</i> (Southern Regional Fisheries Board, 2007).</p>

**Table 2** Natural Heritage & Biodiversity Objectives (draft Tuam Local Area Plan 2011-2017).

<b>Objective NH1</b>	Seek to protect the Clare River (SAC), Knockavanny Turlough (pNHA) and Killower Turlough (pNHA) and any future designated sites.
<b>Objective NH2</b>	Liaise with the NPWS and the OPW regarding any enhancement/ maintenance works along

	the River Nanny and River Clare.
<b>Objective NH3</b>	Encourage and support in so far as is practicable the conservation, enhancement of, and access to, the geological and geo-morphological system, sites and features in Tuam and its environs and protect them from inappropriate development that would detract from their heritage value and interpretation.
<b>Objective NH4</b>	Enhance biodiversity richness by protecting all rivers/streams and water bodies within the plan area by reserving riparian zones/ecological corridors, maintaining them free from inappropriate development
<b>Objective NH5</b>	Ensure a minimum setback of 10 metres is maintained in any new development proposals along the Rivers Nanny/Clare and their tributaries..
<b>Objective NH6</b>	Require screening for Appropriate Assessment and/or Appropriate Assessment with all applications where it is considered that the proposed development may impact (directly or indirectly), or in combination with other projects, on a Natura 2000 designated site i.e. a Special Area of Conservation (SAC) or a Special Protection Area (SPA) to inform decision making. A Natura Impact Statement will be required with all such applications in accordance with the Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities 2009. The need for an Appropriate Assessment should be discussed with the Planning Section of the Council prior to the submission of the application. The Appropriate Assessment shall be carried out in accordance with Article 6 of the Habitats Directive and with Section 18 of the European Communities (Natural Habitats) Regulations 1997 and shall identify and evaluate the direct and indirect effects, which the development would be likely to have upon the designated site.
<b>Objective NH7</b>	Require an ecological assessment by a suitably qualified person, to inform decision making of all proposed significant planning applications, where it is considered that the proposed development may have an adverse impact on the environment or designated site. The need for an ecological assessment should be discussed with the Planning Section prior to the submission of an application and should include consideration of impacts in relation to biodiversity, ecological linkages, water quality and drainage. The Council will generally require ecological assessments for developments proposed within a zone between the boundary of a national designated site (i.e. NHA or pNHA) to the next field boundary or to a distance of 50 meters, whichever is greater.
<b>Objective NH8</b>	Have regard to the recommendations of the DEHLG and any national guidance documents that are produced during the lifetime of this Plan, with respect to potential impacts on nature conservation, when considering development applications relating to activities on and/or adjoining sites of nature conservation importance.
<b>Objective NH9</b>	Minimise disturbance to wildlife, including fish, birds and bats, by reducing external lighting, and prevent spotlighting of trees, rivers, or other features of ecological significance.
<b>Objective NH10</b>	Seek to retain trees and discourage the felling of mature trees to facilitate development and encourage tree surgery rather than felling, where possible. All these works should be carried out in accordance with the provisions in the Forestry Act 1946.
<b>Objective NH11</b>	Protect the parkland areas and trees stands identified in the Plan's Specific Objectives Map and including those in the following locations: <ul style="list-style-type: none"> <li>• Palace Grounds Town Park;</li> <li>• within the grounds of St. Mary's Cathedral;</li> <li>• on land to the rear of the former Bon Secour Hospital;</li> <li>• St Jarlath's College Grounds</li> </ul>
<b>Objective NH12</b>	Protect native and other significant trees, tree-lines and hedgerows, including their root systems, and any valuable areas of scrub, in new developments through the implementation of proper mitigation measures and promote the planting of additional trees and other vegetation where appropriate.
<b>Objective NH13</b>	Ensure that where flood alleviation works take place the natural heritage and landscape character of rivers, streams and watercourses are protected and enhanced to the greatest extent possible.
<b>Objective NH14</b>	Have regard to the recommendations of the DEHLG and any national guidance documents, which may come about during the lifetime of this plan, with respect to potential impacts on flood plains and flood risk areas, when considering new development applications or flood prevention measures.
<b>Objective NH15</b>	Implement water protection measures to prevent any deterioration of 'good status' waters, and to restore substandard waters to 'good status'.
<b>Objective NH16</b>	Ensure that proposed developments do not adversely affect groundwater resources.
<b>Objective NH17</b>	Protect the River Clare/Nanny and associated floodplain(s), wetlands and natural drainage courses for reasons of flood control, and for reasons of biodiversity, natural heritage tourism/angling.
<b>Objective NH18</b>	New developments proposals shall be required to conform with relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects likely to affect the status of the Natura 2000 site. i.e. Lough Corrib cSAC and/or protected habitats/protected species. If successful in receiving planning permission, development may be subject to stringent mitigation measures to protect the qualifying interests/status of the cSAC and to safeguard the protected habitats/protected species.

**Table 3 Landscape Policies (draft Tuam Local Area Plan 2011-2017).**

<b>Policy NH27</b>	Protect the visual and natural amenity of Tuam in the interests of heritage, local residential amenity and tourism development.
<b>Policy NH28</b>	Ensure that development reflects and reinforces where possible the distinctiveness and sense of place of the townscape and landscape, including the retention of important features or characteristics, taking into account the various elements which contribute to their distinctiveness such as their built, natural and cultural heritage, and their land-use, tranquillity and scenic quality.
<b>Policy NH29</b>	As part of the preparation of a detailed scheme of listed views for protection at County level, the Planning Authority shall promote the protection of designated scenic landscapes such as Knockavanny Turlough and Killoower Turlough within the environs of Tuam and other scenic views, routes and landscape features of local, county and regional level as deemed appropriate.
<b>Policy NH30</b>	Continue to exercise the powers vested in the Planning Authority under the Derelict Sites Act.

**Table 4 Landscape Objectives (draft Tuam Local Area Plan 2011-2017).**

<b>Objective NH19</b>	Require that any necessary assessments are made when undertaking, authorising or approving any significant development proposals and, where necessary, require a Landscape/Visual Impact Assessment to accompany any such significant proposals with potential to impact adversely on significant landscape features within the Plan area.
<b>Objective NH20</b>	Ensure that any development on or near such a site or landscape feature should avoid any significant adverse impact on the features for which the site is considered to be of local importance.
<b>Objective NH21</b>	Development that would have a detrimental effect on listed views and prospects will generally not be permitted.
<b>Objective NH22</b>	Ensure that all proposed developments are sited and designed appropriately having regard to the visual impact on the landscape within which they are located.
<b>Objective NH23</b>	Encourage the renovation of derelict and under-utilised areas within the Town Centre or on its urban fringe that contribute to a negative image of Tuam in terms of its attractiveness.
<b>Objective NH24</b>	Upgrade the visual aspects, streetscapes and landscaping of the approach roads to the town, especially the Galway Road and Dublin Road.
<b>Objective NH25</b>	Protect views of amenity value as identified in the Plan's Specific Objectives Map.
<b>Objective NH26</b>	Continue to support the refurbishment of lanes and streets within the town centre.

**Table 5 Air Quality and Noise Policies (draft Tuam Local Area Plan 2011-2017).**

<b>Policy NH31</b>	Maintain good air quality and acceptable noise levels within the town.
<b>Policy NH32</b>	Implement the provisions of National legislation and EU Directives on air and noise pollution in conjunction with other agencies as appropriate.
<b>Policy NH33</b>	Facilitate the minimisation of emissions of greenhouse gases to the air in order to contribute to a reduction and avoidance of human induced climate change in accordance with the Kyoto Protocol, any subsequent international agreements, and the National Climate Change Strategy.
<b>Policy NH34</b>	Support any initiatives taken to provide for more sustainable forms of energy use, including the implementation the provisions of the Government's Energy White Paper 'Delivering a Sustainable Energy Future for Ireland' The Energy Policy Framework 2007-2020 (DCMNR, 2007), and any other document that may supersede it during the lifetime of the Plan.
<b>Policy NH35</b>	Protect and enhance the natural heritage of the town, in particular trees and other vegetation, as a means of air purification, the filtering of suspended particles and the improvement of the town's micro-climate.
<b>Policy NH36</b>	Encourage the initiatives of the National Transport Authority (NTA) <i>Smarter Travel/Workplaces Strategy 2010</i> in conjunction with the private sector, including the promotion of Mobility Management Plans.
<b>Policy NH37</b>	Support public transport and non-motorised transportation as a key measure to reduce locally generated air pollutants.

**Table 6 Air Quality and Noise Objectives (draft Tuam Local Area Plan 2011-2017).**

<b>Objective NH27</b>	Ensure that all significant development proposals comply with UK standard BS5228:1997 and to the EPA Draft Guidance notes on limiting noise emissions. Condition planning applications for construction works to be limited to between 8.30 and 18.00 Monday–Saturday and by any other methods as deemed appropriate.
<b>Objective NH28</b>	Encourage landscaping and tree planting as a means of air purification, the filtering of suspended particles and the improvement of the town's micro-climate.

**Table 7 Open Space, Amenity & Green Network Policies (draft Tuam Local Area Plan 2011-2017).**

<b>Policy OAG1</b>	Continue to promote an awareness of the rich archaeological, built and natural heritage of Tuam.
<b>Policy OAG2</b>	Provide additional open space to ensure that there is a variety and balance of open space

	types available to include passive and active recreational needs; formal and informal; large and small open spaces and the need to maintain areas of natural built and visual amenity.
<b>Policy OAG3</b>	Ensure that where there is a reduction in open space that it is redistributed to appropriate locations in order to utilise land appropriately for open space.
<b>Policy OAG4</b>	Encourage the improvement of existing open space by landscaping, planting, environmental works and the provision of recreational facilities, to increase the attractiveness of the current provision of open space.
<b>Policy OAG5</b>	Ensure that all areas within the floodplain of the Rivers Clare/Nanny and their tributaries are protected from inappropriate development, so as to maintain the river's natural course, surface and groundwater, associated wetlands and preserve the biodiversity, habitats and species found within this area.
<b>Policy OAG6</b>	Encourage local community involvement in the upgrading and improvement of open space, to add a sense of place and provide better areas for the residents and visitors.
<b>Policy OAG7</b>	Encourage where feasible the provision of tree planting and other enhancement proposals to provide a focus to Market Square, the Mill Complex area and proposed neighbourhood centres.
<b>Policy OAG8</b>	Ensure that a network of open space is provided to encourage a range of recreational and amenity activities, including walking and cycling in the town.
<b>Policy OAG9</b>	The loss of existing public or private recreational open space will normally be resisted by the planning authority unless alternative recreational facilities are provided in a suitable location, or if it can be demonstrated that there is no longer sufficient demand to sustain the facility.
<b>Policy OAG10</b>	Retain where appropriate the grounds of schools, colleges, sports clubs and other institutional facilities for recreation and amenity use allowing for increased in the physical capacity of the institutions or clubs and for policies in relation to Community Facility/Educational zoned lands.
<b>Policy OAG11</b>	Retain, extend and enhance opportunities for recreation and access to the Palace Grounds Town Park, playgrounds, amenity areas and within the green network/green oasis for all members of the community including the elderly and people with disabilities.
<b>Policy OAG12</b>	Continue to promote Tuam as a 'Historic Town'.
<b>Policy OAG13</b>	Seek to enhance and extend the Tuam Architectural Walking Tour as appropriate in conjunction with Community & Enterprise and Heritage sections of the Council, Failte Ireland, the Old Tuam Society and the Royal Irish Academy and other organisations.
<b>Policy OAG14</b>	Carry out an Action and Management Plan for the Palace Grounds Town Park to improve the amenity and recreational value through landscaping and to maximise its usage.
<b>Policy OAG15</b>	Establish a tree planting programme for the town in conjunction with the Border Midland and Western Assembly/Galway County Council initiative 'Connecting Tuam, People, Places, Public, Private' programme of works
<b>Policy OAG16</b>	Upgrade visual aspects of the approach roads to the town especially the Dublin Road and the Galway Road.

**Table 8** Open Space, Amenity & Green Network Objectives (draft Tuam Local Area Plan 2011-2017).

<b>Objective OAG1</b>	Provide walkway along the Nanny Riverbank in conjunction with private owners/developers potentially linking Curraghgreen in the east of the Town towards the Weir Road Bridge in the north west of the Plan area. The precise location and form of the linear walkway will be agreed with the Planning Authority in the context of specific development proposals or otherwise through discussion with the landowners/developers.
<b>Objective OAG2</b>	Develop a pedestrian link/amenity wedge along the railway corridor. The precise location and form of the linear walkway/cycleway will be agreed with the Planning Authority in the context of specific development proposals or otherwise through discussion with the landowners/developers.
<b>Objective OAG3</b>	Continue to enhance and extend the potential of the Tuam Architectural Walking Tour and other heritage tourism products.
<b>Objective OAG4</b>	Maintain and sensitively enhance Teampall Jarlath Church and graveyard and consider improving public access and availability to the site taking cognisance of its archaeological heritage.
<b>Objective OAG5</b>	Preserve pedestrian links / amenity wedges at the following locations- <ul style="list-style-type: none"> <li>• from the Palace Grounds Town Park northwards;</li> <li>• from the Cathedral of the Assumption to Parkmore;</li> <li>• from the residential areas on the Dunmore Road to the schools on the Dublin Road;</li> <li>• from Curraghgreen to the Weir Road Bridge following the course of the River Nanny where appropriate</li> </ul>
<b>Objective OAG6</b>	Reserve an area of amenity and provide open space links and connections as part of an overall network of open space in the Parkmore area.
<b>Objective OAG7</b>	Consider the provision of amenity areas to the south of the town within Gilmartin and Tirboy Housing Estates
<b>Objective OAG8</b>	Continue to highlight St Mary's Cathedral and the Cathedral of the Assumption as 'gateways' to Tuam.
<b>Objective OAG9</b>	Enhance linkages and connectivity within the 'green network' as identified on the Plan's Specific Objectives Map.

<b>Objective OAG10</b>	Ensure that all passive and active recreational proposals are considered in the context of potential impact on the environment and heritage including sites of ecological and biodiversity importance, general amenity and archaeology.
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Elsewhere in the draft LAP relevant policies and objectives include the following:

Section 3 *Services and Infrastructure* contains the following sections Water Services, Surface Water and Flooding, Waste Management and Climate Change and Energy.

Section 3.1 – *Water Services* section includes details of Wastewater Treatment and disposal in the Tuam area. This section also makes reference to Tuam town Water Supply which is currently being sourced from Lough Corrib at Luimnagh. A number of policies and objectives (Table 9) have been set out in relation to water services one of which is to implement the Water Service Investment Programme (WSIP) 2007-2009 and any other WSIP's relating to Tuam town over the lifetime of the Tuam LAP 2011- 2017.

Section 3.2 – *Surface Water and Flooding* includes details of the sustainable drainage systems and flood risk management strategies within Tuam town. Acknowledgement has been made in the Draft Plan that adequate stormwater drainage and retention facilities will be necessary to accommodate increased surface run-off resulting from current and future development. The LAP has been prepared with due consideration of the 'The Planning System and Flood Risk Management: Guidelines for Planning Authorities in 2009'. The Draft LAP includes policies and objectives (Tables 11 and 12) that ensure new development will generally avoid areas of flood risk and a Flood Risk Map has also been developed.

Section 3.3 – *Waste Management* details policies and objectives (Tables 13 and 14) which show how the Tuam LAP aims to manage waste in the area.

Section 3.4 – The *Climate Change and Energy* section includes details of the promotion of Energy Efficiency and Building in the Tuam Area and also includes details on how Tuam aims to identify ways to 'Green' the town in terms of renewable/green energy. The Tuam Drainage Scheme also aims to facilitate the provision of gas to Tuam. Details of the policies and objectives of this section are included in Tables 15 and 16).

**Table 9** Water Services Policies (draft Tuam Local Area Plan 2011-2017).

<b>Policy WS1:</b>	Ensure that the provision of water and wastewater treatment facilities is undertaken in accordance with EU policies and Directives, relevant national legislation and national/regional policies and guidelines and delivered through the Water Services Investment Programme.
<b>Policy WS2:</b>	Continue to develop and expand, in a sustainable manner and as resources permit, the public wastewater and water supply systems for the town in order to facilitate the supply of serviced land for residential, commercial and industrial development.
<b>Policy WS3:</b>	Ensure that new developments are properly serviced with water, wastewater and surface water drainage infrastructure.
<b>Policy WS4:</b>	Protect and improve water quality, in conjunction with other agencies and stakeholders, in accordance with the EU Water Framework Directive and the Western River Basin District Management Plan.
<b>Policy WS5:</b>	Achieve and maintain required standards for drinking water in Tuam,
<b>Policy WS6:</b>	Encourage and support measures that promote water conservation and reduce water wastage.
<b>Policy WS7:</b>	Continue to improve and upgrade water supplies within the LAP area and implement as appropriate the relevant recommendations set out in The Provision and Quality of Drinking Water in Ireland for the Years 2007-2008 (Office of Environment Enforcement – EPA, 2009).
<b>Policy WS8:</b>	Promote and make available to the public the EPA Advice Notes which cover lead compliance, e-coli in drinking water, disinfection by-products in drinking water, turbidity in drinking water and restoring public water supplies affected by flooding.
<b>Policy WS9:</b>	Implement and enforce, where appropriate, relevant national legislation in relation to water services and quality, including the provisions of Water Pollution Legislation, the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2009, the European Communities (Drinking Water) (No. 2) Regulations 2007.

