



**VARIATION NO. 1 TO THE
GALWAY COUNTY DEVELOPMENT PLAN 2015-2021
NATURA IMPACT REPORT**

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1 Introduction

1.1 Legal Requirement for Appropriate Assessment

This Natura Impact Report (NIR) has been prepared by Scott Cawley Ltd. on behalf of Galway County Council. It provides information on, and assesses the potential for, Variation No. 1 to the Galway County Development Plan 2015-2021 to impact on Natura 2000 sites (hereafter referred to as European sites)¹ and furthermore assess whether the Variation would impact on the integrity of any European site.

Variation No. 1 to the Galway County Development Plan 2015-2021 was adopted by the Elected Members of Galway County Council on the 24th April 2017.

The responsibility for carrying out the Appropriate Assessment (AA) lies with the competent authority (in this instance Galway County Council) and the information provided in this NIR facilitates the AA by Galway County Council.

It is necessary that the process by which Galway County Council adopt Variation No. 1 to the Galway County Development Plan 2015-2021 is carried out in accordance with the requirements of Article 6 of the Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (hereafter referred to as the Habitats Directive). The Habitats Directive has been transposed into Irish Law by Part XAB of the Planning and Development (Amendment) Act 2010, as amended (hereafter referred to as the Planning Acts).

Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to affect European sites.

Article 6(3) establishes the requirement to screen all plans and projects and to carry out a further assessment if required (Appropriate Assessment (AA)):

“Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to an appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

Article 6(4) allows proposed plans and projects to be approved under certain circumstances:

“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 a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall

¹ Natura 2000 sites are defined under the Habitats Directive (Article 3) as a European ecological network of special areas of conservation composed of sites which host the natural habitat types listed in Annex I and habitats of the protected species listed in Annex II. The aim of the network is to aid the long-term survival of Europe's most valuable and threatened species and habitats. In Ireland these sites are designated as European sites – defined under the Planning Acts and/or Birds and Habitats Regulations as (a) a candidate site of Community importance, (b) a site of Community importance, (c) a candidate special area of conservation, (d) a special area of conservation, (e) a candidate special protection area, or (f) a special protection area. They are commonly referred to in Ireland as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)

coherence of the 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 the 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 Natura Impact Report will inform the Appropriate Assessment process for Variation No. 1 to the Galway County Development Plan 2015-2021, hereafter referred to as the Variation.

1.2 Background Information

The primary purpose of the Variation is to incorporate where relevant the Galway Transport Strategy (GTS) into the Galway County Development Plan 2015 – 2021. There are also text edits included in the Variation; none of which posed likely significant effects on the European sites and therefore are not considered further.

This assessment includes a change made to the original proposed Variation following the public consultation process. The change reinstated the requirement for the cost of noise-related mitigation measures to be borne by the developer under the circumstances described in Objective TI 12 of the County Development Plan. Clarifying this point in relation to noise mitigation was assessed as not posing a risk of impacting on the conservation objectives of any European sites as it does not propose or support any future development, works or interventions. Therefore, the change was assessed as not likely to have a significant effect on any European sites, either alone or in-combination with any other plans or projects, and therefore will not adversely affect the integrity of any European sites. This assessment is included in full within the *Variation No. 1 to the Galway County Development Plan 2015 – 2021, Natura Impact Report Addendum* report (Scott Cawley Ltd., 2017b).

The GTS includes a mitigation strategy to ensure that none of the project elements associated with the GTS (and consequently any of the strategic objectives and aims which are dependent upon the delivery of projects proposed within the Strategy) are likely to have a significant effect on any of the European sites within its zone of influence, either alone or in-combination with other plans or projects. However, based upon the precautionary principle, the likelihood of significant effects arising through the implementation of the GTS was considered in the absence of those mitigation measures, as part of the Appropriate Assessment Screening.

Therefore, following an examination, analysis and evaluation of the GTS, in light of best scientific knowledge, including in particular the nature of the predicted impacts from the GTS elements and in the absence of the mitigation measures contained within the GTS, it was determined that likely significant effects on the European sites described in the Appropriate Assessment Screening as a result of the GTS could not be ruled out.

For the full screening assessment of the draft proposed Variation No. 1 text refer to *Provision of Information for Appropriate Assessment Screening, Proposed Variation No. 1 to the Galway County Development Plan 2015-2021* (Scott Cawley Ltd., 2017a).

2 Assessment Methodology

2.1 Formal Guidance

The preparation of the NIR has taken account of guidance contained in the following documents:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*. (Department of Environment, Heritage and Local Government, 2010 revision)
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular NPWS 1/10 and PSSP 2/10
- *Appropriate Assessment of Land Use Plans*. Circular Letter SEA 1/08 & NPWS 1/08
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission Environment Directorate-General, 2001); hereafter 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
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (EC Environment Directorate-General, 2000); hereafter referred to as MN2000. Note that a revised version of this Guidance is due to for publication in 2016 and will be taken into account when appropriate
- *Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. Clarification of the Concepts of Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence*. Opinion of the European Commission (European Commission, January 2007)
- *Guidelines for Good Practice Appropriate Assessment of Plans Under Article 6(3) Habitats Directive* (International Workshop on Assessment of Plans under the Habitats Directive, 2011)
- *Communication from the Commission on the precautionary principle*. European Commission (2000)

2.2 Sources of Information Used

Information relied upon included the following information sources, which included mapping, ecological and water quality data:

- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie
- Online data available on European sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie – including site synopsis, conservation objectives and other relevant supporting documentation (accessed January 2017)
- GIS based ecological datasets held by the NPWS (e.g. habitat datasets)
- Ecological survey results and GIS ecological datasets gathered as part of the Route Selection study for the N6 Galway City Transport Project—as presented in the *N6 Galway City Transport Project: Route Selection Report* (Arup, 2016)
- Information on land use zoning from the online mapping of the Department of the Environment, Community and Local Government <http://www.myplan.ie/en/index.html>;
- Information on water quality in the area available from www.epa.ie
- Information on the Western River Basin District from www.wfdireland.ie

- Information on soils, geology and hydrogeology in the area available from www.gsi.ie
- Information on the status of EU protected habitats and species in Ireland (National Parks & Wildlife Service, 2013b and 2013c)
- A wide range of spatial land use strategies, development plans at a regional, county and local level, and relevant projects informed the in-combination assessment—refer to Appendix E for full list
- *Biodiversity Action Plan for County Galway 2008-2013* (Galway County Council, 2008)
- *Galway City Draft Biodiversity Action Plan 2014-2024* (Galway City Council, 2015)
- *Galway City Habitat Inventory. Galway City Council* (Natura Environmental Consultants, 2005) – including digital mapping dataset
- Coastal Habitat Study for Bearna (Galway County Council, 2007b)
- Galway Harbour Extension Environmental Impact Statement (Galway Harbour Company, 2014)
- The Barna Woods Project, Biodiversity Report (Browne et al., 2009)
- Galway Transport Strategy (Galway City Council, 2016)

2.3 Appropriate Assessment: Purpose and Process

Galway City Council and Galway County Council, in partnership with the National Transport Authority, prepared the GTS, which was published on the 1st September 2016. The GTS consists of a number of project elements, generated by a series of guiding principles, strategic objectives and strategic aims under an overall vision “to create a connected city region driven by smarter mobility”, to form a coherent and integrated transport strategy for Galway City and its environs. The GTS encompasses all modes of transport, and includes an implementation strategy over the short, medium and long term.

All plans, such as the GTS, must be prepared and examined to ensure that there will not be any adverse effects on the integrity of European sites. The Irish Government and local planning authorities have a legal obligation to protect these sites.

The process of assessing the GTS was iterative. The overall purpose of the assessment was to ensure that the GTS, when implemented, does not result in adverse effects on the “integrity²” of the European sites within the Natura 2000 network.

The first step was to look at the overall GTS in principle and to answer the questions: is it likely that the implementation of this Strategy could result in likely significant effects (LSEs) on the European sites within the Natura 2000 network? This step is known as “Screening”. In order to ensure that the GTS complied fully with the requirements of Article 6 (3) of the Habitats Directive and all relevant Irish transposing legislation, RPS Group Ltd. prepared a screening for appropriate assessment report of the GTS (RPS, 2016). The outcome of this Screening Stage was that it was determined by Galway City Council that due to the nature and location of the transport infrastructure elements proposed to be implemented under the GTS, that significant effects could not be ruled out and that the GTS would need further assessment during its preparation. The AA process then moved to full Appropriate Assessment.

The full AA process involved analysing the relationship between the proposed elements of the GTS and the Conservation Objectives of the European sites. Where there was the potential for adverse impacts to occur, recommendations were made to change elements of the GTS to avoid or mitigate measures to address the potential impact(s). These recommendations were integrated into the GTS so that the implementation of the Strategy would not result in any adverse effects on the integrity of any European sites.

As part of the iterative assessment process Scott Cawley Ltd. were provided with draft chapters/appendices during the process of preparing the final version of the GTS and these drafts were reviewed and feedback provided.

The mitigation measures were subsequently incorporated into the GTS as detailed in Section 9.3.5 of the GTS and will be implemented in the event of the adoption of Variation No. 1 to the Galway County Development Plan 2015-2021, which is the subject of this Natura Impact Report.

² Adverse effects on site integrity are considered with respect to the conservation objectives of the European site supporting the Qualifying Interests (QIs)/Special Conservation Interests (SCIs) conservation condition.

2.4 How the AA process is applied within the Planning Hierarchy

The AA process takes place at several stages within the land use planning hierarchy. In the case of the Variation, it must take cognisance of the Regional Planning Guidelines for the West Region 2010-2022 and its “Habitats Directive” (Appropriate) Assessment.

The integration of the GTS into the County and City land use plans will provide a framework for the AA and implementation of individual project elements (and any associated individual planning applications) that will be implemented under these plans. These project-level AAs will have to take into account the mitigation measures incorporated into the GTS as part of the AA process.

The Appropriate Assessment requirements of Part XAB of the Planning and Development (Amendment) Act 2010 apply to all levels of the planning hierarchy³. At each stage the scale and nature of the assessment will match the scale and level of the hierarchy. As projects pass from the County Plan-level to the local plan level and then to individual planning applications, the following aspects become expressed at a sharper and more detailed level:

- Geographic specificity (i.e. from generally described locations for plan elements, to those with a more defined and fixed location)
- Duration and timing of impacts (usually not known at the strategic plan level)
- Raw materials required, wastes and energy generated (can be predicted in a generic sense at plan level but precise constituents and quantities are usually only known at the project level)

In order to address this hierarchy of level of detail, the AA of the GTS and subsequently the assessment of the Variation presented in this NIR has ensured that where the certain aspects are not predictable at the Strategy level, but may pose a risk to the European site when project details are known, that this was highlighted in the AA process and appropriate safeguards or capture mechanisms were proposed.

2.5 Assessment Methodology

As part of the assessment of the Variation, various elements of the GTS – the Overall Vision, Guiding Principles, Strategic Objectives and Key Performance Indicators, and Strategic Aims – were analysed and assessed to determine which had the potential to adversely affect the integrity of any European sites. This assessment was undertaken in consideration of all potential impact pathways connecting the Variation to European sites in view of the conservation objectives supporting the conservation condition of the Sites’ Qualifying Interests (QIs)/Special Conservation Interests (SCIs).

The conservation objectives relating to each QI/SCI are expressed generally for Special Area of Conservation (SAC) QIs as “to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected”, and for Special Protection Area (SPA) SCIs as “To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA”.

Following from this, favourable conservation status (or condition, at a site level) of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing

³ Some proposals may fall under the European Communities (Birds and Natural Habitats) Regulations 2011

- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future
- the conservation status of its typical species is favourable

The favourable conservation status (or condition, at a site level) of a species is achieved when:

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

Where site-specific conservation objectives have been prepared for a given European site, these include a series of specific attributes and targets against which effects on conservation condition, or integrity, can be measured—i.e. an impact which affects the achievement of favourable conservation condition, as measured by the attributes and targets, is an impact on site integrity. In the case of many SACs/SPAs, site-specific conservation objectives are not available, or have not been published. Where that is the case, sample site specific attributes and targets for a given QI/SCI have been compiled, based on those from other European sites, as a guide in assessing how conservation condition could potentially be affected by the integration of the GTS elements into the County Development Plan.

In the case of some QIs/SCIs in certain European sites, the conservation objective is to restore rather than maintain conservation condition⁴ and this distinction is taken into account in the assessment; as is any legacy damage to European sites that has occurred since their designation.

Having ascertained during the screening test for the Variation that in the absence of mitigation measures the Variation is either likely to have a significant effect on a European site(s), or that any such likelihood is uncertain or cannot be ruled out, Appropriate Assessment (AA) considers whether or not that significant effect would adversely affect the integrity of any European site(s), either alone or in-combination with other plans or projects, in consideration of these mitigation measures – *i.e.* where a source-pathway-receptor relationship exists, would it, despite the implementation of mitigation measures, result in significant adverse effects on the habitats and/or species for which the site has been designated, either alone or in-combination with other plans or projects, with respect to the Site's conservation objectives supporting their conservation status?

Where the assessment finds that the Variation has the potential to adversely affect the integrity of a European site, via impacts to the conservation objectives supporting the conservation condition of the Sites' QIs/SCIs, the incorporation of mitigation measures in the GTS, and their subsequent implementation as part of the adoption of the Variation, will ensure that it poses no risk of adversely affecting any European sites.

This process is summarised below in Figure 1.

⁴ This information in relation to the European sites within the ZoI of the GTS is included in Appendix C, Table C-2.

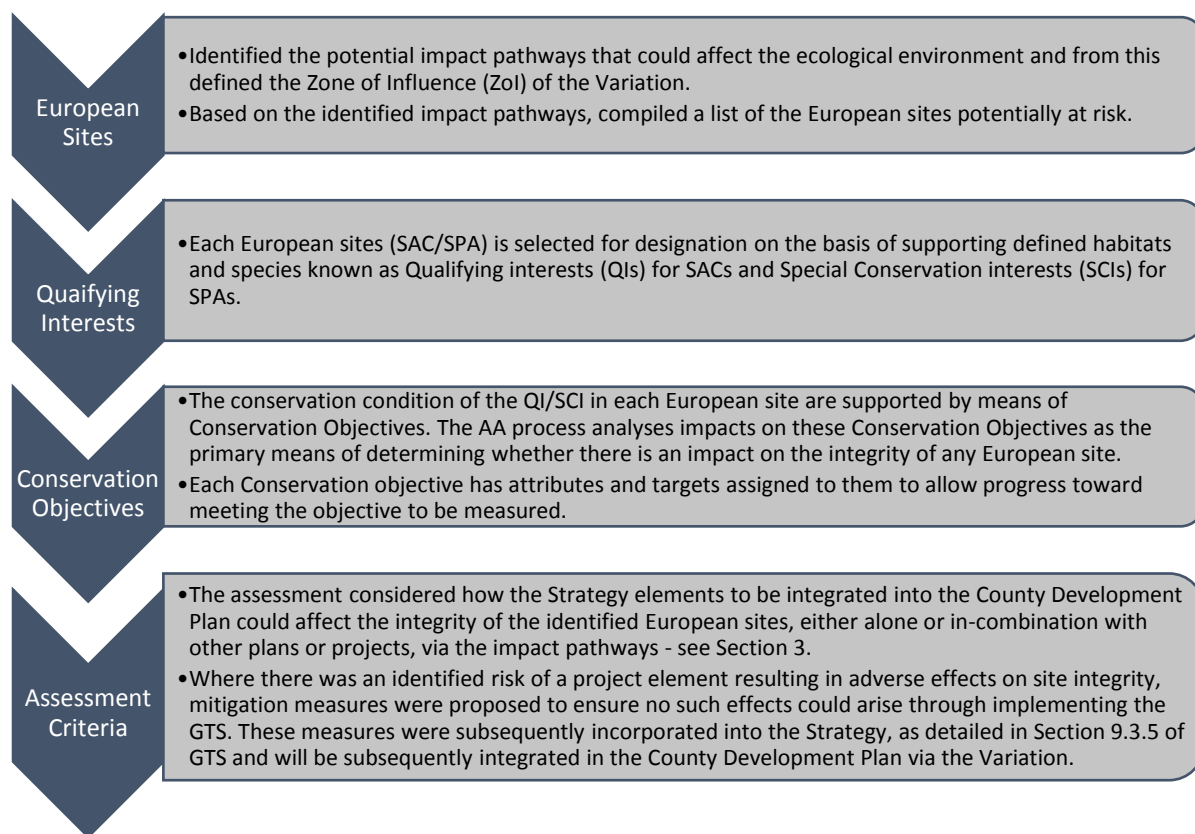


Diagram 1: Preparation of Assessment Criteria

Projects which are found to have adverse effects on the integrity of any European site(s) can only proceed under the provisions of Article 6(4) of the Habitats Directive and this scenario is provided for in the land use plans relevant to the GTS; which includes both the County Development Plan and City Development Plan. This process is outlined in more detail in Chapter 10 of the GTS, *Implementation and Outcomes*.

2.6 Overview of the Proposed Variation No. 1 to the Galway County Development Plan 2015-2021

The primary purpose of the Variation is to incorporate, where relevant, the Galway Transport Strategy (GTS) into the Galway County Development Plan 2015 – 2021. The GTS itself consists of a number of project elements, generated by a series of guiding principles, strategic objectives and strategic aims under an overall vision “to create a connected city region driven by smarter mobility”. The various projects that are proposed to be implemented through the strategy, over an anticipated 20 year period, can be grouped under the following general headings:

- The Pedestrian Network
- Bearna Greenway
- Galway to Dublin Cycleway (Galway City to Oranmore)⁵
- Galway to Oughterard Greenway⁶

⁵ The GTS includes that portion of the Galway to Dublin Cycleway between Galway City and Oranmore.

⁶ The GTS only references that section of the Galway to Oughterard Greenway between Galway City and Moycullen, as use of this section is a realistic option for use as a cycle route to/from Galway City by commuters. However given that the project is the full extent of the greenway to Oughterard, the intension is for the greenway to utilise the disused Clifden to Galway rail line along much of its length (Section 4.5.1 of

- Non-greenway elements of the cycle network
- Public Transport Network
- N6 Galway City Ring Road (GCRR)

The various projects proposed under the GTS are described at different levels of geographic specificity: the greenways are referenced at a non-specific scale, linking Galway City with Bearna, Oranmore, Maigh Cuilinn and Baile Chláir; many of the proposed public transport, Non-greenway Cycle Network and Pedestrian Network projects are generally linked to road corridors, with some proposing bridge crossings of the River Corrib referenced at specific locations (e.g. the proposed cycle and pedestrian bridge at the former crossing of the Old Clifden Railway), and, the proposed N6 GCRR referenced by means of a defined corridor extending around the city from Bearna to the Ardaun area.

As many of the proposed project elements will cross, may interact with (given the general location descriptions given) or will/may be in close proximity to European sites, there is the potential for the Variation (in the absence of considering the measures outlined in the GTS mitigation strategy) to adversely affect the integrity of several European sites, either directly or indirectly, or in-combination with other plans or projects.

2.7 Overview of the Receiving Environment

The full extent of the Variation includes Galway City Council administrative area, and the surrounding hinterland within the Galway County Council administrative area, with the settlements of Bearna, Oranmore, Maigh Cuilinn and Baile Chláir (i.e. hereafter referred to as the Variation study area). In terms of land use, this area includes both the expanse of urban and suburban development of Galway City and these commuter settlements, and the surrounding landscape of agricultural lands, quarries and semi-natural habitats. A wide range of habitats and species listed under the EC Birds and Habitats Directives are present within this area.

Galway Bay forms the southern boundary of the Variation study area. Galway Bay is designated as far west as Rusheen Bay as an SAC for a range of marine, coastal and terrestrial habitats. These include reefs, intertidal mudflats, coastal lagoons, saltmarsh habitats, shingle and gravel banks, wetland habitats such as turloughs and fen, and also Juniper and calcareous grassland habitats. The marine and intertidal habitats support a range of benthic communities, Otter, Harbour seal and the range of bird species for which Inner Galway Bay SPA is designated.

The Variation study area may be perceived to be conveniently divided into western and eastern sections by the River Corrib, each of which is characterised by the underlying geology. The western part of this study area is predominantly underlain by granite and this is reflected in the range of peatland habitats present in this area. The eastern part of this study area is a karst landscape underlain by limestone and resulting in habitats such as limestone pavement, calcareous grasslands and scrub, calcareous springs and turloughs. A zone east of the N59, along the western shores of Lough Corrib, includes a number of Annex I lake habitats, supporting a range of wetland habitats in addition to areas of exposed limestone and calcareous grasslands. Within this zone are Ross Lake and Woods SAC and Gortnandarragh Limestone Pavement SAC.

Galway City Council (2016) and Section 4.12.13 of Galway County Council (2015)), and that the rail line passes through Ross Lake and Woods SAC, the full extent of the project is considered in the NIR and therefore, so are potential impacts on Ross Lake and Woods SAC.

The River Corrib and Lough Corrib are designated as part of Lough Corrib SAC and Lough Corrib SPA. The River Corrib and Lough Corrib support a range of both breeding and wintering bird species. These waterbodies support a range of aquatic flora and fauna species such as Slender naiad *Najas flexilis* and Stoneworts *Chara* spp., Otter *Lutra lutra*, Atlantic salmon *Salmo salar* and lamprey, and further north from Galway City White-clawed crayfish *Austropotamobius pallipes* and Freshwater pearl mussel *Margaritifera margaritifera*.

Within the Variation study area, Lough Corrib SAC also includes the Coolagh Lakes and an area between the River Corrib and Ballindooley. The Coolagh Lakes themselves are hard water lakes which support a diverse wetland complex of fen, reed swamp and wet grassland. Between the River Corrib and Ballindooley are semi-natural woodlands, a range of limestone pavement habitat types and calcareous grassland.

The main watercourses in the western part of the study area are the Knocknacarragh Stream, Bearna Stream, the Trusky Stream and Sruthán na Líbeirtí. In the eastern part of the study area there are fewer watercourses as a result of the permeable karst geology. Other than the River Corrib, watercourses in the eastern area include the Terryland River and the Merlin Stream.

Aside from the European sites, the area surrounding Galway City also supports many other fauna species protected at the national and/or European level including bat species, Badger *Meles meles*, Red squirrel *Sciurus vulgaris*, Pine marten *Martes martes*, Barn owl *Tyto alba*, Peregrine falcon *Falco peregrinus* and the Marsh fritillary butterfly *Euphydryas aurinia*.

3 Appropriate Assessment

3.1 Assessment Results

3.1.1 Identification of Potential Impact Pathways and defining the Zone of Influence (ZoI)

The first stage of the assessment was to examine and analyse the Variation in order to determine which elements had the potential to adversely affect the integrity of European sites, and how. In the absence of the mitigation measures incorporated in the GTS, it was determined that likely significant effects as a result of the GTS on European sites cannot be ruled out (Scott Cawley Ltd. 2017a). None of the other elements (the text edits) of the Variation have impact pathways by which they could adversely affect the integrity of any European sites.

Analysis of the elements of the GTS identified the following impact pathways by which they could potentially adversely affect the integrity of European site(s):

- *Habitat Loss*
Direct loss of habitat (terrestrial or freshwater) in European site; habitat fragmentation is directly associated with this impact pathway
- *Habitat degradation – hydrogeology*
Tunnelling and/or deep excavations affecting groundwater quality and/or quantity and thereby the existing hydrogeological regime
- *Habitat degradation – tunnelling/excavation*
Tunnelling and/or deep excavations affecting the structural integrity of surface-level habitats
- *Habitat degradation – water quality impacts during construction*
Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats
- *Habitat degradation – water quality impacts during operation*
Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats
- *Habitat degradation – shading*
Shading effects of bridge structures on habitats (e.g. reduction in sunlight and direct precipitation)
- *Habitat degradation – air quality*
A reduction in air quality affecting fauna species and/or habitats (e.g. vegetation composition and structure)
- *Habitat degradation – non-native invasive species*
Introducing or spreading non-native invasive species affecting habitats (e.g. vegetation composition and structure)
- *Disturbance/displacement*
Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas – including consideration of ex-situ sites⁷ and their role in supporting the SCI bird species of affected SPAs)

⁷ The need to consider use of habitat areas outside of an SPA by SCI bird species is set out in Section 3.1 and 5.2 of the *Inner Galway Bay Special Protection Area (Site Code 4031), Conservation Objectives Supporting Document, Version 1* (National Parks & Wildlife Service, 2013a); and in the absence of a site specific conservation objectives document for many other SPAs potentially affected by GTS, this is applied for all. These areas are termed 'ex-situ' sites and are defined as areas of habitat situated within the immediate hinterland of the SPA, or in areas ecologically connected to it, which support SCI bird species.

- *Barrier effect*
Construction works or new structures creating a barrier to faunal species movement
- *Mortality risk*
Mortality/road traffic collision risk to fauna species

The potential Zone of Influence (ZoI) with respect to European sites was defined as all European sites within the Variation study area, those downstream of the GTS projects, those selected for groundwater-dependent habitats and within the same groundwater bodies as the GTS projects, or within a distance of the GTS projects where disturbance effects could potentially occur during construction or operation (300m). In poorly productive bedrock, the ZoI was considered to be more local (i.e. in the western part of the study area where granite is the underlying rock, a precautionary distance of 1km was used), compared with karst areas where a more precautionary approach was taken to include the whole groundwater body and those with potential hydrological connections to European sites (e.g. surface water features such as rivers, streams and drainage features). The potential ZoI of the proposed Variation in the context of the GTS projects is shown on Figure 1.

The results of the assessment carried out to identify which of the GTS elements have the potential to adversely affect the integrity of any European sites are provided in Appendix A. This follows on to a more detailed assessment in Appendix B, Table B-1, which examines which European sites the various projects proposed under the GTS could affect and by which impact pathways. A summary matrix of this assessment is also provided in Appendix B, Table B-2.

3.1.2 Identifying European sites within the ZoI of the Variation

In order to determine which European sites were within the ZoI of the Variation, the nature and scale of the various projects proposed under the GTS, the potential impact pathways identified (and their ZoI) and their relationship to European sites were considered.

In the absence of mitigation measures, which have been incorporated into the GTS and subsequently will be implemented by the Variation, and considering the absence of detailed design for the majority of strategy elements, the GTS was assessed as having the potential to adversely affect the integrity of the following European sites⁸:

⁸ The GTS only references that section of the Galway to Oughterard Greenway between Galway City and Moycullen, as use of this section is a realistic option for use as a cycle route to/from Galway City. However, given that the project is the full extent of the greenway to Oughterard, the intention is for the greenway to utilise the disused Clifden to Galway rail line along much of its length (Section 4.5.1 of Galway City Council (2015) and Section 4.12.13 of Galway County Council (2015)), and that the rail line passes through Ross Lake and Woods SAC, the full extent of the project is considered in the NIR and therefore, so are potential impacts on Ross Lake and Woods SAC.

Although the Gortmandarragh Limestone Pavement SAC lies within the mapped ZoI boundary, it was scoped out at the AA Screening stage and is therefore not discussed further in this report. It was scoped out on the basis that given its general location (as discussed above) is associated with the disused Clifden to Galway rail line, and this is 1.5km from the SAC, the Galway to Oughterard Greenway poses no risk of direct impacts to the SAC. As the SAC is designated for Limestone pavement, a habitat which would not be affected by groundwater or surface water impact pathways, the greenway poses no risk of indirect impacts.

Although Ardrahan Grassland SAC lies within the mapped ZoI boundary it was scoped out at the AA Screening stage and is therefore not discussed further in this report. It was scoped out on the basis that there is no risk of direct impacts to the SAC, no potential for indirect impacts via hydrological or hydrogeological impact pathways.

Although Monivea Bog SAC lies at the margins of the mapped ZoI boundary it is more than 18km from the nearest of the GTS projects and was scoped out at the AA Screening stage and is therefore not discussed further in this report. It was scoped out on the basis that there is no risk of direct impacts to the SAC, and the proposed GTS projects pose no risk to raised bog habitat in the SAC via hydrological or hydrogeological impact pathways.

- Lough Corrib SAC
- Lough Corrib SPA
- Galway Bay Complex SAC
- Inner Galway Bay SPA
- Ross Lake and Woods SAC
- Cregganna Marsh SPA
- Rahasane Turlough SAC
- Rahasane Turlough SPA
- Castletaylor Complex SAC
- Kiltiernan Turlough SAC
- Lough Fingall Complex SAC

Appendix C lists the QIs and SCIs of these European sites (Table C-1), and their conservation objectives with reference to the attributes and targets supporting the QI/SCIs conservation condition (Table C-2). Table C-2 presents a more detailed examination and analysis of how the GTS could affect the QI/SCIs conservation objectives via the identified impact pathways.

Identifying these potential impact pathways and assessing how they could affect European sites informed the mitigation measures required to ensure that the Variation does not adversely affect the integrity of any European site(s).

In assessing the links between the various impact pathways and the conservation objectives of the QIs and SCIs of the European sites within the ZoI of the Variation (in Table C-2 in Appendix C of this NIR), all QIs/SCIs are included in that analysis. This is a precautionary approach as the details, and in many cases the precise locations, scope and extent of works, will not be known until the project design stage. In the absence of this information, the potential for any given project to impact upon specific QIs/SCIs within a given European site, and not others, cannot be definitively ruled out at this stage. The results of this analysis therefore, present the full picture of how projects linked to European sites via a given impact pathway could potentially affect the specific attributes, measures and targets defining the conservation objectives which support the conservation condition of the Site's QIs or SCIs. It also provides a framework or reference point through which any future AA Screening or AA of projects implemented through the Variation and as described in the GTS should consider how a given project could potentially affect any of the European sites within the ZoI, once the potential impact pathways have been determined.

3.1.3 Interaction between the GTS projects and European sites

This section provides a summary of how the various GTS project elements could result in adverse effects on the integrity of those European sites via the potential impact pathways.

N6 Galway City Ring Road (N6 GCRR)

The potential impact pathways associated with the proposed N6 GCRR and the European site(s) which are potentially at risk of adverse effects on site integrity are summarised below:

Habitat Loss

The N6 GCRR will likely result in the direct loss of habitat (terrestrial and/or freshwater) in Lough Corrib SAC; habitat fragmentation is directly associated with this impact pathway. None of the habitats within both the SAC boundary and the current road corridor that will be lost are qualifying interest (QI) habitats of Lough Corrib SAC, nor are they supporting habitats to any

QI habitat or to species such that their loss would affect the species' conservation objectives. However, as the final landtake associated with the proposed N6 GCRR has not yet been determined, there remains a risk that some level of habitat loss may occur outside of the current corridor for the proposed N6 GCRR and could therefore result in additional habitat loss/fragmentation within Lough Corrib SAC.

Mitigation measures: refer to Box 1c in Section 3.2 below

Habitat degradation – hydrogeology

Tunnelling and/or deep excavations likely to be associated with the N6 GCRR may affect the existing hydrogeological regime which in turn may affect groundwater dependant habitats (and in some cases supported species) within the following European sites: Lough Corrib SAC, Lough Corrib SPA, Inner Galway Bay SPA, Cregganna Marsh SPA, Rahasane Turlough SAC, Rahasane Turlough SPA, Castletaylor Complex SAC, Kiltiernan Turlough SAC and/or Lough Fingall Complex SAC.

Mitigation measures: refer to Box 2b in Section 3.2 below

Habitat degradation – tunnelling/excavation

Tunnelling and/or deep excavations at Lackagh Quarry has the potential to affect the integrity of surface level habitats in Lough Corrib SAC.

Mitigation measures: refer to Box 3 in Section 3.2 below

Habitat degradation – water quality impacts during construction and/or operation

As the N6 GCRR will cross the River Corrib and numerous watercourses which drain to Galway Bay, construction works, and operation of the proposed road development, has the potential to affect surface, ground and/or coastal water quality and as a consequence affect wetland/coastal/estuarine habitats in Lough Corrib SAC, Galway Bay Complex SAC and/or Inner Galway Bay SPA.

Mitigation measures: refer to Box 4 and Box 5b in Section 3.2 below

Habitat degradation – shading

The proposed River Corrib Bridge will have shading effects (i.e. reduced sunlight and levels of direct precipitation) on habitats beneath the structure within Lough Corrib SAC.

Mitigation measures: refer to Box 6 in Section 3.2 below

Habitat degradation – air quality

Introducing a new road has the potential to cause a reduction in air quality, potentially affecting fauna species and/or habitats⁹.

Mitigation measures: refer to Box 7 in Section 3.2 below

Habitat degradation – non-native invasive species

Introducing or spreading non-native invasive species during construction and/or operation (e.g. maintenance works) of the proposed road development has the potential to affect habitats, and

⁹ As one of the key principles of the GTS is to “To promote and encourage sustainable transport, and in particular to make it convenient and attractive to walk, cycle or use public transport”, there may be an overall positive impact compared with the “Do-nothing” scenario in urban and suburban areas of Galway City and the associated European sites (Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA)

may as a consequence affect supported species, in Lough Corrib SAC, Galway Bay Complex SAC, Lough Corrib SPA and/or Inner Galway Bay SPA.

Mitigation measures: refer to Box 8 in Section 3.2 below

Disturbance/displacement

Construction works and/or operation associated with the proposed road development has the potential to result in levels of disturbance that could potentially displace QI/SCI species from important habitat areas (e.g. breeding/resting places or foraging areas) within Lough Corrib SAC (e.g. along the River Corrib), Galway Bay Complex SAC (e.g. in the vicinity of Bearna Woods), and Lough Corrib SPA or Inner Galway Bay SPA (in the case of SPAs, important ex-situ habitat areas remote from the designated site but important in supporting SCI populations).

Mitigation measures: refer to Box 9 in Section 3.2 below

Barrier effect

Construction works associated with the proposed road development along the River Corrib have the potential to create a barrier to fauna species movement (e.g. within foraging areas or along commuting routes) in Lough Corrib SAC.

Mitigation measures: refer to Box 10 in Section 3.2 below

Mortality risk

The N6 GCRR will include for the construction of a new bridge structure across the River Corrib, a new road in the vicinity of the Coolagh lakes, and a new bridge over the Bearna Stream. All of these areas are used by Otter (a QI species of Lough Corrib SAC and Galway Bay Complex SAC) and there is a permanent risk of mortality/road traffic collision impacts if Otter gain access to the road carriageway. Constructing a new bridge over the River Corrib poses a (temporary) risk of construction materials/debris falling into the river and injuring/killing QI aquatic. A new bridge across the River Corrib poses a permanent collision risk with the bridge structure to SCI bird species of Lough Corrib SPA and/or Inner Galway Bay SPA commuting along the river corridor.

Mitigation measures: refer to Box 11 in Section 3.2 below

Bearna Greenway

The potential impact pathways associated with the proposed Bearna Greenway and the European site(s) which are potentially at risk of adverse effects on Site integrity are summarised below:

Habitat Loss

As a route has not yet been selected for the Bearna Greenway, applying the precautionary principle, it has the potential to result in the direct loss of habitat (terrestrial and/or estuarine/marine) in Galway Bay Complex SAC and Inner Galway Bay SPA as the Greenway may follow the coastline between the city and Bearna Village; habitat fragmentation is directly associated with this impact pathway. Loss of habitat from these European sites, and indeed in any potential ex-situ sites supporting SCI bird species of the SPA (e.g. high-tide roost sites or terrestrial feeding sites), has the potential to affect the conservation objectives supporting the Site's QI/SCI species.

Mitigation measures: refer to Box 1a in Section 3.2 below

Habitat degradation – hydrogeology

Although unlikely, there is the possibility that excavations associated with the Bearna Greenway may affect the existing hydrogeological regime which in turn may affect groundwater dependant habitats (and in some cases supported species) within European sites. Given the likely nature of works associated with building a cycleway (which would be minimally invasive in terms of excavation requirements and therefore pose little risk of interacting with groundwater), and the underlying geology in this area (poorly productive granite bedrock), the Zone of Influence (ZoI) of any groundwater interaction would not be expected to extend beyond Galway Bay Complex SAC, Inner Galway Bay SPA, and wetland sites locally which may support SCI species of both Inner Galway Bay SPA and/or Lough Corrib SPA.

Mitigation measures: refer to Box 2a in Section 3.2 below

Habitat degradation – water quality impacts during construction

As the Bearna Greenway may be located adjacent to the coastline and/or must cross watercourses which drain to Galway Bay, construction works have the potential to affect surface, ground and/or coastal water quality. As a consequence, the Bearna Greenway could affect wetland/coastal/estuarine habitats, and potentially QI/SCI species, in Lough Corrib SAC, Galway Bay Complex SAC and/or coastal ex-situ sites which may support SCI species of Lough Corrib SPA.

Mitigation measures: refer to Box 4 in Section 3.2 below

Habitat degradation – shading

Any new bridge structures installed as part of the Bearna Greenway that are located within Galway Bay Complex SAC and/or Inner Galway Bay SPA, have the potential to result in shading effects (i.e. reduced sunlight and levels of direct precipitation) on habitats beneath the structure. Such impacts could potentially affect QI habitats and/or habitats which may support QI/SCI species of these European sites.

Mitigation measures: refer to Box 6 in Section 3.2 below

Habitat degradation – non-native invasive species

Introducing or spreading non-native invasive species during construction and/or operation (e.g. maintenance works) of the Bearna Greenway has the potential to affect habitats, and may as a consequence affect supported species, in Lough Corrib SAC, Galway Bay Complex SAC and/or coastal ex-situ sites which may support SCI species of Lough Corrib SPA.

Mitigation measures: refer to Box 8 in Section 3.2 below

Disturbance/displacement

Construction works and/or operation associated with the Bearna Greenway has the potential to result in levels of disturbance that could potentially displace QI/SCI species from important habitat areas (e.g. breeding/resting places, such as high tide roosts for wintering birds, or foraging areas) within Galway Bay Complex, Inner Galway Bay SPA and potentially Lough Corrib SPA (coastal ex-situ sites which may support SCI species of this SPA).

Mitigation measures: refer to Box 9 in Section 3.2 below

Barrier effect

As the Bearna Greenway must cross the Bearna Stream (part of Galway Bay Complex SAC) and may affect other habitat areas within Galway Bay Complex SAC, construction works and/or any proposed new structures have the potential to create a barrier to fauna species movement (e.g. within foraging areas or along commuting routes).

Mitigation measures: refer to Box 10 in Section 3.2 below

Galway to Dublin Cycleway (Galway City to Oranmore)

The potential impact pathways associated with the proposed Galway City to Oranmore section of the Galway to Dublin Cycleway and the European site(s) which are potentially at risk of adverse effects on Site integrity are summarised below:

Habitat Loss

As a route has not yet been selected for this section of the Galway to Dublin Cycleway, applying the precautionary principle, it has the potential to result in the direct loss of habitat (terrestrial and/or estuarine/marine) in Galway Bay Complex SAC and Inner Galway Bay SPA as it may follow the coastline between the city and Oranmore Village; habitat fragmentation is directly associated with this impact pathway. Loss of habitat from these European sites, and indeed in any potential ex-situ sites supporting SCI bird species of the SPA (e.g. high-tide roost sites or terrestrial feeding sites), has the potential to affect the conservation objectives supporting the Site's QI/SCI species.

Mitigation measures: refer to Box 1a in Section 3.2 below

Habitat degradation – hydrogeology

Although unlikely, there is the possibility that excavations associated with this section of the Galway to Dublin Cycleway may affect the existing hydrogeological regime which in turn may affect groundwater dependant habitats (and in some cases supported species) within European sites. Given the likely nature of works associated with building a cycleway (which would be minimally invasive in terms of excavation requirements and therefore pose little risk of interacting with groundwater), the ZoI of any groundwater interaction would not be expected to extend beyond Galway Bay Complex SAC or Inner Galway Bay SPA, and wetland sites locally which may support SCI species of both Inner Galway Bay SPA and/or Lough Corrib SPA. However, given the underlying karst geology, hydrogeological impacts affecting a wider area to include Cregganna Marsh SPA, Rahasane Turlough SAC, Rahasane Turlough SPA, Castletaylor Complex SAC, Kiltiernan Turlough SAC or Lough Fingall Complex SAC cannot be ruled out.

Mitigation measures: refer to Box 2a in Section 3.2 below

Habitat degradation – water quality impacts during construction

As this section of the Galway to Dublin Cycleway may be located adjacent to the coastline and/or must cross watercourses which drain to Galway Bay, construction works have the potential to affect surface, ground and/or coastal water quality. As a consequence, this section of the Galway to Dublin Cycleway could affect wetland/coastal/estuarine habitats, and

potentially QI/SCI species, in Lough Corrib SAC, Galway Bay Complex SAC and/or coastal ex-situ sites which may support SCI species of Lough Corrib SPA.

Mitigation measures: refer to Box 4 in Section 3.2 below

Habitat degradation – shading

Any new bridge structures installed as part of this section of the Galway to Dublin Cycleway that are located within Galway Bay Complex SAC and/or Inner Galway Bay SPA, have the potential to result in shading effects (i.e. reduced sunlight and levels of direct precipitation) on habitats beneath the structure. Such impacts could potentially affect QI habitats and/or habitats which may support QI/SCI species of these European sites.

Mitigation measures: refer to Box 6 in Section 3.2 below

Habitat degradation – non-native invasive species

Introducing or spreading non-native invasive species during construction and/or operation (e.g. maintenance works) of this section of the Galway to Dublin Cycleway has the potential to affect habitats, and may as a consequence affect supported species, in Lough Corrib SAC, Galway Bay Complex SAC and/or coastal ex-situ sites which may support SCI species of Lough Corrib SPA.

Mitigation measures: refer to Box 8 in Section 3.2 below

Disturbance/displacement

Construction works and/or operation associated with this section of the Galway to Dublin Cycleway has the potential to result in levels of disturbance that could potentially displace QI/SCI species from important habitat areas (e.g. breeding/resting places, such as high tide roosts for wintering birds, or foraging areas) within Galway Bay Complex, Inner Galway Bay SPA and potentially Lough Corrib SPA (coastal ex-situ sites which may support SCI species of this SPA).

Mitigation measures: refer to Box 9 in Section 3.2 below

Barrier effect

As this section of the Galway to Dublin Cycleway may cross streams or coastal habitats within Galway Bay Complex SAC, construction works and/or any proposed new structures have the potential to create a barrier to fauna species movement (e.g. within foraging areas or along commuting routes).

Mitigation measures: refer to Box 10 in Section 3.2 below

Galway to Oughterard Greenway

The potential impact pathways associated with the proposed Galway to Oughterard Greenway and the European site(s) which are potentially at risk of adverse effects on Site integrity are summarised below:

Habitat Loss

As a route has not yet been selected for the Galway to Oughterard Greenway, applying the precautionary principle, it has the potential to result in the direct loss of habitat (terrestrial and/or aquatic) in Lough Corrib SAC and Lough Corrib SPA and Ross Lake and Woods; habitat fragmentation is directly associated with this impact pathway. Loss of habitat from

these European sites, and indeed in any potential ex-situ sites supporting SCI bird species of the SPA (e.g. roost sites or feeding sites), has the potential to affect the conservation objectives supporting the Site's QI/SCI species.

Mitigation measures: refer to Box 1a in Section 3.2 below

Habitat degradation – hydrogeology

Although unlikely, there is the possibility that excavations associated with the Galway to Oughterard Greenway may affect the existing hydrogeological regime which in turn may affect groundwater dependant habitats (and in some cases supported species) within European sites. Given the likely nature of works associated with building a cycleway (which would be minimally invasive in terms of excavation requirements and therefore pose little risk of interacting with groundwater), and the locations of groundwater bodies in that area, the ZoI of any groundwater interaction would not extend beyond Lough Corrib SAC, Lough Corrib SPA or Ross Lake and Woods SAC, and/or wetland sites locally which may support SCI species of Lough Corrib SPA.

Mitigation measures: refer to Box 2a in Section 3.2 below

Habitat degradation – water quality impacts during construction

As the Galway to Oughterard Greenway may be located within or adjacent to Lough Corrib SAC, Lough Corrib SPA and/or Ross Lake and Woods SAC and/or must cross watercourses which drain to these European sites and to Galway Bay, construction works have the potential to affect surface and/or groundwater quality. As a consequence, the Galway to Oughterard Greenway could affect wetland habitats, and potentially QI/SCI species, in Lough Corrib SAC, Lough Corrib SPA, Ross Lake and Woods SAC, Galway Bay Complex SAC, and/or ex-situ sites which may support SCI species of Lough Corrib SPA.

Mitigation measures: refer to Box 4 in Section 3.2 below

Habitat degradation – shading

Any new bridge structures installed as part of the Galway to Oughterard Greenway that are located within Lough Corrib SAC, Lough Corrib SPA and/or Ross Lake and Woods SAC, have the potential to result in shading effects (i.e. reduced sunlight and levels of direct precipitation) on habitats beneath the structure. Such impacts could potentially affect QI habitats and/or habitats which may support QI/SCI species of these European sites.

Mitigation measures: refer to Box 6 in Section 3.2 below

Habitat degradation – non-native invasive species

Introducing or spreading non-native invasive species during construction and/or operation (e.g. maintenance works) of the Galway to Oughterard Greenway has the potential to affect habitats, and may as a consequence affect supported species, in Lough Corrib SAC, Lough Corrib SPA, Ross Lake and Woods SAC, Galway Bay Complex downstream, and/or ex-situ sites which may support SCI species of Lough Corrib SPA.

Mitigation measures: refer to Box 8 in Section 3.2 below

Disturbance/displacement

Construction works and/or operation associated with the Galway to Oughterard Greenway has the potential to result in levels of disturbance that could potentially displace QI/SCI species from important habitat areas (e.g. breeding/resting places, such as roost sites for wintering birds, or foraging areas) within Lough Corrib SAC, Lough Corrib SPA, Ross Lake and Woods SAC and/or ex-situ sites which may support SCI species of Lough Corrib SPA.

Mitigation measures: refer to Box 9 in Section 3.2 below

Barrier effect

As this section of the Galway to Oughterard Greenway may cross streams or linear habitats within Lough Corrib SAC and/or Ross Lake and Woods SAC, construction works and/or any proposed new structures have the potential to create a barrier to fauna species movement (e.g. within foraging areas or along commuting routes).

Mitigation measures: refer to Box 10 in Section 3.2 below

Public Transport Network

The potential impact pathways associated with the proposed Public Transport Network and the European site(s) which are potentially at risk of adverse effects on Site integrity are summarised below:

Habitat Loss

Due to their locations within, or in close proximity to, European sites some of the public transport infrastructure elements have the potential to result in direct loss of habitat in Galway Bay Complex SAC, Inner Galway Bay SPA or Lough Corrib SAC; habitat fragmentation is directly associated with this impact pathway. Loss of habitat from these European sites, and indeed in any potential ex-situ sites supporting SCI bird species of the SPA (e.g. roost sites or feeding sites), has the potential to affect the conservation objectives supporting the Site's QI/SCI species.