**Table 10** Water Services Objectives (draft Tuam Local Area Plan 2011-2017).

<b>Objective WS1</b>	Provide and/or facilitate where appropriate the refurbishment and or upgrading of water and wastewater treatment schemes.
<b>Objective WS2</b>	Extend and improve both foul and storm water sewer collection networks in accordance with

	the Tuam Drainage Scheme.
<b>Objective WS3</b>	Ensure that any proposed developments outside the public wastewater system are assessed in terms of site suitability and, if suitable, are serviced by an appropriate wastewater treatment system, correctly sited and designed in accordance with the EPA Wastewater Manuals and Code of Practice.
<b>Objective WS4</b>	Support the protection of groundwater resources and associated habitats and species in accordance with the Groundwater Directive 2006/118/EC and by having regard to any groundwater protection schemes and groundwater protection zones data made available at the Geological Survey of Ireland.
<b>Objective WS5</b>	Provide and protect a 100m buffer around the Wastewater Treatment Plant site and appropriate buffer zones around any other treatment plant.
<b>Objective WS6</b>	Ensure that any development that would have an unacceptable impact on the water environment, including drinking water, surface water and groundwater quality and quantity, river corridors and associated wetlands will not be permitted.
<b>Objective WS7</b>	Implement the Water Services Investment Programme 2007-2009, and any subsequent Water Service Investment Programme of works relating to Tuam town over the lifetime of the Tuam LAP.
<b>Objective WS8</b>	Support the implementation of the relevant recommendations and measures as outlined in the Western River Basin District Management Plan.
<b>Objective WS9</b>	Require, where it is deemed necessary, contributions from developers for the upgrading of the water supply and/or wastewater disposal infrastructure to accommodate their developments.

**Table 11** Surface Water and Flooding Policies (draft Tuam Local Area Plan 2011-2017).

<b>Policy SW1</b>	Support the provision of adequate surface water drainage infrastructure, promote the use of a sustainable drainage system (SuDS) approach and techniques and manage flood risk through the protection of natural drainage systems, the appropriate location and design of different types of development and the incorporation of flood risk assessments and works where necessary.
<b>Policy SW2</b>	Support the implementation of the legislative requirements, policy guidance and development standards relevant to surface water drainage and flood risk management in carrying out County Council functions.
<b>Policy SW3</b>	Protect, preserve and support the establishment of areas providing natural drainage, stormwater retention and water-retaining vegetation to help reduce the occurrence and extent of flooding.
<b>Policy SW4</b>	Liaise and co-operate with the OPW in addressing flood risk, implementing the EU Flood Risk Directive (2007/60/EC) and developing any Catchment-based Flood Risk Management Plan (CFRAM) where these have relevance for Tuam. Have due regard to any relevant recommendations and outputs arising from the CFRAM.
<b>Policy SW5</b>	Prepare a strategic flood risk assessment and stormwater management plan/ measures for Tuam within the lifetime of this LAP, as resources permit and more detailed information becomes available from the OPW and any other relevant sources. This shall incorporate measures to address the likely increased risk of flooding within the LAP area due to climate change.
<b>Policy SW6</b>	Improve flood defences within the Tuam LAP area in conjunction with the OPW, if required

**Table 12** Surface Water and Flooding Objectives (draft Tuam Local Area Plan 2011-2017).

<b>Objective SW1</b>	Ensure that the provisions of the DEHLG/OPW publication 'The Planning System and Flood Risk Management: Guidelines for Planning Authorities 2009' are implemented in respect of the Council's functions, where relevant, including in the assessment of planning applications.
<b>Objective SW2</b>	Protect and maintain, where feasible, undeveloped riparian strips and natural floodplains along the Rivers Clare and Nanny and their tributaries, where appropriate.
<b>Objective SW3</b>	Prevent the curtailment of natural drainage systems and in the case of development works, require the provision of acceptable mitigation measures in order to minimise the risk of flooding and negative impacts to water quality (run-off, erosion and sedimentation).
<b>Objective SW4</b>	Ensure that development will only be authorised where it can be demonstrated that it does not significantly reduce, either individually or cumulatively, the flood storage capacity of the River Nanny, River Clare, their tributaries and all associated floodplains, or compromise safety standards.
<b>Objective SW5</b>	Require all development proposals seeking to locate in an area, which the Planning Authority considers to be at potential risk from flooding, to adopt a Sequential Approach and Justification Test, as set out in the DEHLG publication 'The Planning System and Flood Risk Management: Guidelines for Planning Authorities 2009' and include a Flood Risk Assessment and proposals for the sustainable storage or attenuation of runoff/discharges with any planning application.
<b>Objective SW6</b>	Ensure that all significant development proposals and greenfield developments where appropriate incorporate SuDS in accordance with current best practice.
<b>Objective SW7</b>	Provide for the protection, management and as appropriate, enhancement of existing wetland habitats where flood protection/management measures are necessary.
<b>Objective SW8</b>	Ensure that screening for EIS/EIA, and full EIS/EIA where necessary, is an integral part of all planning applications in areas at risk of flooding.

**Table 13 Waste Management Policies (draft Tuam Local Area Plan 2011-2017).**

<b>Policy WM1</b>	Implement the Connacht Waste Management Plan 2006-2011, the Galway County Council's Litter Management Plan 2007-2010, the National Waste Prevention Programme and any superseding plans/programmes over the lifetime of the LAP.
<b>Policy WM2</b>	Ensure that the following priorities are applied in relation to waste management: (a) To prevent and minimise the harmful effects of waste; (b) To encourage and support the recycling and recovery of waste including green, organic and construction and demolition waste and the recovery of energy from waste; (c) To ensure that waste that cannot be prevented, recycled or recovered is disposed of without causing environmental pollution; (d) To ensure that effect is given as far as possible to the polluter pays principle.
<b>Policy WM3</b>	Ensure the provision of quality cost effective waste infrastructure and services, which reflect and meet the needs of the community and to ensure that the polluter pays principle is adhered to in all waste management activities.
<b>Policy WM4</b>	Use statutory powers to prohibit the illegal deposit, movement and disposal of waste materials, refuse and litter, and to authorise and regulate waste disposal within the County in an environmentally sustainable manner.
<b>Policy WM5</b>	Facilitate the provision of transfer stations, civic amenity and bring sites in Tuam, which will not adversely affect residential amenities.
<b>Policy WM6</b>	Promote environmental awareness measures and action programmes to ensure good environmental practices, the prevention of littering and the recycling of waste.

**Table 14 Waste Management Objectives (draft Tuam Local Area Plan 2011-2017).**

<b>Objective WM1</b>	Developments will be expected to take account of the provisions of the Waste Management Plan and adhere to those elements of it that relate to waste prevention and minimisation, waste recycling facilities, and the capacity for source segregation.
<b>Objective WM2</b>	Require the provision of bring banks, bottle banks or other appropriate recycling facilities as part of the overall development in the case of new or extended shopping centre developments, commercial neighbourhood centres, and other significant developments, where appropriate
<b>Objective WM3</b>	Encourage the private sector to provide appropriately sited and designed facilities for the transfer, sorting and recovery of waste streams in existing and new developments.
<b>Objective WM4</b>	Encourage the provision of a garden green waste/organic composting service.
<b>Objective WM5</b>	Require that developers of projects with significant potential for the generation of construction and demolition waste prepare a Project Construction and Demolition Waste Management Plan including adequate provisions for storage of source-segregated waste.
<b>Objective WM6</b>	Ensure that planning proposals on contaminated lands include appropriate remediation measures.

**Table 15 Climate Change and Energy Policies (draft Tuam Local Area Plan 2011-2017).**

<b>Policy CE1</b>	Have regard to and support the implementation of, as appropriate, the following: <ul style="list-style-type: none"> <li>• EU Energy Performance of Buildings Directive (Directive 2002/91/EC), as transposed into Irish law in 2006;</li> <li>• National Energy Action Plan 2009-2020 and its commitment to achieving a 20% energy efficiency saving across the economy in 2020 and a 33% reduction in public sector energy use;</li> <li>• EPA's State of the Environment Report 2008, in order to promote a balance between conservation, mitigation of greenhouse gas emissions and efficient sustainable use of resources;</li> <li>• Grid 25 – A Strategy for the development of Ireland's Electricity Grid for a Sustainable and Competitive Future (Eirgrid 2009), to deliver a sustainable electricity system and ensure transition to a low-carbon economy.</li> </ul>
<b>Policy CE2</b>	Support and promote, in conjunction with other agencies, local, national and international initiatives for limiting emissions of greenhouse gases and encouraging the development of renewable energy sources, where such initiatives are consistent with the proper planning and sustainable development of the town.
<b>Policy CE3</b>	Promote energy conservation and efficiency measures and facilitate renewable/micro-renewable energy and innovative building design.
<b>Policy CE4</b>	Continue to promote initiatives that increase public awareness of energy best practice and that promote innovation in the fields of energy conservation and renewable energy resources and research.
<b>Policy CE5</b>	Promote the incorporation of appropriate climate change adaptation (including increased risk of flooding and increased occurrence of drought) and mitigation measures in relation to a Flood Risk Management Plan for Tuam when developed in conjunction with the OPW.
<b>Policy CE6</b>	Promote and facilitate the development and installation of renewable sources of energy in order to showcase Tuam as a 'Green Hub' in accordance with national initiatives and agencies.
<b>Policy CE7</b>	Support and facilitate the delivery of the Tuam Drainage Scheme in the infrastructure renewal and development of electricity, gas and broadband networks in the town.

<b>Policy CE8</b>	Facilitate the upgrade of utilities including electricity and gas to serve the projected demand in the town over the lifetime of this plan period.
<b>Policy CE9</b>	Prohibit the unsightly siting of power lines in the vicinity of existing housing, schools or community facilities and encourage the sharing of support structure for telecommunications infrastructure.
<b>Policy CE10</b>	Ensure that electricity substations and other utility services are adequately screened and/or landscaped where necessary.
<b>Policy CE11</b>	Promote the usage of electric cars, collaborate and work in co-operation with the ESB and the local commercial and industrial sector in achieving the maximum usage of electric car charging point infrastructure.
<b>Policy CE12</b>	Consider the preparation of 'An Energy Conservation Strategy' and associated awareness campaign for Tuam within the lifetime of the Plan as resources permit.

**Table 16** Climate Change and Energy Objectives (draft Tuam Local Area Plan 2011-2017).

<b>Objective CE1</b>	All new single or mixed use development above 1,000m <sup>2</sup> and residential development (whether or not part of a mixed use scheme) above 10 units may be required to submit an Energy Statement by a qualified and accredited person.
<b>Objective CE2</b>	Encourage where appropriate the use of sustainable building materials and the re-use of materials, including the use of recycled aggregates in the construction of buildings, roads, footpaths etc.
<b>Objective CE3</b>	Implement the DEHLG Guidelines on Sustainable Residential Development in Urban Areas, 2009 in the assessment of any proposals for residential development, including inter alia those in respect of energy efficiency, passive solar design, renewable energy sources, more energy efficient design/layouts and use of materials
<b>Objective CE4</b>	Require non residential development to conform at a minimum to the current Building Regulations and Building Energy Rating requirements and to any updated versions as required.
<b>Objective CE5</b>	Proposals in relation to renewable energy shall be considered provided that: a) There would be no significant impact on the character and amenity of the surrounding area; b) There would be no significant impact on the transportation network; c) There would be no adverse environmental impacts.
<b>Objective CE6</b>	Encourage the improvement of energy efficiencies in the business community by implementing a 'Green Network' with local businesses to reduce waste, water and energy usage.
<b>Objective CE7</b>	Encourage the creation of employment that is located and connected to Tuam in order to achieve sustainable development and to reduce the need to travel.
<b>Objective CE8</b>	Facilitate the development of 'energy zones' and 'low-energy' or 'energy positive districts' that showcase initiatives in the reduction of energy costs, promote energy efficiencies and help establish Tuam as a Green Hub within the 'Smart Economy'.
<b>Objective CE9</b>	Promote and facilitate the development of renewable sources of energy within the LAP area and support local initiatives, in conjunction with other agencies/institutions.
<b>Objective CE10</b>	Actively encourage the integration of micro-renewable energy sources into the design and construction of single and multiple housing developments as appropriate within the LAP area.
<b>Objective CE11</b>	Support the maintenance, upgrading and provision of renewable energy and electricity infrastructure within the LAP area.
<b>Objective CE12</b>	Support the statutory providers of the National Grid infrastructure by safeguarding such strategic corridors from encroachment by other developments that might compromise the provision of electricity networks where strategic route corridors have been identified.
<b>Objective CE13</b>	Facilitate the delivery of recharging points for electric powered vehicles at appropriate locations within Tuam for domestic, transition and end of journey type travel.

### 3.4 Related plans and proposals

#### 3.4.1 Galway County Council Biodiversity Action Plan

The protection of biodiversity is enshrined in the Convention on Biology Diversity to which Ireland is a signatory. The Irish government adopted and published the National Biodiversity Plan in April 2002. This plan sets out a series of actions to promote and assist in the conservation of Ireland's biological diversity, at a national and also local level, as well as to contribute to the conservation and sustainable use of biodiversity globally. The National Biodiversity Plan has a section dealing with providing for biodiversity at local level, under which there are two specific actions for Local Authorities:

**Action 10.** *Each Local Authority to prepare a local Biodiversity Plan in consultation with relevant stakeholders.*



**Action 11.** *Each Local Authority to designate a contact officer for natural heritage conservation matters in its area.*

Galway County Council has prepared a Biodiversity Action Plan 2008-2013 which contains actions to increase awareness and knowledge and manage and protect the county's biodiversity.

Galway County Council has also produced clear and informative guidelines in relation to protecting and enhancing nature, habit assessment and management:

- *Biodiversity Guidelines for homes and communities*
- *Biodiversity Guidelines for developers*
- *Biodiversity Guidelines for staff of Galway County Council.*

### **3.4.2 Galway County Development Plan 2009-2015**

The Galway County Development Plan (GCDP) is the overarching plan for the draft Tuam LAP and therefore the latter must be consistent with the GCDP. The GCDP includes a number of policies and objectives to protect Natura 2000 sites in relation to plans and projects emanating from the GCDP. These are included in Section 9 entitled '*Heritage, Landscape and Environmental Management*' of the GCDP. Of particular relevance is Section 9.3.1 '*Designated Sites, Habitats and Species*' as it contains details of sites and species that are designated under National and European legislation and discusses the role of Galway County Council in protecting designated sites, in conjunction with NPWS.

Under Section 9.3.1.1 '*Designated Sites, Habitats and Species Policies*' the following policies are outlined:

**HL31:** It is the policy of the Council to implement Article 6(3) of the EU Habitats Directive, and to subject any plan (including County Development Plan, Local Area Plans) or projects likely to impact Natura 2000 or European Sites (SACs, SPAs), whether directly (in situ), indirectly (exsitu) or in combination with other plans or projects, to an Appropriate Assessment in order to inform decision making. A plan or project may only be authorised after the competent authority has made certain, based on scientific knowledge, that it will not adversely affect the integrity of the site; in the case of derogations, authorisation must be pursued under Article 6(4).

**HL32:** It shall be the policy of Galway County Council to ensure that development in Galway and the provision of services take into account the relevant Management Plans (if any) for SACs and SPAs in the county.

**HL33:** Have regard to any impacts developments may have on or near existing and proposed, Natural Heritage Areas, Special Protection Areas and Special Areas of Conservation, Nature Reserves, Ramsar Sites, Wildfowl Sanctuaries, Connemara National Park and any other designated sites including any future designations.

**HL34:** Consult the Department of the Environment, Heritage and Local Government in relation to proposed developments adjoining designated conservation sites.

**HL35:** Protect and conserve habitats and Species designated under the Habitats Directive, Birds Directive, Wildlife Act, Flora Protection Order, National Nature Reserves, Connemara National Park, Ramsar Sites and any other Directives, Acts or Policies which may be issued during the lifetime of this Plan.

Under Section 9.3.1.2 '*Designated Sites, Habitats and Species Objectives*' the following objectives are outlined:

**HL22:** Promote the conservation of biodiversity outside of designated areas, while allowing for appropriate development, access and recreational activity.

**HL23:** It is an objective of the Council to conduct a study to see if any areas would be suitable for designation as Local Nature Reserves.

**HL24:** It is an objective to provide protection to all natural heritage sites designated or proposed for designation in accordance with National and European legislation. This includes

Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas, Statutory Nature Reserves and Ramsar sites.

The GCDP also makes detailed references to policies and objectives in relation to Natural Heritage and Biodiversity, Eskers, Coastal Zones and Inland Waterways, Flood Risk Management and Assessment, Natural Water Systems, Invasive Species and Landscape Conservation and Management which aim to protect Natura 2000 sites against future plans and projects emanating from the GCDP. The Draft Tuam LAP has been prepared with cognisance to these policies and objectives.

In addition, the GCDP has been subject to an AA, which concluded that it would not give rise to adverse effects on Natura 2000 sites in County Galway or adjoining areas.

### **3.4.3 Western River Basin District (WRBD) Management Plan**

Under the Water Framework Directive (Directive 2000/60/EC) all Irish waters must achieve 'good ecological status' by 2015. The Western River Basin District encompasses practically all of Mayo and Sligo, the Galway urban district area, significant portions of Galway and Leitrim counties and smaller portions of Roscommon and County Clare. The report; 'Water Matters – Help us Plan' which is a draft River Basin Management Plan (RBMP) was published in December of 2008 and covers a six-year period from 2009 until 2015. This plan must be adopted by all local authorities in the district and came into effect at the end of 2009.

Both the GCDP and the Draft Tuam LAP have regard to the WRBD Draft Management Plan and both include policies and objectives to protect and improve water quality in accordance with the Water Framework Directive.

## **4. NATURA 2000 SITES**

### **4.1 Natura 2000 sites within the boundary of the Local Area Plan**

This section of the screening report describes the Natura 2000 sites within the LAP and within a 15km radius of the plan area. A 15km buffer zone was chosen as a precautionary measure, to ensure that all potentially affected Natura 2000 sites are included in the screening process. Table 1 lists the Natura 2000 sites that are within 15km of the plan area and Appendix 3 shows their locations in relation to the plan boundary. The qualifying features for each site have been obtained through a review of the site synopses available from the NPWS website.

### **4.2 Special Areas of Conservation**

#### **4.2.1 Lough Corrib SAC**

The Lough Corrib cSAC (Site Code: 00297) is situated to the north of Galway city and is the second largest lake in Ireland with an area of approximately 18,240 ha (the entire site is 20,556 ha). The lake can be divided into two parts: a relatively shallow basin, underlain by Carboniferous limestone, in the south and a larger, deeper basin, underlain by more acidic granite, schists, shales and sandstones, to the north. The surrounding lands are mostly pastoral farmland, to the south and east, and bog and heath, to the west and north. Rivers, mainly to the east of the site are included within the cSAC as they are important for Atlantic salmon. These rivers include the Clare, Grange, Abbert, Sinking, Dalgan and Black to the east, as well as the Cong, Bealanabrack, Failmore, Cornamona, Drimneen and Owenriff to the west. In addition to the rivers and lake basin, adjoining areas of conservation interest, including raised bog, woodland, grassland and limestone pavement, have been incorporated into the site. These habitats support a number of species of conservation concern. Only a small portion of this site is located within the boundary of the LAP and this includes the River Clare.

The River Clare was added to the designated area of the Lough Corrib cSAC in 1999. The full site synopsis for this designated area is included as Appendix 1 to this Appropriate

Assessment. This river flows south westwards from the Ballygaddy Bridge to the Corrib and is located to the north west of the Plan boundary.

The full list of qualifying interests for Lough Corrib cSAC is provided in Tables 17 and 18 and includes all species and habitats for which the cSAC is selected.

**Table 17** Qualifying interests of the Lough Corrib cSAC: Annex I habitats for which the Lough Corrib SAC has been designated and the likelihood of impacts arising from the Tuam LAP

Natura Code	Habitats	Priority	Cover (%) within cSAC	Location within cSAC	Likelihood of being impacted by Tuam LAP
7220	Petrifying springs with tufa formation	Yes	1	In many areas of L. Corrib	None – this habitat does not occur within the study area of the Tuam LAP and would not be affected by any element of the proposed plan.
7210	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	Yes	1	SE corner of lake, especially northern section of Addergoole Bog on L. Corrib	None – <i>Cladium</i> fen habitat has not been recorded from within the SAC along the Clare River corridor.
7110	Active raised bog	Yes	1	Addergoole Bog on eastern shore of L. Corrib is most westerly semi-intact raised bog in Ireland <sup>[1]</sup>	None – Active raised bog within the SAC will not be affected by the proposed LAP. Raised bog habitat within the SAC in the townland of Clonfush occurs outside of the proposed Tuam LAP boundary.
8240	Limestone pavement	Yes	1	Found throughout the cSAC along the shores of L. Corrib except for the northern quarter of the cSAC area. Mainly concentrated within the lower Corrib basin.	None – this habitat does not occur within the study area of the Tuam LAP and would not be affected by any element of the proposed plan.
91D0	Bog woodland	Yes	1	Addergoole Bog and also in NW of cSAC	None – this habitat does not occur within the study area of the Tuam LAP and would not be affected by any element of the proposed plan.
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates ( <i>Festuco Brometalia</i> )	Yes	1	Associated with areas of limestone pavement around lakeshore. Also at Anglingham and Menlough quarries to SE of cSAC	None – this habitat may occur along the spoil heaps adjacent to the River Clare within the SAC boundary. The proposed LAP will not adversely affect this habitat.
3140	Hard oligotrophic waters with benthic vegetation of <i>Chara spp.</i>	No	85	Majority of L. Corrib	None – The R. Clare flows into L. Corrib, c. 40 km downstream of the area located within the Tuam LAP. Policies and Objectives detailed in Section 9 of the LAP allow for the protection of water quality within both the River Nanny and River Clare, negating any potential impact affecting Lough Corrib.
3260	Watercourses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation	No	1	Rivers include the Corrib, Owenriff, Clare and Cregg	None - The Tuam LAP boundary includes and is adjacent to sections of the R. Clare from 0.5km u/s of Ballygaddy Br. To c. 100m downstream of Weir Br on both the east and west of the River Clare. There is no zoning or proposals for instream works that may affect this habitat in the river. Policies and Objectives detailed in Section 9 of the LAP allow for the protection of water quality within both the

<sup>[1]</sup> NPWS, *Draft conservation Plan for Lough Corrib cSAC 297, SPA 042*, May 2000

Natura Code	Habitats	Priority	Cover (%) within cSAC	Location within cSAC	Likelihood of being impacted by Tuam LAP
					River Nanny and River Clare, negating any potential impact affecting this habitat within the River Clare. In addition any new developments proposed through the lifetime of the LAP will be required to adhere with the relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects likely to affect the status of the Natura 2000 site. i.e. Lough Corrib cSAC.
7230	Alkaline Fens	No	1	Small patches along lake edge throughout cSAC.	None – this habitat does not occur within the study area of the Tuam LAP and would not be affected by any element of the proposed plan.
6410	<i>Molinia</i> meadows on calcareous, peaty or clayey silt-laden soils ( <i>Moliniion caeruleae</i> )	No	1	Seasonally flooded wet meadows near lake shore	None – This habitat may potentially occur within peatland habitats designated within the SAC along the River Clare corridor, adjacent to the proposed Tuam LAP boundary. However, no adverse impacts are expected as sufficient protection of lands within the cSAC has been provided for under the Policies and Objectives of the LAP (specifically Policies NH5, NH14 and NH15 of Section 9).
91A0	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	No	1	Hill of Doon, NW of cSAC	None – this habitat does not occur within the study area of the Tuam LAP and would not be affected by any element of the proposed plan.
7120	Degraded Raised Bogs still capable of natural regeneration	No	1	Parts of Addergoole Bog on eastern shore of L. Corrib	None – this habitat occurs within the SAC adjacent to but outside the south western boundary of the proposed Tuam LAP in the townland of Cloonfush. The lands within the LAP at this location are zoned as Agricultural. However, no adverse impacts are expected as sufficient protection of lands within the SAC has been provided for under the Policies and Objectives of the LAP (specifically Policies NH5, NH14 and NH15 of Section 9).
7150	Depressions on peat substrates of the <i>Rhycosporion</i>	No	1	Scattered to east and west of site	None – this habitat may potentially occur as a mosaic with raised bog or degraded raised bog habitat within the SAC along the River Clare corridor. However, no adverse impacts are expected as sufficient protection of lands within the SAC has been provided for under the Policies and Objectives of the LAP (specifically Policies NH5, NH14 and NH15 of Section 9).

**Table 18** Qualifying interests of the Lough Corrib cSAC: Annex II species for which the Lough Corrib SAC has been designated and the likelihood of impacts arising from the Tuam LAP

Natura code	Species	Common Name	Location within cSAC	Likelihood of being impacted by Tuam LAP
1095	<i>Petromyzon marinus</i>	Sea lamprey	Currently only known to be present downstream of the weir in Galway City only. May be extinct.	None – does not occur within the study area of the Tuam LAP and would not be affected by any element of the proposed plan.
1106	<i>Salmo salar</i>	Atlantic salmon	Present throughout the Corrib system including R. Clare. Optimum spawning and nursery areas	None –River Clare is important salmon river; however suitable Policies and Objectives detailed in Section 9 of

Natura code	Species	Common Name	Location within cSAC	Likelihood of being impacted by Tuam LAP
			present along stretch of river at Ballygaddy. Some salmon spawning in the lower reaches of River Nanny in the past.	the LAP allow for the protection of water quality and riparian habitats within both the River Nanny and River Clare, negating any potential impact affecting this species. In addition any new developments proposed through the lifetime of the LAP will be subject to the relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects likely to affect the status of the Natura 2000 site and if successfully in receiving planning permission will be subject to stringent mitigation measures to protect to the qualifying interests of the cSAC.
1096	<i>Lampetra planeri</i>	Brook lamprey	Present throughout Corrib and Clare catchment, including the River Nanny.	None – brook lamprey occur within the River Clare; however suitable Policies and Objectives detailed in Section 9 of the LAP allow for the protection of water quality and riparian habitats within both the River Nanny and River Clare, negating any potential impact affecting this species. In addition any new developments proposed through the lifetime of the LAP will be subject to the relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects likely to affect the status of the Natura 2000 site and if successful in receiving planning permission will be subject to mitigation measures to protect to the qualifying interests of the cSAC. See Section 5.3 for proposed mitigation measures.
1303	<i>Rhinolophus hipposideros</i>	Lesser Horseshoe Bat	Roosts at Ebor Hall, limestone caves around Cong	None – this species does not occur within the study area of the Tuam LAP and would not be affected by any element of the proposed plan.
1355	<i>Lutra lutra</i>	Otter	Occurs regularly within Lough Corrib system including records from Clare and River Nanny.	None – otter occur within the River Clare and River Clare; however suitable Policies and Objectives detailed in Section 9 of the LAP allow for the protection of water quality and riparian habitats within both the River Nanny and River Clare, negating any potential impact affecting this species. In addition any new developments proposed through the lifetime of the LAP will be subject to the relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects likely to affect the status of the Natura 2000 site and if successful in receiving planning permission will be subject to mitigation measures to protect to the qualifying interests of the cSAC. See Section 5.3 for proposed mitigation measures.
1092	<i>Austropotamobius pallipes</i>	White-clawed	Occur within L. Corrib and River Clare. Apparently	None – crayfish occur within the River Clare; however

Natura code	Species	Common Name	Location within cSAC	Likelihood of being impacted by Tuam LAP
		crayfish	absent from River Nanny.	suitable Policies and Objectives detailed in Section 9 of the LAP allow for the protection of water quality and riparian habitats within both the River Nanny and River Clare, negating any potential impact affecting this species. In addition any new developments proposed through the lifetime of the LAP will be subject to the relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects likely to affect the status of the Natura 2000 site and if successful in receiving planning permission will be subject to mitigation measures to protect to the qualifying interests of the cSAC. See Section 5.3 for proposed mitigation measures.
1029	<i>Margaritifera margaritifera</i>	Freshwater Pearl Mussel	Population in Owenriff River near Oughterard	None – this species does not occur within the study area of the Tuam LAP and would not be affected by any element of the proposed plan.
1833	<i>Najas flexilis</i>	Slender Naiad	Recorded in the north-western arm of the lake	None – this species does not occur within the study area of the Tuam LAP and would not be affected by any element of the proposed plan.
1393	<i>Drepanocladus vernicosus</i>	Slender Green Feather Moss	NW of Gortachalla Lake west of L. Corrib	None – this species does not occur within the study area of the Tuam LAP and would not be affected by any element of the proposed plan.

## 4.4 NPWS Conservation Management Plan for Lough Corrib cSAC

European and national legislation places a collective obligation on Ireland and its citizens to maintain at favourable conservation status areas designated as candidate Special Areas of Conservation. The Government and its agencies (i.e. the NPWS, local authorities and other statutory bodies) are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites. According to the EU Habitats Directive, favourable conservation status of a habitat is 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”. The favourable conservation status of a species is 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”.

The Conservation Management Plan for the Lough Corrib cSAC is currently not available for consultation and is to be prepared by the National Parks and Wildlife Service (NPWS) of the Department of the Environment, Heritage and Local Government. In the absence of a completed management plan for any designated site, the conservation objectives are taken to include maintaining or restoring the ‘favourable conservation status’ of habitats and species for which the site has been selected, including the habitats of the annexed species. The conservation objectives of the Lough Corrib SAC have been summarised in Table 19.

**Table 19** The conservation objectives of the Lough Corrib cSAC, in relation to the qualifying interests of the site.

Number	Objective
<b>Objective 1</b>	To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status.
<b>Objective 2</b>	To maintain the Annex II species for which the cSAC has been selected at favourable conservation status.
<b>Objective 3</b>	To maintain the extent, species richness and biodiversity of the entire site
<b>Objective 4</b>	To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

## 5. STAGE 1: SCREENING/TEST OF SIGNIFICANCE

### 5.1 Records of protected habitats / species within the Tuam LAP Boundary

#### 5.1.1 Habitats for which the Lough Corrib SAC has been designated

##### 5.1.1.1 Annex I terrestrial habitats of European Importance

###### Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* (7210)

Calcareous fens and Priority Annex I *Cladium mariscus* fen habitat occur along the south eastern margins of Lough Corrib and have been recorded from the area of Addergoole Bog. These habitat records are geographically removed from the Tuam LAP and the SAC designation within the vicinity of the proposed LAP has not been derived to include this habitat.

Annex I calcareous fen habitat within the SAC will not be affected by the proposed Tuam LAP.

There is potential for fen habitat to occur in association with wet grassland, seasonal lake and turlough habitats within the environs of the Tuam LAP study area; however, the occurrence of this habitat would be fragmented and poorly developed – not warranting inclusion in the SAC.



Active raised bog (7110)

Active raised bog occurs within the Lough Corrib SAC, recorded from the eastern side of the lake at Addergoole Bog, geographically removed from the SAC. A small area of raised bog has been included within the SAC, adjoining the River Clare, directly adjacent to the south western boundary of the Tuam LAP in the townland of Cloonfush. This designated section of raised bog habitat adjoins lands within the Tuam LAP which are zoned for Agriculture, as is currently being undertaken within this area.

Annex I active raised bog habitat within the SAC will not be affected by the proposed Tuam LAP.

Raised bog habitat does occur within the Tuam LAP, concentrated on the western and south western side of the study area, outside of the Lough Corrib SAC. The raised bog habitat within the environs of the Tuam LAP has not been included within the SAC designation as this habitat has been subjected to significant modification from harvesting, drainage and agricultural improvements.

Limestone pavement (8240)

Limestone pavement within the Lough Corrib SAC has been identified as occurring within the area of Lough Corrib itself, predominantly within the Lough Corrib lower basin.

No limestone pavement habitat has been identified within the Lough Corrib SAC, within the area of the Tuam LAP. This habitat will therefore not be directly or indirectly affected by the proposed LAP.

It is considered possible that small, localised areas of this habitat may occur within the general area of the Tuam LAP which have not been identified or are not of ecological significance due to the fragmented nature or lack of integrity of the habitat. In the case where this habitat was present in an area of proposed development throughout the lifetime of the Draft LAP, impacts of the proposed development affecting this habitat would require assessment on a case by case basis with cognisance to the relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects likely to affect the status of this habitat.

Bog Woodland (91D0)

This habitat has not been recorded from within the area of the Tuam LAP and the area of this habitat designated within the SAC is located on the western shore of Lough Corrib, geographically removed from the current study area.

Annex I bog woodland habitat within the SAC will not be affected by the proposed Tuam LAP.

Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*) (6210)

Semi-natural dry grasslands and scrubland on calcareous substrates may potentially occur within the limestone rich environs of Tuam. There is potential for this habitat to occur on the spoil heaps and dry margins along the line of the River Clare and River Nanny within the Tuam LAP. However, the presence of the required qualifying species composition (*Festuco Brometalia*) of the grassland at these locations is currently unknown.

Annex I semi-natural dry grassland habitat within the SAC will not be affected by the proposed Tuam LAP.

The proposed Tuam LAP will not impinge on the grassland habitats within the SAC along the line of the River Clare, as these habitats have been designated within the proposed Environmental Management Area.

Alkaline Fens (7230)

Alkaline fens within the Lough Corrib SAC are associated with the margins of Lough Corrib. No alkaline fen habitat has been recorded with the lands designated within the Tuam LAP and this habitat is not likely to occur within the study area in the absence of suitable hydrological and hydrogeological conditions.

Annex I alkaline fen habitat within the SAC will not be affected by the proposed Tuam LAP.

Molinia meadows on calcareous, peaty or clayey silt-laden soils (*Molinia caerulea*) (6410)

The Lough Corrib SAC includes *Molinia* meadows occurring within seasonally flooded wet meadows adjacent to the shores of Lough Corrib. *Molinia* meadow habitat may occur in association with the active raised bog habitat designated within the Lough Corrib SAC, along the riparian corridor of the River Clare adjacent to the Tuam LAP.

Annex I *Molinia* meadow occurring within the SAC will not, however, be affected by the proposed Tuam LAP, as the boundary of the SAC is to be protected and lands within the SAC attributed zoning as Environmental Management Areas.

*Molinia* meadows occurring outside of the SAC but within the boundary of the Tuam LAP have not been confirmed; however, it is considered that should this habitat occur in association with degraded raised bog or wet grassland habitat, it would be fragmented in nature and of diminished ecological significance.

Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles (91A0)

Old sessile oak woods have been recorded from the north western shore of Lough Corrib, geographically removed from the current study area.

This habitat does not occur within the Lough Corrib SAC along the margins of the River Clare within the current study area.

There are no records of old sessile oak woodlands within the boundary of the Tuam LAP and it is considered that this habitat does not occur.

Degraded Raised Bogs still capable of natural regeneration (7120)

The Lough Corrib SAC includes degraded raised bog habitat which has been identified as being capable of natural regeneration. This habitat has been recorded in the vicinity of Addergoole bog on the eastern shore of Lough Corrib. It is considered likely that small pockets of degraded raised bog occur within the SAC designation in close proximity to the proposed Tuam LAP, particularly in the south western portion of the study area in the townland of Cloonflush.

Annex I degraded raised bog habitat within the SAC will not be affected by the proposed Tuam LAP.

Outside of the SAC designation, there are extensive tracts of degraded raised bog in the southern and south western areas of the Tuam LAP. These areas are zoned as agricultural lands and have not been designated for nature conservation within the SAC or within any NHA provisions. It is therefore considered that the ecological integrity of these peatland habitats has been significantly diminished and that they do not represent examples of Annex I habitats.

Small, fragmented areas of Annex I degraded raised bog still capable of regeneration may occur within the Tuam LAP. In the case where this habitat was present in an area of proposed development throughout the lifetime of the Draft LAP, impacts of the proposed development affecting this habitat would require assessment on a case by case basis with cognisance to the agricultural zoning of these lands and to the relevant regulatory provisions for the

prevention of pollution, nuisance or other environmental effects likely to affect the status of this habitat.

#### Depressions on peat substrates of the *Rhynchosporion* (7150)

Depressions on peat substrates of the *Rhynchosporion* occur in complex mosaics with wet peatland habitats including Annex I wet heath, degraded raised bog and blanket bog habitats. This habitat has a very scattered distribution within the peatland habitats of the Lough Corrib SAC and may potentially occur within the SAC designation along the River Clare riparian corridor within the vicinity of the Tuam LAP, where raised bog habitat has been included in the SAC.

Annex I depression on peat substrates of the *Rhynchosporion* habitat within the SAC will not be affected by the proposed Tuam LAP.

There is further potential for this habitat to occur within the degraded and impacted raised bog habitat occurring outside of the SAC designation within the Tuam LAP, in the southern and south western portion of the study area where peatland habitats are zoned as Agricultural. Impacts affecting good examples of this Annex I habitat outside of the SAC would require assessment on a case by case basis, with cognisance of the zoning of these lands.