These public transport elements are as follows (numerical references when given are as per Appendix D of the GTS):

- Park & Ride Facilities – the indicative location of the Western Distributor Road/R336 Bearn Road could affect habitats within Galway Bay Complex SAC, Inner Galway Bay or ex-situ sites linked with the latter and Lough Corrib SPA
- Rail – additional transport infrastructure at Ceannt Station and surrounding lands lie within or adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA
- Providing additional coach parking at Ceannt Station/Galway Harbour may include lands within or adjacent to Galway bay Complex SAC and/or Inner Galway Bay SPA
- Salmon Weir Bridge (and associated with this measure is the provision of a new pedestrian bridge to the south of the Salmon Weir Bridge which must cross Lough Corrib SAC)
- D2.1.3 UHG Grounds/University Road – terminates at the Salmon Weir Bridge which is within Lough Corrib SAC
- D2.1.7 Coast Road – the existing road and associated hard standing lies within, or is adjacent to, Galway bay Complex SAC and lies adjacent to Inner Galway Bay SPA
- D2.1.8 Salthill Road Upper – the southern end of this corridor lies within Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA

- D2.2.1 St. Vincent's Avenue/St. Francis Street/Eglington Street – this corridor includes the Salmon Weir Bridge which is within Lough Corrib SAC
- D2.2.3 Forster Street/College Road – the northern end of this corridor lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA
- D2.2.4 Old Dublin Road – the western end of this corridor lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA

Mitigation measures: refer to Box 1b in Section 3.2 below

Habitat degradation – hydrogeology

Although unlikely, there is the possibility that excavations associated with the installation of the Public Transport Network may affect the existing hydrogeological regime which in turn may affect groundwater dependant habitats (and in some cases supported species) within European sites. Given the likely nature of works associated with the infrastructure described in Appendix D of the GTS - which would be minimally invasive in terms of excavation requirements and with any such works being undertaken in the urban environment, poses little risk of interacting with groundwater – only elements adjacent to Lough Corrib SAC, Galway Bay Complex SAC or Inner Galway Bay SPA are likely to be at any risk of effects. However, even in those locations the risk is minimal.

Mitigation measures: refer to Box 2a in Section 3.2 below

Habitat degradation – water quality impacts during construction/operation

All of the public transport elements will be connected to the existing drainage network which ultimately discharges to Galway Bay via the River Corrib or other watercourses within the city and environs. Construction works therefore, have the potential to affect surface and/or groundwater quality which in turn could affect aquatic/wetland habitats, and potentially QI/SCI species, in Lough Corrib SAC, Galway Bay Complex SAC, Inner Galway Bay SPA and/or ex-situ sites which may support SCI species of Inner Galway Bay SPA or Lough Corrib SPA. Some elements are (or could potentially be) located within or in close proximity to European sites and therefore may pose a greater risk in this regard (numerical references when given are as per Appendix D of the GTS):

- Park & Ride Facilities – the indicative locations given in Appendix E of the GTS are potentially hydrologically linked to Lough Corrib SAC, Galway Bay Complex SAC, Inner Galway Bay or ex-situ sites linked with Inner Galway Bay SPA or Lough Corrib SPA
- Additional transport infrastructure (rail or coach parking) at Ceannt Station/Galway Harbour or Galway Cathedral lies within or adjacent to Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA
- D2.1.3 UHG Grounds/University Road – terminates at the Salmon Weir Bridge which is within Lough Corrib SAC
- D2.1.7 Coast Road – the existing road and associated hard standing lies within, or is adjacent to, Galway bay Complex SAC and lies adjacent to Inner Galway Bay SPA
- D2.1.8 Salthill Road Upper – the southern end of this corridor lies within Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA
- D2.2.1 St. Vincent's Avenue/St. Francis Street/Eglington Street – this corridor includes the Salmon Weir Bridge which is within Lough Corrib SAC

- D2.2.3 Forster Street/College Road – the northern end of this corridor lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA
- D2.2.4 Old Dublin Road – the western end of this corridor lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA
- D2.2.7 Headford Road/Dun na Coiribe/Castlelawn heights/Tirellan Heights – crosses the Terryland River which drains to the River Corrib

Many of the road infrastructure proposals proposed in the GTS will involve upgrades to the existing road network, in addition to new road infrastructure. Facilitating increased use of transport modes such as bus, bicycle and walking over individual car use in Galway City and its environs would be expected to reduce traffic levels and have a positive impact on water quality discharges from the city drainage network.

The GTS projects includes a number of new road infrastructure developments in Galway City, aside from the N6 GCRR: new road links from Newcastle Road to Bóthar Einde, from Dun na Coiribe to Castlelawn Heights, between Bóthar na dTreabh and the Tuam Road via Liosbán Industrial Estate, between Ballybrit Business Park and Parkmore Business Park, between Parkmore Link Road and the N17 and two links at Merlin Park (one from the Dublin Road and over the R446 at Doughiska. Road drainage, in the absence of any treatment measures, could contain pollutants such as hydrocarbons and heavy metals, which could impact on water quality in receiving watercourses and in Galway Bay. A reduction in water quality in receiving watercourses/waterbodies could affect sensitive QI habitats and QI/SCI species of European sites downstream – Lough Corrib SAC, Galway Bay Complex SAC, Inner Galway Bay SPA and/or ex-situ sites which may support SCI species of Inner Galway Bay SPA or Lough Corrib SPA.

Mitigation measures: refer to Box 4, Box 5a and Box 5b in Section 3.2 below

Habitat degradation – shading

Upgrading the Public Transport Network will/may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas within or adjacent to European sites which have the potential to affect habitat areas within Lough Corrib SAC as a result of direct shading:

- Salmon Weir Bridge (and associated with this measure is the provision of a new pedestrian bridge to the south of the Salmon Weir Bridge which must cross Lough Corrib SAC)

New bridge structures have the potential to result in shading effects (i.e. reduced sunlight and levels of direct precipitation) on habitats beneath the structure. Such impacts could potentially affect QI habitats and/or habitats which may support QI/SCI species of Lough Corrib SAC.

Mitigation measures: refer to Box 6 in Section 3.2 below

Habitat degradation – non-native invasive species

Introducing or spreading non-native invasive species during construction and/or operation (e.g. maintenance works) of any Public Transport Network elements has the potential to affect habitats, and may as a consequence affect supported species, in Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC, Inner Galway Bay SPA and/or ex-situ sites which may support SCI species of Inner Galway Bay SPA or Lough Corrib SPA.

Mitigation measures: refer to Box 8 in Section 3.2 below

Disturbance/displacement

Construction works and/or operation associated with elements of the Public Transport Network has the potential to result in levels of disturbance that could potentially displace QI/SCI species from important habitat areas (e.g. breeding/resting places, such as roost sites for wintering birds, or foraging areas) within Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC, Inner Galway Bay SPA and/or ex-situ sites which may support SCI species of Inner Galway Bay SPA or Lough Corrib SPA. Those in closest proximity to European sites, and posing the greatest risk of effects, are:

- Park & Ride Facilities – the indicative locations given in Appendix E of the GTS are potentially located within or in close proximity to Lough Corrib SAC, Galway Bay Complex SAC, Inner Galway Bay or ex-situ sites linked with Inner Galway Bay SPA or Lough Corrib SPA
- Additional transport infrastructure (rail or coach parking) at Ceannt Station/Galway Harbour or Galway Cathedral lies within or adjacent to Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA
- D2.1.3 UHG Grounds/University Road – terminates at the Salmon Weir Bridge which is within Lough Corrib SAC
- D2.1.7 Coast Road – the existing road and associated hard standing lies within, or is adjacent to, Galway bay Complex SAC and lies adjacent to Inner Galway Bay SPA
- D2.1.8 Salthill Road Upper – the southern end of this corridor lies within Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA
- D2.2.1 St. Vincent's Avenue/St. Francis Street/Eglington Street – this corridor includes the Salmon Weir Bridge which is within Lough Corrib SAC
- D2.2.3 Forster Street/College Road – the northern end of this corridor lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA
- D2.2.4 Old Dublin Road – the western end of this corridor lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA
- D2.2.7 Headford Road/Dun na Coiribe/Castlelawn heights/Tirellan Heights – crosses the Terryland River which drains to the River Corrib

Mitigation measures: refer to Box 9 in Section 3.2 below

Barrier effect

The Cross-City Link is an integral part of the Public Transport Network and includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge. Construction works and/or the new structure has the potential to create a barrier to fauna species movement (e.g. within foraging areas or along commuting routes).

Mitigation measures: refer to Box 10 in Section 3.2 below

Mortality Risk

The Cross-City Link is an integral part of the Public Transport Network and includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge. Construction works have the potential to result in the mortality of QI/SCI species as a result of construction debris/materials accidentally falling onto aquatic/estuarine habitats.

Mitigation measures: refer to Box 11 in Section 3.2 below

Cycle Network (Non-Greenway Elements of the GTS)

The potential impact pathways associated with the proposed Non-greenway Cycle Network and the European site(s) which are potentially at risk of adverse effects on Site integrity are summarised below:

Habitat Loss

Due to their locations within, or in close proximity to, European sites some of the Non-greenway Cycle Network infrastructure elements have the potential to result in direct loss of habitat in Lough Corrib SAC, Galway Bay Complex SAC or Inner Galway Bay SPA; habitat fragmentation is directly associated with this impact pathway. Loss of habitat from these European sites, and indeed in any potential ex-situ sites supporting SCI bird species of the SPA (e.g. roost sites or feeding sites), has the potential to affect the conservation objectives supporting the Site's QI/SCI species.

These Non-Greenway Cycle Network elements are as follows (numerical references when given are as per Appendix F of the GTS):

- F4.1 Knocknacarra South – includes a feeder cycle corridor along the coast road/R336 which lies within, or is adjacent to, Galway Bay Complex SAC and lies adjacent to Inner Galway Bay SPA (the Bearna Greenway also forms part of the proposals in this area and is described separately under that heading)
- F4.2 Salthill – includes Threadneedle Road, Salthill Road Upper and Whitestrand Road, sections of which either lie within or adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA
- F4.6 Newcastle & Dangan – includes the N6/Quincentenary Bridge, NUIG and Chestnut Lane sections of which lie either within or adjacent to Lough Corrib SAC (the Galway to Oughterard Greenway also forms part of the proposals in this area and is described separately under that heading)
- F4.7 City Centre – includes new bridges over the River Corrib at the site of the Old Clifden Railway bridge, the Salmon Weir Bridge and Wolfe Tone Bridge, and proposed works along College Road. The first two locations cross Lough Corrib SAC, the area south of Wolfe Tone Bridge crosses Galway Bay Complex SAC, and the proposed works along College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA
- F4.8 Terryland and Ballinfoyle – includes the N6/Quincentenary Bridge, which crosses Lough Corrib SAC, and Dyke Road, sections of which lie adjacent to Lough Corrib SAC
- F4.10 Renmore & Dublin Road – includes College Road, the Dublin Road and Doughiska Road. The northern end of College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA, the western end of the Dublin Road lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA, and the southern end of Doughiska Road lies adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA (the proposed Galway City to Oranmore section of the Galway to Dublin Cycleway also forms part of the proposals in this area and is described separately under that heading)

- Supporting measures to expand the bike share scheme, provide for and upgrade bicycle parking facilities, and improve cycling permeability across the city are not location specific and could potentially affect European sites within Galway City – Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA
- A greenway connecting Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) would cross Galway Bay Complex SAC and Inner Galway Bay SPA

Mitigation measures: refer to Box 1b in Section 3.2 below

Habitat degradation – hydrogeology

Although unlikely, there is the possibility that excavations associated with the installation of Non-greenway Cycle Network elements may affect the existing hydrogeological regime which in turn may affect groundwater dependant habitats (and in some cases supported species) within European sites. The likely nature of works associated with the majority of infrastructure described in Appendix F of the GTS and would be minimally invasive in terms of excavation requirements and with any such works being undertaken in the urban environment, poses little risk of interacting with groundwater – only elements adjacent to Lough Corrib SAC, Galway Bay Complex SAC or Inner Galway Bay SPA are likely to be at any real risk of effects (see list above under habitat loss). Installation of new bridge structures may be more likely to interact with groundwater. However, as these bridges are all associated with a modified urban landscape in the city centre, the risk is likely to remain low.

Mitigation measures: refer to Box 2a in Section 3.2 below

Habitat degradation – water quality impacts during construction

Many of the Non-greenway Cycle Network elements may be connected to the existing drainage network which ultimately discharges to Galway Bay via the River Corrib or other watercourses within the city and environs. Construction works therefore, have the potential to affect surface and/or groundwater quality which in turn could affect aquatic/wetland habitats, and potentially QI/SCI species, in Lough Corrib SAC, Galway Bay Complex SAC, Inner Galway Bay SPA and/or ex-situ sites which may support SCI species of Inner Galway Bay SPA or Lough Corrib SPA. Some elements are (or could potentially be) located within or in close proximity to European sites and therefore may pose a greater risk in this regard (numerical references when given are as per Appendix F of the GTS):

- F4.1 Knocknacarra South – includes a feeder cycle corridor along the coast road/R336 which lies within, or is adjacent to, Galway Bay Complex SAC and lies adjacent to Inner Galway Bay SPA (the Bearna Greenway also forms part of the proposals in this area and is described separately under that heading)
- F4.2 Salthill – includes Threadneedle Road, Salthill Road Upper and Whitestrand Road, sections of which either lie within or adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA
- F4.3 Shantalla – includes facilities along the canals which are hydrologically linked to Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA via the River Corrib
- F4.6 Newcastle & Dangan – includes the N6/Quincentenary Bridge, NUIG and Chestnut Lane sections of which lie either within or adjacent to Lough Corrib SAC (the

Galway to Oughterard Greenway also forms part of the proposals in this area and is described separately under that heading)

- F4.7 City Centre – includes new bridges over the River Corrib at the site of the Old Clifden Railway bridge, the Salmon Weir Bridge and Wolfe Tone Bridge, and proposed works along College Road. The first two locations cross Lough Corrib SAC, the area south of Wolfe Tone Bridge crosses Galway Bay Complex SAC, and the proposed works along College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA
- F4.8 Terryland and Ballinfoyle – includes the N6/Quincentenary Bridge, which crosses Lough Corrib SAC, and Dyke Road, sections of which lie adjacent to the River Corrib (Lough Corrib SAC)
- F4.10 Renmore & Dublin Road – includes College Road, the Dublin Road and Doughiska Road. The northern end of College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia, the western end of the Dublin Road lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA at Lough Atalia, and the southern end of Doughiska Road lies adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA at Oranmore Bay (the proposed Galway City to Oranmore section of the Galway to Dublin Cycleway also forms part of the proposals in this area and is described separately under that heading)
- Supporting measures to expand the bike share scheme, provide for and upgrade bicycle parking facilities, and improve cycling permeability across the city are not location specific and could potentially affect European sites within Galway City – Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA
- A greenway connecting Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) would cross Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia

Many of the non-greenway cycle elements are likely to be dependent on either upgrades to the existing road infrastructure, or proposed new road infrastructure – this is assessed above under *Habitat degradation – water quality impacts during construction/operation* in the Public Transport Network section.

Mitigation measures: refer to Box 4 in Section 3.2 below

Habitat degradation – shading

Upgrading the Non-greenway Cycle Network will/may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas within or adjacent to European sites which have the potential to affect habitat areas within those Sites as a result of direct shading:

- The secondary cycle network includes for a proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC
- Facilitating city cycling relies upon the Cross-City Link which includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge
- Connecting a greenway between Eyre Square and Renmore may impact on Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia

- A proposed new cycle/pedestrian bridge over the River Corrib, to the south of Wolfe Tone Bridge, must cross Galway Bay Complex SAC

New bridge structures have the potential to result in shading effects (i.e. reduced sunlight and levels of direct precipitation) on habitats beneath the structure. Such impacts could potentially affect QI habitats and/or habitats which may support QI/SCI species of Lough Corrib SAC, Galway Bay Complex SAC or Inner Galway Bay SPA.

Mitigation measures: refer to Box 6 in Section 3.2 below

Habitat degradation – non-native invasive species

Introducing or spreading non-native invasive species during construction and/or operation (e.g. maintenance works) of any Non-greenway Cycle Network elements has the potential to affect habitats, and may as a consequence affect supported species, in Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC, Inner Galway Bay SPA and/or ex-situ sites which may support SCI species of Inner Galway Bay SPA or Lough Corrib SPA.

Mitigation measures: refer to Box 8 in Section 3.2 below

Disturbance/displacement

Construction works and/or operation associated with elements of the Non-greenway Cycle Network has the potential to result in levels of disturbance that could potentially displace QI/SCI species from important habitat areas (e.g. breeding/resting places, such as roost sites for wintering birds, or foraging areas) within Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC, Inner Galway Bay SPA and/or ex-situ sites which may support SCI species of Inner Galway Bay SPA or Lough Corrib SPA. Those in closest proximity to European sites, and posing the greatest risk of effects, are:

- F4.1 Knocknacarra South – includes a feeder cycle corridor along the coast road/R336 which lies within, or is adjacent to, Galway Bay Complex SAC and lies adjacent to Inner Galway Bay SPA (the Bearna Greenway also forms part of the proposals in this area and is described separately under that heading)
- F4.2 Salthill – includes Threadneedle Road, Salthill Road Upper and Whitestrand Road, sections of which either lie within or adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA
- F4.6 Newcastle & Dangan – includes the N6/Quincentenary Bridge, NUIG and Chestnut Lane sections of which lie either within or adjacent to Lough Corrib SAC (the Galway to Oughterard Greenway also forms part of the proposals in this area and is described separately under that heading)
- F4.7 City Centre – includes new bridges over the River Corrib at the site of the Old Clifden Railway bridge, the Salmon Weir Bridge and Wolfe Tone Bridge, and proposed works along College Road. The first two locations cross Lough Corrib SAC, the area south of Wolfe Tone Bridge crosses Galway Bay Complex SAC, and the proposed works along College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA
- F4.8 Terryland and Ballinfoyle – includes the N6/Quincentenary Bridge, which crosses Lough Corrib SAC, and Dyke Road, sections of which lie adjacent to Lough Corrib SAC

- F4.10 Renmore & Dublin Road – includes College Road, the Dublin Road and Doughiska Road. The northern end of College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA, the western end of the Dublin Road lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA, and the southern end of Doughiska Road lies adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA (the proposed Galway City to Oranmore section of the Galway to Dublin Cycleway also forms part of the proposals in this area and is described separately under that heading)
- Supporting measures to expand the bike share scheme, provide for and upgrade bicycle parking facilities, and improve cycling permeability across the city are not location specific and could potentially affect European sites within Galway City – Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA
- A greenway connecting Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) would cross Galway Bay Complex SAC and Inner Galway Bay SPA

Mitigation measures: refer to Box 9 in Section 3.2 below

Barrier effect

Construction works associated with the new structures, or the structures themselves, have the potential to create a barrier to fauna species movement (e.g. within foraging areas or along commuting routes):

- The secondary cycle network includes for a proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC
- Facilitating city cycling relies upon the Cross-City Link which includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge
- Connecting a greenway between Eyre Square and Renmore may impact on Galway Bay Complex SAC at Lough Atalia
- A proposed new cycle/pedestrian bridge over the River Corrib, to the south of Wolfe Tone Bridge, must cross Galway Bay Complex SAC

Mitigation measures: refer to Box 10 in Section 3.2 below

Mortality Risk

Construction works associated with the new structures have the potential to result in the mortality of QI/SCI species as a result of construction debris/materials accidentally falling onto aquatic/estuarine habitats:

- The secondary cycle network includes for a proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC.
- Facilitating city cycling relies upon the Cross-City Link which includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge.
- Connecting a greenway between Eyre Square and Renmore may impact on Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia.

- A proposed new cycle/pedestrian bridge over the River Corrib, to the south of Wolfe Tone Bridge, must cross Galway Bay Complex SAC

Mitigation measures: refer to Box 11 in Section 3.2 below

Pedestrian Network

The potential impact pathways associated with the proposed Pedestrian Network and the European site(s) which are potentially at risk of adverse effects on Site integrity are summarised below:

Habitat Loss

Aside from the three principle greenway projects (which are discussed separately), the provision of infrastructure associated with the Pedestrian Network in areas within or adjacent to European sites has the potential to result in the permanent loss of habitat in Lough Corrib SAC, Galway Bay Complex SAC or Inner Galway Bay SPA; habitat fragmentation is directly associated with this impact pathway. Loss of habitat from these European sites, and indeed in any potential ex-situ sites supporting SCI bird species of the SPA (e.g. roost sites or feeding sites), has the potential to affect the conservation objectives supporting the Site's QI/SCI species:

- The Cross-City Link includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge
- Connecting a greenway between Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) may impact on Galway Bay Complex SAC and Inner Galway Bay SPA
- The proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC
- A proposed new cycle/pedestrian bridge to the south of Wolfe Tone Bridge must cross Galway Bay Complex SAC

Mitigation measures: refer to Box 1b in Section 3.2 below

Habitat degradation – hydrogeology

Although unlikely, there is the possibility that excavations associated with the installation of Pedestrian Network elements may affect the existing hydrogeological regime which in turn may affect groundwater dependant habitats (and in some cases supported species) within European sites. Given the likely nature of works associated with the majority of the Pedestrian Network described in the GTS they would be minimally invasive in terms of excavation requirements and, with any such works being undertaken in the urban environment, pose little risk of interacting with groundwater – only elements adjacent to Lough Corrib SAC, Galway Bay Complex SAC or Inner Galway Bay SPA are likely to be at any real risk of effects (see list above under habitat loss). Installation of new bridge structures may be more likely to interact with groundwater. However, as these bridges are all associated with a modified urban landscape in the city centre, the risk is likely to remain low.

Mitigation measures: refer to Box 2a in Section 3.2 below

Habitat degradation – water quality impacts during construction

Many of the Pedestrian Network elements may be connected to the existing drainage network which ultimately discharges to Galway Bay via the River Corrib or other watercourses within the city and environs. Construction works therefore, have the potential to affect surface and/or groundwater quality which in turn could affect aquatic/wetland habitats, and potentially QI/SCI species, in Lough Corrib SAC, Galway Bay Complex SAC, Inner Galway Bay SPA and/or ex-situ sites which may support SCI species of Inner Galway Bay SPA or Lough Corrib SPA. Some elements are (or could potentially be) located within or in close proximity to European sites and therefore may pose a greater risk in this regard:

- The Cross-City Link includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge
- Connecting a greenway between Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) may impact on Galway Bay Complex SAC and Inner Galway Bay SPA
- The proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC
- A proposed new cycle/pedestrian bridge to the south of Wolfe Tone Bridge must cross Galway Bay Complex SAC

Mitigation measures: refer to Box 4 in Section 3.2 below

Habitat degradation – shading

Upgrading the Pedestrian Network will/may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas within or adjacent to European sites which have the potential to affect habitat areas within those Sites as a result of direct shading:

- A proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC
- A proposed new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge
- Connecting a greenway between Eyre Square and Renmore may impact on Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia
- A proposed new cycle/pedestrian bridge over the River Corrib, to the south of Wolfe Tone Bridge, must cross Galway Bay Complex SAC

New bridge structures have the potential to result in shading effects (i.e. reduced sunlight and levels of direct precipitation) on habitats beneath the structure. Such impacts could potentially affect QI habitats and/or habitats which may support QI/SCI species of Lough Corrib SAC, Galway Bay Complex SAC or Inner Galway Bay SPA.

Mitigation measures: refer to Box 6 in Section 3.2 below

Habitat degradation – non-native invasive species

Introducing or spreading non-native invasive species during construction and/or operation (e.g. maintenance works) of any Pedestrian Network elements has the potential to affect habitats, and may as a consequence affect supported species, in Lough Corrib SAC, Lough Corrib SPA,

Galway Bay Complex SAC, Inner Galway Bay SPA and/or ex-situ sites which may support SCI species of Inner Galway Bay SPA or Lough Corrib SPA.

Mitigation measures: refer to Box 8 in Section 3.2 below

Disturbance/displacement

Construction works and/or operation associated with elements of the Pedestrian Network has the potential to result in levels of disturbance that could potentially displace QI/SCI species from important habitat areas (e.g. breeding/resting places, such as roost sites for wintering birds, or foraging areas) within Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC, Inner Galway Bay SPA and/or ex-situ sites which may support SCI species of Inner Galway Bay SPA or Lough Corrib SPA. Those in closest proximity to European sites, and posing the greatest risk of effects, are:

- The proposed new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge
- Connecting a greenway between Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) may impact on Galway Bay Complex SAC and Inner Galway Bay SPA
- The proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC
- A proposed new cycle/pedestrian bridge to the south of Wolfe Tone Bridge must cross Galway Bay Complex SAC

Mitigation measures: refer to Box 9 in Section 3.2 below

Barrier effect

Construction works associated with the new structures, or the structures themselves, have the potential to create a barrier to fauna species movement (e.g. within foraging areas or along commuting routes):

- A proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC
- A proposed new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge
- Connecting a greenway between Eyre Square and Renmore may impact on Galway Bay Complex SAC at Lough Atalia
- A proposed new cycle/pedestrian bridge over the River Corrib, to the south of Wolfe Tone Bridge, must cross Galway Bay Complex SAC

Mitigation measures: refer to Box 10 in Section 3.2 below

Mortality Risk

Construction works associated with the new bridge structures, or the structures themselves, have the potential to result in the mortality of QI/SCI species as a result of construction debris/materials accidentally falling onto aquatic/estuarine habitats:

- The proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC
- A proposed new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge
- Connecting a greenway between Eyre Square and Renmore may impact on Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia
- A proposed new cycle/pedestrian bridge over the River Corrib, to the south of Wolfe Tone Bridge, must cross Galway Bay Complex SAC

Mitigation measures: refer to Box 11 in Section 3.2 below

3.2 Mitigation Measures

This section details the mitigation measures, which were incorporated into the GTS (and will form part of the County Development Plan by reference made in the Variation), required to ensure that the GTS elements do not affect the conservation objectives of the QIs/SCIs of any European sites, and therefore will not result in adverse effects on site integrity as a result of the potential impacts described above in Section 3.1.

This approach toward mitigation includes not inhibiting any future efforts to repair or remediate any legacy impacts to European sites that have occurred since their designation in cases where the conservation objectives are to restore favourable conservation condition rather to maintain it. The references to the mitigation measures in that section correspond with the relevant text boxes below.

In the hierarchy of land use plans, the Galway County Development Plan 2015-2021 and subsequent land use Plans have an overarching role in ensuring the protection of European sites whilst guiding the future development of Galway. This includes implementing the measures set out in the GTS over the next 20 years by means of the Variation.

The relevant land use plans (including the Galway County Development Plan 2015 - 2021) include a range of environmental protection policies, to which all projects proposed under the GTS will be subject. These environmental protection policies will serve, in many cases, to safeguard against the GTS resulting in adverse effects on the integrity of any European sites. These environmental protection policies are extracted from the relevant plans and included in Appendix D of this NIR. They are also referenced under the mitigation measures column in Appendix B (Table B-1) of this NIR, using the reference numbers from Appendix D of this NIR, as this table sets out how they serve to protect European sites from being impacted by GTS elements.

Many of the GTS elements are described at a level of geographic specificity where more project-specific mitigation measures are required to adequately address the various potential impact pathways at the project-level to be able to demonstrate that the GTS will not adversely affect the integrity of any European sites. These project-level mitigation measures are presented below, under the heading of each of the identified impact pathways. These are also referenced,

using the reference numbers from the sections below, under the mitigation measures column in Appendix B (Table B-1) of this NIR.

3.2.1 Habitat Loss

Mitigation measures incorporated into the GTS (and which will form part of the County Development Plan by reference made in the Variation), to ensure that any habitat loss associated with the cycle network greenways do not pose a risk of adversely affecting the integrity of any European sites are included below in Box 1a. Those relating to the Public Transport Network, Non-greenway Cycle Network, and the Pedestrian Network are included in Box 1b, and those relating to the N6 GCRR in Box 1c.

Box 1a: Mitigation measures in relation to habitat loss affecting European sites – Cycle Network Greenways

Habitat Loss: Cycle Network Greenways

If the alignment of the Bearna Greenway, the Galway to Dublin Cycleway (Galway City to Oranmore), or the Galway to Oughterard Greenway will result in habitat loss within a European site:

- a habitat survey of the affected area will be carried out to identify and classify the habitat types present (in accordance with the most recently published Annex I habitat classification guidance documents) to determine whether impacted habitat areas correspond with any of the QI Annex I habitats for which Lough Corrib SAC, Galway Bay Complex SAC or Ross Lake and Woods SAC are selected. A loss of any area of QI habitat, or any area of supporting habitat that in turn affects the QI habitat, would affect the conservation objectives supporting the habitat's conservation condition, resulting in an adverse effect on Site integrity
- if habitats in Lough Corrib SAC are likely to be affected and are assessed as being suitable to support the Sites' QI plant species (Slender green feather-moss - *Drepanocladus (Hamatocaulis) vernicosus* and Slender Naiad - *Najas flexilis*) an appropriate level of survey will be carried out to definitively support an assessment and conclusion of whether the proposed project will affect the conservation objectives supporting the species' favourable conservation status, and thus adversely affect the integrity of the SAC
- if aquatic habitats in Lough Corrib SAC are likely to be affected and are assessed as being suitable to support the Sites' aquatic QI species (Otter, Atlantic salmon, Sea lamprey, Brook lamprey, White-clawed crayfish or Freshwater pearl mussel) an appropriate level of survey will be carried out to definitively support an assessment and conclusion as to whether the proposed project will affect the conservation objectives supporting the species' favourable conservation status, and thus adversely affect the integrity of the SAC
- if aquatic and/or coastal habitats in Galway Bay Complex SAC are likely to be affected and are assessed as being suitable to support the Sites' aquatic/marine QI species (Otter and Harbour seal) an appropriate level of survey will be carried out to definitively support an assessment and conclusion as to whether the proposed project will affect the conservation objectives supporting the species' favourable conservation status, and thus adversely affect the integrity of the SAC
- an assessment will be made, based on an appropriate level of survey work to definitively support its conclusion, as to whether any habitat loss associated with the Galway to Oughterard Greenway will affect the conservation objectives supporting the favourable conservation status of the Lesser horseshoe bat roost for which the Ross Lake and Woods SAC is designated, and thus adversely affect the integrity of the SAC¹⁰
- if the greenways will result in habitat loss within Lough Corrib SPA/Inner Galway Bay SPA, an assessment will be made, based on an appropriate level of survey work to definitively support its conclusion, as to whether the habitat loss will affect the conservation objectives supporting the species' favourable conservation status, and thus adversely affect the integrity of the SPA. This

¹⁰ Although the Lesser horseshoe bat is known to be present within the Galway City and environs (*N6 Galway City Transport Project Route Selection Report*, (Arup, 2016)), the roost that forms the QI population for this European site (Eborhall House) is 11km away from the nearest GTS project (the Galway to Oughterard Greenway), on the northern shore of Lough Corrib. This distance would be regarded to be beyond the normal core foraging range of the Eborhall House population and beyond the normal commuting range of this species except on exceptional occasions or over long periods of time – for example, bats dispersing and moving between areas in the wider landscape over a period of many years/generations.

assessment will also consider the effects of habitat loss in areas outside of the SPA in the context of whether these areas are important in supporting the SCI populations (i.e. constitute ex-situ sites as defined in the conservation objectives)

Any sections of the proposed greenways which will adversely affect the integrity of any European site as a result of habitat loss or fragmentation, either alone or in-combination with any other plans or projects, or where such effects cannot be definitively ruled out, will not be progressed and an alternative will be implemented which avoids this impact.

Box 1b: Mitigation measures in relation to habitat loss affecting European sites - Public Transport Network, Non-greenway Cycle Network and Pedestrian Network (proposed bridge structures)

Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network

Generally, the Public Transport Network, Non-greenway Cycle Network, and Pedestrian Network project elements are currently described at a strategic level in terms of their location and function/role within the GTS. However, some, such as the proposed pedestrian bridge near the Salmon Weir Bridge or providing public transport infrastructure along the R336 in Salthill, have a more definite location described. The required ecological information and assessment required, as documented below, will be required to inform the development of the detailed design at the project stage.

Survey and assessment requirements to inform the detailed design of Public Transport Network, Non-Greenway Cycle Network, and Pedestrian Network project elements are listed below.

If elements of the Public Transport Network, the Non-Greenway Cycle Network or the Pedestrian Network will result in habitat loss within a European site:

- a habitat survey of the affected area will be carried out to identify and classify the habitat types present (in accordance with the most recently published Annex I habitat classification guidance documents) to determine whether impacted habitat areas correspond with any of the QI Annex I habitats for which Lough Corrib SAC or Galway Bay Complex SAC are selected. A loss of any area of QI habitat, or any area of supporting habitat that in turn affects the QI habitat, would affect the conservation objectives supporting the habitat's conservation condition, resulting in an adverse effect on Site integrity
- if aquatic habitats in Lough Corrib SAC are likely to be affected and are assessed as being suitable to support the Sites' aquatic QI species (Otter, Atlantic salmon, Sea lamprey, Brook lamprey, White-clawed crayfish or the Freshwater pearl mussel) an appropriate level of survey will be carried out to definitively support an assessment and conclusion as to whether the proposed project will affect the conservation objectives supporting the species' favourable conservation status, and thus adversely affect the integrity of the SAC
- if aquatic and/or coastal habitats in Galway Bay Complex SAC are likely to be affected and are assessed as being suitable to support the Sites' aquatic/marine QI species (Otter and Harbour seal) an appropriate level of survey will be carried out to definitively support an assessment and conclusion as to whether the proposed project will affect the conservation objectives supporting the species' favourable conservation status, and thus adversely affect the integrity of the SAC
- if habitat areas within Inner Galway Bay SPA will be lost as a result of implementing any of these elements, an assessment will be made, based on an appropriate level of survey work to definitively support its conclusion, as to whether the habitat loss will affect the conservation objectives supporting the species' favourable conservation status, and thus adversely affect the integrity of the SPA. This assessment will also consider the effects of habitat loss in areas outside of the SPA in the context of whether these areas are important in supporting the SCI populations (i.e. constitute ex-situ sites as defined in the conservation objectives)

All of the assessments must also consider whether there is any potential for adverse effects on European site integrity in-combination with other plans and/or projects.

Considering the general locations provided, the type of infrastructure development envisaged for each of these project elements, and the ecological information and assessment required to be carried out to inform their design, it is reasonable to assume that at the detailed design stage any potential for a project element to impact on the European site as a result of habitat loss could, and will, be resolved through the exploration of alternative locations or designs whilst still fulfilling their function/role in supporting the overarching vision, guiding principles and strategic objectives/aims of the GTS.

Any proposed projects which will adversely affect the integrity of any European site as a result of habitat loss or fragmentation, either alone or in-combination with any other plans or projects, or where such effects cannot be definitively ruled out, will not be progressed and an alternative will be implemented which avoids this potential impact.

Box 1c: Mitigation measures in relation to habitat loss affecting European sites – N6 GCRR

Habitat Loss: N6 GCRR

Where the N6 GCRR landtake, to include lands for the site compounds and drainage design (or any other landtake requirements not specified at this stage in the project design), falls outside of the current corridor for the proposed road development, they will not be located in areas where they would adversely affect the integrity of Lough Corrib SAC, either alone or in-combination with any other plans or projects, as a result of habitat loss or fragmentation.

3.2.2 Habitat Degradation – Hydrogeology

Mitigation measures incorporated into the GTS (and which will form part of the County Development Plan by reference made in the Variation), to ensure that all GTS elements, aside from the N6 GCRR, do not pose a risk of adversely affecting the integrity of any European sites are included below in Box 2a. Specific mitigation measures to address the potential hydrogeological impacts associated with the N6 GCRR are included below in Box 2b.

Box 2a: General mitigation measures (excluding the N6 GCRR) relating to potential hydrogeological impacts affecting European sites

Hydrogeology General

As part of the design phase, all GTS projects will establish at the earliest possible stage of the feasibility/design process whether their construction or operation will interact with or affect groundwater. If groundwater impacts are likely, an assessment of the zone of influence of any such interaction will be carried out with respect to identifying if there is any risk of groundwater impacts affecting the hydrogeological regime supporting QI habitats/species in any European sites.

Where any such impacts are identified, appropriate mitigation measures will be designed and implemented to ensure that the GTS project element will not adversely affect the integrity of any European sites, either alone or in-combination with any other plans or projects, by impacting on the existing hydrogeological regime.

Box 2b: Specific mitigation measures relating to the proposed N6 GCRR and potential hydrogeological impacts affecting European sites

Hydrogeology N6 GCRR

During construction/operation of the proposed tunnel at Lackagh Quarry there is a risk of groundwater impacts which could affect habitats within Lough Corrib SAC. The following mitigation measures are proposed to ensure that the proposed tunnel, and construction of western and eastern approaches to same, will not adversely affect the integrity of Lough Corrib SAC. These mitigation measures are based upon the results of a study carried out to qualify and quantify the potential impacts that may be associated with a tunnel at Lackagh Quarry. If additional mitigation measures are required at the detailed design stage of the N6 GCRR, these will be designed and implemented to ensure that any tunnel or excavations in this area will not adversely affect the integrity of any European sites, either alone or in-combination with any other plans or projects, by impacting on the existing hydrogeological regime.

Works in the quarry outside and east of the SAC (Section 1)

A composite support system of rock bolts, steel mesh and sprayed concrete will be used to stabilise the quarry face. In the event that sprayed concrete is used, groundwater seepage from the quarry face will be facilitated

by installing weep holes. The frequency of weep holes will be based on the expected groundwater seepage from the quarry face to reduce any water build-up behind the shotcrete layer.

The drainage network for the proposed road within Lackagh Quarry will collect all surface water from both carriageways on the eastern approach to the tunnel. The road drainage will be sealed and directed to a hydrocarbon interceptor and then to a containment pond. Following containment all water will enter an infiltration pond with a 1m constructed subsoil bed that will allow the treated water to recharge to ground. The pond is designed to accommodate a 100-year storm event, with 50% of volume to infiltrate to ground within 24 hours.

The proposed finished level of the proposed road will lie above the groundwater table, however, the embankment starter layer would in part be submerged during the winter groundwater high. In this regard the starter layer will be constructed so as not to dam groundwater in parts of the quarry floor. Similarly, the drainage network will not be installed during the seasonal groundwater high so as to avoid the need for dewatering and groundwater lowering.

Construction of the tunnel section beneath the SAC (Section 2)

No groundwater dewatering of the bedrock aquifer will be permitted during construction works. No construction works will be permitted during periods of high groundwater where groundwater dewatering would be required to facilitate works. When the groundwater rise occurs all construction activities within the zone below the high winter groundwater level for the tunnel will cease and the operation made safe until groundwater levels drop, which may include the installation of berms to prevent groundwater entering or exiting the tunnel from the tunnel portal.

The hydrogeological study of Lackagh Quarry has identified a potential perched water table and flow path along a clay wayboard in the limestone sequence. The clay wayboard will be intersected by the tunnel and there may be inflows along it. These inflows will be managed during construction and allowed to infiltrate to ground along the tunnel section. On sealing of the tunnel these inflows will be transferred laterally around the outside of the tunnel box section and to the groundwater table below.

To facilitate groundwater flow around the completed tunnel a drainage blanket up to the winter groundwater level (16.7m OD) will be incorporated during construction. It is envisaged that this will take the form of a drainage layer, drainage pipes or similar placed outside the permanent cast in-situ reinforced concrete tunnel lining and waterproof membrane.

Construction of western approach to the tunnel outside the SAC (Section 3)

No dewatering of the bedrock aquifer will be permitted due to the sensitive nature at the groundwater dependant habitat at nearby Coolagh Lakes.

Where excavation into subsoils below the winter groundwater level is required, an additional geotechnical investigation to establish the overburden permeability will be required to determine if inflows to the excavation will occur from the bedrock aquifer. In the case that inflow is likely below the winter groundwater level then construction below the winter groundwater level will not be permitted. The additional geotechnical investigation will calculate groundwater seepage based on an assessment of permeability, thickness of overburden between the excavation and the bedrock aquifer and geotechnical stability.

A watertight seal will be installed on the underside of the road base and the cutting sides to protect against groundwater inflow. This area will be sealed during construction (and permanently) to 17.7mOD; which is derived from the groundwater high (15.7m OD) plus 2m free board. Slope or retaining structures will be utilised from +17.7mOD to existing ground level where required.

Runoff will be collected by a sealed drainage system and discharged to ground by infiltration ponds to the west.

Operation of the tunnel

All wash water entering the tunnel on vehicles will be collected in a sealed drainage system and pumped to foul sewer for treatment at a municipal facility.

3.2.3 Habitat degradation – tunnelling/excavation

Mitigation measures incorporated into the GTS (and which will form part of the County Development Plan by reference made in the Variation), relating to the risk of tunnelling or excavations, associated with the proposed N6 GCR, in the vicinity of Lackagh Quarry are included in Box 3.

Box 3: Mitigation measures relating to habitat degradation from construction of the tunnel at Lackagh Quarry affecting European sites

Habitat degradation – tunnelling/excavation (N6 GCRR)

During construction of the proposed tunnel at Lackagh Quarry there is a risk of impacts to habitats above in Lough Corrib SAC or to adjacent habitats in the SAC along the alignment of the western approach to the tunnel. The following mitigation measures are proposed to ensure that the proposed Lackagh Tunnel, and construction of the western and eastern approaches to same, will not adversely affect the integrity of Lough Corrib SAC via this impact pathway. These mitigation measures are based upon the results of a study carried out to qualify and quantify the potential impacts that may be associated with a tunnel/excavations at Lackagh Quarry. If additional mitigation measures are required at the detailed design stage of the N6 GCRR, these will be designed and implemented to ensure that any tunnel or excavations in this area will not adversely affect the integrity of any European sites, either alone or in-combination with any other plans or projects, via this impact pathway.

Works to the quarry face (Section 1)

A composite support system of rock bolts, steel mesh and sprayed concrete will be used to stabilise the quarry face. The proposed works will be completed prior to the tunnel excavation and be limited to the quarry face. These rockface protective measures will limit movement within the rockmass resulting in no adverse impact to the Limestone pavement.

During the construction of the tunnel the Lackagh Quarry stabilised face will be monitored for movement and cracks to ensure no impact to the Limestone pavement. In the unforeseen event that movement is observed additional support systems will be installed.

During operational phase of the tunnel continued monitoring will take place to ensure that further stabilisation measures are implemented to protect against any further movement or instability within the rockmass surrounding the tunnel portal. During the operational stage of the tunnel there will be no adverse impact on the Limestone pavement.

Construction of the tunnel (Section 2)

- Each individual tunnel will maintain at least 8m of clear rock above the tunnel crown to the ground level of Lough Corrib SAC. This eight meters allows a sufficiently stable rock arch to develop around the tunnel which will ensure the stability of the tunnel in the temporary case
- The minimum clear distance of seven meters will be maintained between the twin mined tunnel based on the strength of the rock and expected size of the tunnels
- Pre-support measures will be installed at the quarry face around the proposed tunnel portal to prevent collapse into the quarry
- The blasting charge weights used for excavation will be limited to cater for the proximity of sensitive receivers. Following a preliminary assessment, vibrations of 25mm/sec will not adversely impact the Limestone pavement environment. During the blasting period the Limestone pavement will be monitored to establish if vibration in excess of 25mm/sec are feasible whilst not affecting the Limestone pavement
- Pre-support measures when required in the form of sub-horizontal spiles will be implemented which provide a stiffer support in addition to the rock bolts and sprayed concrete. These additional measures provide an extra level of safety to the temporary works ensuring there is no impact
- Temporary works in the tunnel in the form of steel arch supports, rock bolts and sprayed concrete will be installed to form a reinforced rock arch support allowing the tunnel to be excavated without causing risk of collapse

Construction of western approach to the tunnel (Section 3)

Retaining system will be installed to retain the Annex I habitat where required, this is generally where there is insufficient area (footprint) for self-supporting earthworks slopes between the existing ground level and to 17.7mOD as outlined in Box 2b. These locations area known as ‘pinch points’.

Retaining systems are dependent on the ground conditions in the pinch point locations. The proposed retaining systems that will be used to control these impacts include:

1. Rock bolts, rock dowels, steel mesh, sprayed concrete in areas of rock only
2. Piled retaining walls, supported with ground anchors in areas of overburden only and in areas with a combination of overburden and rock

The exposed rockface surrounding the western tunnel portal will be continuously assessed during excavation. Where required stability control measures will be implemented in the form of rock bolts, steel mesh and sprayed concrete.

3.2.4 Habitat degradation – water quality (construction)

Mitigation measures incorporated into the GTS (and which will form part of the County Development Plan by reference made in the Variation), relating to the risk to water quality posed by construction works associated with all GTS elements are included in Box 4.

Box 4: Mitigation measures relating to habitat degradation, through construction-related water quality impacts, affecting European sites

Habitat degradation – water quality (construction)

As part of the design phase, all GTS projects will assess the risk of construction works affecting water quality. This will consider factors such as: the nature and scale of the works proposed; materials to be used (e.g. hazardous chemicals/substances such as hydrocarbons and cement based products); and the presence of, or proximity of the construction site to, potential pollution pathways via surface water or drainage features.

Best practice construction methodologies will be followed in relation to the protection of watercourses in accordance with the following guidance, where applicable:

- Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters (Inland Fisheries Ireland, 2016)
- Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes (National Roads Authority, 2008)
- CIRIA C648: *Control of water pollution from linear construction projects: Technical Guidance*
- CIRIA C649: *Control of water pollution from linear construction projects: Site guide*

Where risks are identified, a pollution control plan will be prepared. The pollution control plan will include sufficient pollution control measures to ensure that silt, runoff, water pumped from excavations, cement based compounds, hydrocarbons, or any other hazardous chemicals would not significantly affect water quality in any receiving drainage features, watercourses, or waterbodies. Sufficient detail will be included in the pollution control plan to demonstrate that all measures included therein, will adequately address all the identified impact pathways and associated risks and will not affect water quality in receiving watercourses to a degree, either alone or in-combination with any other plans or projects, that would adversely affect the integrity of any European sites.

3.2.5 Habitat degradation – water quality (operation)

Mitigation measures incorporated into the GTS (and will form part of the County Development Plan by reference made in the Variation), relating to the implementation of the Park & Ride facilities are included in Box 5a; those relating to the operational risk to water quality posed by new road infrastructure are included in Box 5b.

Box 5a: Mitigation measures relating to habitat degradation as a result of water quality impacts during operation affecting European sites – Park & Ride Facilities

Habitat degradation – water quality (operation) – Park & Ride Facilities

The design of Park & Ride facilities will include sufficient pollution control measures to ensure that run-off or drainage discharges do not impact upon water quality in receiving watercourses resulting in adverse effects on the integrity of any European sites, either alone or in-combination with any other plans or projects.

The type, design and scale of all pollution control measures will be appropriate to the scale and capacity of each Park & Ride site.

Pollution control measures will be monitored and maintained to ensure their effectiveness.

If required, at such time that future expansion or increases in capacity at the Park & Ride sites are required, pollution control measures will be upgraded to maintain the levels of pollution control required to protect water quality in receiving European sites.

Box 5b: Mitigation measures relating to habitat degradation as a result of water quality impacts during operation affecting European sites – New Road Developments

Habitat degradation – water quality (operation) – New Road Developments

The design of new road developments will include sufficient pollution control measures to ensure that run-off or drainage discharges do not impact upon water quality in receiving watercourses resulting in adverse effects on the integrity of any European sites, either alone or in-combination with any other plans or projects.

The type, design and scale of all pollution control measures will be appropriate to the scale and capacity of the proposed road development. These may include grassed channels, swales, filter drains, wetlands, attenuation/detention/infiltration ponds, or other Sustainable Urban Drainage System (SUDS) measures.

Pollution control measures will be monitored and maintained to ensure their effectiveness.

3.2.6 Habitat degradation – shading

Mitigation measures incorporated into the GTS (and which will form part of the County Development Plan by reference made in the Variation), relating to habitat degradation as a result of shading impacts are included in Box 6.

Box 6: Mitigation measures relating to habitat degradation through shading impacts affecting European sites

Habitat degradation – shading

To inform the bridge designs, a habitat survey of all areas potentially at risk of shading impacts from a bridge structure will be carried out. The survey will identify and classify the habitat types present (in accordance with the most recently published Annex I habitat classification guidance documents) to determine whether affected habitat areas correspond with any of the QI Annex I habitats for which Lough Corrib SAC or Galway Bay Complex SAC are selected, and are at risk of shading related impacts. Effects on any area of QI habitat could affect the conservation objectives supporting the habitat's conservation condition, resulting in an adverse effect on Site integrity.

Where any such impacts are identified, alternative locations and/or designs will be developed to ensure that the bridge structures will not adversely affect the integrity of any European sites, either alone or in-combination with any other plans or projects, as a result of shading impacts.