#### 5.1.1.2 Annex I aquatic habitats of European Importance

##### Petrifying springs with tufa formation (7220)

This habitat has been recorded from within the predominantly calcareous basin of Lough Corrib. Petrifying springs are unlikely to occur within the SAC boundary of the riparian zone of the River Clare adjacent to and included within the Tuam LAP.

Annex I petrifying springs with tufa formation habitats within the SAC will not be affected by the proposed Tuam LAP.

This habitat is considered unlikely to occur within the boundary of the Tuam LAP and no impacts affecting this habitat are anticipated arising from the Tuam LAP.

##### Hard oligotrophic waters with benthic vegetation of *Chara* spp. (3140)

Lough Corrib SAC is designated to include the lake itself; characterised as a hard, oligotrophic water with benthic vegetation (*Chara* spp.). The SAC designation on the River Clare, in proximity to the Tuam LAP does not contain, nor does it constitute this habitat type.

Annex I hard, oligotrophic waters habitats within the SAC will not be affected by the proposed Tuam LAP.

##### Watercourses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* Vegetation (3260)

This habitat has been recorded in the River Clare within the SAC designation and occurs within the river corridor of the River Clare contained within the western and north western boundary of the Tuam LAP.

Annex I floating river vegetation habitat within the SAC will not be affected by the proposed Tuam LAP.

This Annex I listed habitat occurs commonly in Irish rivers and also occurs outside of the SAC designation within the River Nanny main channel. It is not expected that any elements of the proposed Tuam LAP will impact on this habitat within the channel of the River Nanny, outside of the SAC designation.

## **5.1.2 Species for which the Lough Corrib SAC has been designated**

### **5.1.2.1 Annex II terrestrial species of European Importance**

#### **Otter *Lutra lutra* (1355)**

Otter are listed on Annex II of the EU Habitats Directive and are also protected under the Irish Wildlife Act (1976, amendment 2000). This species is known to occur within the River Clare and the River Nanny. It has been recorded from the 10km grid square (M45) within which the Tuam LAP is located.

The riparian corridor of the River Clare has been zoned as an Environmental Management Area within the Tuam LAP, to reflect the SAC designation and ecological significance of this site. The proposed LAP will not significantly affect otter populations occurring along the River Clare within the SAC designation.

Otter are also likely to regularly occur along the corridor of the River Nanny, particularly in the stretch of the river upstream of the confluence with the Clare River. The Tuam LAP has zoned these lands as Agricultural, with the remainder of the River Nanny corridor zoned as Open Space/Amenity/Green Network. Mitigation measures are proposed in Section 5.2 for the protection of this species from future development throughout the lifetime of the Draft plan.

#### **Lesser horseshoe bat *Rhinolophus hipposideros* (1303)**

There is no evidence that the SAC designation along the Clare River corridor would be of any importance to the Annex II listed lesser horseshoe bat *Rhinolophus hipposideros*. The stretch of river within the Tuam LAP boundary contains habitat considered to be optimal for bats foraging, due to the presence of treelines along the river corridor; particularly along at the north western portion of the LAP in the vicinity of Ballygaddy Bridge. The remainder sub-optimal for bats, as there is little vegetation along the river bank and few treelines leading to the river.

It is likely that the stretch of river is used by some bat species (including soprano pipistrelle bats *Pipistrellus pygmaeus* and Daubenton's bats *Myotis daubentonii*) for foraging and commuting.

### **5.1.2.2 Annex II aquatic species of European Importance**

#### **Sea lamprey *Petromyzon marinus* (1095)**

There are records of sea lamprey within the River Corrib below the weir in Galway City. This migratory species cannot pass the weir at the bottom of the Corrib catchment and therefore do not occur in the River Clare within the current study area. This species may now also be existing in the River Corrib.

Sea lamprey populations would not be affected by the proposed Tuam LAP.

#### **Brook lamprey *Lampetra planeri* (1096)**

Brook lampreys are the only lamprey species to occur in the River Clare, having been recorded from the river within the Lough Corrib SAC designation, adjacent to the boundary of the proposed Tuam LAP. O' Connor (2007) investigated 10 sites on the main channel of the Clare during 2006 and lampreys were found at 6 out of the 10 locations investigated (60%). A mean density of 0.48 brook lampreys per m<sup>2</sup> was recorded, one of the lowest levels recorded in surveys of rivers within SAC designations in Ireland.

The River Clare in the area of Tuam follows a channelised course with little optimum habitat for this species. Brook lampreys were not recorded from the River Clare at Weir Bridge, however small numbers of lamprey were recorded from Ballygaddy Bridge (O'Connor, 2007).

The River Nanny was included in the 2007 study undertaken by O'Connor and was found to contain significant numbers of brook lamprey (in contrast to low lamprey densities in the River Clare catchment). Three sites were surveyed, where lampreys were present at two sites. The mean density of lampreys in the River Nanny was 4.27 per m<sup>2</sup> with a maximum density of 11.4 per m<sup>2</sup>. At the lower reaches of the Nanny at Weir Bridge, upstream of the confluence with the River Clare seven lampreys were found in a 5 m<sup>2</sup> survey area. The River Nanny at Weir Bridge is included within the Lough Corrib SAC designation.

At a second sampling site in the town of Tuam (sampling site N2) a significant number of lamprey were recorded, with 57 lampreys in a 5 m<sup>2</sup> area. The substrate at this site was a silt / clay mix (45% and 45%) with rooted vegetation. The densities recorded here were at the upper end of what has been ever recorded in Irish Rivers. Unfortunately this area of the river was affected by maintenance works undertaken on the River Nanny in 2008 and the requirements of brook lampreys were not taken into account during these works. These works resulted in the removal of lamprey nursery habitats that had accumulated since the original arterial drainage scheme. Such maintenance works can have a devastating impact on lamprey populations.

The proposed Tuam LAP does not contain measures that would impact on brook lamprey populations in the River Clare or the River Nanny. The riparian corridor of the River Clare is designated within the Lough Corrib SAC and has been zoned as Environmental Management Area. No impacts affecting this species within the SAC are expected. It is recommended that under Objective RT22 that any agencies undertaking river works in the future are advised to include measures to protect brook lampreys and their remaining habitats in the River Nanny.

The riparian corridor of the River Nanny has been zoned as Agricultural and as Open Space/Recreation/Amenity and Green Network. This is not anticipated to result in any instream impacts to lamprey species within this river corridor. Mitigation measures are proposed in Section 5.2 for the protection of this species from future development throughout the lifetime of the Draft plan.

#### Atlantic salmon *Salmo salar* (1106)

The River Clare is mainly a limestone river and holds excellent stocks of spring salmon, grilse and good quality brown trout and may well be one of the most under-rated fisheries in the country. The spring salmon can run the river from March and fish can be found upstream to Milltown. The area of the River Clare between Ballygaddy Bridge and the Weir Road Bridge can be particularly productive for salmon fishing. The River Clare is included in the Lough Corrib SAC within the study area of the Tuam LAP for the presence of salmon.

Salmon spawning habitat occurs on the main channel of the River Clare within the vicinity of the study area, as designated within the Lough Corrib SAC. Optimum spawning and nursery areas are present at Ballygaddy, which has recovered well from the Corrib Arterial Drainage Scheme. The River Nanny, outside of the Lough Corrib SAC but within the boundary of the Tuam LAP is characterised by sub-optimal salmon spawning habitat, however, some salmon do occur in the lower reaches of the river below Tuam town.

The proposed Tuam LAP will not result in impacts affecting the conservation status of salmon in the SAC.

#### White-clawed crayfish *Austropotamobius pallipes* (1092)

The white-clawed crayfish, also listed on Annex II of the Habitats Directive, is locally abundant in the River Clare, particularly at Ballygaddy; however, this species has not been recorded from the River Nanny. Both watercourses contain suitable habitat for this species, both in relation to water quality and suitable substrates / refuge habitat.

The proposed Tuam LAP has zoned the River Clare corridor as an Environmental Management Area and no impacts affecting white-clawed crayfish within the SAC are expected as a result of the proposed LAP.

The River Nanny riparian corridor has been zoned as Agricultural land and also for Open Space/Amenity & Green Network. No impacts arising from the Tuam LAP which may affect white-clawed crayfish are identified within the River Nanny corridor, or subsequent downstream impacts affecting this species within the River Clare. In the case where impacts may arise throughout the lifetime of the Draft plan, mitigation measures have been proposed in Section 5.2 for the protection of this species from future development along the corridors of the River Nanny and the River Clare.

*Freshwater Pearl Mussel *Margaritifera margaritifera* (1029)*

The Annex II listed Freshwater pearl mussel has been recorded from the Owenriff River in Oughterard, near the western shore of Lough Corrib. This species has a very limited distribution and does not occur within the River Clare catchment. The proposed Tuam LAP would not have any connection or impact on this species within the Lough Corrib SAC.

*Slender Naiad *Najas flexilis* (1833)*

Slender naiad is a plant species found predominantly in oligotrophic lakes at depths of greater than 1m. This species occurs in the north western portion of Lough Corrib and does not occur within the River Clare catchment. The proposed Tuam LAP would not have any adverse impacts affecting this species within the Lough Corrib SAC.

*Slender Green Feather Moss *Drepanocladus vernicosus* (1393)*

This Annex II species has been recorded from within the Lough Corrib SAC at a location on the north western side of Gortachalla Lake, due west of L. Corrib. This species has not been recorded from within the vicinity of the current study area

### **5.1.3 Additional Ecological Interests within the Tuam LAP Study Area**

#### **5.1.3.1 Protected Annex I habitats not designated within the SAC but likely to be present within the Tuam LAP study area**

*Turloughs (3180)*

Turlough or seasonal lake habitats occur frequently within the calcareous hydrogeological conditions prevalent in the Tuam area. Turloughs are listed on Annex I of the EU Habitats Directive as priority habitats.

No turlough habitats within the Tuam LAP boundary have been designated within Natura 2000 (SAC) sites or within NHA sites affording national protection. However, two turlough habitats occur just outside the proposed Tuam LAP boundary to the north and to the east of the proposed LAP.

Ardacong Turlough occurs due west of the N17 road north of Tuam Town. This turlough habitat is adjacent to the golf course at this location. The proposed Tuam LAP boundary includes improved agricultural lands to the south of the turlough; however the seasonally flooded lands of the turlough are not included within the LAP boundary. The proposed N17 by-pass is located within 50m south of this habitat and the potential for impacts affecting this turlough would require a separate Ecological Impact Assessment.

A second large turlough at Birmingham Demesne is located due east of the proposed Tuam LAP, the eastern boundary of which is at Loughpark, approximately 1km to the west of this turlough habitat.

#### **5.1.3.2 Protected species of National Importance**

A number of species protected under the Irish Wildlife Act (1976, amendment 2000) are expected to occur within the area of the Tuam LAP boundary. These species include

protected terrestrial, aquatic and semi-aquatic (i.e. frogs and newts) fauna and also terrestrial and aquatic flora. Plant species protected under the Wildlife Act (1976, Amendment 2000) are listed on the Flora Protection Order (1999).

The proposed Tuam LAP will not significantly affect these species or their distribution within the environs of the LAP, as extensive environmental protection measures have been provided for in the LAP, specifically in Section 9.

## 5.2 Water Quality

The results of the river water monitoring in the Tuam area indicated a deterioration of water quality downstream of the town. The River Nanny (EPA code 30/N/01) was rated as Q4-5 'unpolluted' in 2006 at station 0100 (bridge south of Oakmount) upstream of Tuam town. This corresponds to a WFD 'high' status. Downstream of Tuam town at station 0300 (upstream of Weir Bridge) the River Nanny was rated as Q3 'moderately polluted' in 2009.

The River Nanny makes a confluence with the River Clare approximately 1.5km west of Tuam town. The River Clare (EPA code 30/C/01) was as Q4 'unpolluted' in 2009 at the WFD monitoring station 0500 located at Ballygaddy Bridge. This is located approximately 1km upstream of the River Nanny confluence and north of the town of Tuam. In the same period, the River Clare was rated Q3-4 'moderately polluted' at the WFD station 0650 which is located 100m downstream of Weir Bridge and subsequently downstream of the River Nanny confluence. Further downstream on the Clare River, at station 1300 – Curraghmore Bridge, the watercourse is rated as Q4-5 'unpolluted'.

The River Nanny above Tuam is classed as 'high' status and the section below Tuam and above the confluence with the Clare River is classed as moderate status. The Western RBD Management Plan requires that there is no deterioration from high status, while the section at moderate status must achieve good status by 2021. The River Clare has been assigned moderate status downstream of the confluence with the River Nanny and the Western RBD Management Plan requires that the river achieves good status by 2021.

The Draft Tuam LAP has zoned lands along the River Nanny and the River Clare which may be subject to development activity throughout the lifetime of the Draft LAP. These are namely lands zoned for commercial, residential, industrial and community uses. Potential negative impacts on the water quality of the River Clare and the River Nanny could occur in the absence of appropriate measures to protect water quality and mitigation measures to ensure the protection of habitats and species associated with these watercourses.

In addition, the Tuam WWTP is located in the townland of Killaloonty, approximately two kilometres from Tuam town centre. The primary discharge point for treated effluent from the WWTP is to the River Clare. The discharge point is situated in the townland of Cloonfush, approximately 0.5km northwest of the WWTP on the River Clare downstream of the Weir Bridge. The River Clare flows a further 39.7km from this location prior to discharge to Lough Corrib. In June of 2009, McCarthy Keville O' Sullivan Ltd undertook an Appropriate Assessment of Tuam WWTP Discharge licence to determine any impacts on the River Clare.

It was concluded that there were no significant impacts on water quality of the River Clare as a result of the operation of Tuam WWTP either in its own capacity or in combination with the anticipated operation of proposed WWTPs at Milltown and Claregalway (McCarthy Keville O'Sullivan Ltd, 2009). On inspection of the report by Hydro-G, Hydrological and Hydrogeological Consultants (2008), it was found that the results (outlined in Table 3 below) of the existing treated effluent discharged from the WWTP exceeded the European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (S.I. No. 272 of 2009). Total Ammonia (mg N/l) was above the 'good status' limit of  $\leq 0.140$  at 95%ile flows and ortho-phosphate also exceeded the 'good' status limit of  $\leq 0.075$  at 95%ile flows. However, it is noted that the background concentration of ortho-phosphate in the River Clare was slightly elevated at 0.031mg/l but remained with the 'good' status limit at mean flows under the regulations outlined above. The nearest EPA monitoring station to the Tuam WWTP discharge point is at Curraghmore Bridge (station 1300). This station was rated Q4-5 in 2009. However it

is should be noted that this station is approximately 5km downstream of the discharge point where the watercourse above this point is notably sluggish with a significant amount of macrophyte growth within the watercourse. The draft LAP outlines a specific objective under Section 3.1.3 'Water Services' which aims to 'Provide and/or facilitate where appropriate the refurbishment and or upgrading of water and wastewater treatment schemes'. It is recommended that specific cognisance be made to this objective throughout the lifetime of the draft LAP in order to protect the River Clare and its qualifying interests.

**Table 20:** Assimilative capacity simulation results for the Clare River resulting from the existing treated effluent discharge from WWTP at Tuam (discharge volume of 4470 m<sup>3</sup>/day) (adopted Hydro-G, 2008).

Parameter	Discharge Conc. (mg/l)	Upstream River conc. Median 2008 (mg/l)	Simulated concentration Clare River Mean flow 10.63 (m <sup>3</sup> /day)	Simulated concentration Clare river 95%tile flow 1.34 (m <sup>3</sup> /day)	Simulated concentration Clare river 99%tile flow 0.77 (m <sup>3</sup> /day)	Actual downstream river Conc. Median 2008 (mg/l)
MRP (mg p/l)	1.7	0.031	0.039	0.09	0.136	0.034
BOD	17	0.8	0.88	1.4	1.82	0.8
NH <sub>4</sub> -N	10	0.025	0.073	0.4	0.65	0.03

The draft LAP also contains a number of other policies and objectives that future developments and Tuam WWTP will need to adhere to throughout the lifetime of the Draft Tuam LAP in order to protect the high status of the River Nanny upstream of Tuam town and the good status of the River Clare upstream of the Weir Bridge and simultaneously improve both the status of the River Clare and the River Nanny downstream of Weir Bridge and downstream of Tuam town respectively. These policies and objectives are outlined as follows:

Section 3.1.2 'Water Services Policies':

**WS1:** Ensure that the provision of water and wastewater treatment facilities is undertaken in accordance with EU policies and Directives, relevant national legislation and national/regional policies and guidelines and delivered through the Water Services Investment Programme.

**WS2:** Continue to develop and expand, in a sustainable manner and as resources permit, the public wastewater and water supply systems for the town in order to facilitate the supply of serviced land for residential, commercial and industrial development.

**WS3:** Ensure that new developments are properly serviced with water, wastewater and surface water drainage infrastructure.

**WS4:** Protect and improve water quality, in conjunction with other agencies and stakeholders, in accordance with the EU Water Framework Directive and the Western River Basin District Management Plan.

**WS9:** Implement and enforce, where appropriate, relevant national legislation in relation to water services and quality, including the provisions of Water Pollution Legislation, the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2009, the European Communities (Drinking Water) (No. 2) Regulations 2007.

Section 3.1.3 'Water Services Objectives':

**WS1:** Provide and/or facilitate where appropriate the refurbishment and or upgrading of water and wastewater treatment schemes in order to protect the River Clare and its qualifying interests.

**WS2:** Extend and improve both foul and storm water sewer collection networks in accordance with the Tuam Drainage Scheme.

**WS3:** Ensure that any proposed developments outside the public wastewater system are assessed in terms of site suitability and, if suitable, are serviced by an appropriate wastewater treatment system, correctly sited and designed in accordance with the EPA Wastewater Manuals and Code of Practice.

**WS5:** Provide and protect a 100m buffer around the Wastewater Treatment Plant site and appropriate buffer zones around any other treatment plant.

**WS6:** Ensure that any development that would have an unacceptable impact on the water environment, including drinking water, surface water and groundwater quality and quantity, river corridors and associated wetlands will not be permitted.



**WS8:** Support the implementation of the relevant recommendations and measures as outlined in the Western River Basin District Management Plan.