Considering the general locations provided for these bridge structures, and the ecological information and assessment required to be carried out to inform their design, it is reasonable to assume that at the detailed design stage any potential for a project element to impact on the European site as a result of shading impacts could, and will, be resolved through the exploration of alternative locations or designs whilst still fulfilling their function/role in supporting the overarching vision, guiding principles and strategic objectives/aims of the GTS.

3.2.7 Habitat Degradation – Air Quality

Mitigation measures incorporated into the GTS (and which will form part of the County Development Plan by reference made in the Variation), to protect European sites from potential air quality impacts are included in Box 7.

Box 7: Mitigation measures relating to European sites from air quality impacts associated with the GTS

Habitat Degradation – Air Quality

As part of the N6 GCR design phase, an air quality assessment will be carried out to determine the air quality baseline and model/predict the air quality ZoI and increases in contaminants associated with the proposed road development (e.g. nitrogen oxides, particulate matter and heavy metals).

All habitats within European sites, and within the air quality ZoI, will be surveyed to identify and classify the habitat types present (in accordance with the most recently published Annex I habitat classification guidance documents) to determine whether impacted habitat areas correspond with any of the QI Annex I habitats for

which Lough Corrib SAC is selected and are at risk of air quality impacts, or any area of supporting habitat that in turn affects the QI habitat. These habitats will also be assessed in the context of whether they support any QI species of the SAC.

Where it is determined that there are habitats at risk from air quality related impacts, appropriate mitigation measures will be designed and implemented to ensure that the N6 GCRR will not adversely affect the integrity of Lough Corrib SAC, either alone or in-combination with any other plans or projects.

Best practice construction methods will be applied in relation to all construction work associated with GTS projects to minimise dust emissions during construction. Mitigation measures to prevent wind-blown dust affecting sensitive habitats will be implemented to prevent any long-term effects on QI habitats or adverse effects on the integrity of any European sites. Such mitigation measures may include watering of the construction site/access roads, road cleaning, vehicle speed restrictions, and temporary physical barriers to prevent wind-blown dust.

3.2.8 Habitat Degradation – Non-native Invasive Species

Mitigation measures incorporated into the GTS (and which form part of the County Development Plan by reference made in the Variation), to protect European sites from impacts associated with non-native invasive species are included in Box 8.

Box 8: Mitigation measures relating to habitat degradation from non-native invasive species affecting European sites

Habitat Degradation – Non-native Invasive Species

All elements of the GTS will establish, through an appropriate level of survey, whether non-native species (listed on Schedule 3 of the European Communities (Birds and Natural Habitats) Regulations, 2011) are present in any areas affected by the proposed construction works or operational maintenance works.

If present, the species will be identified, locations mapped and an invasive species management plan prepared detailing the handling and control measures that will be implemented to ensure that the species concerned, or contaminated vector material, will be eradicated from the construction site and will not be allowed to spread or be introduced to other areas.

The invasive species management plan will also include management and control measures to prevent maintenance regimes during operation from spreading non-native invasive species where there is a risk of the project site becoming recolonised from any other infested areas.

3.2.9 Disturbance/Displacement

Mitigation measures incorporated into the GTS (and which will form part of the County Development Plan by reference made in the Variation), to protect European sites from potential impacts associated with disturbance or displacement effects are included in Box 9.

Box 9: Mitigation measures relating to disturbance or displacement effects affecting European sites

Disturbance/Displacement

Otter, Atlantic salmon, Sea lamprey, Brook lamprey (Lough Corrib SAC)

Otter, Harbour seal (Galway Bay Complex SAC)

An appropriate level of survey will be required to identify if, and how, QI species utilise habitat areas potentially affected by disturbance/displacement effects associated with any elements in the GTS. The results of these surveys and any assessment defining the disturbance/displacement ZoI, will be sufficient to adequately inform an assessment (and definitively support its conclusions) as to whether the predicted disturbance/displacement effects would affect the conservation objectives supporting the species' favourable conservation status, and thus adversely affect the integrity of the SPA.

Where disturbance or displacement effects are predicted, appropriate mitigation measures will be designed and implemented to ensure that GTS elements will not adversely affect the integrity of the SPA, either alone or in combination with any other plans or projects, via this impact pathway.

If, despite the implementation of mitigation measures, there remains a risk that disturbance or displacement will adversely affected the integrity of any European site(s), the project will not be progressed unless an alternative solution can be implemented which avoids/reduces the impact to a level that the integrity of the European site(s) is(are) unaffected.

Lesser horseshoe bat (Ross Lake and Woods SAC)

An assessment will be made, based on an appropriate level of survey work to definitively support its conclusion, as to whether any disturbance or displacement effects associated with the Galway to Oughterard Greenway will affect the conservation objectives supporting the favourable conservation status of the Lesser horseshoe bat roost for which the Ross Lake and Woods SAC is designated, and thus adversely affect the integrity of the SAC; and

Where disturbance or displacement effects are predicted, appropriate mitigation measures will be designed and implemented to ensure that the greenway will not adversely affect the integrity of the SAC, either alone or in combination with any other plans or projects, via this impact pathway.

If, despite the implementation of mitigation measures, there remains a risk that disturbance or displacement will adversely affected the integrity of Ross Lake and Woods SAC, the portion of the greenway concerned will not be progressed unless an alternative can be implemented which avoids/reduces the impact to a level that the integrity of the European site(s) is(are) unaffected..

Wintering and Breeding Birds (Lough Corrib SPA, Inner Galway Bay SPA)

An appropriate level of survey will be required to identify if, and how, SCI bird species utilise habitat areas potentially affected by disturbance/displacement effects associated with any elements in the GTS. This includes habitat areas within the SPA boundaries and important ex-situ habitat areas remote from the SPA. The results of these surveys and any assessment defining the disturbance/displacement ZoI, will be sufficient to adequately inform an assessment (and definitively support its conclusions) as to whether the predicted disturbance/displacement effects would affect the conservation objectives supporting the species' favourable conservation status, and thus adversely affect the integrity of the SPA.

Where disturbance or displacement effects are predicted, appropriate mitigation measures will be designed and implemented to ensure that GTS elements will not adversely affect the integrity of the SPA, either alone or in combination with any other plans or projects, via this impact pathway.

If, despite the implementation of mitigation measures, there remains a risk that disturbance or displacement will adversely affected the integrity of any European site(s), the project will not be progressed unless an alternative solution can be implemented which avoids/reduces the impact to a level that the integrity of the European site(s) is(are) unaffected.

3.2.10 Barrier Effect

Mitigation measures incorporated into the GTS (and which will form part of the County Development Plan by reference made in the Variation), to protect European sites from impacts associated with barrier effect are included in Box 10.

Box 10: Mitigation measures relating to barrier effects affecting European sites

Barrier Effect

Otter, Atlantic salmon, Sea lamprey, Brook lamprey (Lough Corrib SAC)

Otter, Harbour seal (Galway Bay Complex SAC)

Best practice will be followed in relation to bridge/culvert construction and design (including installing dedicated mammal passage facilities) to prevent barrier effects occurring on affected watercourses, in accordance with the following guidance, where applicable:

- Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters (Inland Fisheries Ireland, 2016)
- Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes (National Roads Authority, 2008)

A construction methodology and construction management plan will be prepared in relation to all bridge structures; both permanent structures and those installed temporarily to facilitate construction works. This will contain sufficient detail regarding the construction methodology and control measures in order to demonstrate that the construction works will not pose a barrier to aquatic species and will not adversely affect the integrity of any European sites, either alone or in-combination with any other plans or projects, via this impact pathway.

If, despite the implementation of mitigation measures, there remains a risk that the project will adversely affected the integrity of any European site(s) via this impact pathway, the project will not be progressed unless an alternative solution can be implemented which avoids/reduces the impact to a level that the integrity of the European site(s) is(are) unaffected.

Lesser horseshoe bat (Ross Lake and Woods SAC)

If the Galway to Oughterard Greenway will be located within 2.5km of the Lesser horseshoe bat roost for which the Ross Lake and Woods SAC is designated an assessment will be made, based on an appropriate level of survey work to definitively support its conclusion, as to whether any predicted barrier effect will affect the conservation objectives supporting the species' favourable conservation status, and thus adversely affect the integrity of the SAC.

Where a barrier effect is predicted, appropriate mitigation measures will be designed and implemented to ensure that the greenway will not adversely affect the integrity of the SAC, either alone or in-combination with any other plans or projects, via this impact pathway.

If, despite the implementation of mitigation measures, there remains a risk that the barrier effect will adversely affected the integrity of Ross lake and Woods SAC, the portion of the greenway concerned will not be progressed unless an alternative can be implemented which avoids/reduces the impact to a level that the integrity of the European site(s) is(are) unaffected.

3.2.11 Mortality Risk

Mitigation measures incorporated into the GTS (and which will form part of the County Development Plan by reference made in the Variation), to protect European sites from mortality risk impacts are included in Box 11.

Box 11: Mitigation measures relating to mortality risk affecting European sites

Mortality Risk

Otter (N6 GCRR operation) – [Lough Corrib SAC, Galway Bay Complex SAC]

Mammal resistant fencing will be required to prevent Otter gaining access to the proposed road carriageway. The fencing will be constructed as per the specification described in the *Guidelines for the Treatment of Otters Prior to the Construction of National Road Schemes* (National Roads Authority, 2008). The precise location and extent of mammal resistant fencing in association with providing access under the proposed road will be finalised as part of the design process and will be based upon an appropriate level of survey to ensure that the proposed road development poses no mortality risk to the Otter population of Lough Corrib SAC, either alone or in-combination with any other plans or projects. The effectiveness of the mammal-resistant fencing will be monitored and maintained post-construction.

Otter, Atlantic salmon, Sea lamprey, Brook lamprey, Harbour seal (construction works over water)

Best practice construction methodologies will be followed in relation to the protection of watercourses in accordance with the following guidance, where applicable:

- Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters (Inland Fisheries Ireland, 2016)
- Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes (National Roads Authority, 2008)

A construction methodology and construction management plan will be prepared in relation to each of the proposed bridge structures. This will contain sufficient detail regarding the construction methodology and control measures in order to demonstrate that the construction works pose no mortality risk to aquatic species beneath the construction zone and will not adversely affect the integrity of any European sites, either alone or in-combination with any other plans or projects, via this impact pathway.

Wintering and Breeding Birds - bridge collision risk [Lough Corrib SPA, Inner Galway Bay SPA]

An appropriate level of survey will be required to identify if, and how, SCI bird species utilise habitat areas where new bridge structures are proposed. This will form the basis of an assessment as to what potential collision risk a bridge structure would pose to the bird species concerned, based on the location of the bridge structure and the design being considered. As part of an iterative process, the results of this assessment will also inform the bridge design. The design process will have regard to those design elements that contribute to the overall level of potential collision risk posed by bridge structures, with a view to minimising any such risk. Such design elements include deck profile and depth, height above the ground/river, and the design of the supporting structures (e.g. extent, height and density of supporting cables or piers). If an unacceptable level of risk remains, additional mitigation strategies will be explored to support a conclusion that any residual risk would not affect the conservation objectives supporting the favourable conservation condition of the SPAs SCI bird species, either alone or in-combination with any other plans or projects.

If, despite the implementation of mitigation measures, there remains a risk that the project will adversely affected the integrity of any European site(s) via this impact pathway, the project will not be progressed unless an alternative solution can be implemented which avoids/reduces the impact to a level that the integrity of the European site(s) is(are) unaffected.

3.3 How the Mitigation Measures Ensure the Removal of Risks of Adverse Effects on the Integrity of European sites

Considering the potential impact pathways associated with the Variation which principally integrates the GTS into the County Development Plan, the relevant plan level environmental protection policies and the mitigation measures specific to the GTS included in Section 3.2, it was concluded that all GTS elements are capable of being implemented without having adverse effects on the integrity of any European sites, provided all the requirements are met at the planning application/consent level.

Mitigation measures will ensure that any planning application, or consent process to permit any projects proposed in the GTS, that does not provide the required information or prove beyond reasonable scientific doubt that the mitigation provided at the site-specific level will meet the requirements of this NIR and the County/City Development Plan documentation, will not be permitted.

Examples of the different types of mitigation measures that ensure that the Variation will not adversely affect the integrity of any European sites are provided below:

Mitigation measures that reinforce statutory requirements

The Galway County Development Plan 2015-2021 includes environmental protection policies that set out the requirement for AA at the project level. Although this is a point of law rather than specific mitigation, they are included in this NIR as overarching policies that will ensure that GTS projects will not adversely affect the integrity of any European sites, to reinforce its application at the project level and that development applications that do not follow statutory requirements will not be permitted.

For example:

- GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment)

Mitigation measures for GTS elements that lack geographic specificity.

Some projects proposed in the GTS are not described with reference to defined locations (e.g. greenways) which would be needed to permit a “complete” assessment in so far as site-specific impacts could be described. In such cases, the mitigation measures set out the specific baseline information required to inform an assessment and its conclusions, and the mitigation

requirements to address any potential impacts. In some cases, this mitigation includes for a scenario that where adverse effects cannot be ruled out, that the project concerned or part thereof, will not be progressed.

Mitigation measures relating to specific strategy elements and specific impacts

Some elements of the GTS are described in relation to a specific location or will result in a specific impact type and therefore, more detail describing and supporting the mitigation measures and its effectiveness are included.

For example:

- Box 2b: GTS – Hydrogeology N6GCRR
- Box 3: GTS – Habitat degradation – tunnelling/excavation
- Box 11: GTS – Mortality Risk Otter (N6 GCRR operation)

3.4 Responsibilities for Implementing Mitigation Policies

The responsibility for implementing the mitigation measures lies with the Planning Authority granting the consent for individual projects proposed by the GTS through the planning consent process: An Bord Pleanála, Galway County Council or Galway City Council.

Planning applications/consents are obliged to ensure that their application is consistent with the policies, objectives and requirements of the GTS and the supporting County and City Development Plans.

The statutory requirement for the Planning Authority to carry out AA Screening for all planning applications/consents is not affected by any of the statements in this NIR. All applications must be tested for the potential for likely significant effects. However, such effects are not likely to occur if the environmental protection policies in the Galway County and City Development Plans and their requirements are adhered to, in conjunction with the specific mitigation measures included within the GTS.

- All planning applications must provide sufficient information to allow the Competent Authority to screen the application and decide if full AA is required.

Chapter 10 of the GTS sets out the process by which the various GTS project elements will be implemented, with reference to the Appropriate Assessment process and the various steps therein.

3.5 Monitoring the Implementation of Policies

Whilst there is no legal requirement to monitor the outputs of the AA process, there is an obligation to monitor the implementation of the Galway County Development Plan and any Variations thereof through the E.C. SEA Directive as implemented in Ireland. Contingency measures may have to be applied if there is evidence that elements of the GTS cannot be implemented successfully. The European Communities (Environmental Liability) Regulations 2008 will also apply in the event of any significant environmental damage to habitats and species both within and outside of the European sites.

3.6 In-Combination Assessment

Plans and projects located within the ZoI of the Variation were assessed in terms of their potential to act in-combination with the Variation in adversely affecting European site integrity, via the identified impact pathways.

European sites that had the potential to be affected by a specific plan or project, acting in-combination with the Variation, were identified; the results of which are presented in Appendix E Table E-1 of this NIR. In order for any other plan or project to act in-combination with the Variation, there first had to be the potential for any element of the Variation, in isolation, to adversely affect the same European site as one of these other plans/projects via potential impact pathways. Each of these other plans or projects, where the potential for in-combination effects with the GTS was identified, was further analysed to ascertain the likelihood of this impact occurring; the results of which are presented in Appendix E Table E-2 of this NIR. This analysis involved first determining whether or not any of these other plans or projects alone would have an adverse effect on European site integrity; referring to the conclusions of the plan or project's Appropriate Assessment Screening Statement or Natura Impact Report/Statement where available, and then assessing the plan or project in terms of the Variation and its specific mitigation measures as referenced in the Variation.

Following on from this strategic-level in-combination assessment, it has been concluded that there is no potential for adverse effects to arise as a consequence of the implementation of any element of the Variation acting in-combination with any other plans or projects located within the ZoI of the Variation. This is due to the following reasons (see Appendix E Table E-2 of this NIR for more details):

- Any plan or proposed project will have to adhere to the overarching policies and objectives of the Galway County Development Plan 2015-2021, as dependent on the location of the specific plan or proposed project. These policies and objectives will ensure the protection of European sites across all identified potential impact pathways, and will include the requirement for any development to undergo Screening for Appropriate Assessment and/or Habitats Directive Assessment and demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site
- National, regional or local plans contain specific policies, objectives, development standards and/or guidelines that will ensure the protection of European sites from adverse effects that could arise via any of the potential impact pathways
- No adverse effects on European site integrity will arise from the specific proposed projects identified as part of the in-combination assessment, due to project-specific mitigation measures outlined in their respective NIS/EIS, where available
- No adverse effects on European site integrity will arise from the implementation of the GTS alone. This is due to the requirement of any project arising from the GTS to adhere to the mitigation measures for each of its potential impact pathways outlined in Section 3.2 of this NIR and incorporated into the GTS

To conclude, no adverse effects on European site integrity will arise from the implementation of the GTS acting in-combination with any plans or projects located within the ZoI of the strategy.

3.7 NIR Conclusion

As documented in the NIR, following an examination, analysis and evaluation of the Variation No. 1 to the Galway County Development Plan 2015-2021 (the primary purpose of which is to incorporate where relevant the GTS into the Galway County Development Plan 2015-2021) in light of best scientific knowledge, including in particular the nature of the predicted impacts from the GTS elements and with the implementation of the mitigation measures proposed, which have been already incorporated into the GTS, it has been objectively concluded that Variation No. 1 to the Galway County Development Plan 2015-2021 does not pose a risk of adversely affecting the integrity of any European sites, either alone or in-combination with other plans or projects.

4 References

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Appendix A

**Potential for the various
Galway Transport Strategy
(GTS) Elements to Adversely
Affect the Integrity of
European sites**

A1

Appendix A presents the results of the first stage of the assessment of Variation No. 1 to the Galway County Development Plan 2015-2010 which was carried out to examine and analyse all elements of the GTS in order to determine which have the potential to adversely affect the integrity of European sites. The primary purpose of the Variation is to incorporate, where relevant, the Galway Transport Strategy (GTS) into the Galway County Development Plan.

The more detailed, second stage of this assessment is included in Appendix B.

Table A-1: Potential for Overall Vision, Guiding Principles, Strategic Objectives, Strategic Aims, Supporting Measures, and Complementary Measures to Adversely Affect the Integrity of European sites and Corresponding Mitigation Measures

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?
Overall Vision	
To create a connected city region driven by smarter mobility	Yes. Whilst there is no spatial reference associated with this, achieving the overall vision of the GTS requires the delivery/promotion of additional transport infrastructure which has the potential to adversely affect the integrity of European sites.
Guiding Principles	
<p>1) To promote and encourage sustainable transport, and in particular to make it convenient and attractive to walk, cycle or use public transport.</p> <p>2) To improve accessibility and permeability to, and within, the city centre for pedestrians, cyclists and public transport users, while also maintaining an appropriate level of access for vehicular traffic for commercial and retail purposes.</p> <p>3) To maximise the safety and security of pedestrians, cyclists and other transport users, particularly within the core city centre.</p> <p>4) To manage and increase transport capacity, where necessary, for the efficient movement of people and goods into and within the city.</p> <p>5) To provide opportunities to enhance the city centre Public Realm through traffic management and transport interventions.</p> <p>6) To maintain and develop transport infrastructure and services to a high degree of quality and resilience.</p> <p>7) To adopt a ‘smarter technology’ approach to all transport interventions, whereby transport infrastructure and services are future-proofed.</p>	Yes. Whilst there is no spatial reference associated with this, adhering to the guiding principles of the GTS requires the delivery/promotion of additional transport infrastructure which has the potential to adversely affect the integrity of European sites.
Strategic Objectives and Key Performance Indicators	
Economic	
<p>Ensure value for money in the implementation of proposals</p> <p>Utilisation of existing infrastructure and extent of new infrastructure requirements</p>	No potential to adversely affect the integrity of any European sites for adverse effects on European site integrity.

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?
<p>Support Galway City’s function as a regional centre for employment, education, retail, leisure and tourism by providing access for all through an efficient and reliable transport network</p> <p>Peak hour journey times by mode capacity versus demand congestion</p>	<p>Yes, as creating an efficient and reliable transport network requires the provision of many elements of the GTS, some of which have the potential to adversely affect the integrity of European sites – refer to Strategic Aims below.</p>
Safety	
<p>Develop a safer environment for all transport modes and users</p> <p>Safety implications of all interventions, and provision of traffic management measures</p>	<p>No potential to adversely affect the integrity of any European sites</p>
<p>Exploit transport’s role in facilitating a healthier lifestyle</p> <p>Measures which support walking and cycling</p>	<p>Yes, as improving the attractiveness and functioning of the cycle and pedestrian network in Galway City and its environs requires the provision of many elements of the GTS, some of which have the potential to adversely affect the integrity of European sites – refer to Strategic Aims below.</p>
Environmental	
<p>Provide opportunities for better integration between transport and urban form</p> <p>Reduction in traffic volumes in sensitive areas</p>	<p>Yes, as targeted reductions in traffic volumes in unspecified areas may be reliant on the provision of many elements of the GTS, some of which have the potential to adversely affect the integrity of European sites – refer to Strategic Aims below.</p>
<p>Minimise harmful transport emissions</p> <p>Transport emissions</p>	<p>No potential to adversely affect the integrity of any European sites</p>
Integration	
<p>Support integration between sustainable transport and land use planning and policies</p> <p>Compatibility of transport measures with local, regional and national spatial planning and transport policy</p>	<p>Yes, as some of the land-use principles have the potential to adversely affect the integrity of European sites – refer to land-use principles section in Strategic Aims below.</p>

Element of the GTS (to be incorporated into the Galway County Development Plan)		Potential for adverse effects on European site integrity?
Provide for better transport integration Provision of Park & Ride facilities and public transport interchange opportunities		Yes, as the provision of park & ride facilities has been assessed as having the potential to adversely affect the integrity of European sites – refer to park & ride principles section in Strategic Aims below.
Accessibility and Social Inclusion		
Improve multi-modal accessibility within residential, employment and retail centres Accessibility by walking and cycling, public transport, car and HGV		Yes, as improving multi-modal accessibility may require the provision of many elements of the GTS, some of which have the potential to adversely affect the integrity of European sites – refer to Strategic Aims below.
Provide a socially inclusive transport network Coverage and quality of service of public transport network		Yes, as improving the coverage and quality of the public transport network requires the provision of many elements of the GTS, some of which have the potential to adversely affect the integrity of European sites – refer to Strategic Aims below.
Strategic Aim	Proposed Measures	Potential for adverse effects on European site integrity?
Traffic Network		
City Centre Traffic management		
Reduce through-car movement and traffic speeds in the city centre.	It is proposed to arrange the city centre road network such that there is a ‘city centre access network’ (made up of sections of road circumventing the core city centre area of Galway, rather than a continuous road) along sections of the following roads: <ul style="list-style-type: none"> • Lough Atalia Road; • Dock Road/Merchants Road; • Wolfe Tone Bridge; • Father Griffin Road; • The Crescent; • St. Mary’s Road; • Lower Newcastle Road; 	Yes. Whilst designating a series of existing roads as an access network, changing traffic priorities at junctions and changing existing traffic movements in themselves will not adversely affect the integrity of any European sites, facilitating this process will require the provision of many of the other elements of the GTS, some of which have the potential to adversely affect the integrity of European sites.

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
	<ul style="list-style-type: none"> • Quincentenary Bridge; • Sean Mulvoy Road; and • Moneenageisha Road. <p>The city centre access network will provide access to the city centre and a through route for local journeys. A secondary network of road access routes will also provide access to car parks (including Fairgreen Road, Bóthar Na mBan and Headford Road).</p>	
Prioritise Public Transport movements in the city centre.	A public transport route, the ‘ <u>Cross-City Link</u> ’, is to be implemented through the core city centre area (with restrictions on other traffic). The Cross-City Link is routed along University Road, across Salmon Weir Bridge, along Eglinton Street, around Eyre Square and along Forster Street and College Road.	Yes. Whilst designating a series of existing roads as an access network, creating a new link from Browne Roundabout through the University Hospital Galway grounds and on to University Road, changing traffic priorities at junctions and changing existing traffic movements in themselves will not adversely affect the integrity of any European sites, this element of the GTS is reliant on a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge.
Road and Street Network		
Provide resilience of operation of the road network such that all travellers have a reliable (not necessarily fast) journey time.	An outer orbital route is recommended in order to enhance resilience of the Galway Transport Strategy, by reducing congestion on other principal roads, and providing opportunity for re-allocation of road-space within the city for bus priority and cycle lanes. In addition to the outer orbital route, a number of ancillary, localised road links are proposed to improve connectivity at a local level for motorised traffic, pedestrians, cyclists and buses.	Yes, as the N6 Galway City Ring Road (GCRR) scheme—which is envisaged as this outer orbital route— will cross Lough Corrib SAC at two locations with the potential for associated habitat loss, fragmentation and degradation (here and downstream in Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA), and the potential for disturbance to qualifying interest species, mortality risk and barrier effect.
Provide road network improvements to cater for those journeys which are not able to be a made (in	An outer orbital route will provide a convenient route for some car-based journeys which are not able to be	Yes, as the N6 GCRR scheme will cross Lough Corrib SAC at two locations with the potential for associated

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
<p>a viable manner) by public transport, by cycle, or on foot.</p>	<p>made easily by other modes – such as through-journeys.</p>	<p>habitat loss, fragmentation and degradation (here and downstream in Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA), and the potential for disturbance to qualifying interest species, mortality risk and barrier effect to affect those Sites and Lough Corrib SPA.</p> <p>Other road infrastructure improvements also have the potential to affect Galway Bay Complex SAC and Inner Galway Bay SPA due to their close proximity - Lough Atalia Road / College Road Junction and junction upgrades along the coast road (R336) between the city centre and Salthill.</p>
Parking		
<p>To provide efficient access arrangements for city centre car parks.</p>	<p>It is proposed to rationalise the city centre street hierarchy such that well-signed routes to car parks are available via the city centre access network and local access routes. Variable Message Signage is also proposed on approaches to the city as well as an associated Parking Guidance System.</p>	<p>No potential to adversely affect the integrity of any European sites</p>
<p>To ensure that parking is not significantly cheaper than public transport.</p>	<p>To adopt a philosophy that parking fees are similar or more than typical bus fares. E-parking (parking by phone or text) fees may assist in equalising parking and bus prices.</p>	<p>No potential to adversely affect the integrity of any European sites</p>
<p>To reduce the impact of parking on the city centre environment and movement of buses and cycles.</p>	<p>It is proposed to remove most of the on-street parking in the city centre to provide more road-space for pedestrians and public transport, while retaining disabled driver parking. Improved enforcement is also proposed. Some rationalisation of on-street parking on radial access routes will also assist bus movement.</p>	<p>No potential to adversely affect the integrity of any European sites</p>

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
HGV Management		
Restrict HGV access to the city centre to only those vehicles with destinations (or origins) in the city centre.	HGV movement around the city will be accommodated via the city centre access network, including access to the city centre and the port.	No potential to adversely affect the integrity of any European sites
Manage the routing and timing of deliveries to the central area.	A loading and delivery strategy for the core city centre area is proposed, restricting access to off-peak hours, similar to the current arrangements on Shop Street and Quay Street.	No potential to adversely affect the integrity of any European sites
Local Public Transport		
Local Public Transport¹		
Maximise patronage attraction by providing a high-frequency core public transport network.	<p>The existing main bus corridors are proposed to be upgraded to ‘high frequency’ public transport routes which will form a ‘fixed’ spine of future public transport in Galway City and its environs. These routes are proposed as follows:</p> <ul style="list-style-type: none"> ▪ Western Distributor Road – Seamus Quirke Road – University Hospital Galway – University Road, and on to Eyre Square ▪ Knocknacarra - R336 Coast Road – Salthill – Newcastle Road – University Hospital Galway – University Road, and on to Eyre Square East ▪ Parkmore – Ballybrit – Monivea Road – Wellpark Road – College Road – Eyre Square 	<p>Yes, as upgrading of the bus network will require the provision of additional transport infrastructure in areas with a potential impact pathway to European sites:</p> <ul style="list-style-type: none"> ▪ R336 Coast Road - within and adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ Salmon Weir Bridge (and associated with this measure a new pedestrian bridge to the south) - crosses Lough Corrib SAC and poses collision risk to SCIs of Lough Corrib SPA and Inner Galway Bay SPA ▪ College Road & Old Dublin Road - within/adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia

¹ The infrastructural interventions are set out in Table 9 of Appendix D – Galway City Public Transport Network

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
	<ul style="list-style-type: none"> ▪ Parkmore – Doughiska – Old Dublin Road – College Road – Eyre Square City Centre ▪ University Road - Salmon Weir Bridge - Eglinton Street - Eyre Square – Forster Street – College Road 	
<p>Provide city-wide network coverage /connectivity to all parts of the city.</p>	<p>Local buses may also be required to maximise the coverage of the overall bus network and to provide bus connectivity to areas that lie outside of the principal bus network. Local buses will also provide connection and transfer to and from the city bus network.</p> <p>This ancillary local network will necessarily evolve over time (e.g. as developments proceed), and hence does not represent a fixed network. As patronage increases over time, these routes may be upgraded to higher frequency services, where practical to do so.</p>	<p>Yes, as upgrading the bus network will require the provision of additional transport infrastructure in areas with a potential impact pathway to European sites:</p> <ul style="list-style-type: none"> ▪ R336 Coast Road - within and adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ Salmon Weir Bridge (and associated with this measure a new pedestrian bridge to the south) - crosses Lough Corrib SAC and poses collision risk to SCIs of Lough Corrib SPA and Inner Galway Bay SPA ▪ College Road & Old Dublin Road - within/adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia <p>Also subsidiary network elements are acknowledged as elements which are not fixed and therefore, the provision of additional infrastructure in the future could be proposed in areas with a potential impact pathway to European sites.</p>
<p>Provide guaranteed and reliable journey times.</p>	<p>Bus Lanes and Bus Priority measures have been deigned at a conceptual level along the network corridors as follows:</p> <ul style="list-style-type: none"> • Western Distributor Road – Seamus Quirke Road Corridor; • Salthill Road / St Mary’s Road / Newcastle Road Corridor; • Old Dublin Road Corridor; 	<p>Yes, as upgrading the bus network will require the provision of additional transport infrastructure in areas with a potential impact pathway to European sites:</p> <ul style="list-style-type: none"> ▪ R336 Coast Road - within and adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ Salmon Weir Bridge (and associated with this measure a new pedestrian bridge to the south) - crosses Lough Corrib SAC and poses

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
	<ul style="list-style-type: none"> Wellpark Road / Monivea Road Corridor; and City Centre Corridor (University Road - Salmon Weir Bridge - Eglinton Street - Eyre Square – Forster Street – College Road). 	<p>collision risk to SCIs of Lough Corrib SPA and Inner Galway Bay SPA</p> <ul style="list-style-type: none"> College Road & Old Dublin Road - within/adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia
Supporting measures for Local Public Transport²	Segregation of pedestrians from buses at Salmon Weir Bridge through provision of a new, parallel pedestrian bridge adjacent to the existing structure	Yes, as this element of the Strategy relies upon delivering a new pedestrian bridge south of the Salmon Weir Bridge, which crosses Lough Corrib SAC
City Centre Public Transport Interchange		
Maximise range of destinations served by providing convenient interchange between public transport services	Eyre Square has been identified as the main hub for Bus/Bus transfer – as well as Bus/Train and Bus/Coach at Ceannt Station/Fairgreen Station. Other key bus transfer hubs will be located at: University Hospital Galway; and University Road/Cathedral.	<p>Yes, as providing bus transfer hubs may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas with a potential impact pathway to European sites:</p> <ul style="list-style-type: none"> Ceannt Station/Fairgreen Station - adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia University Road/Cathedral area - adjacent to Lough Corrib SAC
Implement multi-mode ticketing which allows transfer between modes	It is proposed that all services will allow for cross-ticketing such that passengers can transfer between routes without extra charges.	No potential to adversely affect the integrity of any European sites

² Only those with an identified impact pathway are included from Section 5.7 of the Galway Transport Strategy

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
Regional Public Transport		
Regional Public Transport		
Coaches/buses should have reliable journey times in the city	Bus lanes proposed for city bus services are in general also suitable for buses and coaches with origins outside the city.	Yes, as delivery of this aim is reliant on the new transport infrastructure proposed in this strategy, some of which will intersect with European sites or is located in areas with a potential impact pathway to European sites.
Good access in and out of bus/coach termini in the city centre	The proposed city centre traffic management, with reduced through-traffic and local distributor routes will ensure that coaches are able to access termini with minimal congestion.	Yes, as delivery of this aim is reliant on the new transport infrastructure proposed in this strategy, some of which will intersect with European sites or is located in areas with a potential impact pathway to European sites.
Interchange between regional and local public transport	A high-quality city bus network will provide interchange opportunities for regional bus travellers – such that passengers can switch modes at a small number of hubs outside the city centre.	Yes, as delivery of this aim is reliant on the new transport infrastructure proposed in this strategy, some of which will intersect with European sites or is located in areas with a potential impact pathway to European sites.
Rail		
Increase frequency of rail services	Rail services will be increased in frequency, subject to sufficient passenger demand and usage.	No potential to adversely affect the integrity of any European sites
Interchange between regional and local public transport	Ceannt Station will remain the terminus for rail services to Galway City, and pending major upgrades at the station will significantly improve the offering for passengers. In addition, pending redevelopment works in the vicinity at Ceannt Quarter will re-energise this part of the city centre, and this will complement Eyre Square and Fairgreen as a collective hub for interchange between services within Galway City Centre.	Yes, as promoting Ceannt Station/Fairgreen Station as an important transport interchange/hub may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas with a potential impact pathway to European sites: <ul style="list-style-type: none"> ▪ Ceannt Station/Fairgreen Station - adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
Park and Ride		
Maximise destinations reachable by Park & Ride services	It is proposed to base Park & Ride on the city-wide core high-frequency public transport network – such that a range of destinations can be reached.	Yes, as specific locations are not identified Park & Ride facilities could potentially be located in areas with a potential impact pathway to European sites.
Ensure that Park & Ride is financially sustainable	Basing Park & Ride on the city-wide public transport network will maximise the financial viability of Park & Ride services. It is intended that the cost of Park & Ride will be integrated with the overall public transport journey fare for passengers.	No potential to adversely affect the integrity of any European sites
Appendix G – GTS Park & Ride Locations Analysis	It is intended that the capacity of these Park & Ride locations will grow organically over time as demand increases.	As specific locations are not identified for the Park & Ride facilities, other than that they are likely to be situated on the outskirts of Galway City, on the M6, the N17, and the Western Distributor Road/R336 corridors, they could potentially be located in areas with a potential impact pathway to European sites.
Tourist Coach Parking Management		
Suitable drop-off/pick-up locations; Controlled coach drop-off/pick-up in the core city centre area; Provision of managed layover coach parking areas outside of the core city centre area.	Possible sites identified to eliminate layover in city centre proper are: <ul style="list-style-type: none"> ▪ Galway Cathedral; ▪ Galway Harbour; and ▪ Merchants Road. 	Yes, as achieving this aim may require the provision of additional transport infrastructure in areas with a potential impact pathway to European sites: <ul style="list-style-type: none"> ▪ Galway Cathedral - adjacent to Lough Corrib SAC ▪ Galway Harbour - within Galway Bay Complex SAC and Inner Galway Bay SPA ▪ Ceannt Station site – adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA ▪

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
Cycling, Walking and Public Realm		
Cycle Network Infrastructural Design Measures		
<p>To provide a primary ‘trunk’ cycle network which will provide a convenient and safe route for medium-distance radial commuter / leisure journeys</p>	<p>The primary network comprises two Greenways providing connectivity for cyclists from nearby towns and villages; one along the coast from An Spidéal to Oranmore, passing through Galway City; and one along the western bank of the River Corrib from Galway City to Oughterard, via Maigh Cuilinn. Furthermore the cycle network will continue east via the Galway-Dublin cycleway.</p> <p>As part of the greenway network, it is proposed to carry out investigations to determine the feasibility of connecting from Eyre Square to Renmore barracks via the existing rail crossing over Lough Atalia or via lands at Galway Port.</p> <p>Additional primary routes include a cross-city route to the north of the city, building on existing facilities, along with some key north-south links. In general, primary routes are either segregated, off-road cycle only paths, or dedicated cycle lanes along new or existing roads. Wherever possible, these routes are separated from traffic by kerbs or edge markings.</p>	<p>Yes, as all three greenways intersect with, and/or are in close proximity to, European sites:</p> <ul style="list-style-type: none"> ▪ Galway to Dublin Cycleway - within/adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ Connemara Greenway (Galway to Oughterard) - within Lough Corrib SAC and Ross lake and Woods SAC, and adjacent to Lough Corrib SPA ▪ Bearna Greenway - within/adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA <p>Also, connecting a greenway between Eyre Square and Renmore may impact on Galway Bay Complex SAC and Inner Galway Bay SPA.</p>
<p>To provide a secondary cycle network which will provide a recognisable grid network for local journeys, and will be connected to the primary network for longer journeys.</p>	<p>The secondary network provides connections from residential areas and areas of employment to the primary network, accessing key destinations. Secondary links are a combination of off-road cycle paths, cycle lanes along existing roads, shared bus and cycle lanes, and traffic-calmed roads. They often run parallel to primary routes, providing an alternative link.</p>	<p>Yes, as the secondary cycle network includes for a proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC.</p>

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
	<p>In addition to this network, feeder links have been identified on streets and roads which are highly constrained or more suited to other modes, but need to cater for cyclists also. These are generally cycle-friendly advisory routes where traffic calming and management measures allow cyclists and motorists to mix safely.</p>	
<p>To increase options for cycling in and across the city centre</p>	<p>Through-traffic will be removed from the core city centre area. This will reduce the amount of traffic on these roads, creating a shared environment where cyclists can safely use the existing street network. Cyclists will be permitted to use Salmon Weir Bridge, which is to be designated as public-transport only as part of the Cross-City Link.</p>	<p>Yes, as this element of the Strategy relies upon the Cross-City Link which includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge.</p>
<p>Supporting Measures for Cycling</p>	<p>Expansion of bike share scheme</p>	<p>Yes, as specific locations are not identified, additional infrastructure may be required and could potentially be located in areas with a potential impact pathway to European sites.</p>
	<p>Provide for and upgrade bicycle parking facilities</p>	<p>Yes, as specific locations are not identified, additional infrastructure may be required and could potentially be located in areas with a potential impact pathway to European sites.</p>
	<p>Permeability and Wayfinding Permeability is a key constraint for cyclists and pedestrians in Galway. Links between residential areas and/or workplaces will be improved for use by active modes, providing more direct routes. In addition, a cycle route signage programme is proposed in parallel to the development of the cycle network.</p>	<p>Yes, as specific locations are not identified, additional infrastructure may be required and could potentially be located in areas with a potential impact pathway to European sites.</p>
<p>Galway Transport Strategy Appendix E - Cycle Network & Infrastructure Development</p>	<p>Knocknacarra South – Feeder route along R336 proposed for upgrade and footpath installation which</p>	<p>Yes, as many of the transport infrastructure developments referenced in this appendix will be</p>

Element of the GTS (to be incorporated into the Galway County Development Plan)

Potential for adverse effects on European site integrity?

	<p>lies within/adjacent to Galway Bay Complex SAC boundary</p> <p>Salthill – elements of the cycle network are within/adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA</p> <p>Newcastle and Dangan – the primary route through NUIG, which connects with the Galway to Oughterard Greenway, lies within/adjacent to Lough Corrib SAC</p> <p>City Centre – upgrade of University Road and associated installation of dedicated pedestrian bridge crosses Lough Corrib SAC; Proposal to construct a new pedestrian and cyclist bridge over the River Corrib to the south of the Wolfe Tone Bridge crosses Galway Bay Complex SAC; cycleway from the Long Walk around the Docks as far as Lough Atalia Road runs adjacent to Galway Bay Complex SAC; proposal to install a cycleway along Lough Atalia Road could potentially be within/adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA; proposal to construct a pedestrian and cyclist bridge across the existing piers of the former Clifden Railway Line bridge would cross Lough Corrib SAC; noted that along Dyke Road footpaths are not continuous and the provision of additional footpath space would be adjacent to Lough Corrib SAC</p> <p>Terryland and Ballinfoyle - a new road is proposed from the N84 Headford Road to the N6 Bóthar na dTreabh which would require a new bridge crossing the Terryland River which connects with the River Corrib downstream and Lough Corrib SAC, Galway Bay Complex SAC, and Inner Galway Bay SPA</p> <p>Renmore and Dublin Road – additional off-road cycle paths required to connect existing cycle network in an area within/adjacent to Galway Bay Complex SAC</p>	<p>constructed, or operate, in areas with potential impact pathways to European sites.</p>
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Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
	and Inner Galway Bay SPA. Park & Ride proposal along Dublin Road also noted (location unspecified).	
Walking Network Design		
To provide improvements for pedestrians along city centre public transport corridors	Provide a new pedestrian river crossing at Galway Cathedral, adjacent to Salmon Weir Bridge; and Establish and implement a city centre public realm improvement programme (signage, surface materials and lighting), including pedestrianisation schemes, to create a comfortable, well connected walking environment.	Yes. As s a new pedestrian bridge at this location must cross Lough Corrib SAC.
To increase priority given to pedestrians over road traffic	Transform the character of the core city centre area with a clear emphasis on pedestrians through extended pedestrianised areas, traffic management, reducing pedestrian wait times at crossings, removal of through traffic, limiting on-street parking availability and revised road and junction layouts; and Enhancing the pedestrian offering through upgrade of major roundabout junctions to include signalisation, and providing dedicated pedestrian facilities and priority.	Yes. Whilst there is no spatial reference associated with this aim additional transport infrastructure could be located in areas where there is the potential to adversely affect the integrity of European sites.
Increase legibility and wayfinding	Define a safe, legible city centre pedestrian network, providing for ease of movement for all users, including persons with mobility, visual and hearing impairments, and for those using buggies and prams; and Implement a Smart Information and Integrated Wayfinding strategy for the city centre for all modes, including pedestrians. This will include wayfinding signage across the city and provision of information on walking, cycling and public transport networks, to benefit the community and visitors alike.	No potential to adversely affect the integrity of any European sites

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
To increase the quality, comfort and safety of the pedestrian facilities	A structured, prioritised programme of improvements will be undertaken across the pedestrian network, including providing new footpath facilities, widening existing facilities, providing new and improved crossing facilities, removal of street clutter, adapting junction layouts in order to minimise crossing distances and reduce vehicle speeds, and an intensive program of improvements of pedestrian permeability through residential areas in order to create safe, secure environments that encourage and foster a strong walking culture.	Yes, as some of these pedestrian facilities are within, or in close proximity to European sites - proposed new pedestrian bridge at the Salmon Weir Bridge, proposed new pedestrian/cycle bridge on the Old Clifden Railway Line
Supporting Measures for Walking	Revision of road junction layouts, where appropriate, to provide dedicated pedestrian crossings, reduce pedestrian crossing distances, provide more direct pedestrian routes and reduce the speed of turning traffic.	Yes. Whilst there is no spatial reference associated with this aim additional (or upgrading of) transport infrastructure could be located in areas where there is the potential to adversely affect the integrity of European sites.
	Creation of permeable pedestrian environments in residential areas, amenable to walking, and maximising accessibility to the proposed bus network.	Yes. Whilst there is no spatial reference associated with this aim additional (or upgrading of) transport infrastructure could be located in areas where there is the potential to adversely affect the integrity of European sites.
	In conjunction with An Garda Síochána the Local Authorities will evaluate and, where appropriate, seek the introduction of lower speed limits in the core city centre area and on residential streets.	No potential to adversely affect the integrity of any European sites
	Cooperation with An Garda Síochána in the enforcement of laws in relation to parking on footpaths.	No potential to adversely affect the integrity of any European sites
	Removal of unnecessary street clutter to facilitate ease of movement along streets and through 'places'.	No potential to adversely affect the integrity of any European sites

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
	<p>Leisure Walking: Advance the roll-out of the greenway network, including the Oranmore-City Centre-Bearna Greenway and the extension of the Dangan Greenway to Oughterard via Maigh Cuilinn.</p>	<p>Yes, as all three greenways intersect with, and/or are in close proximity to, European sites;</p> <ul style="list-style-type: none"> ▪ Galway to Dublin Cycleway - within/adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ Connemara Greenway (Galway to Oughterard) - within Lough Corrib SAC and Ross lake and Woods SAC, and adjacent to Lough Corrib SPA ▪ Bearna Greenway - within/adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA
<p>Public Realm – Cross-City Link The Cross-City Link Includes the Following:</p>		
<p>Bus Priority</p>	<p>The route will be subject to traffic restrictions such that road sections become essentially bus only – but with local access and deliveries allowed on a permitted basis.</p>	<p>No potential to adversely affect the integrity of any European sites</p>
<p>General Traffic</p>	<p>General traffic will be excluded from the corridor from Salmon Weir Bridge to the north-eastern end of Forster Street. There is a further bus priority section proposed for College Road to prevent general traffic from entering and leaving the city centre via College Road, with Lough Atalia Road designated as the main access route for general traffic.</p>	<p>Yes, as this element of the Strategy relies upon delivering a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge.</p>
<p>Deliveries and Local Access</p>	<p>Certain permitted vehicles will be allowed to travel on the Cross-City Link route for delivery and business purposes. A management system will be implemented in respect of permits, delivery times and locations of access. Local businesses and residents will continue to be able to access their property.</p>	<p>No potential to adversely affect the integrity of any European sites</p>
<p>Legibility and Linkage</p>	<p>The Cross-City Link will provide corridor legibility in terms of linking places which currently have high</p>	<p>No potential to adversely affect the integrity of any European sites</p>

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
	pedestrian footfall and movement within the city centre, stretching from the NUIG Campus and University Hospital, past the Cathedral and Courthouse, through Eyre Square and on towards the Sportsgrounds. It creates a space within the city and immediate environs that asserts the place of pedestrians, cyclists and public transport above the private car, and will greatly strengthen these modes as viable choices for commuters and visitors alike.	
Key Locations	University Road - the gateway to the city from the west, accessing the canal network, NUIG and Nun's Island (from the junction with Newcastle Road to Salmon Weir Bridge).	Yes, as the University Road/Salmon Weir Bridge crosses Lough Corrib SAC
	Cathedral Quarter - comprising the front entrance to Galway Cathedral and surrounding street space.	No potential to adversely affect the integrity of any European sites
	A New Pedestrian Bridge adjacent to Salmon Weir Bridge, and removal of pedestrian traffic from Salmon Weir Bridge.	Yes, as a new bridge here would cross over Lough Corrib SAC and poses a collision risk to SPA bird species
	Courthouse (Waterside) - a key riverfront area adjacent to the Cathedral Quarter.	Yes, as this area is immediately adjacent to Lough Corrib SAC
	St. Francis Street/Eglinton Street - providing connectivity to the existing pedestrian areas on William Street, Shop Street and environs.	No potential to adversely affect the integrity of any European sites
	Eyre Square - the principal destination within the city centre for shopping and recreation.	No potential to adversely affect the integrity of any European sites
	Ceannt Quarter - incorporating Ceannt station, and rail/bus interchange.	Yes, as Ceannt Station lies immediately adjacent to Galway Bay Complex SAC (Lough Atalia)
	College Road - the gateway to the city from the east.	Yes, as the road lies in close proximity to Galway Bay Complex SAC (Lough Atalia)

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
Complementary Measures		
Smarter Mobility	Smarter Mobility uses technology to increase efficiency, safety and co-ordination across transport networks to manage traffic demand and capacity; but also includes projects which provide additional capacity to the transportation network which will be reliant on delivery of many other elements of the GTS.	Yes. Whilst there is no spatial reference associated with this aim additional (or upgrading of) transport infrastructure could be located in areas where there is the potential to adversely affect the integrity of European sites.
	<p>Smarter mobility Policies (refer to Galway Transportation Strategy Appendix H – ITS Proposals)</p> <p>SM Policy 1: Galway City's transport network shall be safe, usable and equitable to all road users</p> <p>SM Policy 2: Ensure Galway City's transport system is resilient and adaptable to future trends</p> <p>SM Policy 3: Capitalise on investment made to date in Galway's transportation network and systems</p> <p>SM Policy 4: Encourage the economic viability of Galway through ease of movement to and around the City</p> <p>SM Policy 5: Maximise the Efficiency of the existing transport infrastructure in Galway</p> <p>SM Policy 6: Reduce the environmental impact created by transportation</p> <p>SM Policy 7: Increase the capacity of Galway's transportation network</p> <p>SM Policy 8: Remove unnecessary car-trips to Galway City Centre</p> <p>SM Policy 9: Increase the mode share of sustainable transport across the network</p> <p>SM Policy 10: Galway City Centre is a destination, not a route</p>	Yes, as some of these policies (SM Policy 2, SM Policy 4, SM Policy 5, SM Policy 7 and SM Policy 11) are directly linked to the provision of additional transport infrastructure, some of which is proposed in areas with a potential impact pathway to European sites.