**WS9:** Require, where it is deemed necessary, contributions from developers for the upgrading of the water supply and/or wastewater disposal infrastructure to accommodate their developments.

Section 9.1.10 'Natural Heritage & Biodiversity Polices':

**NH17:** Maintain protect and preserve the aesthetic value of all waterways and their corridors within the Plan area from the impacts of highly visible development and also protect their water quality.

Section 9.1.11 'Natural Heritage & Biodiversity Objectives:

**NH1:** Seek to protect the Clare River (SAC), Knockavanny Turlough (pNHA) and Killower Turlough (pNHA) and any future designated sites.

**NH5:** Ensure a minimum setback of 10 metres is maintained in any new development proposals along the Rivers Nanny/Clare and their tributaries.

**NH13:** Ensure that where flood alleviation works take place the natural heritage and landscape character of rivers, streams and watercourses are protected and enhanced to the greatest extent possible.

**NH17:** Protect the River Clare/Nanny and associated floodplain(s), wetlands and natural drainage courses for reasons of flood control, and for reasons of biodiversity, natural heritage tourism/angling.

## 5.3 Assessment Criteria

### 5.3.1 Introduction

The Lough Corrib cSAC lies within the boundary of the draft Tuam LAP, therefore there is potential for direct impacts particularly as a result of disturbance to habitats and species from development and activities occurring through the implementation of the Plan's objectives and policies. There is also the potential for indirect and cumulative effects.

The Draft Tuam LAP proposes to incorporate an Environmental Management Zone (Zone EM – see Appendix 4) which was not previously incorporated into the 2005-2011 Tuam LAP. This zone aims to conserve protected sites and provide for environmental management. The use of land as an 'Environmental Management Area' shall be taken to include the use of land primarily for the protection of land located within a Natura 2000 site and/or which are liable to flooding. As outlined under Section 2.2.6.2 *'This zoning shall establish an 'ecological corridor' along the River Clare, comprising of the SAC designated area together with a 20m wide buffer on either side of the River Clare where appropriate within the LAP area. This zoning will limit any new development potential within this area and will help promote 'ecological connectivity' whilst protecting the qualifying interests of cSAC'.*

In addition, the draft Tuam LAP proposes to incorporate an Open Space, Recreation and Amenity & Green Network Zone (Zone OS – see Appendices 5 and 6) along the River Nanny which also was not previously incorporated into the 2005-2011 Tuam LAP. This zone is proposed to *'include an amenity corridor of up to 20m in width where appropriate along the River Nanny and to advance a river walkway/cycleway from Curraghgreen in the east towards the Weir Road Bridge in the western aspect of the LAP area'*, which has been outlined under Section 2.2.6.2

Both of these zones will limit any new development potential within the flood plain of the River Clare and the River Nanny and will help promote 'ecological connectivity' whilst protecting the qualifying interests of cSAC.

### 5.3.2 Elements of Plan likely to cause impacts

A list of the individual policies and objectives of the Plan (either alone or in combination with other plans or projects) with potential to give rise to impacts on the Natura 2000 site network

(Lough Corrib cSAC) is included in the left hand column of the assessment tables contained in Appendix 2. In this evaluation each of the Plan's policies and objectives are evaluated against the conservation objectives of the Lough Corrib SAC listed below:

- Objective 1: To maintain the Annex I habitats for which the SAC has been selected at favorable conservation status.
- Objective 2: To maintain the Annex II species for which the SAC has been selected at favourable conservation status.
- Objective 3: To maintain the extent, species richness and biodiversity of the entire site
- Objective 4: To establish effective liaison and co-operation with landowners, legal users and relevant authorities

The Policies and Objectives set out in Section 9 (9.1.10 and 9.1.11 respectively) of the Draft Tuam LAP provide for the protection and enhancement of Natural Heritage and Biodiversity. Specifically Policies NH5, NH14 and NH15 of Section 9.1.10 in relation to the protection of Designated Conservation Sites and also Objective NH6 set out in Section 9.1.11 providing for the preparation of Appropriate Assessments of any development potentially affecting designated Natura 2000 sites.

In relation to Appendix 2 '*Assessment of potential and residual impacts of policies and objectives*' the following policies and objectives have been deemed as having a potential indirect and/or cumulative impact on the Lough Corrib cSAC. Where potential impacts are identified below, avoidance/mitigation measures contained as policies or objectives within the Plan as well as other laws/standards/procedures are cited and finally it is determined whether there will be any residual impacts or not.

Firstly, under section 2.2.6 'Land Use Zoning Objectives', objective DS1 outlines the different land use zones within the draft LAP. Four areas of land have been identified as Industrial Zones (Zone I) and three of the four Industrial Zones are located within close proximity to the River Clare (see Appendix 4 – Map of Land Use Zonings). The areas zoned for industry will be taken to include the use of land for industry/manufacturing, repairs, science and technology, warehousing, distribution, open-storage, waste material treatment and recovery and transport operating centres.

The River Clare is important salmonid water and is also an important habitat for otter and crayfish. In addition associated with the River Clare are wet grasslands which are important for biodiversity but also help reduce the flow of pollutants to both surface water and groundwater and ease the impacts of flooding. Increased industrial activity such as that outlined above could potentially affect species and habitats within this area and also water quality which is already at 'moderate' pollution status downstream of the Weir Bridge. These industrial developments are also located on the flood plain of the River Clare.

In relation to the protection of the River Clare and River Nanny and their associated protected species and habitats, the draft plan has included two important zones as outlined previously in Section 5.3.1, these are namely the Environmental Management Zone along the River Clare and the Open Space, Recreation and Amenity & Green Network Zone along the River Nanny which will limit any new development potential along the River Clare and the River Nanny and will help promote 'ecological connectivity' and will therefore alleviate any potential negative impacts on the River Clare and on the River Clare.

According to the map 3A Open Space (see Appendix 7) the proposed industrial zones along the River Clare and the residential zones proposed along the River Nanny, its tributary to the North East and along the River Clare at the extreme north western boundary are all known flood areas.

The draft LAP has made due cognisance to the recently announced national guidelines entitled '*The Planning System and Flood Risk Management: Guidelines for Planning Authorities in (2009)*'. The Draft LAP has incorporated specific measures to address flood risk and management and these include the following:

- The areas at flood risk have been identified and mapped based on available data and this has been included within the LAP in the Flood Risk Map.
- The zoning of an amenity corridor along the River Clare and River Nanny, generally with a width of at least 20m outside the built envelope of the town and a narrower width within the built envelope of the town to reflect the existing river channels running through the town centre.
- No new zonings are included in the plan.
- A presumption against the development of lands identified as flood risk in the flood risk map unless and until it can be shown that development can take place through a full flood risk assessment.
- The inclusion of policies and objectives within the LAP to ensure that new development generally avoids areas of flood risk and that where there is a strategic case for allowing development in such areas, that these proposals be subject to the 'justification and sequential tests' in the Flood Risk Management Guidelines and assessed to ensure that flood risk can be reduced and mitigated as appropriate.

Additional mitigation measures identified in the Draft Tuam LAP which address flood risk and ensure that risk can be avoided, reduced and mitigated against in accordance with the Flood Risk Management Guidelines are outlined below:

#### Section 3.2.2 'Surface Water and Flooding'

##### Policies:

**SW1:** Support the provision of adequate surface water drainage infrastructure, promote the use of a sustainable drainage system (SuDS) approach and techniques and manage flood risk through the protection of natural drainage systems, the appropriate location and design of different types of development and the incorporation of flood risk assessments and works where necessary.

**SW2:** Support the implementation of the legislative requirements, policy guidance and development standards relevant to surface water drainage and flood risk management in carrying out County Council functions.

**SW3:** Protect, preserve and support the establishment of areas providing natural drainage, stormwater retention and water-retaining vegetation to help reduce the occurrence and extent of flooding.

**SW4:** Liaise and co-operate with the OPW in addressing flood risk, implementing the EU Flood Risk Directive (2007/60/EC) and developing any Catchment-based Flood Risk Management Plan (CFRAM) where these have relevance for Tuam. Have due regard to any relevant recommendations and outputs arising from the CFRAM.

**SW5:** Prepare a strategic flood risk assessment and stormwater management plan/ measures for Tuam within the lifetime of this LAP, as resources permit and more detailed information becomes available from the OPW and any other relevant sources. This shall incorporate measures to address the likely increased risk of flooding within the LAP area due to climate change.

**SW6:** Improve flood defenses within the Tuam LAP area in conjunction with the OPW, if required

#### Section 3.2.3 'Surface Water and Flooding'

##### Objectives:

**SW1:** Ensure that the provisions of the DEHLG/OPW publication 'The Planning System and Flood Risk Management: Guidelines for Planning Authorities 2009' are implemented in respect of the Council's functions, where relevant, including in the assessment of planning applications.

**SW2:** Protect and maintain, where feasible, undeveloped riparian strips and natural floodplains along the Rivers Clare and Nanny and their tributaries, where appropriate.

**SW3:** Prevent the curtailment of natural drainage systems and in the case of development works, require the provision of acceptable mitigation measures in order to minimise the risk of flooding and negative impacts to water quality (run-off, erosion and sedimentation).

**SW4:** Ensure that development will only be authorised where it can be demonstrated that it does not significantly reduce, either individually or cumulatively, the flood storage capacity of the River Nanny, River Clare, their tributaries and all associated floodplains, or compromise safety standards.

**SW5:** Require all development proposals seeking to locate in an area, which the Planning Authority considers to be at potential risk from flooding, to adopt a Sequential Approach and Justification Test, as set out in the DEHLG publication 'The Planning System and Flood Risk Management: Guidelines for Planning Authorities 2009' and include a Flood Risk Assessment and proposals for the sustainable storage or attenuation of runoff/discharges with any planning application.

**SW7:** Provide for the protection, management and as appropriate, enhancement of existing wetland habitats where flood protection/management measures are necessary.

Section 9.1.9.3 'Natural Heritage & Biodiversity' objectives

**SW8:** Ensure that screening for EIS/EIA, and full EIS/EIA where necessary, is an integral part of all planning applications in areas at risk of flooding.

#### Section 9.1.10 'Natural Heritage & Biodiversity'

##### Objectives:

**NH2:** Liaise with the NPWS and the OPW regarding any enhancement/ maintenance works along the River Nanny and River Clare.

**NH5:** Ensure a minimum setback of 10 metres is maintained in any new development proposals along the Rivers Nanny/Clare and their tributaries.

**NH13:** Ensure that where flood alleviation works take place the natural heritage and landscape character of rivers, streams and watercourses are protected and enhanced to the greatest extent possible.

**NH14:** Have regard to the recommendations of the DEHLG and any national guidance documents, which may come about during the lifetime of this plan, with respect to potential impacts on flood plains and flood risk areas, when considering new development applications or flood prevention measures.

**NH17:** Protect the River Clare/Nanny and associated floodplain(s), wetlands and natural drainage courses for reasons of flood control, and for reasons of biodiversity, natural heritage tourism/angling.

In addition, the policies, objectives and the specific measures outlined in the Draft LAP are in line with the Flood Risk Management and Assessment Objectives set out in the GCDP. The Flood Risk Management Guidelines recommend a Sequential Approach for taking account of flood risk. The sequential approach works by guiding development away from areas that have been identified through a flood risk assessment as being at risk from flooding.

It is recommended that throughout the lifetime of the proposed Draft LAP that strict cognisance be made to objective SW1 under Section 3.2.3 'Surface Water and Flooding' which has been outlined above. Under this objective any proposed developments should be subjected to the 'justification and sequential test'. It is proposed that on failing this test, the zone in which the proposed development is located be re-zoned to a use more appropriate to its status.

Secondly, under Section 4.2.2 'Road and Traffic Management Policies' policies RT3 and RT4 and under 'Section 4.2.3 'Road and Traffic Management Objectives' objectives RT1, RT2, RT3, RT4 and RT5 outline policies and objectives to develop the Atlantic Corridor and promote a number of road schemes. In addition, under Section 4.2.3 'Road and Traffic Management objectives' the following: RT24 and RT25 outline objectives to improve bridges, culverts, and roadside drainage and also aim to facilitate the NRA and OPW to improve river crossings and drainage works. These developments could potentially affect the River Nanny and its associated wildlife corridor. The River Nanny is outside the designated cSAC area therefore only indirect effects if any on the cSAC are likely to occur i.e. pollution of the River

Nanny during road development or bridge repair with subsequent effects on the River Clare downstream.

Finally, under Section 5.4.3 'Employment and Economic Development Objectives', objective EE10 aims to facilitate the *promotion and development of 'Competitive Sustainable Manufacturing (CSM)' which includes development of the implementation of the Factories of the Future Public-Private Partnership (FoF PPP) within appropriate lands*. If such development was to occur within any of the Industrial Zones (Zones I) outlined above this could potentially impact the River Clare particularly downstream of the Weir Bridge where no buffer zone is available on the east of the watercourse.

The following specific policies and objectives (other those which have already been outlined above in relation to Flood Risk) that have been identified as important in order to avoid or mitigate against the negative impacts which have been identified in relation to future development throughout the lifetime of the draft LAP.

Under Section 3.1.2 '*Water Services Policies*': WS3 which '*Ensures that new developments are properly serviced with water, wastewater and surface water drainage infrastructure.*'

Under Section 3.1.3 '*Water Services Objectives*': WS3, WS4 and WS6 aim to ensure that any proposed developments outside the public wastewater system are assessed in terms of site suitability, support the protection of groundwater and also ensure that any proposed development does not have an unacceptable impact on groundwater, drinking water or surface water.

Under Section 9.1.10 '*Natural Heritage & Biodiversity Policies*': Policy NH5 states that '*implementation of EU Directives and associated national legislation and directives with regard to the protection and enhancement of the natural environment, including the Birds Directive, Habitats Directive, Wildlife Act, Flora Protection Order, Ramsar Sites, Water Framework Directive and any other directives, Acts or Policies must be implemented over the lifetime of the Tuam Draft LAP and NH 14 states that It is the policy of Galway County Council to implement Article 6(3) of the EU Habitats Directive, and to subject proposed projects likely to impact on Natura 2000 or European Sites (SAC's, SPA's), whether directly (in situ), indirectly (ex-situ) or in combination with other plans or projects, to an Appropriate Assessment/Screening in order to inform decision making*'. NH15 states that it is necessary to '*Consult with the DEHLG in relation to proposed developments within or adjoining designated conservation sites*'.

Policies NH13 and NH17 outline policies to prevent the spread of invasive species, promote measures to develop policies to manage and control alien invasive species already present and outline policies to protect waterways and their corridors from highly visible development.

Under Section 9.1.11 '*Natural Heritage & Biodiversity Objectives*' the following: NH4, NH5, NH8, NH13, NH14, NH16 and NH17 outline objectives to enhance biodiversity along rivers/streams and water bodies and maintain them free of inappropriate development, ensure a minimum setback of 10m is used in any new development proposals and ensure the protection of ground water.

Objective NH6 requires screening for Appropriate Assessment with all applications that may impact on a Natura 2000 site and Objective NH7 requires ecological assessment to inform decision making of all proposed significant planning applications, where it is considered that the proposed development may have an adverse impact on the environment or designated site. Objective NH8 ensures that ecological impact assessment, in relation to proposed and designated natural heritage sites and other ecologically sensitive locations are carried out by suitably qualified professionals, while objective NH9 has regard to the recommendations of the DEHLG and any national guidance documents that are produced during the lifetime of this Plan, with respect to potential impacts on nature conservation, when considering development applications relating to activities on and/or adjoining sites of nature conservation importance.

Under Section 9.2.3 '*Landscape Objectives*' NH21 ensures that all proposed developments are sited and designed appropriately with regard to the landscape.

Under Section 3.5.3 '*Information and Communication Technology objectives*' objective IT3 aims to '*support the development of underground broadband infrastructure for road, commercial and resident schemes*'. This could have possible landscape impacts however would not directly impact on the cSAC or its qualifying interests.

The following avoidance/mitigations measures have been proposed under section 3.5.2 '*Information and Communication Technology policies*' where IT2 states that *developers must co-locate masts to avoid unnecessary proliferation of masts* and under Section 3.5.3 '*Information and Communication Technology objectives*' under IT4 it is required that telecommunication infrastructure should be integrated/landscaped into the surrounding environment to minimise adverse visual impacts.

In addition to the above measures incorporated into the Draft Tuam LAP, any new development proposed within the boundary of the Draft Tuam LAP area must adhere to the relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects likely to affect the status of the Natura 2000 site. These regulatory provisions include and are not limited to the European Council Directive on the Conservation of natural habitats and of wild fauna and flora (92/43/EEC) (Habitats Directive), The Water Framework Directive 2000/60/EC, Wildlife Act 1976 and Wildlife (Amendment) Act 2000 (Wildlife Act) and the Urban Waste Water Treatment (Amendment) Regulations 2010 and the Water Framework Directive 2000/60/EC.

The proposed Draft LAP for Tuam town could potentially have an overall positive impact on the Lough Corrib cSAC by implementing the above outlined measures and also by confining future development within the zones outlined in the Draft Plan.

## **6. SCREENING CONCLUSIONS**

### **6.1 Criteria for Assessment**

On the basis of the above analysis it can be concluded that no projects that will cause significant adverse direct, indirect or secondary impacts on the integrity of the Lough Corrib SAC will be permitted on the basis of this Plan (either individually or in combination with other plans or projects), considering the following factors:

- size and scale
- land-take
- distance from the Natura 2000 site or key features of the site
- resource requirements (water abstraction etc.)
- emissions (disposal to land, water or air)
- excavation requirements
- transportation requirements
- duration of construction, operation, decommissioning, etc.
- habitat area
- disturbance to key species
- habitat or species fragmentation
- species density
- changes in key indicators of conservation value (water quality etc.)
- climate change
- key relationships that define the structure of the site
- key relationships that define the function of the site

Furthermore, such developments as will be permitted on foot of the provisions of this Plan shall be required to conform to the relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects.

### **6.2 Conclusion**

The trigger for a Stage Two HDA would be if the Plan were likely to have significant effects on a Natura 2000 site (i.e. the Lough Corrib SAC). This screening report evaluates the Plan to see if it needs to be the subject of a Stage Two HDA. It finds that the Plan has been formulated to ensure that uses, developments and effects arising from permissions based upon the Plan (either individually or in combination with other plans or projects) shall not give rise to significant effects on the integrity of any Natura 2000 sites. The recommendations proposed in the AA screening have been incorporated into the draft Tuam LAP. Therefore, in accordance with the Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, it is concluded that the Plan does not require any further assessment to demonstrate compliance with the Directive.

## REFERENCES

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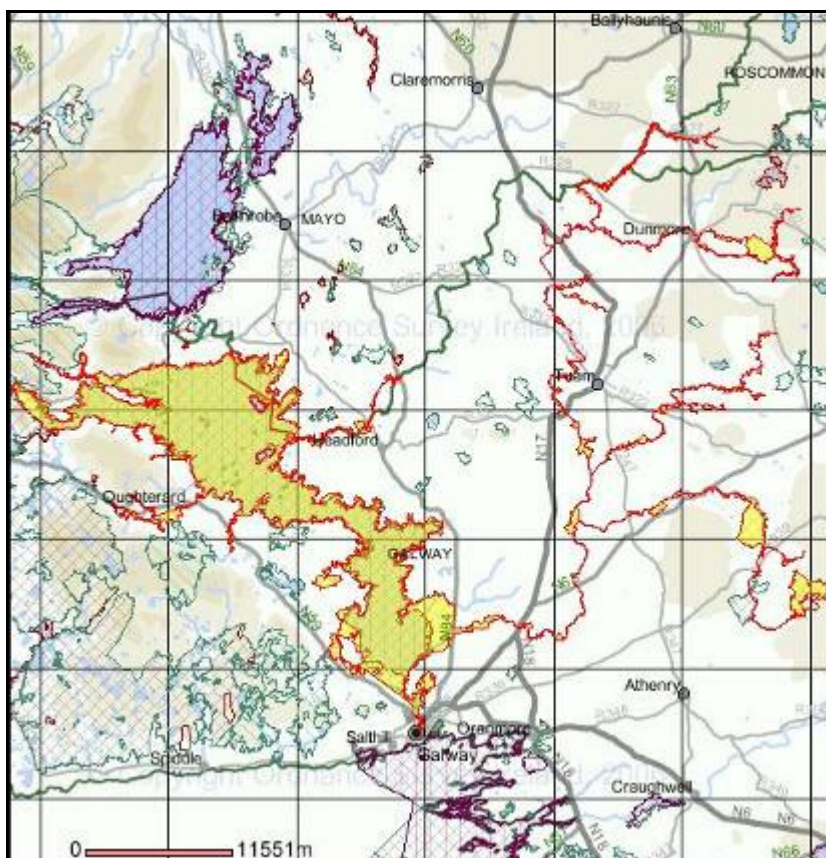
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## APPENDIX 1 NPWS Site Synopses

**SITE NAME: LOUGH CORRIB cSAC**  
**SITE CODE: 000297**



**Figure A1.1** Lough Corrib cSAC. © Ordnance Survey Ireland. All rights reserved. Licence number 2010/15CCMA/Galway County Council.

Lough Corrib is situated to the north of Galway city and is the second largest lake in Ireland with an area of approximately 18,240 ha (the entire site is 20,556 ha). The lake can be divided into two parts: a relatively shallow basin, underlain by Carboniferous limestone, in the south and a larger, deeper basin, underlain by more acidic granite, schists, shales and sandstones, to the north. The surrounding lands are mostly pastoral farmland, to the south and east, and bog and heath, to the west and north. Rivers, mainly to the east of the site are included within the cSAC as they are important for Atlantic Salmon. These rivers include the Clare, Grange, Abbert, Sinking, Dalgan and Black to the east, as well as the Cong, Bealanabrack, Failmore, Cornamona, Drimneen and Owenriff to the west. In addition to the rivers and Lake Basin, adjoining areas of conservation interest, including raised bog, woodland, grassland and limestone pavement, have been incorporated into the site.

This site is of major conservation importance and includes 14 habitats listed on Annex I of the E.U. Habitats Directive. Six of these are priority habitats - petrifying springs, *Cladium* fen, active raised bog, limestone pavement, bog woodland and orchid-rich calcareous grassland. The other annexed habitats present include hard water lakes, lowland oligotrophic lakes, floating river vegetation, alkaline fens, degraded raised bogs, Rhynchosporion vegetation, *Molinia* meadows and old Oak woodlands. Species present on the site that are listed on Annex II of this directive are Sea Lamprey, Brook Lamprey, Atlantic Salmon, White-clawed Crayfish, Freshwater Pearl Mussel, Otter, Lesser Horseshoe Bat, Slender Naiad and the moss *Drepanocladus vernicosus*. The shallow, lime-rich waters of the southern basin of the lake support one of the most extensive beds of Stoneworts (Charophytes) in Ireland, with species such as *Chara aspera*, *C. hispida*, *C. delicatula*, *C. contraria* and *C. desmacantha* mixed with

submerged Pondweeds (*Potamogeton perfoliatus*, *P. gramineus* and *P. lucens*), Shoreweed (*Littorella uniflora*) and Water Lobelia (*Lobelia dortmanna*). These *Chara* beds are an important source of food for waterfowl. In contrast, the northern basin contains more oligotrophic and acidic waters, without *Chara* species, but with Shoreweed, Water Lobelia, Pipewort (*Eriocaulon septangulare*), Quillwort (*Isoetes lacustris*), Alternate Water-milfoil (*Myriophyllum alternifolium*) and Slender Naiad (*Najas flexilis*). The last-named is listed under the Flora (Protection) Order, 1999 and is an Annex II species under the EU Habitats Directive. Large areas of reedswamp vegetation, dominated by varying mixtures of Common Reed (*Phragmites australis*) and Common Club-rush (*Scirpus lacustris*), occur around the margins of the lake. Reedswamp usually grades into species-rich marsh vegetation characterised by Slender Sedge (*Carex lasiocarpa*), Water Mint (*Mentha aquatica*),

Water Horsetail (*Equisetum fluviatile*) and Bog Bean (*Menyanthes trifoliata*). Of particular note are the extensive beds of Great Fen-sedge (*Cladium mariscus*) that have developed over the marly peat deposits in sheltered bays, particularly in the south-east corner of the lake. Alkaline fen vegetation is more widespread around the lake margins and includes, amongst the typically diverse range of plants, the Slender Cottongrass (*Eriophorum gracile*), a species protected under the Flora (Protection) Order, 1999. Wet meadows dominated by Purple Moor-grass (*Molinia caerulea*) occur in seasonally flooded areas close to the lake shore. These support species such as Sharp-flowered Rush (*Juncus acutiflorus*), Jointed Rush (*J. articulatus*), Carnation Sedge (*Carex panicea*), Devil's-bit Scabious (*Succisa pratensis*), Creeping Bent (*Agrostis stolonifera*) and Tormentil (*Potentilla erecta*), amongst others. This large site contains four discrete raised bog areas and is selected for active raised bog, degraded raised bog, Rhynchosporion and bog woodland. Active raised bog comprises areas of high bog that are wet and actively peat-forming, where the percentage cover of bog mosses (*Sphagnum* spp.) is high, and where some or all of the following features occur: hummocks, pools, wet flats, *Sphagnum* lawns, flushes and soaks. Degraded raised bog corresponds to those areas of high bog whose hydrology has been adversely affected by peat cutting, drainage and other land use activities, but which are capable of regeneration. The Rhynchosporion habitat occurs in wet depressions, pool edges and erosion channels where the vegetation includes White Beak-sedge (*Rhynchospora alba*) and/or Brown Beak-sedge (*R. fusca*), and at least some of the following associated species, Bog Asphodel (*Narthecium ossifragum*), Sundews (*Drosera* spp.), Deergrass (*Scirpus cespitosus*) and Carnation Sedge (*Carex panicea*). At Addergoole, on the eastern shores of Lough Corrib, there is an important area of western raised bog. This bog area is one of the most westerly, relatively intact raised bogs in the country. There are also other substantial areas of raised bog along various tributaries of the Corrib in east Co. Galway, namely Slieve Bog, Lough Tee Bog and Killaclogher bog. The active parts of these bogs mostly correspond to the wettest areas, where there are well developed surface features with hummocks, lawns and pools. It is in such areas that Rhynchosporian vegetation is best represented. The dominant species is the aquatic bog moss *Sphagnum cuspidatum*, which is usually accompanied by Bogbean (*Menyanthes trifoliata*), White Beak-sedge, Bog Asphodel, Bog Cotton (*Eriophorum angustifolium*), Bog Sedge (*Carex limosa*) and Great Sundew (*Drosera anglica*). Brown Beak-sedge, a locally rare plant of wet bog pools, has been recorded from a number of the bog areas within the site.

At Addergoole a substantial bog lake or soak occurs and this is infilling with large rafts of Rhynchosporion vegetation at present. This area is associated with an important area of wet bog woodland dominated by Downy Birch (*Betula pubescens*). The largest part of the uncut high bog comprises degraded raised bog. Degraded bog is dominated by a raised bog flora which tends to be rather species-poor because of disturbance and/or drying-out. The most conspicuous vascular plant species are usually Carnation Sedge (*Carex panicea*), Heather (*Calluna vulgaris*), Bog Cotton, Cross-leaved Heath (*Erica tetralix*), Bog Asphodel and Deergrass. Bog Rosemary (*Andromeda polifolia*) and Cranberry (*Vaccinium oxycoccos*), two species indicative of raised bog habitat, are frequent on both degraded and active areas of raised bog. *Sphagnum* cover is generally low within degraded areas due to a combination of drying-out and frequent burning.

Limestone pavement occurs along much of the shoreline in the lower Corrib basin and supports a rich and diverse flora, including Herb-robert (*Geranium robertianum*), Bloody

Crane's-bill (*G. sanguineum*), Carline Thistle (*Carlina vulgaris*), Spring Gentian (*Gentiana verna*), Wild Thyme (*Thymus praecox*), Rustyback (*Ceterach officinarum*), Wood Sage (*Teucrium scorodonia*), Slender St. John's-wort (*Hypericum pulchrum*), Quaking-grass (*Briza media*) and Blue Moor-grass (*Sesleria albicans*). Areas of Hazel (*Corylus avellana*) scrub occur in association with exposed limestone pavement and these include species such as Hawthorn (*Crataegus monogyna*), Buckthorn (*Rhamnus catharticus*), and Spindle (*Euonymus europaeus*) with occasional Juniper (*Juniperus communis*). Three Red Data Book species are also found in association with limestone scrub - Alder Buckthorn (*Frangula alnus*), Shrubby Cinquefoil (*Potentilla fruticosa*) and Wood Bitter-vetch (*Vicia orobus*), the latter is also protected under the Flora (Protection) Order, 1999. Open areas of orchid-rich calcareous grassland are also found in association with the limestone exposures. These can support a typically rich vegetation, including many orchids such as Pyramidal Orchid (*Anacamptis pyramidalis*), Common Spotted-orchid (*Dactylorhiza fuchsii*), Early-purple Orchid (*Orchis mascula*), Frog Orchid (*Coeloglossum viride*), Fragrant Orchid (*Gymnadenia conopsea*), Marsh Helleborine (*Epipactis palustris*), Greater Butterfly-orchid (*Platanthera chlorantha*) and Irish Lady'sstresses (*Spiranthes romanzoffiana*). The latter is protected under the Flora (Protection) Order, 1999. The Hill of Doon, located in the north-western corner of the lake, is a fine example of a Sessile Oak (*Quercus petraea*) woodland. The understorey is dominated by Sessile Oak, Holly (*Ilex aquifolium*) and occasional Juniper. There are occasional Yew (*Taxus baccata*) and Ash (*Fraxinus excelsior*) and a well developed ground layer dominated by Bilberry (*Vaccinium myrtillus*), Hard Fern (*Blechnum spicant*) and Wood Rush (*Luzula sylvatica*). Woodland also occurs on some of the islands in the lake.

The lake is rated as an internationally important site for waterfowl. Counts from 1984 to 1987 revealed a mean annual peak total of 19,994 birds. In the past a maximum peak of 38,281 birds was recorded. The lake supports internationally important numbers of Pochard (average peak 8,600) and nationally important numbers of the following species: Coot (average peak 6,756), Mute Swan (average peak 176), Tufted Duck (average peak 1,317), Cormorant (average peak 110) and Greenland White-fronted Goose (average peak 83). The latter species is listed on Annex I of Birds Directive. The Coot population is the largest in the country and populations of Tufted Duck and Pochard are second only to Lough Neagh. 30-41 breeding pairs of Common Scoter occur on the lake (1995 data) as well as breeding populations of Arctic Tern and Common Tern. Other bird species of note recorded from or close to the lake recently include Hen Harrier, Whooper Swan, Golden Plover and Kingfisher. All of these species are listed on Annex I of the E.U. Birds Directive. Otter and Irish Hare have been recorded regularly within this site. Both of these species are listed in the Red Data Book and are legally protected by the Wildlife Act 1976. Otter is also listed on Annex II of the E.U. Habitats Directive. Lough Corrib is considered one of the best sites in the country for otter, due to the sheer size of the lake and associated rivers and streams and also the generally high quality of the habitats. Atlantic Salmon (*Salmo salar*) use the lake and rivers as spawning grounds. Although this species is still fished commercially in Ireland, it is considered to be endangered or locally threatened elsewhere in Europe and is listed on Annex II of the E.U. Habitats Directive. Lough Corrib is also a well known fishing lake with a very good Trout (*Salmo trutta*) fishery.

The lake has a population of Sea Lamprey (*Petromyzon marinus*), a scarce, though probably under-recorded species listed on Annex II of the E.U. Habitats Directive. A population of Freshwater Pearl-mussel (*Margaritifera margaritifera*), a species listed on Annex II of the E.U. Habitats Directive, occurs within the site. White-clawed Crayfish (*Austropotamobius pallipes*), also listed on Annex II, is well distributed throughout Lough Corrib and its in-flowing rivers over limestone. A summer roost of Lesser Horseshoe Bat (*Rhinolophus hipposideros*), another Annex II species, occurs within the site - approximately 100 animals were recorded here in 1999.

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. The raised bog habitats are susceptible to further degradation and drying out due to drainage and peat cutting and, on occasions, burning. Peat cutting threatens Addergoole Bog and already a substantial

area of it has been cut away. Fishing and shooting occur in and around the lake. Introduction of exotic crayfish species or the crayfish fungal plague (*Aphanomyces astaci*) could have a serious impact on the native crayfish population. The bat roost is susceptible to disturbance or development.

Despite this ongoing interference however, Lough Corrib is one the best examples of a large lacustrine catchment system in Ireland, with a range of habitats and species still well represented. The lake itself is internationally important for birds and is designated as a Special Protection Area.

## APPENDIX 2 ASSESSMENT OF POTENTIAL AND RESIDUAL IMPACTS OF POLICIES AND OBJECTIVES

**Table A2.1** Evaluation of each of the draft plan's policies and objectives were evaluated against the conservation objectives of the Lough Corrib cSAC listed in Section 5.3.2. Where positive effects are likely to occur these are highlight below. The likelihood of policies and objectives in the draft plan causing negative impacts are highlighted below as is the corresponding appropriate mitigation measures in the draft plan and other instruments likely to help avoid or mitigate the negative impact. Policies and objectives with no impact (either positive or negative) are left vacant as these are considered to aid the development of Tuam LAP without any impacts to the Lough Corrib cSAC.

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
Strategic Development Policies	Policy DS1						
	Policy DS2						
	Policy DS3						
Land Use Zoning Objectives	DS1	Negative on Land Zone for Industry and Land Zone for Residential only			Polices: NH13, NH14, NH15, NH17, NH21, WS2, WS3, WS9,  Objectives: NH4, NH5, NH6, NH7, NH8, NH9, NH17, NH21, NH22, WS1, WS3, WS4, WS6, WS9	Habitats Directive (92/43/EEC); Water Framework Directive (2000/60/EC); Wildlife Act 1976 and Wildlife (Amendment) Act 2000; Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC); National Biodiversity Plan 2002	None
	DS2						
	DS3						
	DS4						
	DS5						
	DS6						
Services and Infrastructure							
	Water Services Policies	WS1		Positive			
		WS2					
		WS3		Positive			

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	WS4		Positive				
	WS5						
	WS6		Positive				
	WS7						
	WS8						
	WS9		Positive				
Water Services Objectives	WS1		Positive				
	WS2		Positive				
	WS3		Positive				
	WS4		Positive				
	WS5		Positive				
	WS6		Positive				
	WS7						
	WS8						
	WS9						
Surface water and flooding policies	SW1						
	SW2						
	SW3						
	SW4						
	SW5						
	SW6						
Surface Water and Flooding objectives	SW1		Positive				
	SW2		Positive				
	SW3		Positive				
	SW4		Positive				
	SW5		Positive				
	SW6		Positive				
	SW7		Positive				
	SW8		Positive				

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
Waste Management Policies	WM1						
	WM2						
	WM3						
	WM4						
	WM5						
	WM6						
Waste Management Objectives	WM1						
	WM2						
	WM3						
	WM4						
	WM5						
	WM6			Positive			
Climate change and Energy Policies	CE1						
	CE2						
	CE3						
	CE4						
	CE5			Positive			
	CE6						
	CE7						
	CE8						
	CE9						
	CE10						
	CE11						
	CE12						
Climate change and Energy Objectives	CE1						
	CE2						
	CE3						
	CE4						

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	CE5						
	CE6						
	CE7						
	CE8						
	CE9						
	CE10						
	CE11						
	CE12						
	CE13						
ICT Telecommunications							
Information and Communication Technology Policies	IT1						
	IT2						
	IT3						
	IT4						
Information and Communication Technology Objectives	IT1						
	IT2						
	IT3	Negative			Polices: IT2 Objectives: IT4	Habitats Directive (92/43/EEC); Wildlife Act 1976 and Wildlife (Amendment) Act 2000; Urban National Biodiversity Plan 2002	None
	IT4						
	IT5						
<b>Transportation and Movement</b>							
Sustainable Transport Policies	ST1						
	ST2						



Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	ST3						
	ST4						
	ST5						
	ST6						
	ST7						
	ST8						
	ST9						
	ST10						
	ST11						
Sustainable Transport objectives	ST1						
	ST2						
	ST3						
	ST4						
	ST5						
	ST6						
	ST7						
	ST8						
	ST9						
	ST10						
	ST11						
<b>Road Traffic Management and Parking</b>							
Road and traffic management policies	RT1		Positive				
	RT2						
	RT3						
	RT4	Negative		Negative	Polices: SW1, NH5, NH14, NH15, NH13, NH17 Objectives: SW1, SW2, SW3, SW4, SW5, SW6,	Habitats Directive (92/43/EEC); Water Framework Directive (2000/60/EC); Wildlife Act 1976 and Wildlife	None

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
					SW7, SW8, NH4, NH5, NH8, NH13, NH14, NH16, NH17, NH6, NH7, NH8, NH9	(Amendment) Act 2000; Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC); National Biodiversity Plan 2002	
	RT5						
	RT6						
	RT7						
	RT8						
	RT9						
	RT10						
	RT11						
	RT12						
	RT13						
	RT14						
	RT15						
Road and traffic management objectives	RT1	Negative		Negative	Polices: SW1, NH5, NH14, NH15, NH13, NH17 Objectives: SW1, SW2, SW3, SW4, SW5, SW6, SW7, SW8, NH4, NH5, NH8, NH13, NH14, NH16, NH17, NH6, NH7, NH8, NH9	Habitats Directive (92/43/EEC); Water Framework Directive (2000/60/EC); Wildlife Act 1976 and Wildlife (Amendment) Act 2000; Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC); National Biodiversity Plan 2002	None
	RT2						
	RT3						
	RT4						
	RT5						
	RT6						
	RT7						
	RT8						
	RT9						

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	RT10						
	RT11						
	RT12						
	RT13						
	RT14						
	RT15						
	RT16						
	RT17						
	RT18						
	RT19						
	RT20						
	RT21						
	RT22						None
	RT23					Habitats Directive (92/43/EEC); Water Framework Directive (2000/60/EC); Wildlife Act 1976 and Wildlife (Amendment) Act 2000; Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC); National Biodiversity Plan 2002	None
	RT24	Negative			Polices: SW1, NH5, NH14, NH15, NH13, NH17 Objectives: SW1, SW2, SW3, SW4, SW5, SW6, SW7, SW8, NH4, NH5, NH8, NH13, NH14, NH16, NH17, NH6, NH7, NH8, NH9	Habitats Directive (92/43/EEC); Water Framework Directive (2000/60/EC); Wildlife Act 1976 and Wildlife (Amendment) Act 2000; Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC); National Biodiversity Plan 2002	
	RT25	Negative			Polices: SW1, NH5, NH14,	Habitats Directive (92/43/EEC);	

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
					NH15, NH13, NH17 Objectives: SW1, SW2, SW3, SW4, SW5, SW6, SW7, SW8, NH4, NH5, NH8, NH13, NH14, NH16, NH17, NH6, NH7, NH8, NH9	Water Framework Directive (2000/60/EC); Wildlife Act 1976 and Wildlife (Amendment) Act 2000; Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC); National Biodiversity Plan 2002	
	RT26						
	RT27						
	RT28						
<b>Sustainable Economic development, employment &amp; Enterprise</b>							
Employment and Economic Development policies	EE1						
	EE2						
	EE3						
	EE4						
	EE5						
	EE6						
	EE7						
	EE8						
	EE9						
	EE10						
	EE11						
	EE12						
	EE13						
	EE14						
Employment and	EE1						

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
Economic Development objectives							
	EE2						
	EE3						
	EE4						
	EE5						
	EE6						
	EE7						
	EE8						
	EE9						
	EE10	Negative		Negative	Polices: SW1, NH5, NH14, NH15, NH13, NH17 Objectives: SW1, SW2, SW3, SW4, SW5, SW6, SW7, SW8, NH4, NH5, NH8, NH13, NH14, NH16, NH17, NH6, NH7, NH8, NH9	Habitats Directive (92/43/EEC); Water Framework Directive (2000/60/EC); Wildlife Act 1976 and Wildlife (Amendment) Act 2000; Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC); National Biodiversity Plan 2002	None
	EE11						
	EE12						
	EE13						
Retail development policies	RD1						
	RD2		Positive				
	RD3						
	RD4						
	RD5						
	RD6						
	RD7						
	RD8						
	RD9						

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	RD10						
	RD11						
Retail development objectives	RD1						
	RD2		Positive				
	RD3						
	RD4						
	RD5						
	RD6						
	RD7						
	RD8						
	RD9						
	RD10						
	RD11						
	RD12						
	RD13						
	RD14						
	RD15						
Residential and neighbourhood development Policies	RN1						
	RN2						
	RN3	Positive					
	RN4						
	RN5						
	RN6						
	RN7						
	RN8						
	RN9						
	RN10						
	RN11						

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	RN12						
	RN13						
	RN14						
	RN15						
	RN16						
	RN17						
	RN18						
	RN19						
	RN20						
	RN21						
Residential and neighbourhood development objectives	RN1						
	RN2						
	RN3						
	RN4						
	RN5						
	RN6						
	RN7						
	RN8						
	RN9						
	RN10						
	RN11						
	RN12						
	RN13						
	RN14						
	RN15						
	RN16						
	RN17						
	RN18						
	RN19						

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	RN20						
	RN21						
	RN22						
	RN23						
<b>Social Inclusion and Community Facilities</b>	SI 1						
Social Inclusion policies	SI 2						
	SI 3						
	SI 4						
	SI 5						
	SI 6						
	SI 7						
	SI 8						
	SI 9						
	SI 10						
	SI 11						
Social Inclusion objectives	SI 1						
	SI 2						
	SI 3						
Community facilities policies	RCF 1						
	RCF 2						
	RCF 3						
	RCF 4						
	RCF 5						
	RCF 6						
	RCF 7						
	RCF 8						
	RCF 9						



Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	RCF 10						
	RCF 11						
	RCF 12						
	RCF 13						
	RCF 14						
	RCF 15						
	RCF 16						
	RCF17						
	RDF 18						
Community facilities objectives	RCF 1						
	RCF 2						
	RCF 3						
	RCF 4						
<b>Built heritage and urban design</b>							
Architectural heritage policies	BH1						
	BH2						
	BH3						
	BH4						
	BH5						
	BH6						
	BH7						
	BH8						
Architectural heritage objectives	BH1						
	BH2						
	BH3						
	BH4						
	BH5						
	BH6						

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	BH7						
	BH8						
	BH9						
	BH10						
	BH11						
	BH12						
	BH13						
	BH14						
	BH15						
	BH16						
	BH17						
	BH18						
	BH19						
Urban design/Public realm policies	UR1						
	UR2						
	UR3						
	UR4						
	UR5						
	UR6						
	UR7						
	UR8						
	UR9						
Urban design/Public realm objectives	UR1						
	UR2						
	UR3						
Archaeological heritage policies	AH1						
	AH2						
	AH3						
	AH4						

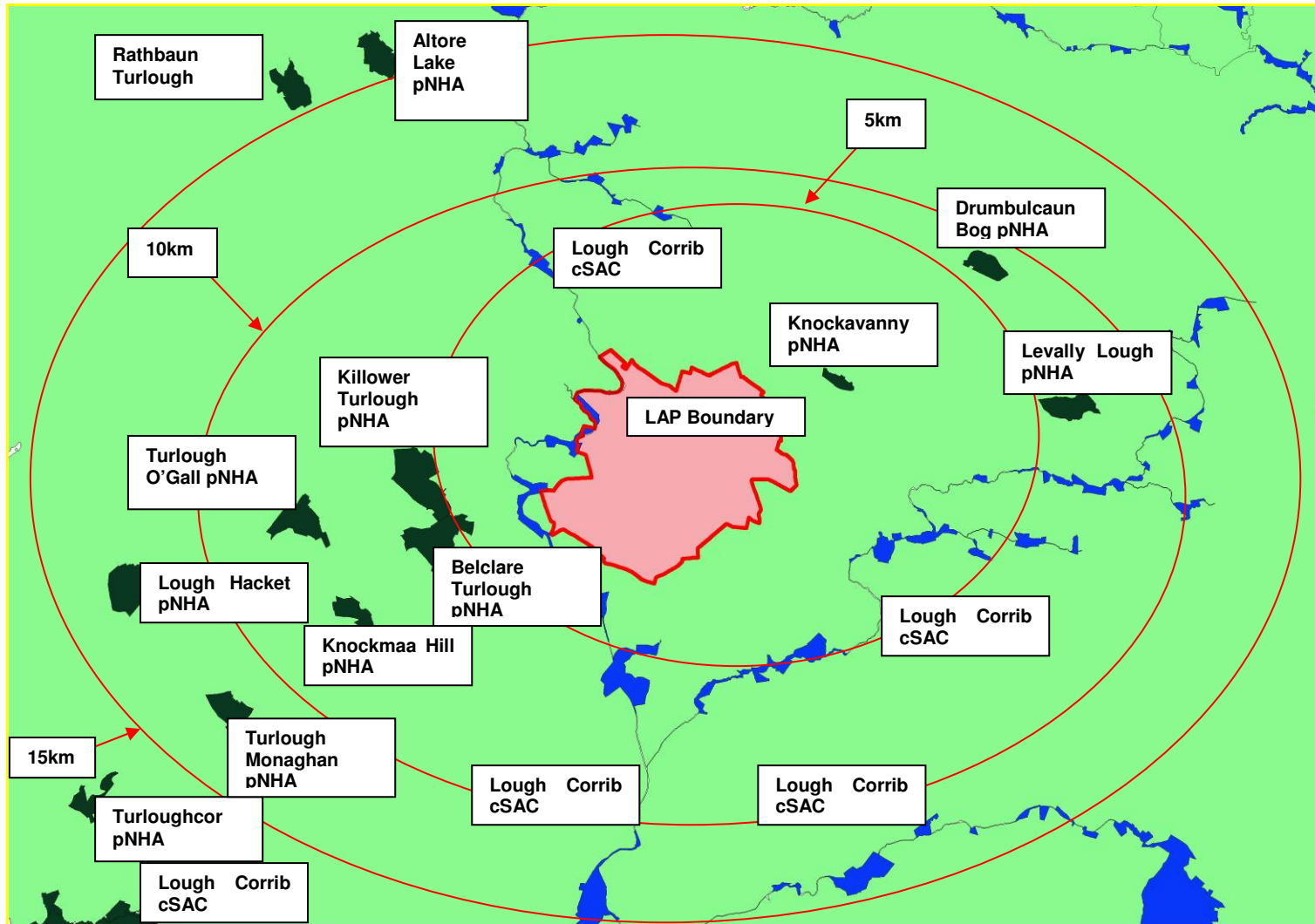
Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	AH5						
	AH6						
	AH7						
	AH8						
Archaeological heritage objectives	AH1						
	AH2						
	AH3						
	AH4						
	AH5						
	AH6						
	AH7						
	AH8						
<b>Natural Heritage, Environment and Amenity</b>							
Natural Heritage & Biodiversity Policies	NH1						
	NH2						
	NH3						
	NH4						
	NH5	Positive					
	NH6						
	NH7						
	NH8						
	NH9						
	NH10						
	NH11						
	NH12						
	NH13	Positive					
	NH14	Positive					
	NH15	Positive					

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	NH16						
	NH17	Positive					
	NH18						
	NH19						
	NH20						
	NH21						
	NH22						
	NH23						
	NH24						
Natural Heritage & Biodiversity objectives	NH1						
	NH2						
	NH3						
	NH4	Positive					
	NH5	Positive					
	NH6	Positive					
	NH7	Positive					
	NH8	Positive					
	NH9	Positive					
	NH10						
	NH11						
	NH12						
	NH13	Positive					
	NH14	Positive					
	NH15						
	NH16	Positive					
	NH17	Positive					
Landscape policies	NH25						
	NH26						
	NH27						
	NH28						
Landscape objectives	NH18	Positive					

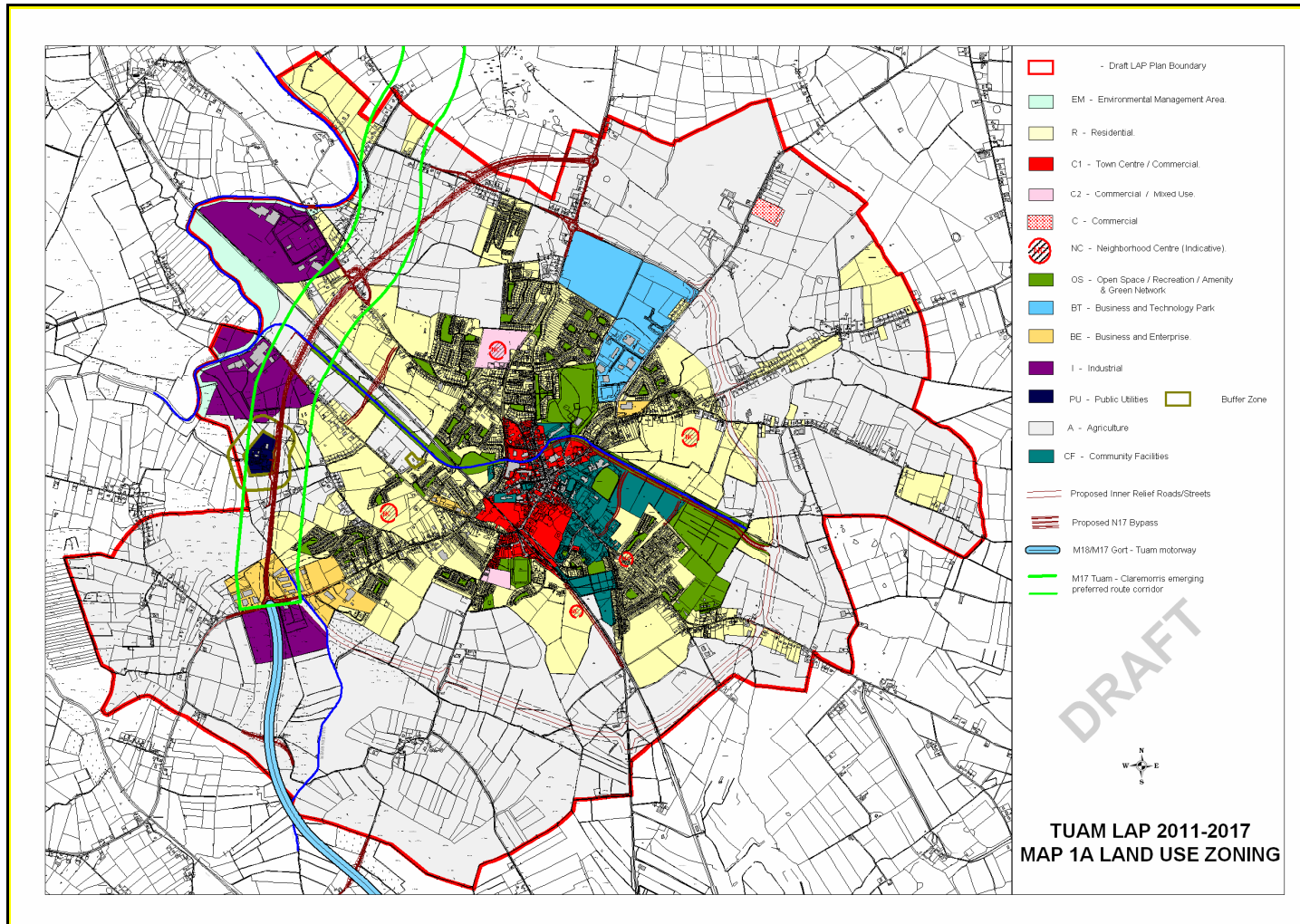
Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	NH19						
	NH20						
	NH21	Positive					
	NH22						
	NH23						
	NH24	Positive					
	NH25						
Air quality and Noise policies	NH29						
	NH30						
	NH31						
	NH32						
	NH33						
	NH34						
	NH35						
Air quality and Noise objectives	NH26						
	NH27						
Open space, amenity and Green network polices	OAG1						
	OAG2						
	OAG3						
	OAG4						
	OAG5						
	OAG6						
	OAG7						
	OAG8						
	OAG9						
	OAG10						
	OAG11						
	OAG12						

Policy/objective		Special Area of Conservation			Avoidance/Mitigation Measures		Residual Impacts
		Lough Corrib cSAC (000297)					
		Potential impacts					
Name of policy/objective	Number of policy/objective	Indirect	Direct	Cumulative	Policies/Objectives contained in draft plan	Other instruments	
	OAG13						
	OAG14						
	OAG15						
	OAG16						
Open space, amenity and Green network polices	OAG1						
	OAG2						
	OAG3						
	OAG4						
	OAG5						
	OAG6						
	OAG7						
	OAG8						
	OAG9						
	OAG10						