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
	<p>SM Policy 11: Improve the operational efficiency of necessary car movements</p> <p>SM Policy 12: Enable users of the transportation network to make informed decisions on journey choice</p> <p>SM Policy 13: Ensure Galway City Centre is an enjoyable and vibrant place to live, work and visit</p> <p>SM Policy 14: Galway shall adopt the principles of "Mobility as a Service"</p>	
	<p>Smarter mobility Projects (refer to Galway Transportation Strategy Appendix H – ITS Proposals)</p> <p>SM Project 1: Create a Bus Network with a High Level of Service</p> <p>SM Project 2: Salmon Weir Bridge to allow Public Transport only</p> <p>SM Project 3: Remove Private cars from inner city cordon</p> <p>SM Project 4: Maintain, Expand, Integrate and actively operate Galway City Councils Urban Traffic Management Centre (GCC UTMC)</p> <p>SM Project 5: Provide an integrated ticketing / universal method of payment across all modes</p> <p>SM Project 6: Create and operate a smart parking system for Galway</p> <p>SM Project 7: Create a Smart Street Lighting System for Galway</p> <p>SM Project 8: Provide an integrated way-finding system for all modes</p> <p>SM Project 9: Carry out a review of each traffic signal junction to ensure correct layout, configuration and operation is in place</p>	<p>Yes, as some of these policies are directly or indirectly linked to the provision of additional transport (or transport related) infrastructure (SM Project 1, SM Project 2, SM Project 11, SM Project 12, SM Project 16, SM Project 18), some of which is proposed in areas with a potential impact pathway to European sites.</p>

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
	<p>SM Project 10: Create Smart Priority Routes for Pedestrians and Cyclists</p> <p>SM Project 11: Provide Smart Parking facilities for Cyclists</p> <p>SM Project 12: Facilitate smart City Centre Coach Parking</p> <p>SM Project 13: Provide a "Last Mile" taxi service for bus users</p> <p>SM Project 14: Provide zone based, variable pricing structure for Public Transport</p> <p>SM Project 15: Examine demand based variable pricing for parking</p> <p>SM Project 16: Encourage and provide for Electric Vehicle Usage</p> <p>SM Project 17: Enforcement of red light running</p> <p>SM Project 18: Ensure all proposals are future-proofed for Co-Operative ITS</p>	
Travel to Places of Education	Behavioural change programmes which encourages students and schoolchildren to travel to school by modes other than the car.	No potential to adversely affect the integrity of any European sites
	General strategic improvements of bus, cycle and walking networks will provide safe opportunities for students to use non-car modes – especially if bus and cycle networks are planned to run close to educational centres.	Yes. Whilst there is no spatial reference associated with this aim, some additional (or upgrading of) transport infrastructure associated with the GTS will be located in areas where there is the potential to adversely affect the integrity of European sites.
	Permeability improvements targeted at walking and cycling modes, improving accessibility to the bus network, and also minimising excessive routing for those who wish to walk or cycle to school.	Yes, as improvements to the transport network permeability directly linked to the provision of additional transport infrastructure, some of which is proposed in areas with a potential impact pathway to European sites.

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
	Promotion of school travel plans, and participation in the Green Schools Travel initiative.	No potential to adversely affect the integrity of any European sites
	At second level and third level, implementing mobility management planning for student travel, combined with targeted promotion of alternatives to the private car to better inform students of their travel options.	No potential to adversely affect the integrity of any European sites
Land-use Integration	Land-use Planning Principles	
	<p>High-volume, trip intensive developments, such as offices and retail, should primarily be focused into the city centre, or areas well served by public transport. Residential development located proximate to high capacity public transport should be prioritised over development in less accessible locations.</p> <p>All non-residential development proposals should be subject to maximum parking standards – these standards should vary with location with regard to the centrality of the proposal within the city and the level of public transport provision. Area-based parking standards could be considered.</p> <p>For all major employment developments and all new and extended schools, travel plans should be conditioned as part of planning permissions and be carried out in a manner consistent with existing NTA guidance.</p> <p>To the extent practicable, residential development should be carried out sequentially, whereby lands which are, or will be, most accessible by walking, cycling and public transport – including infill and brownfield sites – are prioritised.</p> <p>Planning at the local level should promote walking, cycling and public transport by maximising the number of people living within walking and cycling distance of their neighbourhood or district centres,</p>	<p>Some of these principles seek to influence the location and, to some degree, design and layout considerations for proposed developments; particularly with regard to development permeability for walking and cycling. Others relate to considering development sequencing with respect to the public transport network or promoting the use of walking, cycling and public transport.</p> <p>Due to the non-specific nature of these with regard to scale and location in particular, and that by their nature they could influence land-use zonings and development locations in the future, it is not possible to fully assess their implications with respect to potential impacts to European sites. On that basis, and applying the precautionary principle, the land-use integration principles are considered to have the potential to adversely affect the integrity of European sites.</p>

Element of the GTS (to be incorporated into the Galway County Development Plan)	Potential for adverse effects on European site integrity?	
	<p>public transport services, and other services at the local level such as schools.</p> <p>New development areas should be fully permeable for walking and cycling and the retrospective implementation of walking and cycling facilities should be undertaken where practicable in existing neighbourhoods, in order to give competitive advantage to these modes.</p> <p>Where possible, developments should provide for filtered permeability. This would provide for walking, cycling, public transport and private vehicle access but at the same time would restrict or discourage through trips by private car.</p> <p>To the extent practicable, proposals for right-of-way extinguishments or other requirements should only be considered where these do not result in more circuitous walking and cycling trips for local residents accessing public transport or local destinations.</p> <p>In urban areas, including the numerous towns, villages and settlements, the Design Manual for Urban Roads and Streets (DMURS) will guide localised proposals with a view to reaffirming walking, cycling and public transport modes over the private car.</p>	
Behaviour Change	Encouraging the use of more sustainable travel choices	No potential to adversely affect the integrity of any European sites
Implementation and Outcomes		
Implementation Plans	Short Term, Medium Term and Long Term implementation plans for delivery of the strategy elements over a 20 year period	Setting an implementation timeline has no potential to adversely affect the integrity of any European sites

Appendix B

Source-Pathway-Receptor Analysis

Potential Impact Pathways Connecting elements of Variation No 1 (to incorporate the Galway Transport Strategy) to European sites

B1

Appendix B1 presents the results of the second stage of the assessment of Variation No. 1 to the Galway County Development Plan 2015-2021 which was carried out to examine and analyse all elements of the GTS in order to determine which have the potential to adversely affect the integrity of European sites.

This stage involved a more detailed examination and analysis of the potential impact pathways between the impact source and receptor. Additional detail on how the various impact pathways could potentially affect the conservation objectives supporting the QI habitats/QI species/SCI species is presented in Appendix C.

Also included in this appendix are the corresponding mitigation measures to ensure such potential adverse effects are fully addressed as a result of implementing the GTS. The mitigation measure references used correspond with those presented in Appendix D, which are derived from the Galway County Development Plan 2015-2021 and the Galway City Council Development Plan 2017-2023, and Section 3.2 of the main NIR text.

These mitigation measures form part of the GTS as detailed in Section 9.3.5 of the GTS (Galway City Council, 2016) and through incorporating the GTS into the Galway County Development Plan 2015-2021 via the Variation, now form part of the County Development Plan.

Table B-1: Source-Pathway-Receptor Analysis—potential impact pathways connecting elements of Variation No. 1 to the Galway County Development Plan 2015 – 2021 (related to incorporating the Galway Transport Strategy) to European sites, supporting environmental protection policies and mitigation measures

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
<p><u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European site – habitat fragmentation is directly associated with this impact pathway</p>	<p>N6 Galway City Ring Road (N6 GCRR) The only European site at risk from habitat loss associated with the N6 GCRR is Lough Corrib SAC. The road corridor crosses Lough Corrib SAC at two locations¹: at the site of the proposed River Corrib Bridge between NUI Galway and Menlough and to the west of Lackagh Quarry where the road will consist of a tunnel and approach road infrastructure. The corridor shown to represent the N6 GCRR also overlaps with the SAC boundary to the west of the Coolagh Lakes; this is discussed further below. Habitat mapping of each of these areas is provided showing both the Fossitt (2000) habitat classifications and where these correspond with priority Annex I or Annex I habitat types as follows:</p> <ul style="list-style-type: none"> ▪ River Corrib area on Figures 2a (Fossitt habitat classifications) and 2b (Annex I habitats); ▪ Coolagh Lakes area on Figures 2c (Fossitt habitat classifications) and 2d (Annex I habitats); and ▪ Lackagh Quarry area on Figures 2e (Fossitt habitat classifications) and 2f (Annex I habitats). <p>Further information on the non-Annex I habitat classifications is also provided in Appendix G. Loss of QI habitat from an SAC, would negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site. The corridor shown for the N6 GCRR is, in general, broader than is required to construct the road infrastructure. To more accurately reflect this, there are areas identified on Figures 2c, 2d, 2e and 2f</p>	Lough Corrib SAC	<p>Galway City Council Development Plan 2017-2023 GCiDP 01, GCiDP 02, GCiDP 03, GCiDP 04, GCiDP 05, GCiDP 06, GCiDP 07, GCiDP 08, GCiDP 10, GCiDP 11, GCiDP 21, GCiDP 22, GCiDP 23</p> <p>Galway County Development Plan 2015-2021 GCoDP 01, GCoDP 02, GCoDP 03, GCoDP 04, GCoDP 06, GCoDP 07, GCoDP 18, GCoDP 19</p>	GTS – Habitat Loss: N6 GCRR See Box 1c in Section 3.2 of the NIR

¹ The current versions of the digital designated area boundaries that can be downloaded from the NPWS website do not always accurately represent the legally defined boundaries, as shown on the official Department of Arts, Heritage and the Gaeltacht boundary maps, as they relate to features on the ground such as field boundaries, road margins etc. This is on account of the scale difference between the 6-inch maps used to originally define the European site boundaries and current larger scale vector mapping/orthophotography. The descriptions of habitat locations in this report, with respect to whether they are inside/outside of the SAC boundary, are an interpretation of their intended locations with respect to the field boundaries and designated area boundary as shown on the official Department of Arts, Heritage and the Gaeltacht boundary maps.

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>where no works will be undertaken. As these areas will not be affected by any habitat loss, they are not discussed any further in this section. This includes the area where the corridor overlaps with Lough Corrib SAC west of the Coolagh Lakes.</p> <p><u>River Corrib</u></p> <p>On the east bank, the grassland fields were classified as Dry calcareous and neutral grassland (GS1) habitat types (Figure 2a). The westernmost field corresponded with a <i>Cynosurus cristatus</i> – <i>Trifolium repens</i> grassland (3b)²; the easternmost field with a <i>Cynosurus cristatus</i> – <i>Trifolium pratense</i> grassland (3d). Neither corresponded with any Annex I habitat types.</p> <p>The woodland block was classified as a mixed Beech <i>Fagus sylvatica</i> and Ash <i>Fraxinus excelsior</i> broadleaved woodland which also did not correspond with any Annex I habitat types.</p> <p>On the west bank, the habitat types corresponded with the following Fossitt categories: Buildings and artificial surfaces (BL3), Amenity grassland (improved) (GA2), Scrub (WS1), rank grassland categorised as Dry meadows and grassy verges (GS2), a small copse of young Beech trees (WD1) and a narrow linear strip of Wet willow-alder-ash woodland (WN6)/Scrub (WS1) along the river bank. None of these habitat types corresponded with any Annex I habitat classifications.</p> <p>The River Corrib was also surveyed as part of the habitat survey work carried out for the route selection phase of the N6 GCRR project and was classified as a Depositing/lowland river (FW2). Which did not correspond with any Annex I habitat type. For more information refer to Appendix A.4.2 of the Route Selection Report (Arup, 2015).</p> <p>As none of these habitat types are QIs of Lough Corrib SAC, and they do not provide a supporting role to any QI habitats elsewhere in the cSAC, or to QI species, their loss will not affect the conservation objective attributes and targets supporting the conservation condition of any of the QI habitats or species of</p>			

² Grassland vegetation community classifications are as per the classification system described in O'Neill, F.H., Martin, J.R., Devaney, F.M. & Perrin, P.M. (2013) *The Irish semi-natural grasslands survey 2007-2012. Irish Wildlife Manuals, No. 78*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Ireland..

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>Lough Corrib SAC and, will not adversely affect the integrity of this European site.</p> <p><u>Coolagh Lakes</u></p> <p>Habitats within Lough Corrib SAC in this area that could potentially be impacted by the proposed N6 GCRR include semi-natural Oak-Ash-Hazel woodlands, scrub, wet grassland and calcareous grassland. The woodlands corresponded with the <i>Fraxinus excelsior – Hedera helix</i> woodland groups <i>Corylus avellana – Oxalis acetosella</i> woodland type (2e³). The wet grassland corresponded with the <i>Juncus effusus – Ranunculus repens</i> group/<i>Juncus effusus – Holcus lanatus</i> vegetation community (2b); the calcareous grassland with the <i>Holcus lanatus – Lolium perenne</i> vegetation community of that same group. The area of Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0] in this area lies outside of the SAC boundary (see footnote ¹ above).</p> <p>None of these habitat types are QIs of Lough Corrib SAC, and they do not provide a supporting role to any QI habitats elsewhere in the cSAC, or to QI species. Therefore if affected, their loss would not affect the conservation objective attributes and targets supporting the conservation condition of any of the QI habitats or species of Lough Corrib SAC and, will not adversely affect the integrity of this European site.</p> <p><u>Lackagh Quarry</u></p> <p>Only the western approach road to Lackagh Quarry is likely to result in habitat loss within Lough Corrib SAC, where it may impact upon areas of Oak-ash-hazel woodland (WN2), Scrub (WS1), and a mosaic of Ash treeline (WL2), Scrub (WS1), rank grassland (GS2) and bare ground (ED2). The woodland and scrub areas lacked the requisite cover of thin soils and/or limestone pavement underlying the canopy to qualify as the priority Annex I habitat type Limestone pavement (*8240). None of these habitat types corresponded with any Annex I habitat classifications.</p> <p>As none of these habitat types are QIs of Lough Corrib SAC, and they do not provide a supporting role to any QI habitats elsewhere</p>			

³Woodland vegetation community classifications are as per the classification system described in Perrin, P., Martin, J., Barron, S., O'Neill, F., McNutt, K. & Delaney, A. (2008) *National Survey of Native Woodlands 2003-2008. Volume II: Woodland classification.*

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>in the SAC, or to QI species, their loss will not affect the attributes and targets of the conservation objective supporting the conservation condition of any of the QI habitats or species of Lough Corrib SAC and, will not adversely affect the integrity of this European site.</p> <p><u>Otter</u></p> <p>As there were no Otter breeding or resting places, holt or couch sites, present within the proposed road corridor there will there will be no decline in the number of available holt or couch sites within the SAC. The full results of the Otter surveys carried out in 2014 are detailed in the Appendix A.4.2 of the Route Selection Report (Arup, 2015).</p> <p>In the context of river systems, the <i>Threat Response Plan Otter Lutra lutra 2009-2011</i> document (Department of the Environment, Heritage and the Gaeltacht, 2011) defines terrestrial Otter habitat as a 10m zone of riparian habitat along the river banks. The bankside piers associated with the proposed River Corrib Bridge, some vegetation cutting/removal would likely be required to facilitate the construction works and on an ongoing basis to avoid any impact to the proposed road infrastructure during operation. Some effects to any remaining vegetation underneath the bridge structure would also be expected as a result of shading. This type of change to any terrestrial Otter habitat within the SAC is not considered to be significant, even in a case where it would be partially converted to hard surfaces as Otter will routinely use habitat underneath bridges which is highly modified, and would not constitute a significant decline in the extent of available terrestrial Otter habitat within the European site. The same applies in the event that the bridge requires the installation of in-stream piers; the loss of freshwater habitat, at the scale of bridge piers, is not considered to be significant.</p> <p>Therefore any habitat loss associated with construction of the proposed N6 GCRR, will not affect the conservation objective attributes and targets supporting the conservation condition of Otter in Lough Corrib SAC and, will not adversely affect the integrity of this European site.</p> <p><u>Sea lamprey</u></p>			

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>Sea lamprey are not known from the River Corrib upstream of the Salmon Weir in Galway City (O'Connor, 2007) and as such will not be subject to any habitat loss effects as a result of the proposed N6 GCRR.</p> <p>Therefore any habitat loss associated with construction of the proposed N6 GCRR, will not affect the conservation objective attributes and targets supporting the conservation condition of Sea lamprey in Lough Corrib SAC and, will not adversely affect the integrity of this European site.</p> <p><u>Brook lamprey</u></p> <p>Impacts on this species will be dependent on the proposed River Corrib Bridge design. Instream habitat loss resulting from the pier installation will not affect the Brook lamprey conservation objectives—habitat at the crossing point is not suitable for spawning nor is it suitable holding habitat for Brook lamprey ammocoetes. Similarly, the river bank substrate present at the crossing point is not suitable ammocoete habitat and construction works here will not result in any significant habitat loss.</p> <p>Therefore any habitat loss associated with construction of the proposed N6 GCRR, would not affect the conservation objective attributes and targets supporting the conservation condition of Brook lamprey in Lough Corrib SAC and, will not adversely affect the integrity of this European site.</p> <p><u>Atlantic salmon</u></p> <p>As the river habitat at the proposed river crossing is not salmonid spawning habitat, any habitat loss associated with construction of the proposed N6 GCRR, will not affect the conservation objective attributes and targets supporting the conservation condition of Atlantic salmon in Lough Corrib SAC and, will not adversely affect the integrity of this European site</p>			
	<p>Bearna Greenway</p> <p>The proposed Bearna Greenway will require the construction of new cycle infrastructure, most likely along the existing road and pathway network and within existing green spaces in close proximity to the coastline. The existing green spaces include areas</p>	Galway Bay Complex SAC Inner Galway Bay SPA		GTS – Habitat Loss: Cycle Network Greenways See Box 1a in Section 3.2 of the NIR

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>managed for amenity purposes (e.g. public parks), lands managed for agricultural purposes, and semi-natural habitat types (e.g. rank grassland areas, scrub, woodland and saltmarsh).</p> <p>The Bearna Greenway could result in habitat loss within Galway Bay Complex SAC and Inner Galway Bay SPA given that the boundaries of these European sites not only follow the coastline but include a portion of terrestrial habitat above the intertidal zone which may be directly affected by construction works. This includes areas of existing hard standing and amenity grassland between Nimmo's Pier through South Park, along Grattan Road and the Coast Road (R336) to the junction with Threadneedle Road where upgrades to existing cycle infrastructure are described in the GTS (see Sections 4.1.7 and 4.1.8 of <i>Appendix D - Public Transport Infrastructure Development</i>) and may form part of the Bearna Greenway. Loss of QI habitat from an SAC would negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site.</p> <p>Loss of habitat from an SAC or SPA (including ex-situ sites) which provides an essential supporting role to QI habitats or QI/SCI species, may negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site.</p> <p>The construction of the greenway infrastructure could potentially result in the loss of Otter habitat⁴ and/or impacts to Otter breeding or resting places (holts or couches) along the coastline. It could also result in the loss of habitat areas outside of Inner Galway Bay SPA which are important in supporting the Special Conservation Interest (SCI) bird species (defined as ex-situ sites in the conservation objectives supporting document for Inner Galway Bay SPA⁵) either in the form of foraging habitat or high tide roost sites, as examples.</p> <p>Loss of Otter habitat has the potential to affect the Site's conservation objectives and result in an adverse effect on the</p>			

⁴ In the context of river systems or terrestrial habitat along the coastline, the *Threat Response Plan Otter Lutra lutra 2009-2011* document (Department of the Environment, Heritage and the Gaeltacht, 2011) defines Otter terrestrial Otter habitat as a 10m zone of riparian habitat along the river banks or a 10m zone of shoreline above the high water mark.

⁵ The need to consider use of habitat areas outside of an SPA by SCI bird species is set out in Section 3.1 and 5.2 of the *Inner Galway Bay Special Protection Area (Site Code 4031), Conservation Objectives Supporting Document, Version 1* (National Parks & Wildlife Service, 2013d). These areas are termed 'ex-situ' sites and are defined as areas of habitat situated within the immediate hinterland of the SPA, or in areas ecologically connected to it, which support SCI bird species.

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>integrity of that European site – see Appendix C, Table C-2 for more detail.</p> <p>Although this project has the potential to result in habitat loss within the aforementioned European sites, its location is not fixed. There is therefore a large degree of flexibility in selecting its final alignment and avoiding habitat loss within the European sites that would adversely affect the Site’s integrity, whilst still fulfilling the greenways role to connect Bearna and Galway City. This scenario is reflected in the mitigation strategy proposed.</p>			
	<p>Galway to Dublin Cycleway (Galway City to Oranmore)</p> <p>This section of the proposed greenway will require the construction of new cycle infrastructure along the coastline between Galway City and Oranmore.</p> <p>The greenway could result in habitat loss within Galway Bay Complex SAC and Inner Galway Bay SPA given that the boundaries of these European sites not only follow the coastline but include a portion of terrestrial habitat above the intertidal zone which may be directly affected by construction works.</p> <p>Loss of QI habitat from an SAC would negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site. Loss of habitat from an SAC or SPA (including ex-situ sites) which provides an essential supporting role to QI habitats or QI/SCI species, may negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site.</p> <p>The construction of the greenway infrastructure could result in the loss of Otter habitat⁶ and/or impacts to Otter breeding or resting places (holts or couches) along the coastline. It could also result in the loss of habitat areas outside of Inner Galway Bay SPA which are important in supporting the Special Conservation Interest (SCI) bird species (defined as ex-situ sites in the conservation objectives supporting document for Inner Galway Bay SPA) either in the form of foraging habitat or high tide roost sites, as examples.</p>	<p>Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Habitat Loss: Cycle Network Greenways See Box 1a in Section 3.2 of the NIR</p>

⁶ In the context of river systems or terrestrial habitat along the coastline, the *Threat Response Plan Otter Lutra lutra 2009-2011* document (Department of the Environment, Heritage and the Gaeltacht, 2011) defines Otter terrestrial Otter habitat as a 10m zone of riparian habitat along the river banks or a 10m zone of shoreline above the high water mark.

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>Loss of Otter habitat has the potential to affect the Site's conservation objectives and result in an adverse effect on the integrity of that European site – see Appendix C, Table C-2 for more detail.</p> <p>Although this project has the potential to result in habitat loss within the aforementioned European sites, its location is not fixed. There is therefore a large degree of flexibility in selecting its final alignment and avoiding habitat loss within the European sites that would adversely affect the Site's integrity, whilst still fulfilling the greenways role to connect Galway City to Oranmore. This scenario is reflected in the mitigation strategy proposed.</p>			
	<p>Galway to Oughterard Greenway</p> <p>Whilst the specific alignment of the Galway to Oughterard Greenway has not yet been determined, it is envisaged that it will utilise the disused Galway to Clifden rail line along much of its length⁷.</p> <p>Therefore, the greenway has the potential to result in habitat loss within Lough Corrib SAC as the rail line crosses the SAC at a number of locations. The construction of the greenway infrastructure could potentially result in the loss of Otter habitat⁸ and/or impacts to Otter breeding or resting places (holts or couches) within Lough Corrib SAC.</p> <p>Although the disused rail line is remote from Lough Corrib SPA, the fact that the alignment is not yet known means that there is the potential that it could intersect with the SPA, and there is also the potential that it may result in habitat loss affecting important ex-situ sites for SCI bird species of Lough Corrib SPA.</p> <p>The greenway also has the potential to result in habitat loss within Ross Lake and Woods SAC, as the rail line passes through the SAC. If the greenway were to cross the SAC, or result in habitat loss within the foraging/commuting range of the Lesser horseshoe roost for which the site is designated (potentially the key habitat area supporting the roost), there is the potential for habitat loss and</p>	<p>Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC</p>		<p>GTS – Habitat Loss: Cycle Network Greenways</p> <p>See Box 1a in Section 3.2 of the NIR</p>

⁷ Section 4.5.1 of the *Galway City Development Plan 2017-2023* (Galway City Council, 2016a) Section 4.12.13 of the *Galway County Development Plan 2015-2021* (Galway County Council, 2015)

⁸ In the context of river systems or terrestrial habitat along the coastline, the *Threat Response Plan Otter Lutra lutra 2009-2011* document (Department of the Environment, Heritage and the Gaeltacht, 2011) defines Otter terrestrial Otter habitat as a 10m zone of riparian habitat along the river banks or a 10m zone of shoreline above the high water mark.

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>fragmentation to occur which could affect the SACs Lesser horseshoe population.</p> <p>Loss of QI habitat from an SAC would negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site. Loss of habitat from an SAC or SPA (including ex-situ sites) which provides an essential supporting role to QI habitats or QI/SCI species, may negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site.</p> <p>Loss of Otter habitat has the potential to affect the Site’s conservation objectives and result in an adverse effect on the integrity of that European site – see Appendix C, Table C-2 for more detail.</p> <p>Although this project has the potential to result in habitat loss within the aforementioned European sites, its location is not fixed. There is therefore a large degree of flexibility in selecting its final alignment and avoiding habitat loss within the European sites that would adversely affect the Site’s integrity, whilst still fulfilling the greenways role to connect Galway City and Oughterard. This scenario is reflected in the mitigation strategy proposed.</p>			
	<p>Public Transport Network (All Elements of the GTS)⁹</p> <p>Upgrading the public transport network will/may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas within or adjacent to European sites which have the potential to result in the permanent loss of habitat area within SACs and/or SPAs (and important ex-situ sites):</p> <ul style="list-style-type: none"> ▪ Park & Ride Facilities – the indicative location of the Western Distributor Road/R336 Bearna Road could affect habitats within Galway Bay Complex SAC, Inner Galway Bay or ex-situ sites linked with the latter and Lough Corrib SPA ▪ Rail – additional transport infrastructure at Ceannt Station and surrounding lands lie within or adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA 	<p>Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network</p> <p>See Box 1b in Section 3.2 of the NIR</p>

⁹ The infrastructural interventions required in relation to the bus network are set out in Table 9 of Appendix D – Galway City Public Transport Network

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<ul style="list-style-type: none"> ▪ Providing additional coach parking at Ceannt Station/Galway Harbour may include lands within or adjacent to Galway bay Complex SAC and/or Inner Galway Bay SPA ▪ Salmon Weir Bridge (and associated with this measure is the provision of a new pedestrian bridge to the south of the Salmon Weir Bridge which must cross Lough Corrib SAC) ▪ D2.1.3 UHG Grounds/University Road¹⁰ – terminates at the Salmon Weir Bridge which is within Lough Corrib SAC ▪ D2.1.7 Coast Road – the existing road and associated hard standing lies within, or is adjacent to, Galway bay Complex SAC and lies adjacent to Inner Galway Bay SPA ▪ D2.1.8 Salthill Road Upper – the southern end of this corridor lies within Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA ▪ D2.2.1 St. Vincent’s Avenue/St. Francis Street/Eglington Street – this corridor includes the Salmon Weir Bridge which is within Lough Corrib SAC ▪ D2.2.3 Forster Street/College Road – the northern end of this corridor lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ D2.2.4 Old Dublin Road – the western end of this corridor lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA <p>Loss of QI habitat from an SAC would negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site. Loss of habitat from an SAC or SPA (including ex-situ sites) which provides an essential supporting role to QI habitats or QI/SCI species, may negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site.</p>			

¹⁰ ¹⁰ (numerical references when given are as per Appendix D of the GTS)

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>Cycle Network (Non-Greenway Elements of the GTS)</p> <p>Aside from the three principle greenway projects, achieving the strategic aims for the cycle network will/may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas within or adjacent to European sites which have the potential to result in the permanent loss of habitat areas within SACs and/or SPAs, including:</p> <ul style="list-style-type: none"> ▪ F4.1 Knocknacarra South – includes a feeder cycle corridor along the coast road/R336 which lies within, or is adjacent to, Galway bay Complex SAC and lies adjacent to Inner Galway Bay SPA (the Bearna Greenway also forms part of the proposals in this area and is described separately under that heading) ▪ F4.2 Salthill – includes Threadneedle Road, Salthill Road Upper and Whitstrand Road, sections of which either lie within or adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ F4.6 Newcastle & Dangan – includes the N6/Quincentenary Bridge, NUIG and Chestnut Lane sections of which lie either within or adjacent to Lough Corrib SAC (the Galway to Oughterard Greenway also forms part of the proposals in this area and is described separately under that heading) ▪ F4.7 City Centre – includes new bridges over the River Corrib at the site of the Old Clifden Railway bridge, the Salmon Weir Bridge and Wolfe Tone Bridge, and proposed works along College Road. The first two locations cross Lough Corrib SAC, the area south of Wolfe Tone Bridge crosses Galway Bay Complex SAC, and the proposed works along College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ F4.8 Terryland and Ballinfoyle – includes the N6/Quincentenary Bridge, which crosses Lough Corrib SAC, and Dyke Road, sections of which lie adjacent to Lough Corrib SAC 	<p>Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network</p> <p>See Box 1b in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<ul style="list-style-type: none"> ▪ F4.10 Renmore & Dublin Road – includes College Road, the Dublin Road and Doughiska Road. The northern end of College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA, the western end of the Dublin Road lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA, and the southern end of Doughiska Road lies adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA (the proposed Galway City to Oranmore section of the Galway to Dublin Cycleway also forms part of the proposals in this area and is described separately under that heading) ▪ Supporting measures to expand the bike share scheme, provide for and upgrade bicycle parking facilities, and improve cycling permeability across the city are not location specific and could potentially affect European sites within Galway City – Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA ▪ A greenway connecting Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) would cross Galway Bay Complex SAC and Inner Galway Bay SPA <p>Loss of QI habitat from an SAC would negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site. Loss of habitat from an SAC or SPA (including ex-situ sites) which provides an essential supporting role to QI habitats or QI/SCI species, may negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site.</p>			
	<p>Pedestrian Network (All Elements of the GTS)</p> <p>Aside from the three principle greenway projects, achieving the strategic aims for the pedestrian network will/may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas within or adjacent to European sites which have the potential to result in the permanent loss of habitat areas within SACs and/or SPAs:</p>	<p>Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network</p> <p>See Box 1b in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<ul style="list-style-type: none"> ▪ The Cross-City Link includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge. ▪ Connecting a greenway between Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) may impact on Galway Bay Complex SAC and Inner Galway Bay SPA. ▪ The proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC. ▪ A proposed new cycle/pedestrian bridge to the south of Wolfe Tone Bridge must cross Galway Bay Complex SAC. <p>Loss of QI habitat from an SAC would negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site. Loss of habitat from an SAC or SPA (including ex-situ sites) which provides an essential supporting role to QI habitats or QI/SCI species, may negatively affect the conservation objectives of the Site and constitute an adverse effect on the integrity of the European site.</p>			
<p><u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting groundwater quality and/or quantity and thereby the existing hydrogeological regime</p>	<p>N6 Galway City Ring Road (N6 GCRR)</p> <p>The N6 GCRR lies within the same karst groundwater bodies as that portion of Lough Corrib SAC which lies between Lough Corrib and Galway Bay and could potentially interact with, and impact on, the existing hydrogeological regime which supports wetland habitats within the European site.</p> <p>Of particular risk to the existing groundwater regime is the proposed tunnel immediately west of Lackagh Quarry beneath the SAC at Menlough, associated with the N6 GCRR, which is within the same groundwater body that supports the QI Annex I/priority Annex I (*) habitats at the Coolagh Lakes—namely Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. [3140], Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> * [7210], and Alkaline fen [7230]. Other elements of the N6 GCRR with potential karst groundwater impacts are the tunnel at Galway Racecourse and cuttings at Castlegar and at Briarhill, all of which have the potential to interact with groundwater that could affect the</p>	<p>Lough Corrib SAC Lough Corrib SPA Inner Galway Bay SPA Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC</p>	<p>Galway City Council Development Plan 2017-2023 GCiDP 01, GCiDP 02, GCiDP 03, GCiDP 04, GCiDP 05, GCiDP 06, GCiDP 08, GCiDP 11, GCiDP 12, GCiDP 13, GCiDP 14, GCiDP 15, GCiDP 21, GCiDP 22,</p> <p>Galway County Development Plan 2015-2021 GCoDP 01, GCoDP 02, GCoDP 03, GCoDP 04, GCoDP 06, GCoDP 07,</p>	<p>GTS – Hydrogeology N6GCRR See Box 2b in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>conservation objectives supporting QI groundwater dependent habitats in Lough Corrib SAC.</p> <p>Hydrogeological impacts could also affect wetland habitat in ex-situ sites that support SCI bird species of Lough Corrib SPA and Inner Galway Bay SPA – most notably is the lake and wetland complex at Ballindooley.</p> <p>Similarly, the N6 GCRR lies within the same groundwater body as a number of other SACs which are selected for the presence of groundwater dependant habitats, and SPAs where groundwater dependant habitats support the SCI bird species, and therefore the conservation objectives supporting QI habitats or SCI species could be affected: Cregganna Marsh SPA, Rahasane Turlough SAC, Rahasane Turlough SPA, Castletaylor Complex SAC, Kiltiernan Turlough SAC, and Lough Fingall Complex SAC.</p>		GCoDP 08, GCoDP 09, GCoDP 10, GCoDP 15, GCoDP 16, GCoDP 18, GCoDP 19	
	<p>Bearna Greenway</p> <p>The proposed Bearna Greenway lies within the same groundwater body as Galway Bay Complex SAC and could potentially interact with, and impact on, the existing hydrogeological regime which supports wetland habitats within the European site.</p> <p>Hydrogeological impacts could also affect wetland habitat in ex-situ sites that support SCI bird species of Lough Corrib SPA and Inner Galway Bay SPA.</p> <p>However, there are unlikely to be any proposals for tunnels or deep excavations associated with a greenway development. Cycleways are generally built following the existing topography and are minimally invasive with respect to excavation requirements. Even if groundwater were encountered by such a development, any effects would be expected to be confined to the area immediately adjacent. Therefore, this proposed project is unlikely to interact with groundwater and the risk of it affecting any conservation objectives or resulting in adverse effects on the integrity of any European site are low.</p>	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA		GTS – Hydrogeology General See Box 2a in Section 3.2 of the NIR
	<p>Galway to Dublin Cycleway (Galway City to Oranmore)</p> <p>This section of the proposed greenway lies within the same groundwater body as Galway Bay Complex SAC and could potentially interact with, and impact on, the existing</p>	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA		GTS – Hydrogeology General See Box 2a in Section 3.2 of the NIR

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>hydrogeological regime which supports wetland habitats within the European site. Construction of a cycleway could also affect wetland habitat in ex-situ sites that support SCI bird species of Lough Corrib SPA and Inner Galway Bay SPA.</p> <p>However, there are unlikely to be any proposals for tunnels or deep excavations associated with a greenway development. Cycleways are generally built following the existing topography and are minimally invasive with respect to excavation requirements. Even if groundwater were encountered by such a development, any effects would be expected to be confined to the area immediately adjacent. Therefore, this proposed project is unlikely to interact with groundwater and the risk of it affecting any conservation objectives or resulting in adverse effects on the integrity of any European site are low. This is particularly the case in relation to Cregganna Marsh SPA, Rahasane Turlough SAC, Rahasane Turlough SPA, Castletaylor Complex SAC, Kiltiernan Turlough SAC and Lough Fingall Complex SAC; all more than 1.5km away and separated from the greenway by the urban area of Oranmore.</p>	<p>Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC</p>		
	<p>Galway to Oughterard Greenway</p> <p>The proposed Galway to Oughterard Greenway lies within the same groundwater bodies as Lough Corrib SAC, Ross Lake and Woods SAC and Lough Corrib SPA and could potentially interact with, and impact on, the existing hydrogeological regime which supports the conservation objectives of wetland habitats within the European site. Hydrogeological impacts could also affect wetland habitat in ex-situ sites that support SCI bird species of Lough Corrib SPA.</p> <p>However, there are unlikely to be any proposals for tunnels or deep excavations associated with a greenway development. Cycleways are generally built following the existing topography and are minimally invasive with respect to excavation requirements. Even if groundwater were encountered by such a development, any effects would be expected to be confined to the area immediately adjacent. Therefore, this proposed project is unlikely to interact with groundwater and the risk of it affecting any conservation objectives or resulting in adverse effects on the integrity of any European site are low.</p>	<p>Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC</p>		<p>GTS – Hydrogeology General See Box 2a in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>Public Transport Network (All Elements of the GTS)</p> <p>Although unlikely, there is the possibility that excavations associated with the installation of the public transport network may affect the existing hydrogeological regime which in turn may affect hydrogeologically dependant habitats (and in some cases supported species) within European sites. Given the likely nature of works associated with the infrastructure described in Appendix D of the GTS - which would be minimally invasive in terms of excavation requirements and with any such works being undertaken in the urban environment, poses little risk of interacting with groundwater – only elements adjacent to Lough Corrib SAC, Galway Bay Complex SAC or Inner Galway Bay SPA are likely to be at any risk of effects. However, even in those locations the risk is minimal:</p> <ul style="list-style-type: none"> ▪ Park & Ride Facilities – the indicative location of the Western Distributor Road/R336 Bearn Road could affect habitats within Galway Bay Complex SAC, Inner Galway Bay or ex-situ sites linked with the latter and Lough Corrib SPA ▪ Rail – additional transport infrastructure at Ceannt Station and surrounding lands lie within or adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ Providing additional coach parking at Ceannt Station/Galway Harbour may include lands within or adjacent to Galway bay Complex SAC and/or Inner Galway Bay SPA ▪ D2.1.3 UHG Grounds/University Road¹¹ – terminates at the Salmon Weir Bridge which is within Lough Corrib SAC ▪ D2.1.7 Coast Road – the existing road and associated hard standing lies within, or is adjacent to, Galway bay Complex SAC and lies adjacent to Inner Galway Bay SPA ▪ D2.1.8 Salthill Road Upper – the southern end of this corridor lies within Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA 	<p>Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Hydrogeology General See Box 2a in Section 3.2 of the NIR</p>

¹¹ ¹¹ (numerical references when given are as per Appendix D of the GTS)

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<ul style="list-style-type: none"> ▪ D2.2.1 St. Vincent’s Avenue/St. Francis Street/Eglington Street – this corridor includes the Salmon Weir Bridge which is within Lough Corrib SAC ▪ D2.2.3 Forster Street/College Road – the northern end of this corridor lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ D2.2.4 Old Dublin Road – the western end of this corridor lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA 			
	<p>Cycle Network (Non-Greenway Elements of the GTS)</p> <p>Although unlikely, there is the possibility that excavations associated with the installation of non-greenway cycle network elements may affect the existing hydrogeological regime which in turn may affect hydrogeologically dependant habitats (and in some cases supported species) within European sites. The likely nature of works associated with the majority of infrastructure described in Appendix F of the GTS and would be minimally invasive in terms of excavation requirements and with any such works being undertaken in the urban environment, poses little risk of interacting with groundwater – only elements adjacent to Lough Corrib SAC, Galway Bay Complex SAC or Inner Galway Bay SPA are likely to be at any real risk of effects (see list above under habitat loss). Installation of new bridge structures may be more likely to interact with groundwater. However, as these bridges are all associated with a modified urban landscape in the city centre, the risk is likely to remain low.</p> <p>These Non-Greenway Cycle Network elements are as follows (numerical references when given are as per Appendix F of the GTS):</p> <ul style="list-style-type: none"> ▪ F4.1 Knocknacarra South – includes a feeder cycle corridor along the coast road/R336 which lies within, or is adjacent to, Galway bay Complex SAC and lies adjacent to Inner Galway Bay SPA (the Bearna Greenway also forms part of the proposals in this area and is described separately under that heading) ▪ F4.2 Salthill – includes Threadneedle Road, Salthill Road Upper and Whitstrand Road, sections of which either lie 	<p>Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Hydrogeology General See Box 2a in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>within or adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA</p> <ul style="list-style-type: none"> ▪ F4.6 Newcastle & Dangan – includes the N6/Quincentenary Bridge, NUIG and Chestnut Lane sections of which lie either within or adjacent to Lough Corrib SAC (the Galway to Oughterard Greenway also forms part of the proposals in this area and is described separately under that heading) ▪ F4.7 City Centre – includes new bridges over the River Corrib at the site of the Old Clifden Railway bridge, the Salmon Weir Bridge and Wolfe Tone Bridge, and College Road. The first two locations cross Lough Corrib SAC, the area south of Wolfe Tone Bridge crosses Galway Bay Complex SAC, and College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ F4.8 Terryland and Ballinfoyle – includes the N6/Quincentenary Bridge, which crosses Lough Corrib SAC, and Dyke Road, sections of which lie adjacent to Lough Corrib SAC ▪ F4.10 Renmore & Dublin Road – includes College Road, the Dublin Road and Doughiska Road. The northern end of College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA, the western end of the Dublin Road lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA, and the southern end of Doughiska Road lies adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA (the proposed Galway City to Oranmore section of the Galway to Dublin Cycleway also forms part of the proposals in this area and is described separately under that heading) ▪ Supporting measures to expand the bike share scheme, provide for and upgrade bicycle parking facilities, and improve cycling permeability across the city are not location specific and could potentially affect European sites within Galway City – Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA ▪ a greenway connecting Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over 			

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	Lough Atalia) would cross Galway Bay Complex SAC and Inner Galway Bay SPA			
	<p>Pedestrian Network (All Elements of the GTS)</p> <p>Although unlikely, there is the possibility that excavations associated with the installation of pedestrian network elements may affect the existing hydrogeological regime which in turn may affect hydrogeologically dependant habitats (and in some cases supported species) within European sites. Given the likely nature of works associated with the majority of the public transport infrastructure described in the GTS they would be minimally invasive in terms of excavation requirements and, with any such works being undertaken in the urban environment, pose little risk of interacting with groundwater – only elements adjacent to Lough Corrib SAC, Galway Bay Complex SAC or Inner Galway Bay SPA are likely to be at any real risk of effects (see list above under Cycle Network (Non-Greenway Elements of the GTS)). Installation of new bridge structures may be more likely to interact with groundwater. However, as these bridges are all associated with a modified urban landscape in the city centre, the risk is likely to remain low.</p>	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA		GTS – Hydrogeology General See Box 2a in Section 3.2 of the NIR
<u>Habitat degradation – tunnelling/excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<p>N6 Galway City Ring Road (N6 GCRR)</p> <p>The proposed tunnel at Lackagh Quarry could impact on the surface and sub-surface rock structure above and consequently affect the conservation objectives supporting the QI Annex I habitats, Limestone pavement [*8240] and Calcareous grassland [6210], present on the surface above in Lough Corrib SAC.</p>	Lough Corrib SAC	<p>Galway City Council Development Plan 2017-2023</p> <p>GCiDP 01, GCiDP 02, GCiDP 03, GCiDP 04, GCiDP 05, GCiDP 08, GCiDP 11, GCiDP 21, GCiDP 22</p> <p>Galway County Development Plan 2015-2021</p> <p>GCoDP 01, GCoDP 02, GCoDP 03, GCoDP 04, GCoDP 06, GCoDP 07</p>	GTS – Habitat degradation – tunnelling/excavation See Box 3 in Section 3.2 of the NIR

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
<p><u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats</p>	<p>N6 Galway City Ring Road (N6 GCRR), Public Transport Network, Cycle Network and the Pedestrian Network</p> <p>All elements of GTS either intersect European sites, are immediately adjacent to European sites, or will cross watercourses that drain to European sites. Therefore, associated construction works where either new transport infrastructure is proposed or existing infrastructure will be upgraded could impact on water quality in receiving watercourses/waterbodies through the accidental release of contaminated/polluted run-off. A reduction in water quality in receiving watercourses/waterbodies could affect the conservation objectives supporting QI habitats and QI/SCI species in European sites downstream—Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC, Inner Galway Bay SPA or Ross Lake and Woods SAC.</p> <p>Considering the various elements of the GTS and their relationship to the hydrological network connecting them to European sites (e.g. upstream or downstream of):</p> <ul style="list-style-type: none"> ▪ N6 GCRR is downstream of Lough Corrib SPA and Ross Lake and Woods SAC and therefore, could only potentially affect Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA via this impact pathway. ▪ Bearna Greenway is downstream of Lough Corrib SAC, Lough Corrib SPA and Ross Lake and Woods SAC – although, could be potentially upstream of ex-situ sites used by SCI species of Lough Corrib SPA. Therefore, these GTS elements could only potentially affect Lough Corrib SPA, Galway Bay Complex SAC and Inner Galway Bay SPA via this impact pathway. ▪ Galway to Dublin Cycleway (Galway City to Oranmore) is downstream of Lough Corrib SAC, Lough Corrib SPA and Ross Lake and Woods SAC – although, could be potentially upstream of ex-situ sites used by SCI species of Lough Corrib SPA – and therefore, could only potentially affect Lough Corrib SPA, Galway Bay Complex SAC and Inner Galway Bay SPA via this impact pathway. 	<p>Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC</p>	<p>Galway City Council Development Plan 2017-2023 GCiDP 01, GCiDP 02, GCiDP 03, GCiDP 04, GCiDP 05, GCiDP 06, GCiDP 08, GCiDP 11, GCiDP 12, GCiDP 13, GCiDP 14, GCiDP 15, GCiDP 16, GCiDP 17, GCiDP 18, GCiDP 21, GCiDP 22,</p> <p>Galway County Development Plan 2015-2021 GCoDP 01, GCoDP 02, GCoDP 03, GCoDP 04, GCoDP 06, GCoDP 07, GCoDP 12, GCoDP 15, GCoDP 16, GCoDP 18, GCoDP 19</p>	<p>GTS – Habitat degradation – water quality (construction) See Box 4 in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<ul style="list-style-type: none"> ▪ Galway to Oughterard Greenway is upstream of all five European sites, and therefore could potentially affect any/all via this impact pathway. ▪ All public transport elements are downstream of Lough Corrib SPA and Ross Lake and Woods SAC – although, could be potentially upstream of ex-situ sites used by SCI species of Lough Corrib SPA. Specific elements in close proximity to European sites include: <ul style="list-style-type: none"> ▪ Park & Ride Facilities – the indicative location of the Western Distributor Road/R336 Bearna Road could affect habitats within Galway Bay Complex SAC, Inner Galway Bay or ex-situ sites linked with the latter and Lough Corrib SPA ▪ Rail – additional transport infrastructure at Ceannt Station and surrounding lands lie within or adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ Providing additional coach parking at Ceannt Station/Galway Harbour may include lands within or adjacent to Galway bay Complex SAC and/or Inner Galway Bay SPA ▪ Salmon Weir Bridge (and associated with this measure is the provision of a new pedestrian bridge to the south of the Salmon Weir Bridge which must cross Lough Corrib SAC) ▪ D2.1.3 UHG Grounds/University Road¹² – terminates at the Salmon Weir Bridge which is within Lough Corrib SAC ▪ D2.1.7 Coast Road – the existing road and associated hard standing lies within, or is adjacent to, Galway bay Complex SAC and lies adjacent to Inner Galway Bay SPA ▪ D2.1.8 Salthill Road Upper – the southern end of this corridor lies within Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA ▪ D2.2.1 St. Vincent’s Avenue/St. Francis Street/Eglington Street – this corridor includes the Salmon Weir Bridge which is within Lough Corrib SAC 			

¹² (numerical references when given are as per Appendix D of the GTS)

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<ul style="list-style-type: none"> ▪ D2.2.3 Forster Street/College Road – the northern end of this corridor lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ D2.2.4 Old Dublin Road – the western end of this corridor lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA ▪ D2.2.7 Headford Road/Dun na Coiribe/Castlelawn heights/Tirellan Heights – crosses the Terryland River which drains to the River Corrib <p>Therefore, these GTS elements could only potentially affect Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC and Inner Galway Bay SPA via this impact pathway.</p> <p>The non-greenway cycle network elements are downstream of Lough Corrib SPA and Ross Lake and Woods SAC – although, could be potentially upstream of ex-situ sites used by SCI species of Lough Corrib SPA:</p> <ul style="list-style-type: none"> ▪ F4.1 Knocknacarra South – includes a feeder cycle corridor along the coast road/R336 which lies within, or is adjacent to, Galway bay Complex SAC and lies adjacent to Inner Galway Bay SPA (the Bearna Greenway also forms part of the proposals in this area and is described separately under that heading) ▪ F4.2 Salthill – includes Threadneedle Road, Salthill Road Upper and Whitestrand Road, sections of which either lie within or adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ F4.6 Newcastle & Dangan – includes the N6/Quincentenary Bridge, NUIG and Chestnut Lane sections of which lie either within or adjacent to Lough Corrib SAC (the Galway to Oughterard Greenway also forms part of the proposals in this area and is described separately under that heading) 			

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<ul style="list-style-type: none"> <li>▪ F4.7 City Centre – includes new bridges over the River Corrib at the site of the Old Clifden Railway bridge, the Salmon Weir Bridge and Wolfe Tone Bridge, and proposed works along College Road. The first two locations cross Lough Corrib SAC, the area south of Wolfe Tone Bridge crosses Galway Bay Complex SAC, and the proposed works along College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA <li>▪ F4.8 Terryland and Ballinfoyle – includes the N6/Quincentenary Bridge, which crosses Lough Corrib SAC, and Dyke Road, sections of which lie adjacent to Lough Corrib SAC <li>▪ F4.10 Renmore & Dublin Road – includes College Road, the Dublin Road and Doughiska Road. The northern end of College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA, the western end of the Dublin Road lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA, and the southern end of Doughiska Road lies adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA (the proposed Galway City to Oranmore section of the Galway to Dublin Cycleway also forms part of the proposals in this area and is described separately under that heading) <li>▪ Supporting measures to expand the bike share scheme, provide for and upgrade bicycle parking facilities, and improve cycling permeability across the city are not location specific and could potentially affect European sites within Galway City – Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA <li>▪ A greenway connecting Eyre Square and Renmore (in the vicinity of Galway Port or the 			

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>existing rail crossing over Lough Atalia) would cross Galway Bay Complex SAC and Inner Galway Bay SPA</p> <p>Therefore, these GTS elements could only potentially affect Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC and Inner Galway Bay SPA via this impact pathway.</p> <p>The pedestrian network elements are downstream of Lough Corrib SPA and Ross Lake and Woods SAC – although, could be potentially upstream of ex-situ sites used by SCI species of Lough Corrib SPA:</p> <ul style="list-style-type: none"> ▪ The Cross-City Link includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge. ▪ Connecting a greenway between Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) may impact on Galway Bay Complex SAC and Inner Galway Bay SPA. ▪ The proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC. ▪ A proposed new cycle/pedestrian bridge to the south of Wolfe Tone Bridge must cross Galway Bay Complex SAC. <p>Therefore, these GTS elements could only potentially affect Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC and Inner Galway Bay SPA via this impact pathway.</p>			
<p><u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or</p>	<p>N6 Galway City Ring Road (N6 GCRR) Road drainage from the proposed road will discharge to the River Corrib and many other rivers and streams within the strategy area that drain to Galway Bay. Road drainage could contain pollutants that could impact on water quality in receiving watercourses and in Galway Bay and consequently affect the conservation objectives</p>	<p>Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA</p>	<p>Galway City Council Development Plan 2017-2023 GCiDP 01, GCiDP 02, GCiDP 03, GCiDP 04, GCiDP 05, GCiDP 06,</p>	<p>GTS – Habitat degradation – water quality (operation) – New Road Developments See Box 5b in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<p>supporting QI habitats and QI/SCI species in European sites downstream – Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA.</p> <p>Facilitating increased use of transport modes such as bus, bicycle and walking over individual car use in Galway City by the implementation of the N6 GCRR would be expected to result in a positive impact on water quality discharges from the city drainage network. Beyond the urban and suburban fringe of the city the GTS consists of Greenways—cycle and pedestrian facilities—which pose no operational risk to water quality in receiving watercourses or to any European sites downstream.</p>		<p>GCiDP 08, GCiDP 11, GCiDP 12, GCiDP 13, GCiDP 14, GCiDP 15, GCiDP 16, GCiDP 17, GCiDP 18, GCiDP 21, GCiDP 22, GCiDP 23</p> <p>Galway County Development Plan 2015-2021</p> <p>GCoDP 01, GCoDP 02, GCoDP 03, GCoDP 04, GCoDP 06, GCoDP 07, GCoDP 12, GCoDP 13, GCoDP 14, GCoDP 15, GCoDP 16, GCoDP 18, GCoDP 19</p>	
	<p>Public Transport Network (All Elements of the GTS)</p> <p>Park & Ride facilities – although specific locations have not been identified, based on the assessment presented in <i>Appendix F – Modelling Services Framework, Galway Transport Strategy, Assessment for the Role of Park & Ride</i>, these are likely to be situated on the outskirts of Galway City, on the M6, the N17, and the Western Distributor Road/R336 corridors. There is the potential for operational run-off from such sites to be contaminated with hydrocarbons or heavy metals and therefore, the potential to impact on water quality in receiving watercourses and in Galway Bay and consequently affect the conservation objectives supporting QI habitats and QI/SCI species in European sites downstream – Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC and Inner Galway Bay SPA.</p> <p>Other proposed new road links - The GTS does however include for a number of new road development in Galway City: new road links from Newcastle Road to Bóthar Einde, from Dun na Coiribe to Castlelawn Heights, between the Bóthar na dTreabh and the Tuam Road via Liosbán Industrial Estate, between Ballybrit Business Park and Parkmore Business Park, between Parkmore Link Road and the N17 and two links at Merlin Park (one from the Dublin Road and over the R446 at Doughiska. Drainage from proposed new roads will discharge to rivers or streams (including the River Corrib) that ultimately drain to Galway Bay. Road drainage could contain pollutants that could impact on water quality in receiving watercourses and in Galway Bay and consequently affect the conservation objectives supporting QI</p>	<p>Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Habitat degradation – water quality (operation) – Park & Ride Facilities</p> <p>See Box 5a in Section 3.2 of the NIR</p> <p>GTS – Habitat degradation – water quality (operation) – New Road Developments</p> <p>See Box 5b in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	habitats and QI/SCI species in European sites downstream – Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA.			
<u>Habitat degradation – shading</u> Shading effects of bridge structures on habitats (e.g. reduction in sunlight and direct precipitation)	N6 Galway City Ring Road (N6 GCRR) The proposed River Corrib Bridge crosses Lough Corrib SAC on an elevated viaduct structure which would affect levels of sunlight and direct precipitation supporting the vegetation beneath. However, none of the habitat types potentially affected are Annex I habitat types, they are not QI habitats of Lough Corrib SAC, and do not provide a supporting role to any QI Annex I habitats of the SAC. Therefore, via this impact pathway, the proposed N6 GCRR does not pose any risk of adverse effects on the integrity of Lough Corrib SAC. <i>For more information on the habitat descriptions, see the habitat loss section above under N6 Galway City Ring Road (N6 GCRR)</i>	Lough Corrib SAC	Galway City Council Development Plan 2017-2023 GCiDP 01, GCiDP 02, GCiDP 03, GCiDP 04, GCiDP 05, GCiDP 06, GCiDP 08, GCiDP 11, GCiDP 21, Galway County Development Plan 2015-2021 GCoDP 01, GCoDP 02, GCoDP 03, GCoDP 04, GCoDP 06, GCoDP 07	No specific mitigation measures are required to address this impact pathway as the N6 GCRR poses no risk of affecting the conservation objectives of any European sites via this impact pathway
	Bearna Greenway, Galway to Dublin Cycleway (Galway City to Oranmore) and Galway to Oughterard Greenway Any new bridge structures that may be proposed as part of the greenways that are located within Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC, Inner Galway Bay SPA and/or Ross Lake and Woods SAC, have the potential to result in shading effects (i.e. reduced sunlight and levels of direct precipitation) on habitats beneath the structure. Such impacts could potentially affect QI habitats and/or habitats which may support QI/SCI species of these European sites.	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC		
	Public Transport Network (All Elements of the GTS) Upgrading the public transport network will/may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas within or adjacent to European sites which have the potential to affect habitat areas within Lough Corrib SAC as a result of direct shading: <ul style="list-style-type: none"> ▪ Salmon Weir Bridge (and associated with this measure is the provision of a new pedestrian bridge to the south of 	Lough Corrib SAC		GTS – Habitat degradation – shading See Box 6 in Section 3.2 of the NIR

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>the Salmon Weir Bridge which must cross Lough Corrib SAC).</p> <p>Shading effects on habitat within an SAC could negatively affect the conservation objectives and constitute an adverse effect on the integrity of the European site.</p>			
	<p>Cycle Network (All Elements of the GTS)</p> <p>Achieving the strategic aims for the cycle network will/may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas within or adjacent to European sites which have the potential to affect habitat areas within SACs and/or SPAs as a result of direct shading:</p> <ul style="list-style-type: none"> ▪ The secondary cycle network includes for a proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC. ▪ Facilitating city cycling relies upon the Cross-City Link which includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge. ▪ Connecting a greenway between Eyre Square and Renmore may impact on Galway Bay Complex SAC and Inner Galway Bay SPA. ▪ A proposed new cycle/pedestrian bridge to the south of Wolfe Tone Bridge must cross Galway Bay Complex SAC <p>Shading effects on habitat within an SAC or SPA (including ex-situ sites) could negatively affect the conservation objectives and constitute an adverse effect on the integrity of the European site.</p>	<p>Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Habitat degradation – shading See Box 6 in Section 3.2 of the NIR</p>
	<p>Pedestrian Network (All Elements of the GTS)</p> <p>Aside from the three principle greenway projects, achieving the strategic aims for the pedestrian network will/may require the provision of (or may be dependent on the delivery of) additional bridge structure within European sites which have the potential to affect habitat areas within SACs and/or SPAs as a result of direct shading:</p>	<p>Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Habitat degradation – shading See Box 6 in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<ul style="list-style-type: none"> ▪ The Cross-City Link includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge. ▪ Connecting a greenway between Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) may impact on Galway Bay Complex SAC and Inner Galway Bay SPA. ▪ The proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC. ▪ A proposed new cycle/pedestrian bridge to the south of Wolfe Tone Bridge must cross Galway Bay Complex SAC <p>Shading effects on habitat within an SAC or SPA (including ex-situ sites) could negatively affect the conservation objectives and constitute an adverse effect on the integrity of the European site.</p>			
<p><u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (e.g. vegetation composition and structure)¹³</p>	<p>N6 Galway City Ring Road (N6 GCRR)</p> <p>The introduction of a new road into a rural landscape will affect air quality to some degree in comparison with existing baseline levels and could affect the environmental conditions supporting QI habitats and/or QI species in Lough Corrib SAC, through which the N6 GCRR passes.</p> <p>Emissions from car exhausts, and the deposition of particulate matter and heavy metals produced by engine, brake and tyre wear, can contribute to increased deposition of pollutants such as oxides of nitrogen (NO_x), particulate matter (PM) and heavy metals (HM) in the vicinity of a road carriageway. This can affect the ecosystems and vegetation present, influencing plant growth rates and species composition, diversity, and abundance.</p> <p>It is considered unlikely, given the predicted traffic volumes, that any of the proposed road corridor would lead to an increase in NO_x concentration levels that would be above the limit value of 30 µg/m³ for the protection of vegetation set out in <i>Guidelines for the</i></p>	Lough Corrib SAC	<p>Galway City Council Development Plan 2017-2023</p> <p>GCiDP 01, GCiDP 02, GCiDP 03, GCiDP 04, GCiDP 05, GCiDP 08, GCiDP 11, GCiDP 19, GCiDP 21</p> <p>Galway County Development Plan 2015-2021</p> <p>GCoDP 01, GCoDP 02, GCoDP 03, GCoDP 04, GCoDP 06, GCoDP 07, GCoDP 18</p>	<p>GTS - Habitat Degradation – Air Quality</p> <p>See Box 7 in Section 3.2 of the NIR</p>

¹³ As one of the key principles of the GTS is to “To promote and encourage sustainable transport, and in particular to make it convenient and attractive to walk, cycle or use public transport”, there may be an overall positive impact compared with the “Do-nothing” scenario in urban and suburban areas of Galway City and the associated European sites (Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p><i>Treatment of Air Quality during the Planning and Construction of National Road Schemes</i> (National Roads Authority, 2011) or affect the conservation objectives supporting qualifying interest habitats, or those of habitats supporting qualifying interest species, within Lough Corrib SAC. Similarly, the dry deposition rate of nitrogen would not be expected to be above the critical load of 5 KG(N)/ha/yr defined in those guidelines and any values would be expected to drop off rapidly at increased distance from a road.</p> <p>In terms of PM and HM, concentrations would be expected to be below the ambient air quality standards. There is likely to be some increases on soil concentrations of elements of PM and HM within the immediate road side verge that would result in some localised effects to vegetation. However, it is unlikely to result in any significant changes to species composition or diversity, to adversely affect the conservation objectives supporting the conservation condition of qualifying interest habitats, or habitats supporting qualifying interest species, within Lough Corrib SAC.</p> <p>Air quality effects on habitat within an SAC or SPA (including ex-situ sites) could negatively affect the conservation objectives and constitute an adverse effect on the integrity of the European site.</p> <p>Facilitating increased use of transport modes such as bus, bicycle and walking over individual car use in Galway City would be expected to result in a positive impact on air quality in Galway City and any European sites therein. Beyond the urban and suburban fringe of the City the GTS consists of Greenways—cycle and pedestrian facilities—which pose no operational risk to any European sites as a result of a reduction in air quality.</p>			
<p><u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (e.g. vegetation composition and structure)</p>	<p>There is the potential for non-native invasive species to be present in habitat areas affected by the GTS. If present, these could potentially be spread to habitats within the SAC/SPA during construction works or during operation, during the course of maintenance works.</p> <p>The introduction of invasive species can significantly affect the conservation objectives supporting the conservation condition of QI habitats or species, adversely affecting the integrity of the European site concerned. For example, affecting habitat/species diversity, vegetation composition, and species distribution and abundance.</p>	<p>Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC</p>	<p>Galway City Council Development Plan 2017-2023 GCiDP 01, GCiDP 02, GCiDP 03, GCiDP 04, GCiDP 05, GCiDP 06, GCiDP 08, GCiDP 11, GCiDP 20, GCiDP 21, GCiDP 22</p>	<p>GTS - Habitat Degradation – Non-native Invasive Species See Box 8 in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
			Galway County Development Plan 2015-2021 GCoDP 01, GCoDP 02, GCoDP 03, GCoDP 04, GCoDP 06, GCoDP 07, GCoDP 17, GCoDP 18	
<u>Disturbance/displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<p>N6 Galway City Ring Road (N6 GCRR)</p> <p>The construction and operation of road infrastructure through Lough Corrib SAC has the potential to result in levels of disturbance that would result in displacement effects to QI species along the River Corrib Corridor—Otter, Atlantic salmon, Brook lamprey and Sea lamprey—, along the Bearna Stream at Bearna Woods in Galway Bay Complex SAC, and potentially at ex-situ sites supporting SCI bird species of Lough Corrib SPA and Inner Galway Bay SPA.</p> <p>An assessment of the potential for the N6 GCRR to adversely affect the integrity of either Lough Corrib SAC or Inner Galway Bay SPA was carried out at the route selection stage (Arup, 2015). Based on the predicted noise levels for road construction works, a disturbance ZoI was defined as 300m with respect to wintering birds which as assessed against the winter bird sites surveyed as part of that study. On a precautionary basis, it was assumed that all winter birds recorded outside of either SPA were part of the SPAs SCI population. In consideration of the numbers of wintering birds recorded at each surveyed site, the frequency of use over the winter period, the temporary nature of any construction or operational disturbance, and the abundance of available suitable habitat across the wider locality, this assessment found that none of the route options (of which the emerging preferred route corridor is one) would affect the Site’s conservation objectives for the SCI species and would not adversely affect the integrity of either SPA. On that basis, it is reasonable to assume that the risk of the GTS adversely affecting the integrity of any of the SPA sites during construction is extremely low; particularly given that the majority of projects proposed under the strategy will be developed within the city itself, and works will be of a temporary nature.</p>	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	<p>Galway City Council Development Plan 2017-2023</p> GCiDP 01, GCiDP 02, GCiDP 03, GCiDP 04, GCiDP 05, GCiDP 06, GCiDP 07, GCiDP 08, GCiDP 11, GCiDP 21, GCiDP 22, GCiDP 23 <p>Galway County Development Plan 2015-2021</p> GCoDP 01, GCoDP 02, GCoDP 03, GCoDP 04, GCoDP 06, GCoDP 07, GCoDP 18, GCoDP 19	GTS – Disturbance/Displacement See Box 9 in Section 3.2 of the NIR

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>Disturbance/displacement effects to species within an SAC or SPA (including ex-situ sites) could negatively affect the conservation objectives and constitute an adverse effect on the integrity of the European site.</p>			
	<p>Bearna Greenway</p> <p>The proposed Bearna Greenway will require the construction of new cycle infrastructure, most likely along the existing road and pathway network and within existing green spaces in close proximity to the coastline. This has the potential to intersect with the boundaries of Galway Bay Complex SAC and Inner Galway Bay SPA at numerous points along the coastline between the River Corrib and Bearna. Construction of the greenway has the potential to result in levels of disturbance that would result in displacement effects to QI species along the coastline of Galway Bay—Otter and Harbour seal—and to areas within Inner Galway Bay SPA (foraging and roosting sites) and ex-situ sites supporting SCI bird species of the SPA, and potentially Lough Corrib SPA. Operation of a greenway within, and in such close proximity to, Inner Galway Bay SPA has the potential to result in levels of disturbance that would result in displacement effects to SCI bird species of Inner Galway Bay SPA.</p> <p>Based on that discussed above in relation to the N6 GCRR, construction works are not likely to result in any long-term displacement effects. However during operation, coastal areas supporting SCI bird species are most vulnerable to the more long-term disturbance/displacement effects. These are often associated with increased human presence where coastal walkways/greenways are introduced into formerly undisturbed habitats in areas important in supporting the SCI populations. Addressing this risk is covered in the mitigation strategy.</p> <p>Disturbance/displacement effects to species within an SAC or SPA (including ex-situ sites) could negatively affect the conservation objectives and constitute an adverse effect on the integrity of the European site.</p>	<p>Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Disturbance/Displacement See Box 9 in Section 3.2 of the NIR</p>
	<p>Galway to Dublin Cycleway (Galway City to Oranmore)</p>	<p>Lough Corrib SPA Galway Bay Complex SAC</p>		<p>GTS – Disturbance/Displacement</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>This section of the proposed greenway will require the construction of new cycle infrastructure along the coastline between Galway City and Oranmore.</p> <p>This has the potential to intersect with the boundaries of Galway Bay Complex SAC and Inner Galway Bay SPA at numerous points along the coastline between the River Corrib and Oranmore. Construction of the greenway has the potential to result in levels of disturbance that would result in displacement effects to QI species along the coastline of Galway Bay—Otter and Harbour seal—and to areas within Inner Galway Bay SPA (foraging and roosting sites) and ex-situ sites supporting SCI bird species of the SPA. Operation of a greenway within, and in such close proximity to, Inner Galway Bay SPA has the potential to result in levels of disturbance that would result in displacement effects to SCI bird species of Inner Galway Bay SPA.</p> <p>Based on that discussed above in relation to the N6 GCRR, construction works are not likely to result in any long-term displacement effects. However during operation, coastal areas supporting SCI bird species are most vulnerable to the more long-term disturbance/displacement effects. These are often associated with increased human presence where coastal walkways/greenways are introduced into formerly undisturbed habitats in areas important in supporting the SCI populations. Addressing this risk is covered in the mitigation strategy.</p> <p>Disturbance/displacement effects to species within an SAC or SPA (including ex-situ sites) could negatively affect the conservation objectives and constitute an adverse effect on the integrity of the European site.</p>	Inner Galway Bay SPA		See Box 9 in Section 3.2 of the NIR
	<p>Galway to Oughterard Greenway</p> <p>Whilst the specific alignment of the Galway to Oughterard Greenway has not yet been determined, it is envisaged that it will utilise the disused Galway to Clifden rail line along much of its length.</p> <p>Construction of the greenway has the potential to result in levels of disturbance that would result in displacement effects to QI species along the River Corrib (Otter and potentially Otter breeding or resting places; holts or couches), disturbance/displacement effects</p>	Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC		GTS – Disturbance/Displacement See Box 9 in Section 3.2 of the NIR

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>to Lesser horseshoe bats in Ross Lake and Woods SAC, and disturbance in areas within Lough Corrib SPA (foraging and roosting sites) and ex-situ sites supporting SCI bird species of the SPA. Operation of a greenway within, and in such close proximity to, Inner Galway Bay SPA has the potential to result in levels of disturbance that would result in displacement effects to SCI bird species of Inner Galway Bay SPA. If lighting is proposed, operation could result in disturbance/displacement effects to Lesser horseshoe bats in Ross Lake and Woods SAC.</p> <p>Based on that discussed above in relation to the N6 GCRR, construction works are not likely to result in any long-term displacement effects. However during operation, any important habitat areas within the SPA, or at ex-situ sites, supporting SCI bird species are most vulnerable to any more long-term disturbance/displacement effects. These are often associated with increased human presence where greenways are introduced into formerly undisturbed habitats in areas important in supporting the SCI populations. Of particular note are Hen harrier, as a winter roosting site is located in the vicinity of the southern shores of Lough Corrib.</p> <p>Disturbance/displacement effects to species within an SAC or SPA (including ex-situ sites) could negatively affect the conservation objectives and constitute an adverse effect on the integrity of the European site.</p>			
	<p>Public Transport Network (All Elements of the GTS)</p> <p>Upgrading the public transport network will/may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas within or adjacent to European sites which have the potential to result in the disturbance/displacement of QIs/SCIs within SACs and/or SPAs:</p> <ul style="list-style-type: none"> ▪ R336 Coast Road (and including D2.1.8 Salthill Road Upper¹⁴) - within and adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA. Construction works have the potential to result in levels of disturbance that would result in displacement effects to QI species along 	<p>Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Disturbance/Displacement See Box 9 in Section 3.2 of the NIR</p>

¹⁴ ¹⁴ (numerical references when given are as per Appendix D of the GTS)

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>the coastline of Galway Bay—Otter and Harbour seal—and to areas within Inner Galway Bay SPA (foraging and roosting sites) and ex-situ sites supporting SCI bird species of the SPA.</p> <ul style="list-style-type: none"> ▪ Salmon Weir Bridge and D2.2.1 St. Vincent’s Avenue/St. Francis Street/Eglington Street (and associated with this measure is the provision of a new pedestrian bridge to the south of the Salmon Weir Bridge which must cross Lough Corrib SAC). Construction works have the potential to result in levels of disturbance that would result in displacement effects to QI species along the River Corrib Corridor—Otter, Atlantic salmon, Brook lamprey and Sea lamprey. ▪ College Road & Old Dublin Road - within/adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia. Construction works have the potential to result in levels of disturbance that would result in displacement effects to QI species along the coastline of Galway Bay—Otter and Harbour seal—and to areas within Inner Galway Bay SPA (foraging and roosting sites) and ex-situ sites supporting SCI bird species of the SPA. ▪ Ceannt Station/Fairgreen Station - adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA at Lough Atalia. Construction works have the potential to result in levels of disturbance that would result in displacement effects to QI species along the coastline of Galway Bay—Otter and Harbour seal—and to areas within Inner Galway Bay SPA (foraging and roosting sites) and ex-situ sites supporting SCI bird species of the SPA. ▪ University Road/Cathedral - adjacent to Lough Corrib SAC. Any construction works here have the potential to result in levels of disturbance that would result in displacement effects to QI species along the River Corrib Corridor—Otter, Atlantic salmon, Brook lamprey and Sea lamprey. ▪ Park & Ride facilities in unspecified locations. Such facilities could be located in areas where potential 			

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>disturbance/displacement effects to QIs/SCIs of Lough Corrib SAC, Lough Corrib SPA, Galway Bay Complex SAC and Inner Galway Bay SPA would result.</p> <p>Disturbance/displacement effects to species within an SAC or SPA (including ex-situ sites) could negatively affect the conservation objectives and constitute an adverse effect on the integrity of the European site.</p> <p>Operation of the public transport network, on the city road network, does not pose a risk of disturbance that would affect species in any of the European sites discussed above.</p>			
	<p>Cycle Network (Non-Greenway Elements of the GTS)</p> <p>Aside from the three principle greenway projects, achieving the strategic aims for the cycle network will/may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas within or adjacent to European sites which have the potential to result in the disturbance/displacement of QIs/SCIs within SACs and/or SPAs:</p> <ul style="list-style-type: none"> ▪ F4.1 Knocknacarra South – includes a feeder cycle corridor along the coast road/R336 which lies within, or is adjacent to, Galway bay Complex SAC and lies adjacent to Inner Galway Bay SPA (the Bearna Greenway also forms part of the proposals in this area and is described separately under that heading) ▪ F4.2 Salthill – includes Threadneedle Road, Salthill Road Upper and Whitestrand Road, sections of which either lie within or adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA ▪ F4.6 Newcastle & Dangan – includes the N6/Quincentenary Bridge, NUIG and Chestnut Lane sections of which lie either within or adjacent to Lough Corrib SAC (the Galway to Oughterard Greenway also forms part of the proposals in this area and is described separately under that heading) ▪ F4.7 City Centre – includes new bridges over the River Corrib at the site of the Old Clifden Railway bridge, the Salmon Weir Bridge and Wolfe Tone Bridge, and 	<p>Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Disturbance/Displacement See Box 9 in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>proposed works along College Road. The first two locations cross Lough Corrib SAC, the area south of Wolfe Tone Bridge crosses Galway Bay Complex SAC, and the proposed works along College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA</p> <ul style="list-style-type: none"> ▪ F4.8 Terryland and Ballinfoyle – includes the N6/Quincentenary Bridge, which crosses Lough Corrib SAC, and Dyke Road, sections of which lie adjacent to Lough Corrib SAC ▪ F4.10 Renmore & Dublin Road – includes College Road, the Dublin Road and Doughiska Road. The northern end of College Road lies in close proximity to Galway Bay Complex SAC and Inner Galway Bay SPA, the western end of the Dublin Road lies within and in close proximity to Galway Bay Complex SAC and adjacent to Inner Galway Bay SPA, and the southern end of Doughiska Road lies adjacent to Galway Bay Complex SAC and Inner Galway Bay SPA (the proposed Galway City to Oranmore section of the Galway to Dublin Cycleway also forms part of the proposals in this area and is described separately under that heading) ▪ Supporting measures to expand the bike share scheme, provide for and upgrade bicycle parking facilities, and improve cycling permeability across the city are not location specific and could potentially affect European sites within Galway City – Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA ▪ a greenway connecting Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) would cross Galway Bay Complex SAC and Inner Galway Bay SPA ▪ A proposed new cycle/pedestrian bridge to the south of Wolfe Tone Bridge must cross Galway Bay Complex SAC. Construction works have the potential to result in levels of disturbance that would result in displacement effects to QI species of Galway Bay Complex SAC— 			

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>Otter and Harbour seal—and to SCI bird species of Inner Galway Bay in this area.</p> <p>Disturbance/displacement effects to species within an SAC or SPA (including ex-situ sites) could negatively affect the conservation objectives and constitute an adverse effect on the integrity of the European site.</p>			
	<p>Pedestrian Network (All Elements of the GTS)</p> <p>Aside from the three principle greenway projects, achieving the strategic aims for the pedestrian network will/may require the provision of (or may be dependent on the delivery of) additional transport infrastructure in areas within or adjacent to European sites which have the potential to result in the disturbance/displacement of QIs/SCIs within SACs and/or SPAs:</p> <ul style="list-style-type: none"> ▪ The Cross-City Link includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge. Construction works have the potential to result in levels of disturbance that would result in displacement effects to QI species along the River Corrib Corridor—Otter, Atlantic salmon, Brook lamprey and Sea lamprey. As a host species to the larval (glochidial) stage of the Freshwater pearl mussel’s life cycle (also a QI species of Lough Corrib SAC), impacts to salmonid fish species could have knock-on effects on the SACs Freshwater pearl mussel population. ▪ Connecting a greenway between Eyre Square and Renmore (in the vicinity of Galway Port or the existing rail crossing over Lough Atalia) may impact on Galway Bay Complex SAC and Inner Galway Bay SPA. Construction works have the potential to result in levels of disturbance that would result in displacement effects to QI species of Galway Bay Complex SAC—Otter and Harbour seal—and to SCI bird species of Inner Galway Bay in this area. ▪ The proposed new bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside which crosses Lough Corrib SAC. Construction works have the potential to result in levels 	<p>Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Disturbance/Displacement See Box 9 in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>of disturbance that would result in displacement effects to QI species along the River Corrib Corridor—Otter, Atlantic salmon, Brook lamprey and Sea lamprey.</p> <ul style="list-style-type: none"> A proposed new cycle/pedestrian bridge to the south of Wolfe Tone Bridge must cross Galway Bay Complex SAC. Construction works have the potential to result in levels of disturbance that would result in displacement effects to QI species of Galway Bay Complex SAC—Otter and Harbour seal—and to SCI bird species of Inner Galway Bay in this area. <p>Disturbance/displacement effects to species within an SAC or SPA (including ex-situ sites) could negatively affect the conservation objectives and constitute an adverse effect on the integrity of the European site.</p>			
<p><u>Barrier effect</u> Construction works or new structures creating a barrier to fauna species movement</p>	<p>N6 Galway City Ring Road (N6 GCRR) The N6 GCRR will include for the construction of a new bridge structure across the River Corrib. The River Corrib is used by Otter, Atlantic salmon, Brook lamprey and Sea lamprey (QI species of Lough Corrib SAC) and, depending on the bridge design and construction methodology used, could present a barrier to species movement along the River Corrib corridor—as a minimum temporarily during construction.</p> <p>Creating a barrier to species movement within an SAC could negatively affect the conservation objectives and constitute an adverse effect on the integrity of Lough Corrib SAC.</p> <p>Bearna Greenway and Galway to Dublin Cycleway (Galway City to Oranmore) As these greenways may cross streams or linear habitats within Galway Bay Complex SAC, construction works and/or any proposed new structures have the potential to create a barrier to fauna species movement (e.g. within foraging areas or along commuting routes).</p> <p>Creating a barrier to species movement within an SAC could negatively affect the conservation objectives and constitute an adverse effect on the integrity of Galway Bay Complex SAC.</p>	<p>Lough Corrib SAC</p> <p>Galway Bay Complex SAC</p>	<p>Galway City Council Development Plan 2017-2023 GCiDP 01, GCiDP 02, GCiDP 03, GCiDP 04, GCiDP 05, GCiDP 06, GCiDP 08, GCiDP 11, GCiDP 21, GCiDP 22, GCiDP 23</p> <p>Galway County Development Plan 2015-2021 GCoDP 01, GCoDP 02, GCoDP 03, GCoDP 04, GCoDP 06, GCoDP 07, GCoDP 18, GCoDP 19</p>	<p>GTS – Barrier Effect See Box 10 in Section 3.2 of the NIR</p> <p>GTS – Barrier Effect See Box 10 in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>Galway to Oughterard Greenway</p> <p>Whilst the specific alignment of the Galway to Oughterard Greenway has not yet been determined, it is envisaged that it will utilise the disused Galway to Clifden rail line along much of its length. Therefore, the greenway has the potential to cross watercourses within Lough Corrib SAC, could require the construction of a new bridge structure and, depending on the bridge design and construction methodology used, could present a barrier to species movement along those river/stream corridors—at least temporarily during construction.</p> <p>The greenway could also impact on Ross Lake and Woods SAC during operation, as the rail line passes through the SAC. If sections of the greenway were to be lit within the foraging/commuting range of the Lesser horseshoe roost for which the site is designated (potentially the key habitat area supporting the roost), there is the potential for a barrier effect to occur which could affect the SACs Lesser horseshoe population through preventing bats following commuting routes or accessing important foraging habitat.</p> <p>Creating a barrier to species movement within an SAC (or in the case of bat species within their foraging/commuting range) could negatively affect the conservation objectives and constitute an adverse effect on the integrity of Lough Corrib SAC.</p>	<p>Lough Corrib SAC</p> <p>Ross Lake and Woods SAC</p>		<p>GTS – Barrier Effect</p> <p>See Box 10 in Section 3.2 of the NIR</p>
	<p>Public Transport Network (All Elements of the GTS)</p> <p>Achieving the strategic aims for the public transport network will/may require the provision of (or may be dependent on the delivery of) additional bridge structures within European sites which, depending on the bridge design and construction methodology used, have the potential to—at least temporarily during construction— present a barrier to species movement along the River Corrib:</p> <ul style="list-style-type: none"> ▪ The Cross-City Link includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge which could affect Otter, Atlantic salmon, Brook lamprey and Sea lamprey in the River Corrib. As a host species to the larval (glochidial) stage of the Freshwater pearl mussel’s life cycle (also a QI species of Lough 	<p>Lough Corrib SAC</p>		<p>GTS – Barrier Effect</p> <p>See Box 10 in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>Corrib SAC), impacts to salmonid fish species could have knock-on effects on the SACs Freshwater pearl mussel population.</p> <p>Creating a barrier to species movement within an SAC could negatively affect the conservation objectives and constitute an adverse effect on the integrity of Lough Corrib SAC.</p>			
	<p>Cycle Network (Non-Greenway Elements of the GTS) and Pedestrian Network (All Elements of the GTS)</p> <p>Achieving the strategic aims for the cycle and pedestrian networks will/may require the provision of (or may be dependent on the delivery of) additional bridge structures within European sites which, depending on the bridge design and construction methodology used, have the potential to—at least temporarily during construction— present a barrier to species movement along the River Corrib and the coastline of Galway Bay:</p> <ul style="list-style-type: none"> ▪ The proposed new cycle/pedestrian bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside crosses Lough Corrib SAC, as dos the proposed new bridge south of the existing Salmon Weir Bridge, and could potentially affect Otter, Atlantic salmon, Brook lamprey and Sea lamprey in the River Corrib. As a host species to the larval (glochidial) stage of the Freshwater pearl mussel’s life cycle (also a QI species of Lough Corrib SAC), impacts to salmonid fish species could have knock-on effects on the SACs Freshwater pearl mussel population. ▪ The proposed new cycle/pedestrian bridge over the River Corrib, to the south of Wolfe Tone Bridge, must cross Galway Bay Complex SAC and could potentially affect Otter and Harbour seal ▪ Connecting a greenway between Eyre Square and Renmore could potentially affect Otter and Harbour seal in the vicinity of Galway Harbour and Lough Atalia. <p>Creating a barrier to species movement within an SAC could negatively affect the conservation objectives and constitute an adverse effect on the integrity of Lough Corrib SAC.</p>	<p>Lough Corrib SAC Galway Bay Complex SAC</p>		<p>GTS – Barrier Effect See Box 10 in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
<p><u>Mortality risk</u> Mortality and/or road traffic collision risk to fauna species</p>	<p>N6 Galway City Ring Road (N6 GCRR)</p> <p>The N6 GCRR will include for the construction of a new bridge structure across the River Corrib and a new road in the vicinity of the Coolagh lakes. Both of these areas are used by Otter (a QI species of Lough Corrib SAC) and there is a permanent risk of mortality/road traffic collision impacts if Otter gain access to the road carriageway. Constructing a new bridge over the River Corrib poses a (temporary) risk of construction materials/debris falling into the river and injuring/killing QI aquatic fish species—Atlantic salmon, Brook lamprey and River lamprey. As a host species to the larval (glochidial) stage of the Freshwater pearl mussel’s life cycle (also a QI species of Lough Corrib SAC), impacts to salmonid fish species could have knock-on effects the SACs Freshwater pearl mussel population. A new bridge across the River Corrib poses a permanent collision risk with the bridge structure to SCI bird species of Lough Corrib SPA and/or Inner Galway Bay SPA commuting along the river corridor.</p> <p>Either of these impact pathways has the potential to negatively affect the conservation objectives and constitute an adverse effect on the integrity of these European sites.</p>	<p>Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA</p>	<p>Galway City Council Development Plan 2017-2023 GCiDP 01, GCiDP 02, GCiDP 03, GCiDP 04, GCiDP 05, GCiDP 06, GCiDP 08, GCiDP 11, GCiDP 21, GCiDP 22, GCiDP 23</p> <p>Galway County Development Plan 2015-2021 GCoDP 01, GCoDP 02, GCoDP 03, GCoDP 04, GCoDP 06, GCoDP 07</p>	<p>GTS – Mortality Risk See Box 11 in Section 3.2 of the NIR</p>
	<p>Public Transport Network (All Elements of the GTS)</p> <p>Achieving the strategic aims for the public transport network will/may require the provision of (or may be dependent on the delivery of) additional bridge structures within European sites which have the potential to result in the mortality of QI/SCI species as a result of construction falling onto aquatic/marine habitats:</p> <ul style="list-style-type: none"> ▪ The Cross-City Link includes for a new pedestrian bridge across Lough Corrib SAC, south of the Salmon Weir Bridge which could affect Otter, Atlantic salmon, Brook lamprey and Sea lamprey in the River Corrib. As a host species to the larval (glochidial) stage of the Freshwater pearl mussel’s life cycle (also a QI species of Lough Corrib SAC), impacts to salmonid fish species could have knock-on effects on the SACs Freshwater pearl mussel population. Any new bridge structure poses a collision risk to SCI bird species of Lough Corrib SPA and/or 	<p>Lough Corrib SAC Lough Corrib SPA Inner Galway Bay SPA</p>		<p>GTS – Mortality Risk See Box 11 in Section 3.2 of the NIR</p>

Potential Impact Pathway	Description	European sites Potentially Affected	Environmental Protection Policies	Mitigation Measures
	<p>Inner Galway Bay SPA commuting along the river corridor.</p> <p>The mortality risk posed by new bridges has the potential to negatively affect the conservation objectives and constitute an adverse effect on the integrity of these European sites.</p>			
	<p>Cycle Network (Non-Greenway Elements of the GTS) and Pedestrian Network (All Elements of the GTS)</p> <p>Achieving the strategic aims for the cycle and pedestrian networks will/may require the provision of (or may be dependent on the delivery of) additional bridge structures within European sites which have the potential to result in the mortality of QI/SCI species as a result of construction falling onto aquatic/marine habitats:</p> <ul style="list-style-type: none"> ▪ The proposed new cycle/pedestrian bridge over the River Corrib along the line of the Old Clifden Railway at NUI Galway/Waterside crosses Lough Corrib SAC and could affect Otter, Atlantic salmon, Brook lamprey and Sea lamprey in the River Corrib. ▪ Connecting a greenway between Eyre Square and Renmore could affect Otter and Harbour seal in the vicinity of Galway Harbour and Lough Atalia. ▪ A proposed new cycle/pedestrian bridge to the south of Wolfe Tone Bridge could affect Otter and Harbour seal in the vicinity of Galway Harbour and Lough Atalia. ▪ Any new bridge structures pose a risk of colliding with the bridge structure to SCI bird species of Lough Corrib SPA and/or Inner Galway Bay SPA commuting along the river corridor/coastline. <p>The mortality risk posed by new bridges has the potential to negatively affect the conservation objectives and constitute an adverse effect on the integrity of these European sites.</p>	<p>Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA</p>		<p>GTS – Mortality Risk See Box 11 in Section 3.2 of the NIR</p>

References

Arup (2016) N6 Galway City Transport Project: Route Selection Report.

Galway County Council (2015) Galway County Development Plan 2015-2021

Galway City Council (2016) Galway City Council Development Plan 2017-2023

Galway City Council (2016) Galway Transport Strategy

Table B-2: Source-Pathway-Receptor Summary Matrix—potential impact pathways connecting elements of Variation No. 1 to the Galway County Development Plan 2015 – 2021 (related to incorporating the Galway Transport Strategy) to European sites

	European sites affected by specific Project Elements of the Galway Transport Strategy						
Potential Impact Pathway	N6 Galway City Ring Road (N6 GCRR)	Bearna Greenway	Galway to Dublin Cycleway (Galway City to Oranmore)	Galway to Oughterard Greenway	Public Transport Network All Elements of the GTS	Cycle Network Non-Greenway Elements of the GTS	Pedestrian Network All Elements of the GTS
Habitat Loss Direct loss of habitat (terrestrial or freshwater) in European site – habitat fragmentation is directly associated with this impact pathway	Lough Corrib SAC	Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA
Habitat degradation – hydrogeology Tunnelling and/or deep excavations affecting the existing hydrogeological regime	Lough Corrib SAC Lough Corrib SPA Inner Galway Bay SPA Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC	Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA

	European sites affected by specific Project Elements of the Galway Transport Strategy						
Potential Impact Pathway	N6 Galway City Ring Road (N6 GCRR)	Bearna Greenway	Galway to Dublin Cycleway (Galway City to Oranmore)	Galway to Oughterard Greenway	Public Transport Network All Elements of the GTS	Cycle Network Non-Greenway Elements of the GTS	Pedestrian Network All Elements of the GTS
<u>Habitat degradation – tunnelling/excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	Lough Corrib SAC						
<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA
<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA				Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA		

	European sites affected by specific Project Elements of the Galway Transport Strategy						
Potential Impact Pathway	N6 Galway City Ring Road (N6 GCRR)	Bearna Greenway	Galway to Dublin Cycleway (Galway City to Oranmore)	Galway to Oughterard Greenway	Public Transport Network All Elements of the GTS	Cycle Network Non-Greenway Elements of the GTS	Pedestrian Network All Elements of the GTS
Habitat degradation – shading Shading effects of bridge structures (sunlight, direct precipitation) on habitats	Lough Corrib SAC	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC	Lough Corrib SAC	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA
Habitat degradation – air quality A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure) ¹⁵	Lough Corrib SAC						
Habitat degradation – non-native invasive species Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA
Disturbance/displacement Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA

¹⁵ As one of the key principles of the GTS is to “To promote and encourage sustainable transport, and in particular to make it convenient and attractive to walk, cycle or use public transport”, there may be an overall positive impact compared with the “Do-nothing” scenario in urban and suburban areas of Galway City and the associated European sites (Lough Corrib SAC, Galway Bay Complex SAC and Inner Galway Bay SPA

	European sites affected by specific Project Elements of the Galway Transport Strategy						
Potential Impact Pathway	N6 Galway City Ring Road (N6 GCRR)	Bearna Greenway	Galway to Dublin Cycleway (Galway City to Oranmore)	Galway to Oughterard Greenway	Public Transport Network All Elements of the GTS	Cycle Network Non-Greenway Elements of the GTS	Pedestrian Network All Elements of the GTS
Barrier effect New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	Lough Corrib SAC	Galway Bay Complex SAC		Lough Corrib SAC Ross Lake and Woods SAC	Lough Corrib SAC	Lough Corrib SAC Galway Bay Complex SAC	Lough Corrib SAC Galway Bay Complex SAC
Mortality risk Mortality/road traffic collision risk to fauna species	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA				Lough Corrib SAC Lough Corrib SPA Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA

Appendix C

Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of Affected European Sites, their Site-Specific Conservation Objectives, and Impact Pathways of Variation No. 1 to incorporate the Galway Transport Strategy (GTS)

C1

Table C-1 in Appendix C1 lists the Qualifying Interest (QIs) and Special Conservation Interests (SCIs) of European sites potentially affected by the GTS in the absence of the mitigation measures outlined in the GTS.

Table C-2 lists the Impact Pathway Assessment criteria used to identify and analyse the impact pathways between the project elements of the GTS and the European sites. Table C-2 then lists the site-specific conservation objectives (SSCOs) that support the conservation condition of the QIs/SCIs of potentially affected European sites and presents the results of analysis of which attributes/targets could potentially be affected by project elements within the GTS as incorporated into the Galway County Development Plan 2015 – 2021 by Variation No. 1.

Where the SSCO for a given European site have been published, they are included in this table. However, SSCO have not been published for many European sites. In such cases, sample SSCO have been prepared based on those available for other European sites with the same QIs/SCIs (as noted in each case in Table C-2 for QI species and in Table C-3 for SCIs).

Where no published SSCO were available for a given QI/SCI, the text of the generic conservation objective is used.

Table C-1: Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of European Sites potentially affected

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

Galway Bay Complex SAC [000268]**Annex I Habitats**

[1140] Mudflats and sandflats not covered by seawater at low tide

[1150] Coastal lagoons*

[1160] Large shallow inlets and bays

[1170] Reefs

[1220] Perennial vegetation of stony banks

[1310] *Salicornia* and other annuals colonising mud and sand

[1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

[1410] Mediterranean salt meadows (*Juncetalia maritimi*)

[3180] Turloughs *

[5130] *Juniperus communis* formations on heaths or calcareous grasslands

[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*)
(*important orchid sites)

[7210] Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* *

[7230] Alkaline fens

Annex II Species

[1355] Otter *Lutra lutra*

[1365] Harbour seal *Phoca vitulina*

Ross Lake and Woods SAC [001312]**Annex I Habitats**

[3140] Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.