### APPENDIX 3 MAP OF PROTECTED AREAS IN RELATION TO THE TUAM LAP BOUNDARY

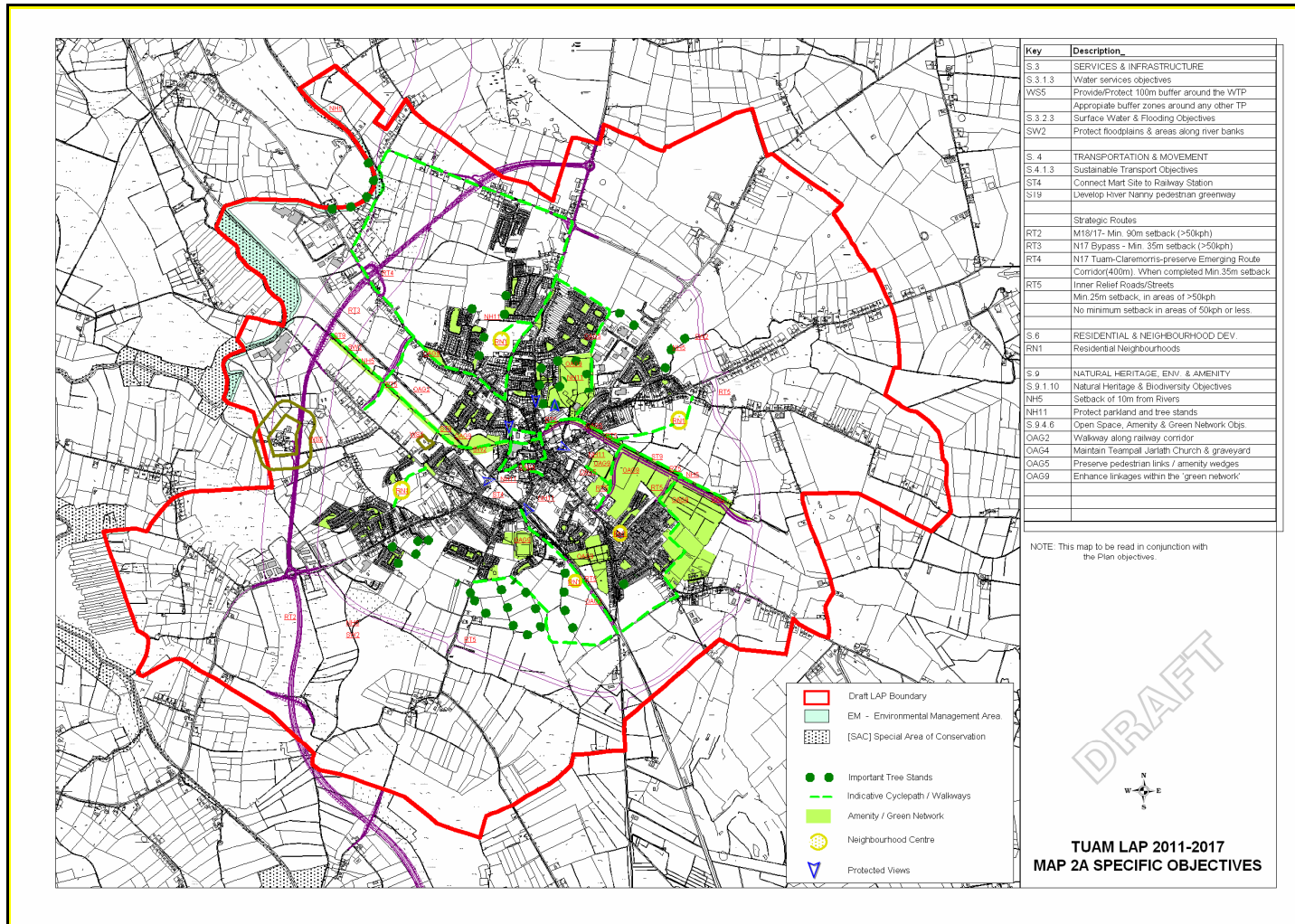


**APPENDIX 4 MAP 1A LAND USE ZONING**

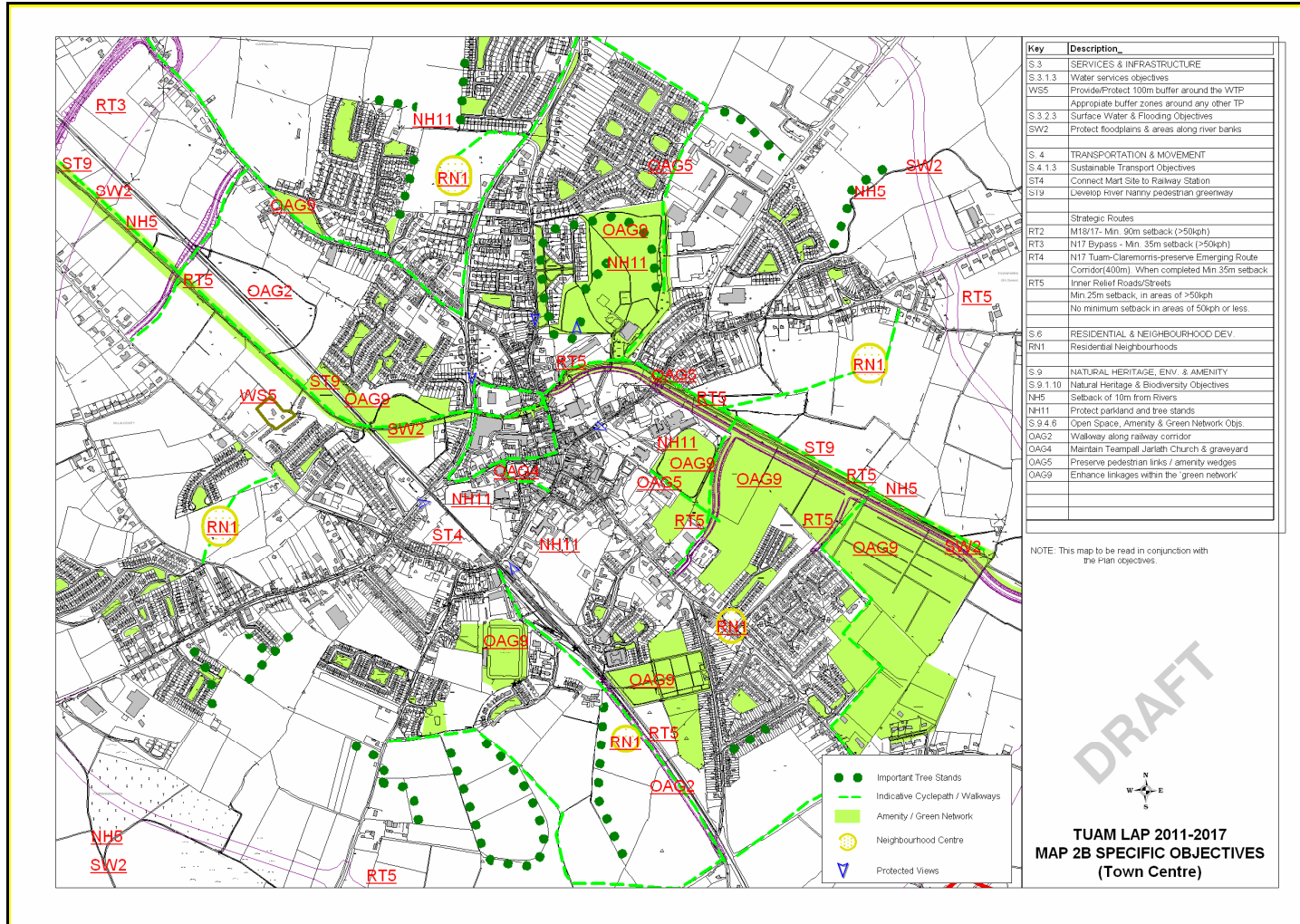




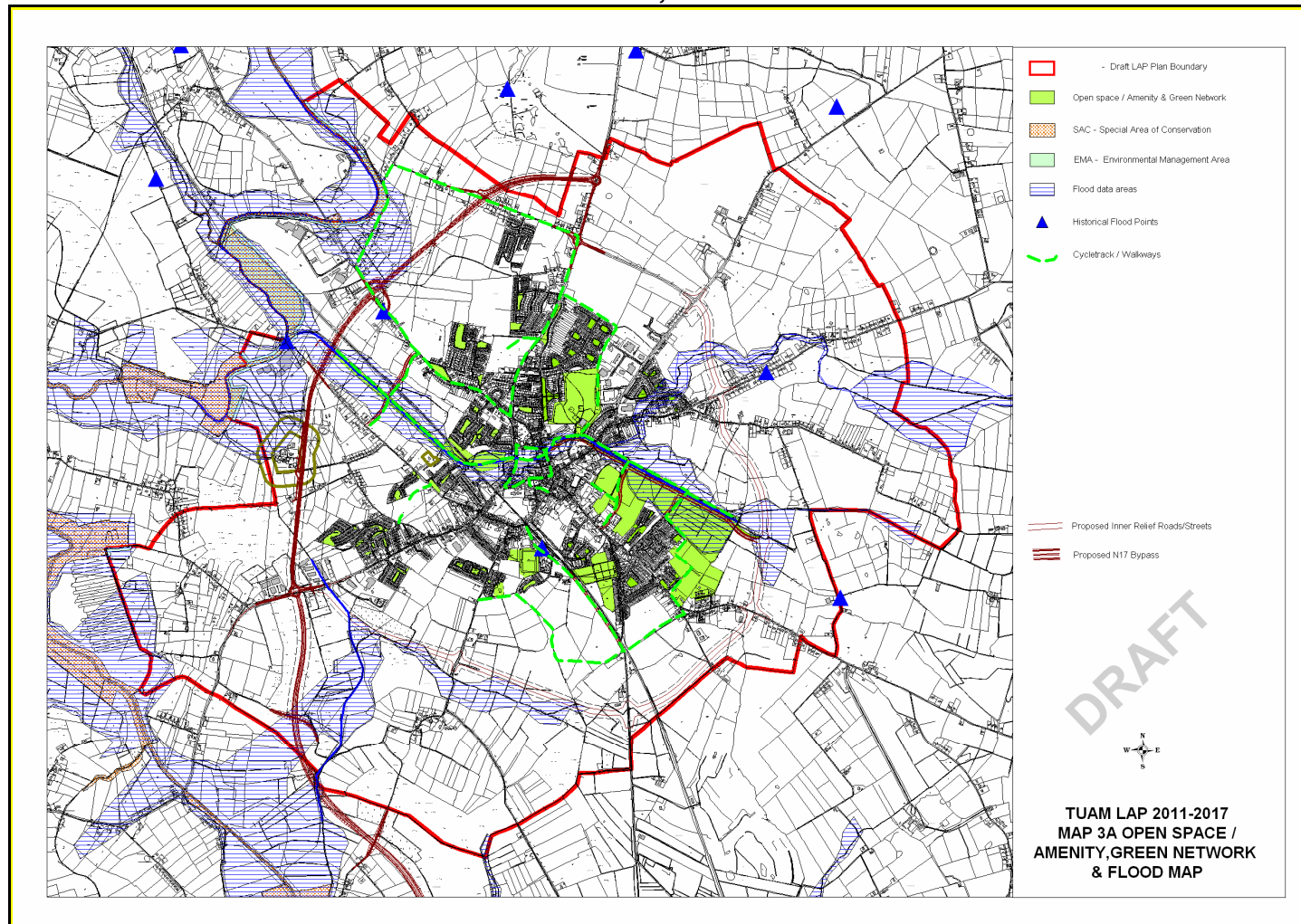
## APPENDIX 5 MAP 2A SPECIFIC OBJECTIVES MAP



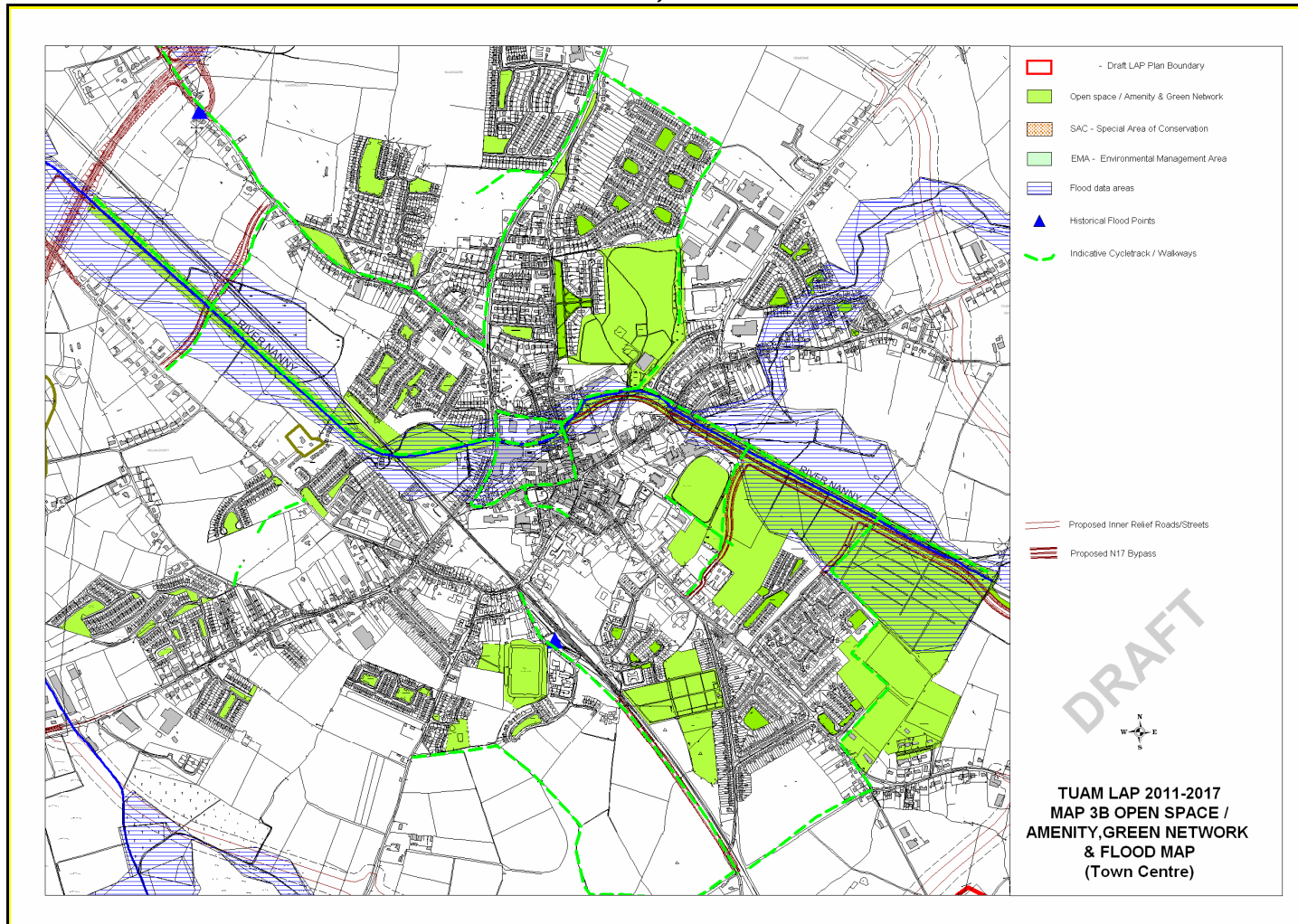
### APPENDIX 6 MAP 2B SPECIFIC OBJECTIVES MAP



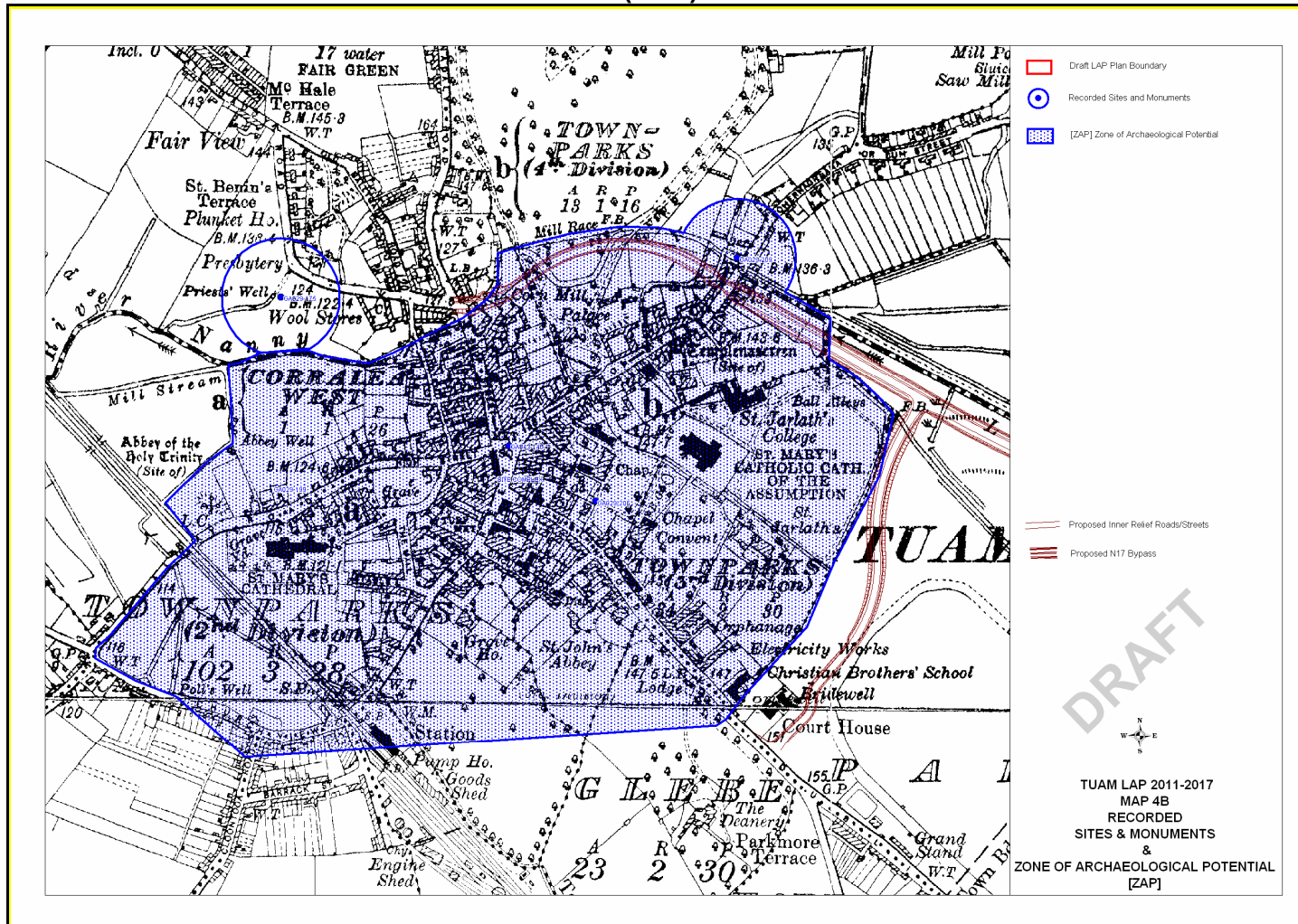
### APPENDIX 7 MAP 3A OPEN SPACE / AMENITY, GREEN NETWORK & FLOOD MAP



### APPENDIX 8 MAP 3B OPEN SPACE / AMENITY, GREEN NETWORK & FLOOD MAP



**APPENDIX 9 MAP 4B SITES & MONUMENTS (ZAP)**



## APPENDIX 10 MAP 5A PROTECTED STRUCTURE & ACA