Annex II Species

[1303] Lesser Horseshoe Bat - *Rhinolophus hipposideros*

Lough Corrib SPA [004042]

Greenland white-fronted goose *Anser albifrons flavirostris* [A395] – Wintering

Gadwall *Anas strepera* [A051] – Wintering

Shoveler *Anas clypeata* [A056] – Wintering

Pochard *Aythya ferina* [A059] – Wintering

Tufted duck *Aythya fuligula* [A061] – Wintering

Common scoter *Melanitta nigra* [A065] – Breeding

Hen harrier <i>Circus cyaneus</i> [A082] – Wintering
Coot <i>Fulica atra</i> [A125] – Wintering
Golden plover <i>Pluvialis apricaria</i> [A140] – Wintering
Black-headed gull <i>Chroicocephalus ridibundus</i> [A179] – Breeding/Wintering
Common gull <i>Larus canus</i> [A182] – Breeding/Wintering
Common tern <i>Sterna hirundo</i> [A193] – Breeding
Arctic tern <i>Sterna paradisaea</i> [A194] – Breeding
Wetlands and Waterbirds [A999]
Inner Galway Bay SPA [004031]
Great northern diver <i>Gavia immer</i> [A003] – Wintering
Cormorant <i>Phalacrocorax carbo</i> [A017] – Breeding/Wintering
Grey heron <i>Ardea cinerea</i> [A028] – Wintering
Light-bellied brent goose <i>Branta bernicla hrota</i> [A046] – Wintering
Wigeon <i>Anas penelope</i> [A050] – Wintering
Teal <i>Anas crecca</i> [A052] – Wintering
Shoveler <i>Anas clypeata</i> [A056] – Wintering
Red-breasted merganser <i>Mergus serrator</i> [A069] – Wintering
Ringed plover <i>Charadrius hiaticula</i> [A137] – Wintering
Golden plover <i>Pluvialis apricaria</i> [A140] – Wintering
Lapwing <i>Vanellus vanellus</i> [A142] – Wintering
Dunlin <i>Calidris alpina</i> [A149] – Wintering
Bar-tailed godwit <i>Limosa lapponica</i> [A157] – Wintering
Curlew <i>Numenius arquata</i> [A160] – Wintering
Redshank <i>Tringa totanus</i> [A162] – Wintering
Turnstone <i>Arenaria interpres</i> [A169] – Wintering
Black-headed gull <i>Chroicocephalus ridibundus</i> [A179] – Wintering
Common gull <i>Larus canus</i> [A182] – Wintering
Sandwich tern <i>Sterna sandvicensis</i> [A191] – Breeding
Common tern <i>Sterna hirundo</i> [A193] – Breeding
Wetlands and Waterbirds [A999]

Cregganna Marsh SPA
Greenland white-fronted goose <i>Anser albifrons flavirostris</i> [A395] – Wintering
Rahasane Turlough SAC
Annex I Habitats
[3180] Turloughs *
Rahasane Turlough SPA
Whooper swan <i>Cygnus cygnus</i> [A038] – Wintering
Wigeon <i>Anas penelope</i> [A050] – Wintering
Golden plover <i>Pluvialis apricaria</i> [A140] – Wintering
Black-tailed godwit <i>Limosa limosa</i> [A156] – Wintering
Greenland white-fronted goose <i>Anser albifrons flavirostris</i> [A395] – Wintering
Wetlands and Waterbirds [A999]
Castletaylor Complex SAC
Annex I Habitats
[3180] Turloughs *
[4060] Alpine and Boreal heaths
[5130] <i>Juniperus communis</i> formations on heaths or calcareous grasslands
[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>) (*important orchid sites)
[8240] Limestone pavements *
Kiltiernan Turlough SAC
Annex I Habitats
[3180] Turloughs *
Lough Fingall Complex SAC
Annex I Habitats
[3180] Turloughs *
[4060] Alpine and Boreal heaths
[5130] <i>Juniperus communis</i> formations on heaths or calcareous grasslands
[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>) (*important orchid sites)
[7210] Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> *
[8240] Limestone pavements *

Annex II Species

[1303] Lesser Horseshoe Bat - <i>Rhinolophus hipposideros</i>

Table C-2: Site specific conservation objectives of the Qualifying Interests of European sites within the zone of Influence (ZoI) of Variation No. 1 to the Galway County Development Plan 2015 – 2021 (related to incorporating the GTS) and analysis of likely significant effects as a result of impact along the identified impact pathways, in the absence of the mitigation measures that have been incorporated into the GTS

Impact Pathway Assessment Criteria	
Impact Pathway Assessment criteria:	
1) Are there elements of the GTS that lie within, or in close proximity to, the boundary of a European site and therefore could result in habitat loss, habitat fragmentation, or habitat degradation (as a result of tunnelling/excavation works or shading from built structures):	<ul style="list-style-type: none"> ▪ Habitat loss ▪ Habitat fragmentation ▪ Habitat degradation – tunnelling/excavation ▪ Habitat degradation – shading
2) Are there elements of the GTS with hydrogeological linkages to European sites and therefore the potential for habitat degradation as a result of impacts to groundwater quality and/or quantity:	<ul style="list-style-type: none"> ▪ Habitat degradation – hydrogeology
3) Are there elements of the GTS (either during construction or operation) with hydrological linkages to European sites and therefore the potential for habitat degradation as a result of impacts to the hydrological regime and/or surface and coastal water quality, or effects to the tidal regime supporting coastal/estuarine habitats:	<ul style="list-style-type: none"> ▪ Habitat degradation – water quality
4) Are there elements of the GTS that lie within, or in close proximity to, the boundary of a European site and therefore could result in habitat degradation as a result of a reduction in air quality affecting fauna species and/or vegetation composition and structure:	<ul style="list-style-type: none"> ▪ Habitat degradation – air quality
5) Are there elements of the GTS that could result in habitat degradation as a result of introducing or spreading non-native invasive plant species:	<ul style="list-style-type: none"> ▪ Habitat degradation – non-native invasive species
6) Are there elements of the GTS that lie within, or in close proximity to, the boundary of a European site (or an important ex-situ site for SCI bird species) and therefore could result in the disturbance or displacement of fauna species:	<ul style="list-style-type: none"> ▪ Disturbance/displacement
7) Are there elements of the GTS that could pose a barrier to QI/SCI species movement within their range(s):	<ul style="list-style-type: none"> ▪ Barrier effect
8) Are there elements of the GTS that could pose a direct mortality risk to QI/SCI species:	<ul style="list-style-type: none"> ▪ Mortality risk
<p> Indicates where the GTS in the absence of mitigation measures could affect the listed attributes/targets here via the potential impact pathways listed above in the assessment criteria. The numbers in the table below correspond to the impact pathway assessment criteria listed above.</p>	

Substratum quality: oxygen availability	Redox potential	Restore to no more than 20% decline from water column to 5cm depth in substrate								
Hydrological regime: flow variability	Metres per second	Restore appropriate hydrological regimes								
Host fish	Number	Maintain sufficient juvenile salmonids to host glochidial larvae								

1092 White-clawed crayfish *Austropotamobius pallipes*

To maintain or restore the favourable conservation condition of White-clawed crayfish, which is defined by the following list of attributes and targets (based upon *Conservation Objectives: Lower River Shannon SAC 002165, Version 1.0*):

* Note that the absence of the White-clawed crayfish has been confirmed from that portion of Lough Corrib SAC downstream of Menlough¹ but its distribution elsewhere in the River Corrib System is unknown. Therefore in applying the precautionary principle, there is the potential for works associated with the construction of the greenway between Galway City and Oughterard to impact in this species within Lough Corrib SAC as the greenway will cross watercourses within, or that drain to, the SAC.

Attribute	Measure	Target	Potential Impact Pathways							
			1	2	3	4	5	6	7	8
Distribution	Occurrence	No reduction from baseline.								
Population structure: recruitment	Percentage occurrence of juveniles and females with eggs	Juveniles and/or females with eggs in at least 50% of positive samples.								
Negative indicator species	Occurrence	No alien crayfish species.								
Disease	Occurrence	No instances of disease.								
Water quality	EPA Q value	At least Q3-4 at all sites sampled by EPA.								

¹ N6 Galway City Transport Project: Route Selection Report – A.4.2 Ecological Constraints Report (Arup, 2015)

Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain the typical vegetated shingle flora including the range of sub-communities within the different zones.								
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover.								

1303 Lesser Horseshoe Bat *Rhinolophus hipposideros* - Lough Corrib SAC and Lough Fingall Complex SAC²

To maintain the favourable conservation condition of Lesser Horseshoe Bat which is defined by the following list of attributes and targets (based upon Conservation Objectives: Kenmare River SAC 002158, Version 1) :

Attribute	Measure	Target	Potential Impact Pathways									
			1	2	3	4	5	6	7	8		
Population per roost	Number	Minimum number for the winter roost X; Minimum of X for summer roost.										
Winter roosts	Condition	No decline										
Summer roosts	Condition	No decline										
Number of auxiliary roosts	Number and condition	No decline										
Extent of potential foraging habitat	Hectares	No significant decline										
Linear features: length	Metres	No significant loss, within 2.5km of qualifying roosts.										
Light pollution	Lux	No significant increase in artificial light intensity adjacent to named roosts or along commuting routes within 2.5km of those roosts.										

² Although the Lesser horseshoe bat was present within the scheme study area, the roost that forms the QI population for this European site (Eborhall House) is 11km away from the nearest GTS project (the Galway to Oughterard Greenway), on the northern shore of Lough Corrib. This distance would be regarded to be beyond the normal core foraging range of the Eborhall House population and beyond the normal commuting range of this species except on exceptional occasions or over long periods of time – for example, bats dispersing and moving between areas in the wider landscape over a period of many years/generations. Similarly, Lough Fingall Complex SAC is 8km from the nearest of the GTS projects (the proposed bus network in Oranmore town centre), beyond the normal core foraging range of bats in the SAC.

Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime.								
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession.								
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward.								
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of the saltmarsh area vegetated.								
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub communities with typical species listed in Saltmarsh Monitoring Project (McCorry and Ryle, 2009).								
Vegetation structure: negative indicator species- <i>Spartina anglica</i>	Hectares	No significant expansion of common cordgrass (<i>Spartina anglica</i>), with an annual spread of less than 1%.								

1393 Slender Green Feather-moss *Drepanocladus vernicosus*

To maintain or restore the favourable conservation condition of Slender Green Feather-moss in Lough Corrib SAC.

* Note that the absence of **Slender Green Feather-moss** has been confirmed from that portion of Lough Corrib SAC within the Route Selection study area associated with the N6 GGCTP project³ but its distribution elsewhere in the SAC (save for the known site at Gortachalla) is unknown. Therefore in applying the precautionary principle, there is the potential for works associated with the construction of the greenway between Galway City and Oughterard to impact in this species within Lough Corrib SAC as the greenway will cross watercourses within, or that drain to, the SAC.

The favourable conservation status of a species is achieved when:	Potential Impact Pathways							
	1	2	3	4	5	6	7	8
Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats.								
Natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.								

³ N6 Galway City Transport Project: Route Selection Report – A.4.2 Ecological Constraints Report (Arup, 2015)

There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.										
1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)										
To restore the favourable conservation condition of Mediterranean salt meadows (<i>Juncetalia maritimi</i>) which is defined by the following list of attributes and targets (taken from <i>Conservation Objectives: Galway Bay Complex SAC 000268. Version 1</i>):										
Attribute	Measure	Target	Potential Impact Pathways							
			1	2	3	4	5	6	7	8
Habitat area	Hectares	Area increasing, subject to natural processes, including erosion and succession.								
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes.								
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions								
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession								
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime								
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession								
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward								
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated								
Vegetation composition: typical species	Percentage cover	Maintain range of sub-communities with typical species listed in Saltmarsh Monitoring Project (McCorry and Ryle, 2009).								
Vegetation structure: negative	Hectares	No significant expansion of common cordgrass (<i>Spartina anglica</i>), with an annual spread of less than 1%								

Water quality: transparency	Metres	Maintain appropriate Secchi transparency. There should be no decline in Secchi depth/transparency.								
Water quality: nutrients	µg/l P; mg/l N	Maintain the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species.								
Water quality: phytoplankton biomass	µg/l Chlorophyll a	Maintain appropriate water quality to support the habitat, including high chlorophyll a status.								
Water quality: phytoplankton composition	EPA phytoplankton composition metric	Maintain appropriate water quality to support the habitat, including high phytoplankton composition status.								
Water quality: attached algal biomass	Algal cover and EPA phytobenthos metric	Maintain trace/ absent attached algal biomass (<5% cover) and high phytobenthos status.								
Water quality: macrophyte status	EPA macrophyte metric (The Free Index)	Maintain high macrophyte status.								
Acidification status	pH units, mg/l	Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes								
Water colour	mg/l PtCo	Maintain appropriate water colour to support the habitat.								
Dissolved organic carbon (DOC)	mg/l	Maintain appropriate organic carbon levels to support the habitat.								
Turbidity	nephelometric turbidity units/ mg/l SS/ other appropriate units	Maintain appropriate turbidity to support the habitat.								
Fringing habitat: area and condition	Hectares	Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of habitat 3110.								

Hydrological regime: water level fluctuations	Metres	Maintain appropriate natural hydrological regime necessary to support the habitat.								
Lake substratum quality	Various	Maintain appropriate substratum type, extent and chemistry to support the vegetation.								
Water quality: transparency	Metres	Maintain appropriate Secchi transparency. There should be no decline in Secchi depth/transparency.								
Water quality: nutrients	µg/l P or mg/l N	The concentration of nutrients in the water column should be sufficiently low to prevent changes in species composition or habitat condition.								
Water quality: phytoplankton biomass	µg/l Chlorophyll a	Maintain appropriate water quality to support the habitat, including high chlorophyll a status.								
Water quality: phytoplankton composition	EPA phytoplankton composition metric	Maintain appropriate water quality to support the habitat, including high phytoplankton composition status.								
Water quality: attached algal biomass	Algal cover and EPA phytobenthos metric	Maintain trace/ absent attached algal biomass (<5% cover) and high phytobenthos status.								
Water quality: macrophyte status	EPA macrophyte metric (The Free Index)	Maintain high macrophyte status.								
Acidification status	pH units, mg/l	Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes.								
Water colour	mg/l PtCo	Maintain appropriate water colour to support the habitat.								
Dissolved organic carbon (DOC)	mg/l	Maintain appropriate organic carbon levels to support the habitat.								
Turbidity	nephelometric turbidity units/ mg/l SS/ other appropriate unit	Maintain appropriate turbidity to support the habitat.								

Formation structure: cover and height	Percentage and metres	Well-developed structure with an open to closed cover of juniper up to or exceeding 0.5 m in height with associated species .								
Formation structure: community diversity and extent	Hectares	Appropriate diversity and extent of formation .								
Formation structure: cone-bearing plants	Percentage	At least 10% of plants bearing cones.								
Formation structure: seedling recruitment	Percentage	At least 10% of juniper plants within the formation are seedlings.								
Formation structure: dead plants	Percentage	Not more than 10% of plants dead .								
Vegetation composition: typical species	Occurrence	A variety of typical native species with a minimum of 10 species present (excluding negative indicator species) .								
Vegetation composition: negative indicator species	Occurrence	Negative indicator species, particularly non-native invasive species, absent or under control .								

Vegetation composition: notable species	Number	No decline, subject to natural processes.	Red	Red	Red	Grey	Red	Grey	Grey	Grey
Vegetation composition: negative indicator moss species	Percentage	Bog mosses (<i>Sphagnum</i> spp.) not more than 10% cover; hair mosses (<i>Polytrichum</i> spp.) not more than 25% cover.	Red	Red	Grey	Grey	Grey	Grey	Grey	Grey
Vegetation structure: woody species and bracken (<i>Pteridium aquilinum</i>)	Percentage	Cover of woody species and bracken not more than 5% cover.	Red	Red	Grey	Grey	Grey	Grey	Grey	Grey
Vegetation structure: broadleaf herb: grass ratio	Percentage	Broadleaf herb component of vegetation between 40 and 90%.	Red	Red	Red	Grey	Red	Grey	Grey	Grey
Vegetation structure: sward height	Percentage	30-70% of sward between 10 and 80cm high.	Red	Grey	Red	Grey	Red	Grey	Grey	Grey
Vegetation structure: litter	Percentage at a representative number of monitoring stops	Litter cover not more than 25%	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
Physical structure: bare ground	Percentage	Not more than 10% bare ground.	Grey	Grey	Red	Grey	Grey	Grey	Grey	Grey
Physical structure: bare soil	Percentage at a representative number of monitoring stops	Not more than 10% bare soil	Grey	Grey	Red	Grey	Grey	Grey	Grey	Grey

positive indicator species	number of 2m x 2m monitoring stops									
Vegetation composition: <i>Rhynchospora</i> spp	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of white beaked sedge (<i>Rhynchospora alba</i>) and brown beaked sedge (<i>R. fusca</i>) at least 10%.								
Vegetation composition: potential dominant species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of each of the potential dominant species less than 35%.								
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 1%.								
Vegetation composition: non-native species	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%.								
Vegetation composition: native trees and scrub	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of scattered native trees and shrubs less than 10%.								
Vegetation structure: <i>Sphagnum</i> condition	Condition of <i>Sphagnum</i> at a representative number of 2m x 2m monitoring stops	Less than 10% of the <i>Sphagnum</i> cover is crushed, broken and/or pulled up.								
Vegetation structure: signs of browsing	Percentage of shoots browsed at a representative	Last complete growing season's shoots of ericoids, crowberry (<i>Empetrum nigrum</i>) and bog-myrtle (<i>Myrica gale</i>) showing signs of browsing collectively less than 33%.								

	number of monitoring stops								
Woodland structure: ling cover	Percentage cover at a representative number of monitoring stops	Ling (<i>Calluna vulgaris</i>) cover not more than 40%							
Woodland structure: bryophyte cover	Percentage cover at a representative number of monitoring stops	Bryophyte cover at least 50%, with bog moss (<i>Sphagnum</i> spp.) cover at least 25%							
Woodland structure: tree size classes	Occurrence	Each size class present							
Woodland structure: senescent and dead wood	Occurrence	Senescent or dead wood present							

References

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Galway Harbour Company (2014) Galway Harbour Extension Environmental Impact Statement.

O'Connor, W. (2007) A Survey of Juvenile Lamprey Populations in the Corrib and Suir Catchments. *Irish Wildlife Manuals* No. 26. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.

Appendix D

County and City Development Plan-Level Environmental Protection Policies

D1

This appendix lists the references for overarching Plan-level environmental protection policies within the Galway County Development Plan 2015-2021 and the Galway City Development Plan 2017-2023 referred to in this report. It also sets out how these relate to protecting European sites in conjunction with the GTS-specific mitigation measures, which have been incorporated into the Strategy, with reference to the potential impact pathways identified in the NIR (Table D-1). The full text of these Plan level environmental protection policies is included for reference in Table D-2.

Table D-1: Environmental protection policies from the Galway City Council Development Plan 2017-2023 and the Galway County Development Plan 2015-2021 referred to in the NIR and how these relate to protecting European sites from potential impacts due to the potential GTS impact pathways

Potential Impact Pathway	Environmental protection policies from the Galway City Council Development Plan 2017-2023	Environmental protection policies from the Galway County Development Plan 2015-2021
Habitat Loss	GCiDP 01 (Natural Heritage, Recreation and Amenity Aim) GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy) GCiDP 03 (Policy 4.1 Green Network) GCiDP 04 (European Designated sites) GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 06 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways) GCiDP 07 (Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way) GCiDP 08 (Environment and Infrastructure Aim) GCiDP 9 (Policy 9.3 Flood Risk Assessment) GCiDP 10 (Specific Development Standards) GCiDP 19 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 21 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways) GCiDP 22 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)	GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment) GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment) GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites) GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation) GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 18 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 2 Biodiversity and Ecological Networks) GCoDP 19 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 6 Protection of Bats and Bats Habitats)
Habitat degradation – hydrogeology	GCiDP 01 (Natural Heritage, Recreation and Amenity Aim) GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy) GCiDP 03 (Policy 4.1 Green Network) GCiDP 04 (European Designated sites) GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 06 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways) GCiDP 08 (Environment and Infrastructure Aim) GCiDP 10 (Specific Development Standards) GCiDP 11 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways) GCiDP 12 (Policy 9.6 Water Quality) GCiDP 13 (Policy 9.7 Water Services) GCiDP 14 (Specific Development Standards) GCiDP 20 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 21 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)	GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment) GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment) GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites) GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation) GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 08 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 09 (Water Policies and Objectives - Objective WS 1 Protection of Ground Waters) GCoDP 10 (Water Policies and Objectives - Objective WS 11 Regionally & Locally Important Aquifers)

		<p>GCoDP 15 (Natural Heritage & Biodiversity Policies & Objectives - Policy NHB 4)</p> <p>GCoDP 16 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 3 Water Resources)</p> <p>GCoDP 18 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 2 Biodiversity and Ecological Networks)</p> <p>GCoDP 19 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 6 Protection of Bats and Bats Habitats)</p>
Habitat degradation – tunnelling/excavation	<p>GCiDP 01 (Natural Heritage, Recreation and Amenity Aim)</p> <p>GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy)</p> <p>GCiDP 03 (Policy 4.1 Green Network)</p> <p>GCiDP 04 (European Designated sites)</p> <p>GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)</p> <p>GCiDP 08 (Environment and Infrastructure Aim)</p> <p>GCiDP 10 (Specific Development Standards)</p> <p>GCiDP 20 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)</p> <p>GCiDP 21 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p>	<p>GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment)</p> <p>GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment)</p> <p>GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites)</p> <p>GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation)</p> <p>GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives)</p> <p>GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives)</p>
Habitat degradation – water quality impacts during construction	<p>GCiDP 01 (Natural Heritage, Recreation and Amenity Aim)</p> <p>GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy)</p> <p>GCiDP 03 (Policy 4.1 Green Network)</p> <p>GCiDP 04 (European Designated sites)</p> <p>GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)</p> <p>GCiDP 06 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p> <p>GCiDP 08 (Environment and Infrastructure Aim)</p> <p>GCiDP 10 (Specific Development Standards)</p> <p>GCiDP 11 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p> <p>GCiDP 12 (Policy 9.6 Water Quality)</p> <p>GCiDP 13 (Policy 9.7 Water Services)</p> <p>GCiDP 14 (Specific Development Standards)</p> <p>GCiDP 15 (Environment and Infrastructure Strategy)</p> <p>GCiDP 16 (Policy 9.3 Flood Risk Assessment)</p> <p>GCiDP 17 (Policy 9.8 Sustainable Urban Drainage Systems (SUDS))</p> <p>GCiDP 20 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)</p>	<p>GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment)</p> <p>GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment)</p> <p>GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites)</p> <p>GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation)</p> <p>GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives)</p> <p>GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives)</p> <p>GCoDP 12 (Water Policies and Objectives - Objective WS 2 EU Policies and Directives)</p> <p>GCoDP 15 (Natural Heritage & Biodiversity Policies & Objectives - Policy NHB 4)</p> <p>GCoDP 16 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 3 Water Resources)</p>

	<p>GCiDP 21 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways) GCiDP 22 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p>	<p>GCoDP 18 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 2 Biodiversity and Ecological Networks) GCoDP 19 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 6 Protection of Bats and Bats Habitats)</p>
<p>Habitat degradation – water quality impacts during operation</p>	<p>GCiDP 01 (Natural Heritage, Recreation and Amenity Aim) GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy) GCiDP 03 (Policy 4.1 Green Network) GCiDP 04 (European Designated sites) GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 06 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways) GCiDP 08 (Environment and Infrastructure Aim) GCiDP 10 (Specific Development Standards) GCiDP 11 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways) GCiDP 12 (Policy 9.6 Water Quality) GCiDP 13 (Policy 9.7 Water Services) GCiDP 14 (Specific Development Standards) GCiDP 15 (Environment and Infrastructure Strategy) GCiDP 16 (Policy 9.3 Flood Risk Assessment) GCiDP 17 (Policy 9.8 Sustainable Urban Drainage Systems (SUDS)) GCiDP 20 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 21 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways) GCiDP 22 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p>	<p>GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment) GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment) GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites) GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation) GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 12 (Water Policies and Objectives - Objective WS 2 EU Policies and Directives) GCoDP 13 (Wastewater Policies and Objectives - Objective WW 1 EU Policies and Directives) GCoDP 14 (Wastewater Policies and Objectives - Objective WW 6 Adherence to Environmental Standards) GCoDP 15 (Natural Heritage & Biodiversity Policies & Objectives - Policy NHB 4) GCoDP 16 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 3 Water Resources) GCoDP 18 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 2 Biodiversity and Ecological Networks) GCoDP 19 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 6 Protection of Bats and Bats Habitats)</p>
<p>Habitat degradation – shading</p>	<p>GCiDP 01 (Natural Heritage, Recreation and Amenity Aim) GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy) GCiDP 03 (Policy 4.1 Green Network) GCiDP 04 (European Designated sites) GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 06 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways) GCiDP 08 (Environment and Infrastructure Aim)</p>	<p>GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment) GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment) GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites)</p>

	<p>GCiDP 10 (Specific Development Standards) GCiDP 20 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)</p>	<p>GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation) GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives)</p>
Habitat degradation – air quality	<p>GCiDP 01 (Natural Heritage, Recreation and Amenity Aim) GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy) GCiDP 03 (Policy 4.1 Green Network) GCiDP 04 (European Designated sites) GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 08 (Environment and Infrastructure Aim) GCiDP 10 (Specific Development Standards) GCiDP 18 (Policy 9.10 Air Quality and Noise) GCiDP 20 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)</p>	<p>GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment) GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment) GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites) GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation) GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 18 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 2 Biodiversity and Ecological Networks)</p>
Habitat degradation – non-native invasive species	<p>GCiDP 01 (Natural Heritage, Recreation and Amenity Aim) GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy) GCiDP 03 (Policy 4.1 Green Network) GCiDP 04 (European Designated sites) GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 06 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways) GCiDP 08 (Environment and Infrastructure Aim) GCiDP 10 (Specific Development Standards) GCiDP 19 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 20 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 21 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p>	<p>GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment) GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment) GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites) GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation) GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 17 (Natural Heritage & Biodiversity Policies & Objectives - Policy NHB 7 Invasive Species) GCoDP 18 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 2 Biodiversity and Ecological Networks)</p>
Disturbance/displacement	<p>GCiDP 01 (Natural Heritage, Recreation and Amenity Aim) GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy) GCiDP 03 (Policy 4.1 Green Network) GCiDP 04 (European Designated sites)</p>	<p>GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment)</p>

	<p>GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)</p> <p>GCiDP 06 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p> <p>GCiDP 07 (Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way)</p> <p>GCiDP 08 (Environment and Infrastructure Aim)</p> <p>GCiDP 10 (Specific Development Standards)</p> <p>GCiDP 20 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)</p> <p>GCiDP 21 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p> <p>GCiDP 22 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p>	<p>GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment)</p> <p>GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites)</p> <p>GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation)</p> <p>GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives)</p> <p>GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives)</p> <p>GCoDP 18 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 2 Biodiversity and Ecological Networks)</p> <p>GCoDP 19 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 6 Protection of Bats and Bats Habitats)</p>
Barrier effect	<p>GCiDP 01 (Natural Heritage, Recreation and Amenity Aim)</p> <p>GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy)</p> <p>GCiDP 03 (Policy 4.1 Green Network)</p> <p>GCiDP 04 (European Designated sites)</p> <p>GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)</p> <p>GCiDP 06 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p> <p>GCiDP 08 (Environment and Infrastructure Aim)</p> <p>GCiDP 10 (Specific Development Standards)</p> <p>GCiDP 20 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)</p> <p>GCiDP 21 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p> <p>GCiDP 22 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p>	<p>GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment)</p> <p>GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment)</p> <p>GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites)</p> <p>GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation)</p> <p>GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives)</p> <p>GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives)</p> <p>GCoDP 18 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 2 Biodiversity and Ecological Networks)</p> <p>GCoDP 19 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 6 Protection of Bats and Bats Habitats)</p>
Mortality Risk	<p>GCiDP 01 (Natural Heritage, Recreation and Amenity Aim)</p> <p>GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy)</p> <p>GCiDP 03 (Policy 4.1 Green Network)</p> <p>GCiDP 04 (European Designated sites)</p> <p>GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)</p> <p>GCiDP 06 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)</p> <p>GCiDP 08 (Environment and Infrastructure Aim)</p> <p>GCiDP 10 (Specific Development Standards)</p>	<p>GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment)</p> <p>GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment)</p> <p>GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites)</p> <p>GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation)</p>

	GCiDP 20 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance) GCiDP 21 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways) GCiDP 22 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)	GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives) GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives)
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Table D-2: Environmental protection policies from the Galway City Council Development Plan 2017-2023 and the Galway County Development Plan 2015-2021 referred to above in Table D-1

Galway City Council Development Plan 2017-2023
<p><u>GCiDP 01 (Natural Heritage, Recreation and Amenity Aim)</u></p> <p><i>“To provide for a green network in the city that allows for the sustainable use, management and protection of natural heritage, recreation amenity areas, parks and open spaces in an integrated manner. The green network will ensure the protection of nature and provide for the enhancement and expansion of passive and active recreational opportunities. It will be accessible to all and by sustainable modes of transport, where feasible. Ensure better integration of environmental and natural resource considerations in the Development Plan through the SEA process and provide the highest level of protection for European Sites, taking account of Article 6 of the Habitats Directive.”</i></p>
<p><u>GCiDP 02 (Natural Heritage, Recreation and Amenity Strategy)</u></p> <p><i>“Promote a green network for the city that allows for sustainable use, management and protection of natural heritage, protected ecological sites, flora and fauna, recreation and amenity areas and parks in an integrated manner where it can be demonstrated that there will be no adverse impacts on the integrity of European Sites and /or where the competent authority has ascertained that the use of the site is in accordance with Article 6 of the Habitat Directive.”</i></p> <p><i>“Conserve, protect and enhance the designated and non-designated sites and natural habitats, while enabling the sustainable development of the city.”</i></p>
<p><u>GCiDP 03 (Policy 4.1 Green Network)</u></p> <p><i>“Support sustainable use and management of areas of ecological importance, parks and recreation amenity areas and facilities through an integrated green network policy approach in line with Galway City Recreation and Amenity Needs Study, where it can be demonstrated that there will be no adverse impacts on the integrity of European Sites.”</i></p>
<p><u>GCiDP 04 (European Designated sites)</u></p> <p><i>“Plan and projects should consider DEHLG Guidance for Planning Authorities on Appropriate Assessment of Plans and Projects in Ireland (2009) and potential impacts identified in the HDA of the City Development Plan relating to habitat loss and fragmentation, water quality, disturbance and in combination effects.”</i></p> <p><i>“The policies and objectives of the City Development Plan have been drafted taking cognisance of Article 6 of the Habitats Directive. All plans including lower tier plans and projects identified as having potential to adversely impact on European Sites are required to adhere to the requirements of the Habitats Directive, to ensure no adverse impact on the integrity of European Sites.”</i></p>

GCiDP 05 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)

“Protect European sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC) and associated national legislation. Ensure that plans or projects within the Plan area will only be authorised and /or supported after the competent authority has ascertained based on scientific evidence, screening for appropriate assessment and /or a Habitats Directive Assessment that:

- 1. The plan or project will not give rise to an adverse direct, indirect or secondary effect on the integrity of any European site (either individually or in combination with other plans or projects); or*
- 2. The plan or project will have an adverse effect on the integrity of any European site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or*
- 3. The plan or project will have an adverse effect on the integrity of any European site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.”*

“Protect, conserve and support the development of an ecological network throughout the city which will improve the ecological coherence of the Natura 2000 network in accordance with Article 10 of the Habitats Directive.”

“Protect Local Biodiversity Areas, wildlife corridors and stepping stones identified in the Galway City Habitat Inventory 2005 and Galway Biodiversity Action Plan 2014-2024 in supporting the biodiversity of the city and in the Council’s role/responsibilities, works and operations, where appropriate.”

“Encourage, in liaison with the NPWS, the sustainable management of features which are important for the ecological coherence of network of European Sites and essential, by their linear or continuous nature or as stepping stones for the migration, dispersal and genetic exchange of wild species.”

“Ensure that plans and projects with the potential to have a significant impact on European Sites (cSAC’s or SPA) whether directly, indirectly or in combination with other plans or projects are subject to Appropriate Assessment under Article 6 of the Habitats Directive (92/43 EEC) and associated legislation and guidelines to inform decision making.”

“Protect the ecological integrity of Statutory Nature Reserves, refuges for fauna and Annex 1 Habitats.”

GCiDP 06 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)

“Protect and maintain the integrity of the coastal environment and waterways by avoiding significant impacts and meeting the requirements of statutory bodies, national and European legislation and standards.”

“Conserve and protect natural conservation areas within the coastal area and along waterways and ensure that the range and quality of associated habitats and the range and populations of species are maintained.”

“Have regard to European and national best practice guidance when assessing development in or near coastal areas which is likely to have significant effects on the integrity, defined by the structure and function, of any designated European Sites, protected coastal and marine fauna and flora.”

“Protect and maintain, where feasible, undeveloped riparian zones and natural floodplains along the River Corrib and its tributaries.”

GCiDP 07 (Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way)

“Provide controlled access and linkages into all parks/public open spaces, areas of natural heritage, including along waterways, where it can be demonstrated that there will be no adverse impacts on the integrity of European Sites. Ensure that paths and structures are constructed from suitable materials.”

GCiDP 08 (Environment and Infrastructure Aim)

“To secure a high quality, clean and healthy environment, while facilitating the sustainable development of the city, through supporting the continued improvement and expansion of infrastructure services, including for water, drainage, communication, energy and waste management facilities. To ensure that environmental protection is an integral part of the development process within the city, by avoiding potential pollution at source and reducing environmental risks to the city and its community. Address climate change and reduce greenhouse gas emissions by facilitating and promoting energy efficiency, energy conservation and renewable energy sources.”

GCiDP 09 (Policy 9.3 Flood Risk Assessment)

“Protect and maintain, where feasible, undeveloped riparian zones and natural floodplains along the River Corrib and its tributaries.”

GCiDP 10 (Specific Development Standards)

11.28 Extract Industries/Quarries – *“The operation of quarries can give rise to land use and environmental issues which require to be mitigated and controlled in the planning process. The protection of residential dwellings, residential amenities, natural amenities, the prevention of pollution, noise/vibration, traffic and the safeguarding of groundwater will be given serious consideration. The Council will have regard to the DEHLG’s Quarries and Ancillary Activities, Guidelines for Planning Authorities, 2004 when assessing all quarry related proposals, in order to achieve more sustainable aggregates development and to avoid and minimise adverse impacts on the environment. Particular constraint will be exercised for sites in the vicinity of/in areas of residential settlements, areas of archaeological importance, recorded monuments, European areas of ecological importance and other environmentally sensitive (designated) areas, unless it can clearly be demonstrated that such quarries would not have significant adverse impacts on residential dwellings, amenities or the environment. All developments should have regard to and comply with the Environmental Protection Agency’s (EPA) publication Environmental Management in the Extractive Industry (non-scheduled minerals), 2006.”*

11.31 Natura Impact Assessment – *“Under Article 6 of the Habitats Directive there is a requirement to establish whether, in relation to plans and projects, appropriate assessment (AA) is required. If, following screening, it is considered that AA is required then the proponent of the plan or project must prepare a Natura Impact Statement/Natura Impact Report. A plan or project will only be authorised after the competent authority has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and a Stage 2 Appropriate Assessment where necessary, that:*

- (a) The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects); or*
- (b) The plan or project will have significant adverse effects on the integrity of any Natura 2000 (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest – including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or*
- (c) The plan or project will have a significant adverse effect on the integrity of any Natura 2000 site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest- restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.”*

GCiDP 11 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)

“Support the implementation of the recommendations of the Western River Basin District – River Basin Management Plan Water Matters (2009) and future plan in relation to the protection of water quality of surface waters, groundwater and coastal waters.”

“Ensure development and uses adhere to the principles of sustainable development and restrict any development or use, which negatively impact on water quality.”

GCiDP 12 (Policy 9.6 Water Quality)

“Support the actions of the Western River Basin District Management Plan 2009-2015 and future River Basin Management Plan in order to promote and achieve a restoration of good status, reduce chemical pollution and prevent deterioration of surface, coastal and groundwater quality, where appropriate.”

“Protect the city’s groundwater resource in accordance with the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010) or any updated legislation and ensure that any development, which threatens the quality of the city’s groundwater is restricted.”

“Minimise and control discharges to inland surface water bodies, groundwater and coastal waters to prevent water pollution.”

GCiDP 13 (Policy 9.7 Water Services)

“Provide a sustainable and effective wastewater drainage collection and treatment system capable of meeting the needs of domestic, commercial, and industrial users in the city in partnership with Irish Water.”

“Ensure that all new developments have and are provided with satisfactory drainage systems in the interests of public health and to avoid the pollution of the ground and surface waters.”

GCiDP 14 (Specific Development Standards)

11.22 Water Quality – *“Proposed developments, which include the storage and/or run-off of potential polluting substances, such as oil and chemicals shall be accompanied with details and specifications, which indicate how risk of pollution will be minimised by using best available practices. This shall also apply to the construction stage.”*

GCiDP 15 (Environment and Infrastructure Strategy)

“Protect and manage water resources effectively and improve coastal and fresh water quality.”

GCiDP 16 (Policy 9.3 Flood Risk Assessment)

“Protect and promote sustainable management and uses of water bodies and watercourses from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains.”

“Ensure the use of SUDS, sustainable urban drainage systems, wherever practical, in the design of development to reduce the rate and quantity of surface water run-off.”

GCiDP 17 (Policy 9.8 Sustainable Urban Drainage Systems (SUDS))

“Ensure the use of Sustainable Urban Drainage Systems (SUDS) and sustainable surface water drainage management, wherever practical in the design of development to enable surface water run-off to be managed as near to its source as possible and achieve wider benefits such as sustainable development, water quality, biodiversity and local amenity.”

“Proposals for Sustainable Urban Drainage Systems (SUDS) should include provisions for the long term management, operation and maintenance of these systems.”

GCiDP 18 (Policy 9.10 Air Quality and Noise)

Maintain air quality to a satisfactory standard by regulating and monitoring atmospheric emissions in accordance with EU policy directives on air quality and Ambient Air Quality and Cleaner Air for Europe (CAFÉ) Directive (2008/50/EC), by promoting and supporting initiatives to reduce air pollution and by increasing the use of sustainable transport modes and developing urban woodland, encouraging tree planting, conserving and creating green open space.

GCiDP 19 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)

“Support and implement measures to control and manage alien/invasive species, where appropriate.”

GCiDP 20 (Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance)

“Protect and conserve rare and threatened flora and fauna and their key habitats, (wherever they occur) listed on Annex I and Annex IV of the EU Habitats Directive (92/43/EEC) and listed for protection under the Wildlife Acts 1976-2000.”

GCiDP 21 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)

“Ensure that development does not have a significant adverse impact, incapable of satisfactory mitigation, on protected species.”

GCiDP 22 (Policy 4.3 Blue Spaces: Coast, Canals and Waterways)

“Ensure the protection of the River Corrib as a Salmonid River, where appropriate.”

Galway County Council Development Plan 2015-2021

GCoDP 01 (Development Strategy Objectives - Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment)

“Protect European Sites that form part of the Natura 2000 network (Including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011(SI No.477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any updated or subsequent guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and/or a Habitats Directive Assessment where necessary, that:

- (a) The Plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European Site (either individually or in combination with other plans or projects); or*
- (b) The Plan or project will have significant adverse effects on the integrity of any European Site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or*
- (c) The Plan or project will have a significant adverse effect on the integrity of any European Site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.”*

GCoDP 02 (Development Strategy Objectives - Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment)

“Ensure that proposed projects and any associated improvement works or associated infrastructure relating to renewable energy projects; water supply and abstraction; wastewater and discharges; flood alleviation and prevention; roads, power lines and telecommunications; and amenity and recreation provision are subject to Appropriate Assessment where relevant.”

GCoDP 03 (Development Strategy Objectives - Objective DS 10 Impacts of Development on Protected Sites)

“Have regard to any impacts of development on or near existing and proposed Natural Heritage Areas, Special Protection Areas and Special Areas of Conservation, Nature Reserves, Ramsar Sites, Wildfowl Sanctuaries, Salmonoid Waters, Refuges for Flora and Fauna, Conamara National Park, shellfish waters, freshwater pearl mussel catchments and any other designated sites including future designations.”

GCoDP 04 (Roads and Transport Policy - Policy TI 1 Transportation Strategy and Compliance with Legislation)

“It is the overarching policy of Galway County Council to comply with all relevant Irish and European planning and environmental legislation in implementing its Transportation Strategy.”

GCoDP 05 (Water & Wastewater Infrastructure &, Waste Management & Extractive Industry)

Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive - *“Ensure that projects associated with the mineral extractive industry carry out screening for Appropriate Assessment in accordance with Article 6(3) of the Habitats Directive, where required.”*

GCoDP 06 (Natural Heritage & Biodiversity Policies & Objectives)

Policy NHB 1 Natural Heritage and Biodiversity - *“It is the policy of Galway County Council to support the protection, conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European Sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas and proposed Natural Heritage Areas and the promotion of the development of a green/ecological network within the Plan Area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment.”*

GCoDP 07 (Natural Heritage & Biodiversity Policies & Objectives)

Objective NHB 1 Protected Habitats and Species - *“Support the protection of habitats and species listed in the Annexes to and/or covered by the EU Habitats Directive (92/43/EEC) (as amended) and Birds Directive (2009/147/EC), and regularly occurring-migratory birds and their habitats, and species protected under the Wildlife Acts 1976-2000 and the Flora Protection Order.”*

GCoDP 08 (Natural Heritage & Biodiversity Policies & Objectives)

Objective NHB12 Soil/Ground Water Protection - *“Developments shall ensure that adequate soil protection measures are undertaken, where appropriate, including investigations into the nature and extent of any soil/groundwater contamination.”*

GCoDP 09 (Water Policies and Objectives - Objective WS 1 Protection of Ground Waters)

“Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the Groundwater Directive 2006/118/EC, the European Communities Environmental Objectives (groundwater) Regulations, 2010 (S.I. No. 9 of 2010) or any updated legislation and the Groundwater Protection Scheme and source protection plans for water supplies.”

GCoDP 10 (Water Policies and Objectives - Objective WS 11 Regionally & Locally Important Aquifers)

“Protect the regionally and locally important aquifers within the County from risk of pollution and ensure the satisfactory implementation of the groundwater protection schemes and groundwater source protection zones, where data has been made available by the Geological Survey of Ireland.”

GCoDP 11 (Water Policies and Objectives - Policy WS 4 Water Quality)

“Promote public awareness of water quality issues and the measures required to protect both surface water and groundwater bodies.”

GCoDP 12 (Water Policies and Objectives - Objective WS 2 EU Policies and Directives)

“Protect, conserve and enhance existing and potential water resources of the County, in accordance with the EU Water Framework Directive, the River Basin Management Plans, the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009), and implement the European Communities (Drinking Water) Regulations (No. 2) 2007 and ensure that water supplies comply with the parameters in these regulations.”

GCoDP 13 (Wastewater Policies and Objectives - Objective WW 1 EU Policies and Directives)

“Ensure that all wastewater generated is collected, treated and discharged after treatment in a safe and sustainable manner, having regard to the standards and requirements set out in EU and national legislation and guidance and subject to compliance with the provisions and objectives of the EU Water Framework Directive, relevant River Basin Management Plans, Urban Waste Water Directive and the EU Habitats Directive.”

GCoDP 14 (Wastewater Policies and Objectives - Objective WW 6 Adherence to Environmental Standards)

“Promote the provision of safe and secure wastewater infrastructure to ensure that the public is protected and that permitted development, is within the environmental carrying capacity and does not negatively impact on habitat quality or species diversity.”

GCoDP 15 (Natural Heritage & Biodiversity Policies & Objectives - Policy NHB 4)

“Protect, conserve and enhance the water resources of the county, including, rivers, streams, lakes, wetlands, springs, turloughs, surface water and groundwater quality, as well as surface waters, aquatic and wetland habitats and freshwater and water dependant species and seek to protect and conserve the quality, character and features of inland waterways by controlling developments close to navigable and non-navigable waterways.”

GCoDP 16 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 3 Water Resources)

“Protect the water resources in the Plan Area, including rivers, streams, lakes, wetlands, springs, turloughs, surface water and groundwater quality, as well as surface waters, aquatic and wetland habitats and freshwater and water dependant species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the Western River Basin District Management Plan 2009-2015, Shannon International River Basin Management Plan 2009-2015 and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same).”

GCoDP 17 (Natural Heritage & Biodiversity Policies & Objectives - Policy NHB 7 Invasive Species)

“It is a policy of the Council to support measures for the prevention and eradication of invasive species. This will include the dissemination of information to raise public awareness, consultation with relevant stakeholders, the promotion of the use of native species in amenity planting and landscaping and the recording of invasive/native species as the need arises and resources permit.”

GCoDP 18 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 2 Biodiversity and Ecological Networks)

“Support the protection and enhancement of biodiversity and ecological connectivity within the Plan Area, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife where these form part of the ecological network and/or may be considered as ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive.”

GCoDP 19 (Natural Heritage & Biodiversity Policies & Objectives - Objective NHB 6 Protection of Bats and Bats Habitats)

“Seek to protect bats and their roosts, their feeding areas, flight paths and commuting routes. Ensure that development proposals in areas which are potentially important for bats, including areas of woodland, linear features such as hedgerows, stone walls, watercourses and associated riparian vegetation which may provide migratory/foraging uses shall be subject to suitable assessment for potential impacts on bats. This will include an assessment of the cumulative loss of habitat or the impact on bat populations and activity in the area and may include a specific bat survey. Any assessment shall be carried out by a suitably qualified professional and where development is likely to result in significant adverse effects on bat populations or activity in the area, development will be prohibited or require mitigation and/or compensatory measures, as appropriate.”

Appendix E

Potential In-combination Effects Assessment of Variation No. 1 (to incorporate the Galway Transport Strategy) and plans and projects located within its Zone of Influence

E1

This appendix presents the analysis and findings of the in-combination effects assessment, which examines the potential for adverse effects to arise as a consequence of Variation No. 1 to the Galway County Development Plan 2015-2021, which will implement the GTS.

Table E-1 presents a Source-Pathway-Receptor Matrix of plans and projects located within the ZoI of Variation No. 1 against each of the identified potential impact pathways associated with the Variation and the European sites that could be impacted.

Table E-1: Source-Pathway-Receptor Matrix for other Plans and Projects.

Potential Impact Pathways											
Plans and Projects	Habitat Loss Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	Habitat degradation – hydrogeology Tunnelling and/or deep excavations affecting the existing hydrogeological regime	Habitat degradation - tunnelling/ excavation Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	Habitat degradation – water quality impacts during construction Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	Habitat degradation – water quality impacts during operation Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	Habitat degradation – shading Shading effects of bridge structures (sunlight, direct precipitation) on habitats	Habitat degradation – air quality A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	Habitat degradation – non-native invasive species Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	Disturbance/ displacement Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	Barrier effect New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	Mortality risk Mortality/road traffic collision risk to fauna species
<i>Plans</i>											
<i>National Plans</i>											
Climate Action and Low-Carbon Development – National Policy Position Ireland	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC		Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC			Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Ross Lake and Woods SAC	

Potential Impact Pathways											
Plans and Projects	<u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	<u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting the existing hydrogeological regime	<u>Habitat degradation - tunnelling/ excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – shading</u> Shading effects of bridge structures (sunlight, direct precipitation) on habitats	<u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	<u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	<u>Disturbance/ displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<u>Barrier effect</u> New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	<u>Mortality risk</u> Mortality/road traffic collision risk to fauna species
Foodwise 2025	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC			Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA		Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC		
Inland Fisheries Ireland Corporate Plan 2011-2015	<i>No potential negative in-combination effects will arise from the implementation of Inland Fisheries Ireland Corporate Plan 2011-2015 and the GTS. This Plan includes the following two fisheries goals that will ensure a positive impact on Qualifying Interest fish species of Lough Corrib SAC Atlantic salmon, Brook lamprey and Sea Lamprey: “to improve the protection and conservation of the resource” and “to develop and improve wild fish populations”.</i>										

	Potential Impact Pathways										
Plans and Projects	<u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	<u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting the existing hydrogeological regime	<u>Habitat degradation – tunnelling/ excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – shading</u> Shading effects of bridge structures (sunlight, direct precipitation) on habitats	<u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	<u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	<u>Disturbance/ displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<u>Barrier effect</u> New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	<u>Mortality risk</u> Mortality/road traffic collision risk to fauna species
Ireland’s Rural Development Programme 2014-2020	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC		Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA		Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Ross Lake and Woods SAC	
National Spatial Strategy for Ireland 2002 – 2020	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC		Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA		Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Ross Lake and Woods SAC	

	Potential Impact Pathways										
Plans and Projects	Habitat Loss Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	Habitat degradation – hydrogeology Tunnelling and/or deep excavations affecting the existing hydrogeological regime	Habitat degradation - tunnelling/ excavation Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	Habitat degradation – water quality impacts during construction Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	Habitat degradation – water quality impacts during operation Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	Habitat degradation – shading Shading effects of bridge structures (sunlight, direct precipitation) on habitats	Habitat degradation – air quality A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	Habitat degradation – non-native invasive species Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	Disturbance/ displacement Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	Barrier effect New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	Mortality risk Mortality/road traffic collision risk to fauna species
		Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC									
Pollution Reduction Programmes for Groundwaters	<i>No potential negative in-combination effects will arise from the implementation of Pollution Reduction Programmes for Groundwaters and the GTS. These Programmes will have a positive impact on groundwater quality in Ireland as they will ensure adherence to measures set out in the EU Groundwater Directive (2006/118/EC) (e.g. assessing groundwater chemical status; procedures for identifying significant and sustained upward trends in groundwater pollution; and, measures to prevent or limit inputs of pollutants to groundwater) and the Good Agricultural Practice for Protection of Waters Regulations 2006 (e.g. set back distances for application of organic fertiliser and soiled water on land in the vicinity of water abstraction points, such as wells, springs and surfaces, to prevent water pollution arising from fertilisers and certain activities) (Shannon International River Basin District, 2008).</i>										
Smarter Travel A Sustainable Transport Future 2009-2020	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC Cregganna Marsh SPA		Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA			Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Ross Lake and Woods SAC	

Potential Impact Pathways											
Plans and Projects	<u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	<u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting the existing hydrogeological regime	<u>Habitat degradation - tunnelling/ excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – shading</u> Shading effects of bridge structures (sunlight, direct precipitation) on habitats	<u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	<u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	<u>Disturbance/ displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<u>Barrier effect</u> New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	<u>Mortality risk</u> Mortality/road traffic collision risk to fauna species
		Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC									
Surface Water Pollution Reduction Programme	<i>No potential negative in-combination effects will arise from the implementation of Pollution Reduction Programmes for Surface Waters and the GTS. These Programmes will have a positive impact on surface water quality in Ireland as they will take into account environmental quality standards (Shannon International River Basin District, 2008).</i>										
Wild Atlantic Way Operational Programme 2015-2019	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA				Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA			Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA		

Potential Impact Pathways											
Plans and Projects	<u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	<u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting the existing hydrogeological regime	<u>Habitat degradation - tunnelling/ excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – shading</u> Shading effects of bridge structures (sunlight, direct precipitation) on habitats	<u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	<u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	<u>Disturbance/ displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<u>Barrier effect</u> New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	<u>Mortality risk</u> Mortality/road traffic collision risk to fauna species
<i>Regional Plans</i>											
Regional Planning Guidelines for the West Region 2010-2022	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC		Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC		Lough Corrib SAC	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	
West Catchment Flood Risk Assessment and Management (CFRAMS) Study	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA		Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA				Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	

	Potential Impact Pathways										
Plans and Projects	<u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	<u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting the existing hydrogeological regime	<u>Habitat degradation - tunnelling/ excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – shading</u> Shading effects of bridge structures (sunlight, direct precipitation) on habitats	<u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	<u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	<u>Disturbance/ displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<u>Barrier effect</u> New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	<u>Mortality risk</u> Mortality/road traffic collision risk to fauna species
		Ross Lake and Woods SAC Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC	X		X	X	X			Ross Lake and	X
River Basin Management Plan for the Western River Basin District in Ireland (2009-2015)	<i>No potential negative in-combination effects will arise from the implementation of the Western River Basin Management and the GTS. This plan will have a positive impact on surface and ground water quality in the Western River Basin District as its main aims are “to protect all waters within the district and, where necessary, improve waters and achieve sustainable water use.”</i>										
Shannon International River Basin Management Plan (2009-2015)	<i>No potential negative in-combination effects will arise from the implementation of the Shannon International River Basin Management and the GTS. This plan will have a positive impact on surface and ground water quality in the Western River Basin District as its main aims are “to protect all waters within the district and, where necessary, improve waters and achieve sustainable water use.”</i>										

	Potential Impact Pathways										
Plans and Projects	Habitat Loss Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	Habitat degradation – hydrogeology Tunnelling and/or deep excavations affecting the existing hydrogeological regime	Habitat degradation – tunnelling/ excavation Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	Habitat degradation – water quality impacts during construction Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	Habitat degradation – water quality impacts during operation Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	Habitat degradation – shading Shading effects of bridge structures (sunlight, direct precipitation) on habitats	Habitat degradation – air quality A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	Habitat degradation – non-native invasive species Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	Disturbance/ displacement Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	Barrier effect New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	Mortality risk Mortality/road traffic collision risk to fauna species
<i>Local Plans</i>											
Athenry Local Area Plan 2012-2018		Lough Corrib SAC		Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA						
Bearna Local Area Plan 2007-2017				Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA			Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA		
Claremorris Local Area Plan 2013-2019		Lough Corrib SAC		Lough Corrib SAC	Lough Corrib SAC						
Draft Clare County Development Plan 2017-2023		Galway Bay Complex SAC Inner Galway Bay SPA		Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA			Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA		
Gaeltacht Local Area Plan 2008-2018	Lough Corrib SAC Galway Bay Complex Inner Galway Bay SPA	Lough Corrib SAC		Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC		Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex Inner Galway Bay SPA Ross Lake and Woods SAC		

	Potential Impact Pathways										
Plans and Projects	<u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	<u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting the existing hydrogeological regime	<u>Habitat degradation – tunnelling/ excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – shading</u> Shading effects of bridge structures (sunlight, direct precipitation) on habitats	<u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	<u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	<u>Disturbance/ displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<u>Barrier effect</u> New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	<u>Mortality risk</u> Mortality/road traffic collision risk to fauna species
Galway City Council Development Plan 2017-2023	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA		Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC		Lough Corrib	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	
Galway City Local Economic and Community Plan	Lough Corrib Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Inner Galway Bay SPA Galway Bay Complex SAC Inner Galway Bay SPA		Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA		Lough Corrib	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA	
Galway County Development Plan 2015-2021	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA		Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC		Lough Corrib	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	

	Potential Impact Pathways										
Plans and Projects	<u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	<u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting the existing hydrogeological regime	<u>Habitat degradation - tunnelling/ excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – shading</u> Shading effects of bridge structures (sunlight, direct precipitation) on habitats	<u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	<u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	<u>Disturbance/ displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<u>Barrier effect</u> New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	<u>Mortality risk</u> Mortality/road traffic collision risk to fauna species
Gort Local Area Plan 2013-2019				Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA						
Headford Local Area Plan 2015-2021		Lough Corrib SAC		Lough Corrib SAC	Lough Corrib SAC						
Loughrea Local Area Plan 2012-2018				Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA						
Maigh Cuilinn Local Area Plan 2013-2019				Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA		Lough Corrib SAC	Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC	
Mayo County Development Plan 2014-2020 ¹		Lough Corrib SAC Lough Corrib SPA		Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA			Lough Corrib SAC			
Oranmore Local Area Plan 2012-2018	Galway Bay Complex SAC			Galway Bay Complex SAC	Galway Bay Complex SAC			Galway Bay Complex SAC	Galway Bay Complex SAC	Galway Bay Complex SAC	

¹ The Local Area Plans for the towns of Ballinrobe, Ballyhaunis and Claremorris have been integrated into the *Mayo County Development Plan 2014-2020*. As these towns are located within the River Corrib catchment, their associated plans have the potential to act in-combination with the GTS.

	Potential Impact Pathways										
Plans and Projects	<u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	<u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting the existing hydrogeological regime	<u>Habitat degradation – tunnelling/ excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – shading</u> Shading effects of bridge structures (sunlight, direct precipitation) on habitats	<u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	<u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	<u>Disturbance/ displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<u>Barrier effect</u> New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	<u>Mortality risk</u> Mortality/road traffic collision risk to fauna species
	Inner Galway Bay SPA			Inner Galway Bay SPA	Inner Galway Bay SPA			Inner Galway Bay SPA	Inner Galway Bay SPA		
Tuam Local Area Plan 2011-2017		Lough Corrib SAC		Lough Corrib SAC	Lough Corrib SAC		Lough Corrib SAC	Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA		
<i>Projects</i>											
<i>Greenways</i>											
Galway Dublin Greenway (Oranmore to Ballinasloe Cycleway)	Galway Bay Complex SAC Inner Galway Bay SPA	Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC		Galway Bay Complex SAC Inner Galway Bay SPA				Galway Bay Complex SAC Inner Galway Bay SPA			
Connemara Greenway (Clifden to Oughterard Cycleway)	Lough Corrib Ross Lake and Woods SAC			Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC				Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC	Lough Corrib SAC Lough Corrib SPA Ross Lake and Woods SAC		

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Plans and Projects	<u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	<u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting the existing hydrogeological regime	<u>Habitat degradation - tunnelling/ excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – shading</u> Shading effects of bridge structures (sunlight, direct precipitation) on habitats	<u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	<u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	<u>Disturbance/ displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<u>Barrier effect</u> New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	<u>Mortality risk</u> Mortality/road traffic collision risk to fauna species
Galway to Spiddal Greenway (Berna to Spiddal Cycleway)				Galway Bay Complex SAC Inner Galway Bay SPA				Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA		
<i>Roads</i>											
M6 Motorway Service Area (Rathmorris Interchange)		Galway Bay Complex SAC Inner Galway Bay Complex SPA									
N18 Oranmore to Gort		Galway Bay Complex SAC Inner Galway Bay SPA Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC		Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA						

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M17 Galway to Tuam	Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA		Lough Corrib SAC	Lough Corrib SAC		Lough Corrib SAC	Lough Corrib SAC	Lough Corrib SAC	Lough Corrib SAC	Lough Corrib SAC
N17 Tuam Bypass		Lough Corrib SAC		Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA		Lough Corrib SAC	Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA		
N59 Clifden to Maam Cross Proposed Road Development				Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA						
N59 Maam Cross to Oughterard Proposed Road Development	Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA		Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA	Lough Corrib	Lough Corrib	Lough Corrib SAC Lough Corrib SPA	Lough Corrib SAC Lough Corrib SPA	Lough Corrib SAC	Lough Corrib SAC
N59 Maigh Cuilinn (Moycullen)	Lough Corrib SAC	Lough Corrib SAC Lough Corrib SPA		Lough Corrib SAC Lough Corrib SPA	Lough Corrib SAC Lough Corrib SPA						

	Potential Impact Pathways										
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Bypass Road Project											
R336 Bearnna to Scrib via Ros an Mhíl Road Scheme		Galway Bay Complex SAC Inner Galway Bay SPA									
<i>Coastal Protection</i>											
Sáilín to Silverstrand Coastal Protection Scheme	Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA		Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA			Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA	
Salthill Coastal Protection Works (Blackrock to Galway Golf Club)	Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA		Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA			Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA	Galway Bay Complex SAC Inner Galway Bay SPA	
<i>Other Infrastructure Projects</i>											
Proposed Galway Harbour Port Extension	Galway Bay SAC Inner Galway Bay SPA			Galway Bay SAC Inner Galway Bay SPA	Galway Bay SAC Inner Galway Bay SPA			Galway Bay SAC Inner Galway Bay SPA	Lough Corrib SPA Galway Bay SAC Inner Galway Bay SPA		

	Potential Impact Pathways										
Plans and Projects	<u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	<u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting the existing hydrogeological regime	<u>Habitat degradation - tunnelling/ excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – shading</u> Shading effects of bridge structures (sunlight, direct precipitation) on habitats	<u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	<u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	<u>Disturbance/ displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<u>Barrier effect</u> New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	<u>Mortality risk</u> Mortality/road traffic collision risk to fauna species
Water supply schemes		Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Cregganna Marsh SPA Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC		Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC						
Wastewater Treatment Works (Public and Private)		Lough Corrib SAC Lough Corrib SPA Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC Cregganna Marsh SPA		Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC	Lough Corrib SAC Galway Bay Complex SAC Inner Galway Bay SPA Ross Lake and Woods SAC						

	Potential Impact Pathways										
Plans and Projects	<u>Habitat Loss</u> Direct loss of habitat (terrestrial or freshwater) in European Site – habitat fragmentation is directly associated with this impact pathway	<u>Habitat degradation – hydrogeology</u> Tunnelling and/or deep excavations affecting the existing hydrogeological regime	<u>Habitat degradation - tunnelling/ excavation</u> Tunnelling and/or deep excavations affecting the structural integrity of surface level habitats	<u>Habitat degradation – water quality impacts during construction</u> Construction works affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – water quality impacts during operation</u> Project operation affecting surface, ground and/or coastal water quality, or affecting the hydrological/tidal regime supporting wetland/coastal/estuarine habitats	<u>Habitat degradation – shading</u> Shading effects of bridge structures (sunlight, direct precipitation) on habitats	<u>Habitat degradation – air quality</u> A reduction in air quality affecting fauna species and/or habitats (vegetation composition and structure)	<u>Habitat degradation – non-native invasive species</u> Introducing or spreading non-native invasive species affecting habitats (vegetation composition and structure)	<u>Disturbance/ displacement</u> Disturbance to fauna resulting in displacement from important habitat areas (e.g. breeding/resting places or foraging areas)	<u>Barrier effect</u> New structures creating a barrier to fauna species movement (e.g. within foraging areas or along commuting routes)	<u>Mortality risk</u> Mortality/road traffic collision risk to fauna species
	X	Rahasane Turlough SAC Rahasane Turlough SPA Castletaylor Complex SAC Kiltiernan Turlough SAC Lough Fingall Complex SAC	X			X	X	X	X	X	X

E2

Table E-2 presents an analysis of the potential for adverse in-combination effects on European site integrity to arise from the proposed Variation No. 1, which will implement where relevant the aims and elements of the GTS, and any other plans and projects as per each of the identified potential impact pathways.

Table E-2: Analysis of potential for adverse in-combination effects on European site integrity arising from the proposed Variation No. 1 which will implement where relevant the aims and elements of the GTS in the absence of mitigation measures and any other plans and projects as per each identified potential impact pathway.

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
<i>National Plans</i>		
<p>Climate Action and Low-Carbon Development – National Policy Position Ireland</p> <p>National Spatial Strategy for Ireland 2002 – 2020</p> <p>Smarter Travel A Sustainable Transport Future 2009-2020</p>	<p>No Appropriate Assessment Screening Statement or Natura Impact Report has been completed for <i>Climate Action and Low Carbon Development – National Policy Position Ireland, National Spatial Strategy for Ireland 2002-2020</i> or <i>Smarter Travel A Sustainable Transport Future 2009-2020</i>. It is considered that <u>these three plans will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</u> via any of the identified impact pathways set out below and outlined in Table E1 above. This is due to the fact that any development that may arise from these plans which has the potential to affect the same European sites as GTS will have to adhere to the following policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> (as detailed in each plan).</p> <p><i>Potential Impact Pathways – Habitat Loss; Habitat Degradation – Hydrogeology; Habitat Degradation - Water Quality (Construction/Operation); Habitat Degradation – Air Quality²; Habitat Degradation - Non-native Invasive Species; Disturbance/Displacement; and, Barrier Effect</i></p> <p>Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive (Galway County Council, 2014a)</p> <p>Natural Heritage, Recreation and Amenity Aim; Natural Heritage, Recreation and Amenity Strategy; Policy 4.1 Green Network; European Designated sites; Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way; Environment and Infrastructure Aim; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.5 Sustainable Building Design and Construction; Policy 9.14 Energy and Associated Infrastructure; Zoning objective for RA; Specific Developments Objectives for RA Zones; Specific Development Standard 11.28 Extract Industries/Quarries; Specific Development Standard 11.31 Natura Impact Assessment (Galway City Council, 2016)</p>	<p>Following on from this strategic level assessment, it has been determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the three national plans: <i>Climate Action and Low-Carbon Development-National Policy Position Ireland; National Spatial Strategy for Ireland 2002-2020</i>; and, <i>Smarter Travel A Sustainable Transport Future 2009-2020</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will occur from any development that may arise in relation to the <i>Climate Action and Low-Carbon Development-National Policy Position Ireland</i>. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site • No adverse effects on European site integrity will arise from the GTS, due to the following

² This potential impact pathway only applies to the *National Spatial Strategy for Ireland 2002-2020* and *Smarter Travel A Sustainable Transport Future 2009-2020* plans.

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathway –Habitat Degradation – Hydrogeology</i></p> <p>Objective NHB12 Soil/Ground Water Protection; Objective WS 1 Protection of Ground Waters; Objective WS 11 Regionally & Locally Important Aquifers; and, Policy WS 4 Water Quality (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Habitat Degradation – Water Quality (Construction/Operation)</i></p> <p>Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.6.2 Open Spaces: Agricultural Lands; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.8 Sustainable Urban Drainage Systems (SUDS); Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Habitat Degradation - Non-native Invasive Species</i></p> <p>Policy NHB 7 Invasive Species (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Disturbance/Displacement</i></p> <p>Objective NHB 2 Biodiversity and Ecological Networks; and, Objective NHB 6 Protection of Bats and Bats Habitats. (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; and, Policy 4.3 Blue Spaces: Coast, Canals and Waterways (Galway City Council, 2016)</p>	<p>mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Air Quality (i.e. Box 7 GTS – Habitat Degradation – Air Quality); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)</p>

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
Foodwise 2025	<p>According to the Natura Impact Statement (Philip Farrelly & Co, 2015), there were 11 proposed actions that had potential to impact on the beef, seafood, tillage and forestry sectors but application of statutory management requirements, GLAS and licencing and permitting procedures in specific sectors were viewed to fully address these potential impacts. Based on this assessment, it is considered that the <u>Foodwise 2025 will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</u> in Co. Galway via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the fact that any development that may arise in relation to Foodwise 2025 which has the potential to affect the same European sites as GTS will have to adhere to the following policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> (as detailed in plan):</p> <p><i>Potential Impact Pathways – Habitat Loss, Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Operation), Non-native Invasive Species, Disturbance/Displacement</i></p> <p>Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive (Galway County Council, 2014a)</p> <p>Natural Heritage, Recreation and Amenity Aim; Natural Heritage, Recreation and Amenity Strategy; Policy 4.1 Green Network; European Designated sites; Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way; Environment and Infrastructure Aim; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.5 Sustainable Building Design and Construction; Policy 9.14 Energy and Associated Infrastructure; Zoning objective for RA; Specific Developments Objectives for RA Zones; Specific Development Standard 11.28 Extract Industries/Quarries; Specific Development Standard 11.31 Natura Impact Assessment (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway –Habitat Degradation – Hydrogeology</i></p> <p>Objective NHB12 Soil/Ground Water Protection; Objective WS 1 Protection of Ground Waters; Objective WS 11 Regionally & Locally Important Aquifers; and, Policy WS 4 Water Quality (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p>	<p>Following on from this strategic level assessment, it has been determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Foodwise 2025</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will occur from any development alone that may arise in relation to the <i>Foodwise 2025</i>. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site; and, • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathway – Habitat Degradation – Water Quality (Operation)</i></p> <p>Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.6.2 Open Spaces: Agricultural Lands; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.8 Sustainable Urban Drainage Systems (SUDS); Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Habitat Degradation - Non-native Invasive Species</i></p> <p>Policy NHB 7 Invasive Species (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Disturbance/Displacement</i></p> <p>Objective NHB 2 Biodiversity and Ecological Networks; and, Objective NHB 6 Protection of Bats and Bats Habitats (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; and, Policy 4.3 Blue Spaces: Coast, Canals and Waterways (Galway City Council, 2016)</p>	<p>(Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); and, Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement).</p>
<p>Ireland’s Rural Development Programme 2014-2020</p>	<p>According to the conclusions of its Natura Impact Report (Blackthorn Ecology 2014), <u>Ireland’s Rural Development Programme 2014-2020 will not have any adverse effects on SAC Qualifying Interest habitats or species or SPA SCI bird species</u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the following mitigation measures:</p>	<p>Following on from this strategic level assessment, it has been determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and <i>Ireland’s Rural Development Programme 2014-2020</i>. This is due to the following reasons:</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Potential Impact Pathways - Habitat Loss; Habitat Degradation – Hydrogeology; Habitat Degradation – Water Quality (Construction/Operation); Non-native Invasive Species; Disturbance/Displacement; and, Barrier Effect</i></p> <ul style="list-style-type: none"> • “Appropriate assessment of individual projects... to ensure that significant impacts do not arise for these developments.” • “Appropriate assessment of reclamation projects” • “Continuing Professional Development for agricultural advisors in forestry schemes” • “Consultations with key stakeholders during GLAS measure development” and, • “Monitoring... to ensure that any negative impacts from the scheme will be detected and remedied before they result in significant impacts on Natura 2000 sites” 	<ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from Ireland’s Rural Development Programme 2014-2020 alone, due to the mitigation measures outlined in the NIR • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will occur from any development alone that may arise in relation to the <i>Ireland’s Rural Development Programme 2014-2020</i>. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) –

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
		Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)
Wild Atlantic Way Operational Programme 2015-2019	<p>According to the conclusions of its Natura Impact Report (CASS Ltd., 2015b), the <i>Wild Atlantic Way Operational Programme 2015-2019</i> alone will not have any adverse effects on SAC Qualifying Interest habitats or species or SPA SCI bird species via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the mitigation measures (described below) that local authorities and other organisations will have to comply with in order to obtain funding, and the implementation of the <i>Strategy for Environmental Surveying and Monitoring for the Wild Atlantic Way Operational Programme</i> (CAAS Ltd., 2015c). This monitoring strategy will provide more data on the condition of habitats, which can in turn be utilised during the preparation of site-specific conservation objectives and development of integrated management plans for all relevant European sites.</p> <p><i>Potential impact Pathways – Habitat Loss; Habitat Degradation – Water Quality (Operation); Habitat Degradation - Non-native Invasive Species; and, Disturbance/Displacement</i></p> <ul style="list-style-type: none"> • Regulatory framework for environmental protection and management – “Local authorities and others shall cumulatively contribute towards - in combination with other users and bodies - the achievement of the objectives of the regulatory framework for environmental protection and management. Local authorities and others will demonstrate, as appropriate, that plans, programmes and projects comply with EU Directives - including the Habitats Directive (92/43/EEC, as amended), the Birds Directive (2009/147/EC), the Environmental Impact Assessment Directive (85/337/EEC, as amended) and the Strategic Environmental Assessment Directive (2001/42/EC) - and relevant transposing Regulations.” • Information to be considered by local authorities and others at lower levels of decision making and environmental assessment – “Lower levels of decision making and environmental assessment by local authorities and others, as relevant, should consider the sensitivities identified in Section 4 of the SEA Environmental Report, including the following: <ul style="list-style-type: none"> (a) Candidate Special Areas of Conservation and Special Protection Areas; 	<p>There is no potential for adverse in-combination effects on European site integrity to occur as a result of the implementation of the GTS and the <i>Wild Atlantic Way Operational Programme 2015-2019</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the Wild Atlantic Way Operational Programme alone, due to the mitigation measures listed in the NIR; • The NIR states “the implementation of the Operational Programme may result in developments within the study area and that works have not been explicitly defined, habitat loss within those sites occurring within the nine coastal counties cannot, at this stage, be ruled out.” Although there is some uncertainty with regards to the potential for habitat loss to occur, adherence to the overarching policies and objectives outlined in the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will arise from the implementation of the <i>Wild Atlantic Way Operational Programme 2015-2019</i>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>(b) Features of the landscape that provide linkages/connectivity to designated sites (e.g. watercourses, areas of semi-natural habitat such as linear woodlands etc.)</p> <p>(c) Salmonid Waters;</p> <p>(d) Shellfish Waters;</p> <p>(e) Freshwater Pearl Mussel catchments;</p> <p>(f) Nature Reserves;</p> <p>(g) Natural Heritage Areas and proposed Natural Heritage Areas;</p> <p>(h) Areas likely to contain a habitat listed in annex 1 of the Habitats Directive;</p> <p>(i) Entries to the Record of Monuments and Places and Zones of Archaeological Potential;</p> <p>(j) Entries to the Record of Protected Structures;</p> <p>(k) Un-designated sites of importance to wintering or breeding bird species of conservation concern;</p> <p>(l) Architectural Conservation Areas; and</p> <p>(m) Relevant landscape designations.”</p> <ul style="list-style-type: none"> • Protection of Biodiversity including Natura 2000 Network – “Local authorities and others shall contribute, as appropriate, towards the protection of designated ecological sites including candidate Special Areas of Conservation (cSACs) and Special Protection Areas (SPAs); UNESCO World Heritage and UNESCO Biosphere sites; Ramsar Sites; Salmonid Waters; Shellfish Waters; Freshwater Pearl Mussel catchments; Flora Protection Order sites; Wildlife Sites (including Nature Reserves); Certain entries to the Water Framework Directive Register of Protected Areas; Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs); Wildfowl Sanctuaries (see S.I. 192 of 1979); and Tree Preservation Orders (TPOs). Local authorities and others shall demonstrate compliance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines, including the following and any updated/superseding documents): <ul style="list-style-type: none"> (a) EU Directives, including the Habitats Directive (92/43/EEC, as amended), the Birds Directive (2009/147/EC), the Environmental Liability Directive (2004/35/EC), the Environmental Impact Assessment Directive (85/337/EEC, as amended), the Water Framework Directive (2000/60/EC) and the Strategic Environmental Assessment Directive (2001/42/EC). (b) National legislation, including the Wildlife Act 1976, the European Communities (Environmental Impact Assessment) Regulations 1989 (SI No. 349 of 1989) (as amended), the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the Planning and Development Act 2000 (as amended), the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011), the European Communities (Environmental Liability) Regulations 2008 and the Flora Protection Order 1999. (c) National policy guidelines (including any clarifying Circulars or superseding versions of same), including the Landscape and Landscape Assessment Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessment Guidance 2010. (d) Catchment and water resource management Plans, including River Basin District Management Plans 2009-2015 (including any superseding versions of same). 	<ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); and, Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement)

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>(e) Biodiversity Plans and guidelines, including Actions for Biodiversity 2011-2016: Ireland's 2nd National Biodiversity Plan (including any superseding version of same).</p> <p>(f) Ireland's Environment 2014 (EPA, 2014, including any superseding versions of same), and to make provision where appropriate to address the report's goals and challenges."</p> <ul style="list-style-type: none"> • Appropriate Assessment – “All projects and plans arising from this programme will be screened for the need to undertake Appropriate Assessment under Article 6 of the Habitats Directive. A plan or project will only be authorised after the competent authority has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and a Stage 2 Appropriate Assessment where necessary, that: <ul style="list-style-type: none"> (a) The Plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European Site (either individually or in combination with other plans or projects); or (b) The Plan or project will have significant adverse effects on the integrity of any European Site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or (c) The Plan or project will have a significant adverse effect on the integrity of any European Site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.” • Protection of Natura 2000 Sites – “No projects giving rise to significant cumulative, direct, indirect or secondary impacts on Natura 2000 sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this programme (either individually or in combination with other plans or projects).” • NPWS & Integrated Management Plans - “Regarding, integrated management plans, Article 6(1) of the Habitats Directive requires that Member States establish the necessary conservation measures for Special Area of Conservation involving, if need be, appropriate management plans specifically designed for the sites or integrated into other development plans. The NPWS's current priority is to identify site specific conservation objectives; management plans may be considered after this is done. Where Integrated Management Plans are being prepared for all Natura sites (or parts thereof), Fáilte Ireland and local authorities shall engage with the National Parks and Wildlife Service in order to ensure that plans are fully integrated with the Operational Programme and other plans and programmes, with the intention that such plans are practical, achievable and sustainable and have regard to all relevant ecological, cultural, social and economic considerations and with special regard to local communities.” 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Potential Impact Pathway - Habitat Degradation – Water Quality (Construction)</i></p> <ul style="list-style-type: none"> <li> <p>• Construction and Environmental Management Plan – “Construction Environment Management Plans (CEMPs) shall be prepared in advance of the construction of larger projects and implemented throughout. Such plans shall incorporate relevant mitigation measures... CEMPs typically provide details of intended construction practice for the proposed development, including:</p> <ul style="list-style-type: none"> (a) Location of the sites and materials compound(s) including area(s) identified for the storage of construction refuse, (b) Location of areas for construction site offices and staff facilities, (c) Details of site security fencing and hoardings, (d) Details of on-site car parking facilities for site workers during the course of construction, (e) Details of the timing and routing of construction traffic to and from the construction site and associated directional signage, (f) Measures to obviate queuing of construction traffic on the adjoining road network, (g) Measures to prevent the spillage or deposit of clay, rubble or other debris, (h) Alternative arrangements to be put in place for pedestrians and vehicles in the case of the closure of any public right of way during the course of site development works, (i) Details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels, (j) Containment of all construction-related fuel and oil within specially constructed bunds to ensure that fuel spillages are fully contained; such bunds shall be roofed to exclude rainwater, (k) Disposal of construction/demolition waste and details of how it is proposed to manage excavated soil, (l) A water and sediment management plan, providing for means to ensure that surface water runoff is controlled such that no silt or other pollutants enter local water courses or drains, (m) Details of a water quality monitoring and sampling plan. (n) If peat is encountered - a peat storage, handling and reinstatement management plan. (o) Measures adopted during construction to prevent the spread of invasive species (such as Japanese Knotweed). (p) Appointment of an ecological clerk of works at site investigation, preparation and construction phases.” <li> <p>• Protection of Riparian Zone and Waterbodies and Watercourses – “Local authorities and others shall demonstrate that waterbodies and watercourses are protected from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include protection buffers in riverine, wetland and coastal areas, as appropriate.”</p> <li> <p>• Water Framework Directive and associated legislation – “Local authorities and others shall contribute towards, as appropriate, the protection of existing and potential water resources, and their use by humans and wildlife,</p> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>including rivers, streams, wetlands, groundwater, coastal waters and associated habitats and species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009), the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (groundwater) Regulations, 2010 (S.I. No. 9 of 2010) and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same). Local authorities and others shall support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development.”</i></p> <ul style="list-style-type: none"> • River Basin Management Plan – “Local authorities and others shall support the implementation of the relevant recommendations and measures as outlined in the various River Basin Management Plans 2009 – 2015, and associated Programmes of Measures, or any such plans that may supersede same during the lifetime of the Operational Programme, as well as relevant recommendations contained in the Water Quality in Ireland 2007 – 2009 (EPA, 2011, and any updated/superseding document). Local authorities and others shall demonstrate that proposals for development would not have an unacceptable impact on the water environment, including surface waters, groundwater quality and quantity, river corridors and associated woodlands and coastal waters. Also local authorities and others shall have cognisance of, where relevant, the EU’s Common Implementation Strategy Guidance Document No. 20 which provides guidance on exemptions to the environmental objectives of the Water Framework Directive.” • Surface Water Drainage and Sustainable Drainage Systems (SuDs) – “Local authorities and others shall ensure that new development is adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems as appropriate.” <p><i>Potential Impact Pathway – Habitat Degradation - Non-native Invasive Species</i></p> <ul style="list-style-type: none"> • Non-native invasive species – “Local authorities and others shall support, as appropriate, the National Parks and Wildlife Service’s efforts to seek to control the spread of non-native invasive species on land and water.” 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
<i>Regional Plans</i>		
Regional Planning Guidelines for the West Region 2010 – 2022	<p>According to the conclusions of its Natura Impact Report, the <i>Regional Planning Guidelines for the West Region 2010-2022 alone will not have any adverse effects on SAC Qualifying Interest habitats or species or SPA SCI bird species</i> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the following mitigation measures:</p> <p><i>Potential impact Pathways – Habitat Loss; Habitat Degradation – Hydrogeology; Habitat Degradation – Water Quality (Construction/Operation); Habitat Degradation – Air Quality; Habitat Degradation - Non-native Invasive Species; Disturbance/Displacement; and, Barrier Effect</i></p> <ul style="list-style-type: none"> • “Development shall not be permitted or specific policy adopted unless the Habitats Directive Assessment process has been carried out (where relevant) and it concludes that there is no threat to a Natura 2000 site habitat or that which might be mitigated to maintain the integrity and conservation objectives of the site.” • “Local Authority Habitats Directive Assessment should also: <ul style="list-style-type: none"> (a) Ensure that identified threats are examined holistically and in combination with other threats listed in this appendix or otherwise as set out by the National Parks and Wildlife Service (NPWS). (b) Where mitigation measures are possible, the amount of land occupied by a development and indirect impacts should be minimal taking account of habitat size, location, season, spatial patterns of habitats and species, etc. (c) No effluent discharge that would be liable to have a negative impact on a habitat shall be permitted unless and until it has been concluded either that no negative impact would arise or that any such impacts can be satisfactorily mitigated.” • “Major residential developments have the potential to fragment or erode habitat. Emissions generated from traffic, noise, light etc. all have potential disruptive impacts. Proposed residential development located in or in close proximity to a Natura 2000 site shall be accompanied by a Habitats Directive Assessment which will examine if the development will have a negative impact (including in-combination effects) on a Natura 2000 site or that where such an impact is likely it can be mitigated satisfactorily.” • “In addition to the impact from wastewater, industrial and enterprise developments and tourism developments may have other negative implications for Natura 2000 sites. These implications may be related to the physical destruction of a habitat, air pollution from traffic, noise and other general activities and light pollution. No industrial or enterprise policies or objectives shall be adopted or development permitted unless it can be demonstrated through the carrying out of the Habitats Directive Assessment process that the development will not impact negatively on a Natura 2000 site or that where such an impact is likely it can be mitigated satisfactorily.” 	<p>Following on from this strategic level assessment, it is determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Regional Planning Guidelines for the West Region 2010-2022</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will occur from any development alone that may arise in relation to the <i>Regional Planning Guidelines for the West Region 2010-2022</i>. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS –

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • “Policies for the development of mineral extraction sites must be contingent on, and be stated to be contingent on it being demonstrated that the development will not impact negatively on a Natura 2000 site. Where a development cannot be shown not to have a negative impact even with mitigation measures being adopted, then the development cannot be permitted except in the very rare circumstances of IROPI Regional Planning Guidelines for the West Region 2010 -2022 153 arising. Even where Natura 2000 sites are not impacted on, any mineral extraction development will be contingent on effluent arising from it being such that it will not impact on any wastewater treatment system whether private or public, that will prevent that system discharging a final effluent that meets the discharge regulation requirements and which would meet the objectives of the River Basin Management Plans.” • ”In considering all transport and other infrastructure proposals, regard must be had to the requirements of the Habitats Directive including the carrying out of an assessment of the implications for any Natura 2000 site that might be at risk from the proposed development.” • “Where a specific road proposal is being considered that is liable to impact negatively on a Natura 2000 site, such a proposal must be assessed in accordance with the requirements of HDA process. If such assessment demonstrates that such a development cannot take place without impacting negatively on any Natura 2000 site, then the development cannot proceed unless the rare circumstance of IROPI.” • “Where a specific rail proposal is being considered that is liable to impact negatively on a Natura 2000 site, such a proposal must be assessed in accordance with the requirements of the HDA process. If such assessment demonstrates that such a development cannot take place without impacting negatively on any Natura 2000 site, then the development cannot proceed unless the rare circumstance of IROPI.” • “Areas that contain or are designated as Natura 2000 or other ecological sites may also coincide with areas suitable for wind energy development. DoEHLG Wind Energy Development Guidelines (2006) should be followed when identifying areas suitable for wind energy. When exploring areas of suitability, Natura 2000 sites and other ecological sites should be placed in the ‘not normally permissible’ category. The HDA process must be undertaken at plan level and where mitigation is satisfactory, an individual development may be permitted in an ‘open for consideration’ category, which has undergone the HDA process and which has concluded that the proposed development would not have a negative impact on such a site or that mitigation measures which would eliminate such impacts can be identified and applied.” • “Recreational development may require the provision of waste-water facilities that discharge to river systems. Many of these systems contain Natura 2000 sites that would be vulnerable to inadequately treated wastewater discharges. Therefore, policies for the development of recreational facilities in such areas must be contingent on, and be stated to be contingent on, the provision of waste-water treatment systems with a capacity to produce waste water discharges of a standard that will not impact negatively on downstream (ex-situ) Natura 2000 sites.” • “Even where Natura 2000 sites are not impacted on, any recreational development will be contingent on effluent arising from it being such that it will not impact on any waste-water treatment system whether private or public, that will prevent that system discharging a final effluent that meets discharge requirements and which would meet the requirements of the River Basin Management Plans.” 	<p>Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Air Quality (i.e. Box 7 GTS – Habitat Degradation – Air Quality); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • <i>“In addition to the impact from waste-water, recreational developments may have other negative implications for Natura 2000 sites. These implications may be related to the physical destruction of a habitat, the impact of air emissions, the impact of Regional Planning Guidelines for the West Region 2010 -2022 156 traffic, noise and other general activities and light pollution. No policy regarding commercial development shall be adopted or development permitted in or in proximity to a Natura 2000 site unless it can be demonstrated through the carrying out of HDA process that the policy or development will not impact negatively on a Natura 2000 site or that where such an impact is likely it can be mitigated satisfactorily.”</i> • <i>“In considering the impact of any proposed policy or project that is liable to give rise to impacts on a Natura 2000 site, the Planning Authority shall consider the likely cumulative effect of such impacts that are liable to arise from any source and shall not adopt any policy or permit any development that would result in the deterioration of the site’s habitat status either by itself or cumulatively with other developments or activities.”</i> <p><i>Potential impact Pathways – Habitat Degradation – Hydrogeology</i></p> <ul style="list-style-type: none"> • <i>“Tourism and rural enterprise developments may be proposed in areas without a piped waste-water collection and treatment system and this has implications for the quality of groundwater in the region. Development which requires the provision of a private treatment system should be considered in the context of the following:</i> <ul style="list-style-type: none"> <i>(a) The quality of the groundwater into which the effluent will discharge and the need to preserve or improve that quality.</i> <i>(b) The quality of the effluent proposed to be discharged from the waste-water treatment process.</i> <i>(c) The quantity of the effluent proposed to be discharged.</i> <i>(d) The capacity of the ground to enhance the quality of the final effluent and ability of treated effluent to percolate to, or reach groundwater.</i> <i>(e) Proposals for the management and maintenance of the treatment system.</i> <i>(f) The capacity of the Local Authority to monitor the quality of the discharge.</i> <i>(g) Direct, indirect and cumulative effects on Natura 2000 sites and their conservation objectives.</i> • <i>“Potential flood risk to any part of the wastewater treatment system Permission should not be granted unless the Planning Authority is satisfied that the quality of the groundwater will not be impaired and policies to this effect should be included in Development Plans.”</i> • <i>“Permission should not be granted unless the Planning Authority is satisfied that the quality of the groundwater will not be impaired and policies to this effect should be included in Development Plans.”</i> • <i>“Recreational developments may be proposed in areas without a piped waste-water collection and treatment system and this has implications for the quality of groundwater in the region. Any development that requires the provision of a private treatment system should be considered in the context of the following –</i> <ul style="list-style-type: none"> <i>(a) The quality of the groundwater into which the effluent will discharge and the need to preserve or improve that quality.</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>(b) The quality of the effluent proposed to be discharged from the waste-water treatment process.</p> <p>(c) The quantity of the effluent proposed to be discharged</p> <p>(d) The capacity of the ground to enhance the quality of the final effluent and ability of treated effluent to percolate to, or reach groundwater.</p> <p>(e) Proposals for the management and maintenance of the treatment system.</p> <p>(f) The capacity of the ground to enhance the quality of the final effluent.</p> <p>(g) Proposals for the management and maintenance of the treatment system.</p> <p>(h) The capacity of the Local Authority to monitor the quality of the discharge.</p> <p>(i) Direct, indirect and cumulative effects on Natura 2000 sites and their conservation objectives.</p> <p>(j) Potential flood risk to any part of the wastewater treatment system</p> <p>Permission should not be granted unless the Planning Authority is satisfied that the quality of the groundwater will not be impaired and policies to this effect should be included in Development Plans.”</p> <p><i>Potential impact Pathways – Habitat Degradation – Water Quality (Construction/Operation)</i></p> <ul style="list-style-type: none"> • “Major population growth and housing development will require the provision of wastewater facilities. The major centres identified for growth (i.e. Galway, Castlebar, Ballina, Tuam and Roscommon) have or will require waste-water treatment systems expansion that discharge to river systems. Many of these systems contain are Natura 2000 sites and contain habitats and species which would be vulnerable to inadequately treated wastewater discharges. The development of housing in such areas must be contingent on, and be stated to be contingent on, the provision of waste-water treatment systems with a capacity to produce waste water discharges of a standard that will not impact negatively on downstream Natura 2000 sites.” • “Where Natura 2000 sites are not impacted on, any development of enterprise, industry and tourism development will be contingent on the effluent arising from it being such that it will not impact on any waste-water treatment system whether private or public, that will prevent that system discharging a final effluent that meets the requirements of discharge regulation in order to achieve the objectives of the River Basin Management Plans nor should any development of this nature impact negatively on the natural environment unless demonstrated that appropriate mitigation measures can address the impacts.” • “Major commercial development may require the provision of waste-water facilities. The major centres identified for commercial growth have or will require waste-water treatment systems that discharge to river systems. Many of these systems contain Natura 2000 Sites that would be vulnerable to inadequately treated waste-water discharges. Therefore, policies for the development of commercial activities in such areas must be contingent on, and be stated to be contingent on, the provision of waste-water treatment systems with a capacity to produce waste water discharges of a standard that will not impact negatively on downstream Natura 2000 Sites. Where a development cannot be shown not to have a negative impact even with mitigation measures being adopted, then the development cannot be permitted except in the very rare instances of IROPI.” 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • <i>“In addition to the impact from waste-water, commercial developments may have other negative implications on Natura 2000 sites. These implications may be related to the physical destruction of a habitat, the impact of air emissions, the impact of traffic, noise and other general activities and light pollution. No commercial policy shall be adopted or development permitted in or in proximity to a Natura 2000 site unless it can be demonstrated through the carrying out of the HDA process that the development will not impact negatively on a Natura 2000 site or that where such an impact is likely it can be mitigated satisfactorily.”</i> • <i>“Where Natura 2000 sites are not impacted on, any commercial development will be contingent on effluent arising from it being such that it will not impact on any waste-water treatment system whether private or public, that will prevent that system discharging a final effluent that meets the requirements of the appropriate River Basin District Management Plan.”</i> • <i>“Distributed population growth in areas without a piped waste-water collection and treatment system has implications for the quality of groundwater in the area. The RBD analyses have identified areas within the region where the quality of the ground-water is not adequate. Any development that requires the provision of a private treatment system should be considered in the context of the following –</i> <ul style="list-style-type: none"> <i>(a) The quality of the groundwater into which the effluent will discharge and the need to preserve or improve that quality.</i> <i>(b) The quality of the effluent proposed to be discharged from the waster-water treatment process.</i> <i>(c) The quantity of the effluent proposed to be discharged.</i> <i>(d) The capacity of the ground to enhance the quality of the final effluent and ability of treated effluent to percolate to, or reach groundwater.</i> <i>(e) Proposals for the management and maintenance of the treatment system.</i> <i>(f) The capacity of the Local Authority to monitor the quality of the discharge.</i> <i>(g) Direct, indirect and cumulative effects on Natura 2000 sites and their conservation objectives.</i> <i>(h) Potential flood risk to any part of the wastewater treatment system.”</i> • <i>“Where the river system to which the final effluent from waste-water treatment plants installed to service smaller towns and villages discharges, contain Natura 2000 sites that would be vulnerable to inadequately treated waste-water discharges the installation of a waste water treatment system and the amount and nature of effluent it proposes to treat must be contingent on, and be stated to be contingent on, the production of wastewater discharges of a standard that will not impact negatively on downstream Natura 2000 sites. Even where Natura 2000 sites are not impacted on, the installation of any wastewater treatment system will be contingent on the effluent arising from it being such that it will give rise to a final effluent that meets the discharge requirements and would not compromise the objectives of the River Basin Management Plans.”</i> • <i>“Many areas that contain or are designated as Natura 2000 sites are also liable to be included in areas designated as being of landscape importance. In considering the policies to apply in such areas regard shall be had to the designation of the area as a Natura 2000 site. As noted above, in implementing these guidelines, full regard must be had to the requirements of the Habitats Directive including the carrying out Regional Planning Guidelines for the West Region 2010 -2022 155 of an assessment of the implications for any Natura 2000 site that might be at risk from</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>any proposed development. While all Natura 2000 sites are of key importance, a number have particular importance as they contain species that are of particular relevance as indicators of environmental quality. A key species in this regard is the Fresh Water Pearl Mussel and all Planning Authorities must take particular care that activities permitted within their areas do not pose a threat to species such as this, whether they lie within or without the Authority's functional area. Where such an impact is identified the development must be mitigated or, where that is not possible must not be implemented unless the procedure relating to developments of IROPI has been completed.”</p> <ul style="list-style-type: none"> • “The European Union Water Framework Directive imposes significant requirements for the protection of water bodies. Local authorities will be required to continue to co-ordinate activities to achieve objectives through the River Basin Management Plans for the Shannon and Western River Basin Districts.” • “In considering the impact of any proposed policy or project that is liable to give rise to a waste-water treatment demand, the Planning Authority shall consider the likely cumulative impact of such demands that are liable to arise from any source and shall not adopt any policy or permit any development that would result in the capacity of the area's waste water treatment system to be exceeded by the cumulative demands of successive developments.” 	
<p>West Catchment Flood Risk Assessment and Management Study</p>	<p>No Appropriate Assessment Screening Statement or Natura Impact Report has been completed for the <i>West Catchment Flood Risk Assessment and Management Study</i>. It is considered that the <u>West Catchment Flood Risk Assessment and Management Study will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the fact that any development that may arise in relation to the West Catchment Flood Risk Assessment and Management Study which has the potential to affect the same European sites as GTS will have to adhere to the following policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and <i>Galway City Council Development Plan 2017-2023</i> (as detailed in plan):</p> <p><i>Potential Impact Pathways – Habitat Loss; Habitat Degradation – Hydrogeology; Habitat Degradation – Water Quality (Construction); Habitat Degradation – Non-native Invasive Species; Disturbance/Displacement; and, Barrier Effect</i></p> <p>Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive (Galway County Council, 2014a)</p> <p>Natural Heritage, Recreation and Amenity Aim; Natural Heritage, Recreation and Amenity Strategy; Policy 4.1 Green Network; European Designated sites; Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.5.1 Community Spaces:</p>	<p>Following on from this strategic level assessment, it is determined that there is no potential for adverse in-combination effects on European site integrity to occur as a result of the implementation of the GTS and the <i>West Catchment Flood Risk Assessment and Management Study</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will occur from any development alone that may arise in relation to the <i>West Catchment Flood Risk Assessment and Management Study</i>. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p>Greenways and Public Rights of Way; Environment and Infrastructure Aim; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.5 Sustainable Building Design and Construction; Policy 9.14 Energy and Associated Infrastructure; Zoning objective for RA; Specific Developments Objectives for RA Zones; Specific Development Standard 11.28 Extract Industries/Quarries; Specific Development Standard 11.31 Natura Impact Assessment (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Habitat Degradation – Hydrogeology</i></p> <p>Objective NHB12 Soil/Ground Water Protection; Objective WS 1 Protection of Ground Waters; Objective WS 11 Regionally & Locally Important Aquifers; and, Policy WS 4 Water Quality (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Habitat Degradation – Water Quality (Construction)</i></p> <p>Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.6.2 Open Spaces: Agricultural Lands; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.8 Sustainable Urban Drainage Systems (SUDS); Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway –Habitat Degradation - Non-native Invasive Species</i></p> <p>Policy NHB 7 Invasive Species (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance (Galway City Council, 2016)</p>	<ul style="list-style-type: none"> No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathway – Disturbance/Displacement; and, Barrier Effect</i></p> <p>Objective NHB 2 Biodiversity and Ecological Networks; and, Objective NHB 6 Protection of Bats and Bats Habitat (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; and, Policy 4.3 Blue Spaces: Coast, Canals and Waterways (Galway City Council, 2016)</p>	
<i>Local Plans</i>		
<p>Galway County Development Plan 2015-2021³⁴</p>	<p>According to the conclusions of its Natura Impact Report (CAAS Ltd., 2015a), the Galway County Development Plan 2015-2021 will not have any adverse effects on the SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following objectives and policies (as detailed in the plan):</p> <p><i>Potential Impact Pathways – Habitat Loss; Habitat Degradation – Hydrogeology; Habitat Degradation – Water Quality (Construction & Operation); Habitat Degradation – Air Quality; Habitat Degradation – Non-native Invasive Species; Disturbance/Displacement; and Barrier Effect</i></p> <p>Development Strategy Objectives</p> <ul style="list-style-type: none"> • Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment – “Protect European Sites that form part of the Natura 2000 network (Including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011(SI No.477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any updated or subsequent guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and/or a Habitats Directive Assessment where necessary, that: 	<p>There is no potential for adverse in-combination effects on European site integrity to occur as a result of the implementation of the GTS and the Galway County Development Plan 2015-2021. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the <i>Galway County Development Plan</i> alone, due to the policies and objectives listed in the NIR; and, • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS –

³ The *Galway County Development Plan 2015-2021* is the overarching plan for the Co. Galway and as such any other plans located within Co. Galway must comply with the policies and objectives outlined in the County Plan.

⁴ Developments that may arise from the following expired Local Area Plans are covered by the *Galway County Development Plan 2015-2021: Claregalway Local Area Plan 2005-2011, Clarinbridge Local Area Plan 2007-2013, Kinvara Local Area Plan 2005-2011 and Oughterard Local Area Plan 2006-2012.*

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>(a) The Plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European Site (either individually or in combination with other plans or projects); or</p> <p>(b) The Plan or project will have significant adverse effects on the integrity of any European Site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or</p> <p>(c) The Plan or project will have a significant adverse effect on the integrity of any European Site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.”</p> <ul style="list-style-type: none"> • Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment – “Ensure that proposed projects and any associated improvement works or associated infrastructure relating to renewable energy projects; water supply and abstraction; wastewater and discharges; flood alleviation and prevention; roads, power lines and telecommunications; and amenity and recreation provision are subject to Appropriate Assessment where relevant.” • Objective DS 10 Impacts of Development on Protected Sites – “Have regard to any impacts of development on or near existing and proposed Natural Heritage Areas, Special Protection Areas and Special Areas of Conservation, Nature Reserves, Ramsar Sites, Wildfowl Sanctuaries, Salmonid Waters, Refuges for Flora and Fauna, Connemara National Park, shellfish waters, freshwater pearl mussel catchments and any other designated sites including future designations.” <p><u>Roads and Transport Policy</u></p> <ul style="list-style-type: none"> • Policy TI 1 Transportation Strategy and Compliance with Legislation - “It is the overarching policy of Galway County Council to comply with all relevant Irish and European planning and environmental legislation in implementing its Transportation Strategy.” <p><u>Water & Wastewater Infrastructure &, Waste Management & Extractive Industry</u></p> <ul style="list-style-type: none"> • Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive - “Ensure that projects associated with the mineral extractive industry carry out screening for Appropriate Assessment in accordance with Article 6(3) of the Habitats Directive, where required.” 	<p>Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Air Quality (i.e. Box 7 GTS – Habitat Degradation – Air Quality); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><u>Natural Heritage & Biodiversity Policies & Objectives</u></p> <ul style="list-style-type: none"> • Policy NHB 1 Natural Heritage and Biodiversity - <i>“It is the policy of Galway County Council to support the protection, conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European Sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas and proposed Natural Heritage Areas and the promotion of the development of a green/ecological network within the Plan Area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment.”</i> • Objective NHB 1 Protected Habitats and Species - <i>“Support the protection of habitats and species listed in the Annexes to and/or covered by the EU Habitats Directive (92/43/EEC) (as amended) and Birds Directive (2009/147/EC), and regularly occurring-migratory birds and their habitats, and species protected under the Wildlife Acts 1976-2000 and the Flora Protection Order.”</i> <p><u>Agriculture, Fishing, Marine Resources and Forestry Policies and Objectives</u></p> <ul style="list-style-type: none"> • Objective AFF 5 Compliance with the EU Habitats Directive - <i>“New agricultural projects that may potentially affect Natura 2000 Sites, individually or in combination with other plans and projects shall be subject to Appropriate Assessment to ensure that there are no likely significant effects on the integrity of any Natura 2000 Sites in the County.”</i> <p style="text-align: center;"><i>Potential Impact Pathway - Habitat Degradation – Hydrogeology</i></p> <p><u>Natural Heritage & Biodiversity Policies & Objectives</u></p> <ul style="list-style-type: none"> • Objective NHB12 Soil/Ground Water Protection - <i>“Developments shall ensure that adequate soil protection measures are undertaken, where appropriate, including investigations into the nature and extent of any soil/groundwater contamination.”</i> <p><u>Water Policies and Objectives</u></p> <ul style="list-style-type: none"> • Objective WS 1 Protection of Ground Waters - <i>“Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the Groundwater Directive 2006/118/EC, the European Communities Environmental Objectives (groundwater) Regulations, 2010 (S.I. No. 9 of 2010) or any updated legislation and the Groundwater Protection Scheme and source protection plans for water supplies.”</i> • Objective WS 11 Regionally & Locally Important Aquifers - <i>“Protect the regionally and locally important aquifers within the County from risk of pollution and ensure the satisfactory implementation of the groundwater protection schemes and groundwater source protection zones, where data has been made available by the Geological Survey of Ireland.”</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Potential Impact Pathways – Habitat Degradation – Water Quality (Construction & Operation)</i></p> <p><u>Water Policies and Objectives</u></p> <ul style="list-style-type: none"> <li>• Policy WS 4 Water Quality - <i>“Promote public awareness of water quality issues and the measures required to protect both surface water and groundwater bodies.”</i> <li>• Objective WS 2 EU Policies and Directives - <i>“Protect, conserve and enhance existing and potential water resources of the County, in accordance with the EU Water Framework Directive, the River Basin Management Plans, the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009), and implement the European Communities (Drinking Water) Regulations (No. 2) 2007 and ensure that water supplies comply with the parameters in these regulations.”</i> <p><u>Wastewater Policies and Objectives</u></p> <ul style="list-style-type: none"> <li>• Objective WW 1 EU Policies and Directives - <i>“Ensure that all wastewater generated is collected, treated and discharged after treatment in a safe and sustainable manner, having regard to the standards and requirements set out in EU and national legislation and guidance and subject to compliance with the provisions and objectives of the EU Water Framework Directive, relevant River Basin Management Plans, Urban Waste Water Directive and the EU Habitats Directive.”</i> <li>• Objective WW 6 Adherence to Environmental Standards - <i>“Promote the provision of safe and secure wastewater infrastructure to ensure that the public is protected and that permitted development, is within the environmental carrying capacity and does not negatively impact on habitat quality or species diversity.”</i> <p><u>Natural Heritage & Biodiversity Policies & Objectives</u></p> <ul style="list-style-type: none"> <li>• Policy NHB 4 – <i>“Water Resources Protect, conserve and enhance the water resources of the county, including, rivers, streams, lakes, wetlands, springs, turloughs, surface water and groundwater quality, as well as surface waters, aquatic and wetland habitats and freshwater and water dependant species and seek to protect and conserve the quality, character and features of inland waterways by controlling developments close to navigable and non-navigable waterways.”</i> <li>• Objective NHB 3 Water Resources - <i>“Protect the water resources in the Plan Area, including rivers, streams, lakes, wetlands, springs, turloughs, surface water and groundwater quality, as well as surface waters, aquatic and wetland habitats and freshwater and water dependant species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the Western River Basin District Management Plan 2009-2015, Shannon International River Basin Management Plan 2009-2015 and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same).”</i> 	

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathways –Habitat Degradation – Non-native Invasive Species</i></p> <p><u>Natural Heritage & Biodiversity Policies & Objectives</u></p> <ul style="list-style-type: none"> • Policy NHB 7 Invasive Species - <i>“It is a policy of the Council to support measures for the prevention and eradication of invasive species. This will include the dissemination of information to raise public awareness, consultation with relevant stakeholders, the promotion of the use of native species in amenity planting and landscaping and the recording of invasive/native species as the need arises and resources permit.”</i> <p><i>Potential Impact Pathways – Disturbance/Displacement</i></p> <p><u>Natural Heritage & Biodiversity Policies & Objectives</u></p> <ul style="list-style-type: none"> • Objective NHB 2 Biodiversity and Ecological Networks - <i>“Support the protection and enhancement of biodiversity and ecological connectivity within the Plan Area, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife where these form part of the ecological network and/or may be considered as ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive.”</i> • Objective NHB 6 Protection of Bats and Bats Habitats - <i>“Seek to protect bats and their roosts, their feeding areas, flight paths and commuting routes. Ensure that development proposals in areas which are potentially important for bats, including areas of woodland, linear features such as hedgerows, stone walls, watercourses and associated riparian vegetation which may provide migratory/foraging uses shall be subject to suitable assessment for potential impacts on bats. This will include an assessment of the cumulative loss of habitat or the impact on bat populations and activity in the area and may include a specific bat survey. Any assessment shall be carried out by a suitably qualified professional and where development is likely to result in significant adverse effects on bat populations or activity in the area, development will be prohibited or require mitigation and/or compensatory measures, as appropriate.”</i> 	
<p>Galway City Council Development Plan 2017-2023</p>	<p>A Natura Impact Report has been prepared for the <i>Galway City Council Development Plan 2017-2023</i>. Based on the in-combination effects assessment for the GTS, there will be <u>no adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</u> via the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following policies, objectives and specific development standards (as detailed in the plan):</p>	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Galway City Council Development Plan 2017-2023</i>. This is due to the following reasons:</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Potential Impact Pathways – Habitat Loss, Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction & Operation), Habitat Degradation – Air Quality, Habitat Degradation – Non-native Invasive Species, Disturbance/Displacement, Barrier Effect</i></p> <p><u>Natural Heritage, Recreation and Amenity Aim</u></p> <ul style="list-style-type: none"> “To provide for a green network in the city that allows for the sustainable use, management and protection of natural heritage, recreation amenity areas, parks and open spaces in an integrated manner. The green network will ensure the protection of nature and provide for the enhancement and expansion of passive and active recreational opportunities. It will be accessible to all and by sustainable modes of transport, where feasible. Ensure better integration of environmental and natural resource considerations in the Development Plan through the SEA process and provide the highest level of protection for European Sites, taking account of Article 6 of the Habitats Directive.” <p><u>Natural Heritage, Recreation and Amenity Strategy</u></p> <ul style="list-style-type: none"> “Promote a green network for the city that allows for sustainable use, management and protection of natural heritage, protected ecological sites, flora and fauna, recreation and amenity areas and parks in an integrated manner where it can be demonstrated that there will be no adverse impacts on the integrity of European Sites and /or where the competent authority has ascertained that the use of the site is in accordance with Article 6 of the Habitat Directive.” “Conserve, protect and enhance the designated and non-designated sites and natural habitats, while enabling the sustainable development of the city.” <p><u>Policy 4.1 Green Network</u></p> <ul style="list-style-type: none"> “Support sustainable use and management of areas of ecological importance, parks and recreation amenity areas and facilities through an integrated green network policy approach in line with Galway City Recreation and Amenity Needs Study, where it can be demonstrated that there will be no adverse impacts on the integrity of European Sites.” “Co-operate with the NPWS, landowners and stakeholders in the preparation and implementation of management plans for designated sites.” “Ensure that all passive and active recreational proposals are considered in the context of potential impact on the environment, sites of ecological and biodiversity importance and general amenity.” <p><u>European Designated sites</u></p> <ul style="list-style-type: none"> “Plan and projects should consider DEHLG Guidance for Planning Authorities on Appropriate Assessment of Plans and Projects in Ireland (2009) and potential impacts identified in the HDA of the City Development Plan relating to habitat loss and fragmentation, water quality, disturbance and in combination effects.” “The policies and objectives of the City Development Plan have been drafted taking cognisance of Article 6 of the Habitats Directive. All plans including lower tier plans and projects identified as having potential to adversely 	<ul style="list-style-type: none"> No adverse effects on European site integrity will arise from the <i>Galway City Development Plan 2017-2023</i> alone, due to the policies, objectives and specific development standards Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will further more ensure no adverse effects will arise from the implementation of the <i>Galway City Development Plan 2017-2023</i> No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Air Quality (i.e. Box 7 GTS – Habitat Degradation – Air Quality); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species);

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>impact on European Sites are required to adhere to the requirements of the Habitats Directive, to ensure no adverse impact on the integrity of European Sites.”</i></p> <p><u>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance</u></p> <ul style="list-style-type: none"> • <i>“Protect European Site that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC) and associated national legislation. Ensure that plans or projects within the Plan area will only be authorised and /or supported after the competent authority has ascertained based on scientific evidence, screening for appropriate assessment and /or a Habitats Directive Assessment that:</i> <ul style="list-style-type: none"> <i>(a) The plan or project will not give rise to an adverse direct, indirect or secondary effect on the integrity of any European Site (either individually or in combination with other plans or projects); or</i> <i>(b) The plan or project will have an adverse effect on the integrity of any European Site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or</i> <i>(c) 3. The plan or project will have an adverse effect on the integrity of any European Site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.”</i> • <i>“Protect, conserve and support the development of an ecological network throughout the city which will improve the ecological coherence of the Natura 2000 network in accordance with Article 10 of the Habitats Directive.”</i> • <i>“Protect Local Biodiversity Areas, wildlife corridors and stepping stones identified in the Galway City Habitat Inventory 2005 and Galway Biodiversity Action Plan 2014-2024 in supporting the biodiversity of the city and in the Council’s role/responsibilities, works and operations, where appropriate.”</i> • <i>“Encourage, in liaison with the NPWS, the sustainable management of features which are important for the ecological coherence of network of European Sites and essential, by their linear or continuous nature or as stepping stones for the migration, dispersal and genetic exchange of wild species.”</i> • <i>“Ensure that plans and projects with the potential to have a significant impact on European Sites (cSAC’s or SPA) whether directly, indirectly or in combination with other plans or projects are subject to Appropriate Assessment under Article 6 of the Habitats Directive (92/43 EEC) and associated legislation and guidelines to inform decision making.”</i> • <i>“Protect the ecological integrity of Statutory Nature Reserves, refuges for fauna and Annex 1 Habitats.”</i> 	<p>Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><u>Policy 4.3 Blue Spaces: Coast, Canals and Waterways</u></p> <ul style="list-style-type: none"> • “Protect and maintain the integrity of the coastal environment and waterways by avoiding significant impacts and meeting the requirements of statutory bodies, national and European legislation and standards.” • “Conserve and protect natural conservation areas within the coastal area and along waterways and ensure that the range and quality of associated habitats and the range and populations of species are maintained.” • “Have regard to European and national best practice guidance when assessing development in or near coastal areas which is likely to have significant effects on the integrity, defined by the structure and function, of any designated European Sites, protected coastal and marine fauna and flora.” • “Protect and maintain, where feasible, undeveloped riparian zones and natural floodplains along the River Corrib and its tributaries.” <p><u>Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way</u></p> <ul style="list-style-type: none"> • “Provide controlled access and linkages into all parks/public open spaces, areas of natural heritage, including along waterways, where it can be demonstrated that there will be no adverse impacts on the integrity of European Sites. Ensure that paths and structures are constructed from suitable materials.” <p><u>Environment and Infrastructure Aim</u></p> <ul style="list-style-type: none"> • “To secure a high quality, clean and healthy environment, while facilitating the sustainable development of the city, through supporting the continued improvement and expansion of infrastructure services, including for water, drainage, communication, energy and waste management facilities. To ensure that environmental protection is an integral part of the development process within the city, by avoiding potential pollution at source and reducing environmental risks to the city and its community. Address climate change and reduce greenhouse gas emissions by facilitating and promoting energy efficiency, energy conservation and renewable energy sources.” <p><u>Environment and Infrastructure Strategy</u></p> <ul style="list-style-type: none"> • “Support the provision of efficient and sustainable water services, energy and telecommunication infrastructure in the city.” <p><u>Policy 9.3 Flood Risk Assessment</u></p> <ul style="list-style-type: none"> • “Ensure any proposal aimed at alleviating flooding will be subject to Appropriate Assessment in accordance with Article 6 of the EU Habitats Directive, where appropriate.” • “Continue to protect the coastal area and foreshore and avoid inappropriate development in areas at risk of coastal erosion and/or would cause and escalate coastal erosion in adjoining areas.” • “Protect and maintain, where feasible, undeveloped riparian zones and natural floodplains along the River Corrib and its tributaries.” 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><u>Policy 9.5 Sustainable Building Design and Construction</u></p> <ul style="list-style-type: none"> • “Ensure that the development of renewable energy and its associated infrastructure avoids negative impacts on European Sites and adhere to the requirements of Article 6 of the Habitats Directive (92/43EEC).” <p><u>Policy 9.14 Energy and Associated Infrastructure</u></p> <ul style="list-style-type: none"> • “Ensure that the infrastructural renewal and development of energy networks avoid negative impacts on European Sites and adhere to the requirements of Article 6 of the Habitats Directive (92/43 EEC). Support where appropriate the provision of energy networks, provided it can be demonstrated that: <ul style="list-style-type: none"> (a) The development is required in order to facilitate the provision or retention of significant economic or social infrastructure; (b) The route proposed has been identified with due consideration for social, economic, environmental and cultural impacts through relevant environmental assessment; (c) The design is such that will achieve least environmental impact consistent; (d) Where impacts are identified mitigation features have been included; (e) Where it can be shown the proposed development is consistent with international best practice with regard to materials and technologies that will ensure a safe, secure, reliable, economic and efficient high quality network.” <p><u>Land Use Zoning Policies and Objectives</u></p> <ul style="list-style-type: none"> • Zoning objective for RA - “To provide for and protect recreational uses, open space, amenity uses and natural heritage. • Specific Developments Objectives for RA Zones – “RA lands between the River Corrib and the Dyke Road and south of Quincentenary Bridge Road in Council ownership. The Council will consider the development of these lands to accommodate municipal and club water based facilities. Development of these lands shall include criteria for a high standard of design and shall not proceed if significant or indeterminate impact on the SAC were likely.” <p><u>Specific Development Standards</u></p> <ul style="list-style-type: none"> • 11.28 Extract Industries/Quarries – “The operation of quarries can give rise to land use and environmental issues which require to be mitigated and controlled in the planning process. The protection of residential dwellings, residential amenities, natural amenities, the prevention of pollution, noise/vibration, traffic and the safeguarding of groundwater will be given serious consideration. The Council will have regard to the DEHLG’s Quarries and Ancillary Activities, Guidelines for Planning Authorities, 2004 when assessing all quarry related proposals, in order to achieve more sustainable aggregates development and to avoid and minimise adverse impacts on the environment. Particular constraint will be exercised for sites in the vicinity of/in areas of residential settlements, areas of archaeological importance, recorded monuments, European areas of ecological importance and other environmentally sensitive (designated) areas, unless it can clearly be demonstrated that such quarries would not have significant adverse impacts on residential dwellings, amenities or the environment. All developments should 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>have regard to and comply with the Environmental Protection Agency's (EPA) publication <i>Environmental Management in the Extractive Industry (non-scheduled minerals)</i>, 2006.”</p> <ul style="list-style-type: none"> • 11.31 Natura Impact Assessment – “Under Article 6 of the Habitats Directive there is a requirement to establish whether, in relation to plans and projects, appropriate assessment (AA) is required. If, following screening, it is considered that AA is required then the proponent of the plan or project must prepare a Natura Impact Statement/Natura Impact Report. A plan or project will only be authorised after the competent authority has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and a Stage 2 Appropriate Assessment where necessary, that: <ul style="list-style-type: none"> (a) The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects); or (b) The plan or project will have significant adverse effects on the integrity of any Natura 2000 (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest – including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or (c) The plan or project will have a significant adverse effect on the integrity of any Natura 2000 site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest- restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.” <p><i>Potential Impact Pathway – Habitat Degradation - Hydrogeology</i></p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways</p> <ul style="list-style-type: none"> • “Support the implementation of the recommendations of the Western River Basin District – River Basin Management Plan Water Matters (2009) and future plan in relation to the protection of water quality of surface waters, groundwater and coastal waters.” • “Ensure development and uses adhere to the principles of sustainable development and restrict any development or use, which negatively impact on water quality.” 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><u>Policy 9.6 Water Quality</u></p> <ul style="list-style-type: none"> • “Support the actions of the Western River Basin District Management Plan 2009-2015 and future River Basin Management Plan in order to promote and achieve a restoration of good status, reduce chemical pollution and prevent deterioration of surface, coastal and groundwater quality, where appropriate.” • “Protect the city’s groundwater resource in accordance with the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010) or any updated legislation and ensure that any development, which threatens the quality of the city’s groundwater is restricted.” • “Minimise and control discharges to inland surface water bodies, groundwater and coastal waters to prevent water pollution.” <p><u>Policy 9.7 Water Services</u></p> <ul style="list-style-type: none"> • “Ensure that all new developments have and are provided with satisfactory drainage systems in the interests of public health and to avoid the pollution of the ground and surface waters.” <p><u>Policy 9.12 Waste Management</u></p> <ul style="list-style-type: none"> • “Ensure that development on contaminated lands include appropriate remediation measures.” <p><u>Specific Development Standards</u></p> <ul style="list-style-type: none"> • 11.22 Water Quality – “Proposed developments, which include the storage and/or run-off of potential polluting substances, such as oil and chemicals shall be accompanied with details and specifications, which indicate how risk of pollution will be minimised by using best available practices. This shall also apply to the construction stage.” <p><i>Potential Impact Pathway – Habitat Degradation – Water Quality (Construction/Operation)</i></p> <p><u>Policy 4.3 Blue Spaces: Coast, Canals and Waterways</u></p> <ul style="list-style-type: none"> • “Support the implementation of the recommendations of the Western River Basin District – River Basin Management Plan Water Matters (2009) and future plan in relation to the protection of water quality of surface waters, groundwater and coastal waters.” • “Ensure development and uses adhere to the principles of sustainable development and restrict any development or use, which negatively impact on water quality.” <p><u>Policy 4.6.2 Open Spaces: Agricultural Lands</u></p> <ul style="list-style-type: none"> • “Ensure agricultural development complies with the measures set out in the Western River Basin Management Plan (2009) and future plan.” 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><u>Environment and Infrastructure Strategy</u></p> <ul style="list-style-type: none"> • <i>“Protect and manage water resources effectively and improve coastal and fresh water quality.”</i> <p><u>Policy 9.3 Flood Risk Assessment</u></p> <ul style="list-style-type: none"> • <i>“Protect and promote sustainable management and uses of water bodies and watercourses from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains.”</i> • <i>“Ensure the use of SUDS, sustainable urban drainage systems, wherever practical, in the design of development to reduce the rate and quantity of surface water run-off.”</i> <p><u>Policy 9.6 Water Quality</u></p> <ul style="list-style-type: none"> • <i>“Support the actions of the Western River Basin District Management Plan 2009-2015 and future River Basin Management Plan in order to promote and achieve a restoration of good status, reduce chemical pollution and prevent deterioration of surface, coastal and groundwater quality, where appropriate.”</i> • <i>“Minimise and control discharges to inland surface water bodies, groundwater and coastal waters to prevent water pollution.”</i> <p><u>Policy 9.7 Water Services</u></p> <ul style="list-style-type: none"> • <i>“Work in close liaison with Irish Water in the operation of water and waste water facilities in the city and the upgrade and expansion of the network.”</i> • <i>“Provide a sustainable and effective wastewater drainage collection and treatment system capable of meeting the needs of domestic, commercial, and industrial users in the city in partnership with Irish Water.”</i> • <i>“Ensure that all new developments have and are provided with satisfactory drainage systems in the interests of public health and to avoid the pollution of the ground and surface waters.”</i> <p><u>Policy 9.8 Sustainable Urban Drainage Systems (SUDS)</u></p> <ul style="list-style-type: none"> • <i>“Ensure the use of Sustainable Urban Drainage Systems (SUDS) and sustainable surface water drainage management, wherever practical in the design of development to enable surface water run-off to be managed as near to its source as possible and achieve wider benefits such as sustainable development, water quality, biodiversity and local amenity.”</i> • <i>“Proposals for Sustainable Urban Drainage Systems (SUDS) should include provisions for the long term management, operation and maintenance of these systems.”</i> <p><u>Policy 9.12 Waste Management</u></p> <ul style="list-style-type: none"> • <i>“Ensure that development on contaminated lands include appropriate remediation measures.”</i> <p><u>Specific Development Standards</u></p>	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • 11.22 Water Quality – “Proposed developments, which include the storage and/or run-off of potential polluting substances, such as oil and chemicals shall be accompanied with details and specifications, which indicate how risk of pollution will be minimised by using best available practices. This shall also apply to the construction stage.” <p><i>Potential Impact Pathway – Habitat Degradation – Air Quality</i></p> <p><u>Policy 9.10 Air Quality and Noise</u></p> <ul style="list-style-type: none"> • “Maintain air quality to a satisfactory standard by regulating and monitoring atmospheric emissions in accordance with EU policy directives on air quality and Ambient Air Quality and Cleaner Air for Europe (CAFÉ) Directive (2008/50/EC), by promoting and supporting initiatives to reduce air pollution and by increasing the use of sustainable transport modes and developing urban woodland, encouraging tree planting, conserving and creating green open space.” <p><i>Potential Impact Pathway – Non-native Invasive Species</i></p> <p><u>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance</u></p> <ul style="list-style-type: none"> • “Support and implement measures to control and manage alien/invasive species, where appropriate.” <p><i>Potential Impact Pathway – Disturbance/Displacement, Barrier Effect</i></p> <p><u>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance</u></p> <ul style="list-style-type: none"> • “Protect and conserve rare and threatened flora and fauna and their key habitats, (wherever they occur) listed on Annex I and Annex IV of the EU Habitats Directive (92/43/EEC) and listed for protection under the Wildlife Acts 1976-2000.” <p><u>Policy 4.3 Blue Spaces: Coast, Canals and Waterways</u></p> <ul style="list-style-type: none"> • “Ensure that development does not have a significant adverse impact, incapable of satisfactory mitigation, on protected species.” • “Ensure the protection of the River Corrib as a Salmonid River, where appropriate.” • “Ensure that development does not have a significant adverse impact, incapable of satisfactory mitigation, on protected species.” 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
<p>Draft Clare County Development Plan 2017-2023</p>	<p>According to the conclusions of its Natura Impact Report (Scott Cawley Ltd., 2015), <i>the <u>Draft Clare County Development Plan 2017-2023 will not have any adverse effects on the SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</u></i> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following objectives and mitigation measures:</p> <p><i>Potential Impact Pathways – Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction/Operation), Habitat Degradation – Non-native Invasive Species, Disturbance/Displacement</i></p> <ul style="list-style-type: none"> The implementation of specific objectives (outlined in the plan) which reinforce statutory requirements, such as: <ul style="list-style-type: none"> Objective CD 12.1 – “It is an objective of the development plan: To require proposals for development which may impact on a European Site to undertake and submit a Natura Impact Statement in accordance with the requirements of the Habitats Directive as part of any planning application.” Objective CD 14.9 – “It is an objective of Clare County Council: <ul style="list-style-type: none"> (a) To implement the EIA Directive, ensuring that all elements/stages or components of the project are included in one overall assessment and all reasonable alternatives are taken into consideration in choosing the option with the least environmental impact. (b) To have regard to “Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessments (2013) when considering proposals for which an EIA is required. (c) To ensure full compliance with the requirements of the EU Habitats Directive, SEA Directive and associated legislation/regulations, including the associated European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004-2011, and the European Communities (Environmental Impact Assessment) Regulations 1989 – 2011 (or any updated/superseding legislation).” Implementation of objectives that place conditions and caveats, such as: <ul style="list-style-type: none"> Objective CDP 9.7 - “It is an objective of Clare County Council: <ul style="list-style-type: none"> (a) To work with local communities and relevant agencies to achieve the sustainable development of County Clare as a world-class destination for sports and recreation-related tourism development at appropriate locations and in full compliance with all relevant environmental legislation in particular the requirements of the Habitats Directive. (b) To support the appropriate development of low-impact experiential tourism in order to diversify the range of tourist activities available in the County and expand the tourist season; (c) To support the sustainable development of watersports, surfing, sailing and water-related events at appropriate locations in the County, subject to an analysis of their potential environmental impact.” Objective CDP 9.12 – “It is an objective of the development plan: To support the development of tourism activities in lakeland areas and waterways subject to normal planning and environmental criteria. All proposed 	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Draft Clare County Development Plan 2017-2023</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> No adverse effects on European site integrity will arise from the <i>Draft Clare County Development Plan 2017-2023</i> alone, due to the objectives and mitigation measures No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR), Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); and, Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement)

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>developments shall be in accordance with the Birds and Habitats Directive, Water Framework Directive and all other relevant EC Directives.”</i></p> <p>Objective CDP 12.11 – <i>“It is an objective of the development plan: To facilitate the sustainable development of marinas and associated amenities at appropriate locations along the Atlantic coastlines, ensuring that such developments shall not adversely affect species and habitats designated by the Birds and Habitats Directives and is in compliance with all relevant environmental designations.”</i></p> <p>Objective CDP 12.12 – <i>“It is an objective of Clare County Council:</i></p> <ul style="list-style-type: none"> <i>(a) To engage with the OPW to develop appropriate strategies for the management of identified coastal flood and erosion hazards and associated risks;</i> <i>(b) To have regard to the Clare County Strategic Flood Risk Assessment, CFRAM Flood Risk Management Plans (when finalised), the OPW Coast Protection Strategy Study, and any updated version/more detailed local studies, in the assessment of development applications in coastal areas;</i> <i>(c) To permit developments only where the Council is satisfied that they will not be at risk from coastal erosion or inundation in the future;</i> <i>(d) To permit developments only where the Council is satisfied that it will not result in an increase in coastal erosion or increase the risk of inundation, either at the subject site or at another location in the vicinity;</i> <i>(e) To prohibit developments outside the boundaries of existing settlements where such development could not be adequately defended over the lifetime of the development without the need to construct additional or new coastal defences;</i> <i>(f) To seek funding for coastal defence works based on the outcome of detailed Coastal Erosion and Flood Risk Management Studies undertaken in areas identified as being at risk from coastal flooding;</i> <i>(g) To ensure full compliance with the requirements of the Habitats Directive with regard to developments in the coastal area;</i> <i>(h) To have regard to any future adopted Integrated Coastal Zone Management Plan for the coastal and estuarine areas of the county, undertaken in accordance with the Habitats and SEA Directive.”</i> <p>Potential Impact Pathway – Habitat Degradation - Hydrogeology</p> <ul style="list-style-type: none"> • Mitigation measure to ensure no potential impacts on the hydrology of groundwater-dependent Qualifying interests: <i>“Ensure any development application is accompanied by a hydrogeological assessment and concludes that the development will not interfere with groundwater movement to the groundwater dependent Qualifying Interest of the European Site.”</i> 	

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathway – Water Quality (Construction/Operation)</i></p> <ul style="list-style-type: none"> Mitigation measures to ensure no potential impacts on water quality: <i>“Ensure any further development application is connected to a WWTP with adequate capacity for foul water during operation, or that it is serviced by an on-site treatment system that will ensure no impact to water quality in the area.”</i> <i>“Ensure a Construction Environmental Management Plan (CEMP) is produced as part of any planning application for development detailing how surface water run-off, especially in relation to release of silt and other pollutants, will be controlled during construction.”</i> <i>“Ensure that surface water run-off during operation is treated via a combination of appropriate SUDS (i.e. green roofs, permeable paving, petrol interceptor, silt trap) prior to discharge to any surface water features.”</i> <p><i>Potential Impact Pathway – Non-native Invasive Species</i></p> <ul style="list-style-type: none"> Mitigation measure to ensure no potential impacts caused by invasive species: <i>“Any development application should address the potential for introduction and spread of invasive species via water craft/equipment movement into the area and/or out of the area to other European Sites.”</i> <p><i>Potential Impact Pathway – Disturbance/Displacement</i></p> <ul style="list-style-type: none"> Mitigation measure to ensure no potential impacts on nesting Special Conservation interest bird species: <i>“Any development applications should include an assessment by a suitably- qualified Ecologist as to the potential for the site to support SPA SCI bird species. If the site is deemed suitable, detailed bird surveys should be undertaken on the site to accompany the development application. These assessments and/or surveys should inform an Appropriate Assessment Screening Report and/or Natura Impact Statement, dependent on the outcome of the site survey. If the site is deemed suitable, a full light- spill modelling study should accompany all development applications and demonstrate that the chosen lighting design would not create any increase in ambient light levels beyond the perimeter of the development applications and demonstrate that the chosen lighting design would not create any increase in ambient light levels beyond the perimeter of the development footprint in relation to SCI birds.”</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
<p>Mayo County Development Plan 2014-2020⁵</p>	<p>According to the conclusions of its Natura Impact Report (Mayo County Council, 2013), <i>the Mayo County Development Plan 2017-2023 will not have any adverse effects on the SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</i> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following objectives and policies:</p> <p><i>Potential Impact Pathways – Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction & Operation)</i></p> <p>Economic Development Strategy Objectives (Mayo County Council, 2014)</p> <ul style="list-style-type: none"> • E-05 General – “It is the objective of the Council to encourage and facilitate home-based employment of appropriate type, size and scale, where it can be demonstrated that the development will not have significant adverse effects on the environment, including the integrity of the Natura 2000 network, residential amenity or visual amenity.” • AG-01 Agriculture – “It is an objective of the Council to support the sustainable development of agriculture, with emphasis on local food supply and agriculture diversification (e.g. agri-business and tourism enterprises) where it can be demonstrated that the development will not have significant adverse effects on the environment, including the integrity of the Natura 2000 network, residential amenity or visual amenity.” • FY-01 Forestry – “It is an objective of the Council to promote sustainable forestry development of appropriate scale in accordance with the Indicative Forest Strategy for Mayo or any amendment to it where it can be demonstrated that the development will not have significant adverse effects on the environment, including the integrity of the Natura 2000 network, residential amenity or visual amenity.” • MF-02 Marine Resources, Aquaculture & Fishing – “It is an objective of the Council to support the sustainable development of marine aquaculture and fishing industries having regard to best environmental practices so as to maximize their contribution to jobs and growth in coastal communities where it can be demonstrated that the development will not have significant adverse effects on the environment, including the integrity of the Natura 2000 network, residential amenity or visual amenity.” • TM-01 Tourism – “It is an objective of the Council to support and promote sustainable tourism development, accessible to all throughout the County and to work in partnership with tourism organisations, and adjoining Local Authorities where necessary, in securing the development of tourism enterprises and infrastructure in suitable locations where it can be demonstrated that the development will not have significant adverse effects on the environment, including the integrity of the Natura 2000 network, residential amenity or visual amenity.” • EI-01 Extractive Industries – “It is an objective of the Council to ensure that the development of aggregate resources (stone and sand/gravel deposits) is carried out in a manner which minimises effects on the environment, 	<p>There is no potential for adverse in-combination effects on European site integrity to occur as a result of the implementation of the GTS and the <i>Mayo County Development Plan 2014-2020</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the <i>Mayo County Development Plan 2014-2020</i> alone, due to the policies and objectives • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); and, Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments)

⁵ The Local Area Plans for the towns of Ballinrobe, Ballyhaunis and Claremorris have been integrated into the *Mayo County Development Plan 2014-2020*. As these towns are located within the River Corrib catchment, their associated plans have the potential to act in-combination with the GTS.

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>including the Natura 2000 network, amenities, infrastructure and the community, and has full regard to the principles of sustainability.”</p> <ul style="list-style-type: none"> • RE-02 Renewable Energy – “It is an objective of the Council to identify at least one renewable energy hub in the County which will allow for the development of renewable energy devices and associated infrastructure/vessels/equipment and deployment of the same having regard to the needs of the industry while ensuring no adverse impact on the environment including Natura 2000 sites.” <p>Infrastructure Strategy Objectives (Mavo County Council, 2014)</p> <ul style="list-style-type: none"> • I-01 General – “It is an objective of the Council to provide, or facilitate the provision of, all infrastructure projects set out in Table 3, with priority given to infrastructure serving the Linked-Hub and Key Towns or areas where significant environmental or safety issues are evident and require the particular infrastructure to solve the issues and where it can be demonstrated that the development will not have significant adverse effects on the environment, the integrity of the Natura 2000 network or visual amenity.” • RD-02 Roads – “It is an objective of the Council to support improvements to the existing National Road and Regional Road network including road schemes and by-passes where it can be demonstrated that the development will not have significant adverse effects on the environment, the integrity of the Natura 2000 network or visual amenity.” • RD-03 Roads – “It is an objective of the Council, in co-operation with the Department of Environment, Community and Local Government, to continue with the strengthening and improvement of the local road network including links, by-passes and relief roads, with priority given to those serving the Linked-Hub and Key Towns and interconnection between such settlements, where it can be demonstrated that the development will not have significant adverse effects on the environment or Natura 2000 network.” • PP-01 Parking Provision – “It is an objective of the Council to support and facilitate the provision of public parking facilities at appropriate locations, including the provision of bus parking facilities within and on the edge of towns and villages, and at appropriate scenic viewing points and scenic routes where it can be demonstrated that the development will not have significant adverse effects on the environment, including the integrity of the Natura 2000 network, residential or visual amenity.” • PC-01 Pedestrians & Cyclists – “It is an objective of the Council to encourage and facilitate the maintenance and further development of the public footpath network, public rights of way, walking and cycling routes and associated infrastructure, including the provision of bicycle racks in all towns and villages, in the County, including where possible the retrofitting of cycle and pedestrian routes into the existing urban road network, by carrying out works in accordance with the National Transport Authority’s National Cycle Manual and to support the establishment of a network of interlinked cycle ways and walk ways in the County and the adjoining Counties, having regard to best practice standards and where it can be demonstrated that the development will not have significant adverse effects on the environment or the integrity of the Natura 2000 network.” • RL-01 Rail – “It is an objective of the Council to support and encourage the provision of a high-quality rail network and service (including commuter services) and ancillary works for passenger and freight carriage to, from and 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>within the County, including the re-opening of the Western Rail Corridor where it can be demonstrated that the development will not have significant adverse effects on the environment including the integrity of the Natura 2000 network.”</p> <ul style="list-style-type: none"> • BS-01 Bus – “It is an objective of the Council to support the provision of public and private bus services, including the Rural Transport Programme, in the County by: <ul style="list-style-type: none"> (a) Encouraging appropriate and sustainable development patterns that will support the provision of services; and (b) Supporting the provision of bus shelters and park & ride facilities at appropriate locations in the County where it can be demonstrated that the development will not have significant adverse effects on the environment including the integrity of the Natura 2000 network.” • AT-04 Air Transport – “It is an objective of the Council to ensure any development associated with light aircraft/helicopter activity is located in areas that avoid significant adverse effects on the environment, the integrity of the Natura 2000 network and residential amenity.” • PH-01 Ports, Harbours and Piers – “It is an objective of the Council to develop and improve ports, harbours, piers, slipways and associated shore facilities and access, including those that can be shared by leisure, tourism, fishing, renewable energy and aquaculture, where it can be demonstrated that the development will not have significant adverse effects on the environment including the integrity of the Natura 2000 network.” • WS-01 Water Services – “It is an objective of the Council to ensure the provision of an adequate level of water services infrastructure throughout the County to meet domestic, commercial, industrial and other needs, having regard to the Core Strategy and Settlement Strategy of this Plan, the Water Services Investment Programme, the Rural Water Programme... and where it can be demonstrated that the development will not have significant adverse effects on the environment including the integrity of the Natura 2000 network.” • WL-01 Waste – “It is an objective of the Council to implement the Regional Waste Management Plan for the Connaught Region (as amended) or replacement plan with particular emphasis on reuse, recycling and disposal of residual waste in the most appropriate manner where it can be demonstrated that the development will not will not have significant adverse effects on the environment, the integrity of the Natura 2000 network, residential or visual amenity.” • TC-01 Information and Communication Technology – “It is an objective of the Council to support and facilitate the delivery of high capacity ICT infrastructure, broadband networks and digital broadcasting in the County having regard to the Government Guidelines Telecommunications Antennae and Support Structures-Guidelines for Planning Authorities 1996 (DoEHLG) and Circular Letter PL 07/12 and where it can be demonstrated that the development will not have significant adverse effects on the environment including the integrity of the Natura 2000 network.” <p><u>Environment, Heritage & Amenity Strategy Objectives (Mayo County Council, 2014)</u></p> <ul style="list-style-type: none"> • CC-01 Climate Change – “It is an objective of the Council to support the National Climate Change Strategy and methods of reducing anthropogenic greenhouse gases on an ongoing basis through implementation of supporting 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>objectives in this Plan, particularly those supporting use of alternative and renewable energy sources, sustainable transport, air quality, coastal zone management, flooding and soil erosion and promotion of the retention of, and planting of trees, hedgerows and afforestation subject to no significant adverse effects on the environment including the integrity of the Natura 2000 network.”</p> <ul style="list-style-type: none"> • WQ-01 Water Quality – “It is an objective of the Council to implement the Western River Basin District Management Plan “Water Matters” 2009-2015 to ensure the protection, restoration and sustainable use of all waters in the County, including rivers, lakes, ground water, coastal and transitional waters, and to restrict development likely to lead to deterioration in water quality or quantity.” • NH-01 Natural Heritage – “It is an objective of the Council to protect, enhance, conserve and, where appropriate restore: <ul style="list-style-type: none"> (a) Candidate Special Areas of Conservation, Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas and proposed National Heritage Areas, Statutory Nature Reserves, Ramsar Sites and Biogenetic Reserves, including those listed in the Environmental Report documenting the Strategic Environmental Assessment of this plan and any modifications or additional areas that may be so designated during the lifetime of the plan. (b) Natural habitats and plant and animal species identified under the Habitats Directive, Birds Directive, Wildlife Act and the Flora Protection Order, or any other relevant legislation that may be implemented during the lifetime of the plan. (c) Bogs, fens and turloughs listed in the Environmental Report documenting the Strategic Environmental Assessment of this plan. (d) The conservation value of disused railway lines, waterways, walkways etc. notwithstanding that some of these items (e.g. disused rail lines) may be developed at some future date as part of the County’s infrastructure where it can be demonstrated that the development will not have significant adverse effects on the environment including the integrity of the Natura 2000 network. (e) Surface waters, aquatic and wetland habitats and freshwater and water-dependent species through the implementation of all appropriate and relevant Directives and transposed legislation. ” • NH-03 Natural Heritage – “It is an objective of the Council to implement Article 6(3) and 6(4) of the EU Habitats Directive, by screening all plans and projects for appropriate assessment and to ensure those with potential to have significant effects on the integrity of Natura 2000 or European Sites (cSACs, SPAs), whether directly (in situ), indirectly (ex-situ) or in combination with other plans or projects, are subject to an appropriate assessment and the preparation of an NIR or NIS in order to inform decision making.” • AoH-01 Archaeological Heritage – “It is an objective of the Council to: Facilitate public access to National Monuments in State care or in the ownership of the State where it can be demonstrated that the development will not have significant adverse effects on the environment, the integrity of the Natura 2000 network, residential amenity or visual amenity.” 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
Galway City Local Economic and Community Plan 2015-2021	<p>According to the conclusions of the Appropriate Assessment Screening Statement (McCarthy Keville O’Sullivan Ltd., 2015) no likely significant effects will arise from the <i>Galway City Local Economic and Community Plan</i>. Based on the in-combination effects assessment for the GTS, it is considered that the <u>Galway City Local Economic and Community Plan 2015-2021 will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the fact that any development that may arise in relation to the <i>Galway City Local Economic and Community Plan 2015-2021</i> which has the potential to affect the same European sites as GTS will have to adhere to the following policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i>.</p>	<p>Following on from this strategic level assessment, it is determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Galway City Local Economic and Community Plan 2015-2021</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will occur from any development alone that may arise in relation to the <i>Galway City Local Economic and Community Plan 2015-2021</i>. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat
	<p><i>Potential Impact Pathways – Habitat Loss; Habitat Degradation – Hydrogeology; Habitat Degradation – Water Quality (Construction/Operation); Habitat Degradation – Air Quality; Habitat Degradation – Non-native Invasive Species; Disturbance/Displacement; and, Barrier Effect</i></p>	
	<p>Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive (Galway County Council, 2014a)</p> <p>Natural Heritage, Recreation and Amenity Aim; Natural Heritage, Recreation and Amenity Strategy; Policy 4.1 Green Network; European Designated sites; Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way; Environment and Infrastructure Aim; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.5 Sustainable Building Design and Construction; Policy 9.14 Energy and Associated Infrastructure; Zoning objective for RA; Specific Developments Objectives for RA Zones; Specific Development Standard 11.28 Extract Industries/Quarries; Specific Development Standard 11.31 Natura Impact Assessment (Galway City Council, 2016)</p>	
	<p><i>Potential Impact Pathway –Habitat Degradation – Hydrogeology</i></p>	
	<p>Objective NHB12 Soil/Ground Water Protection; Objective WS 1 Protection of Ground Waters; Objective WS 11 Regionally & Locally Important Aquifers; and, Policy WS 4 Water Quality (Galway County Council, 2014a)</p>	

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway –Habitat Degradation – Water Quality (Construction/Operation)</i></p> <p>Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.6.2 Open Spaces: Agricultural Lands; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.8 Sustainable Urban Drainage Systems (SUDS); Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway –Habitat Degradation – Non-native Invasive Species</i></p> <p>Policy NHB 7 Invasive Species (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Disturbance/Displacement</i></p> <p>Objective NHB 2 Biodiversity and Ecological Networks; and, Objective NHB 6 Protection of Bats and Bats Habitats (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; and, Policy 4.3 Blue Spaces: Coast, Canals and Waterways (Galway City Council, 2016)</p>	<p>Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Air Quality (i.e. Box 7 GTS – Habitat Degradation – Air Quality); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)</p>
<p>Gaeltacht Local Area Plan 2008-2018</p>	<p>According to the conclusions of its Natura Impact Report (CAAS Ltd., 2012b), the <u>Gaeltacht Local Area Plan 2008-2018 will not have any adverse effects on the SAC Qualifying Interest habitats or species or SPA Special Conservation Interest bird species</u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following objectives and policies (as detailed in the plan):</p>	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Gaeltacht</i></p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Potential Impact Pathways – Habitat Loss, Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction & Operation), Habitat Degradation – Air Quality, Habitat Degradation – Non-native Invasive Species, Disturbance/Displacement, Barrier Effect</i></p> <p><u>Strategic Development Objective</u></p> <ul style="list-style-type: none"> • Objective O.S.D. 3 Natura 2000 Network and Habitats Directive Assessment – “<i>Protect European Sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence, screening for appropriate assessment, and a Habitats Directive Assessment where necessary, that:</i> <ol style="list-style-type: none"> <i>The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European Site (either individually or in combination with other plans or projects); or</i> <i>The plan or project will have significant adverse effects on the integrity of any European Site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or</i> <i>The plan or project will have significant adverse effects on the integrity of any European Site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.”</i> <p><u>Environmental Policies – Biodiversity/Flora and Fauna</u></p> <ul style="list-style-type: none"> • Policy P.B. 5 – “<i>Conserve and protect any new areas or sites that are designated in the lifetime of this plan and to take cognisance of any revisions and adjustments to designated sites as furnished by the Department of Environment, Heritage and Local Government.”</i> 	<p><i>Local Area Plan 2008-2018.</i> This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the <i>Gaeltacht Local Area Plan 2008-2018</i> alone, due to the policies and objectives • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will further more ensure no adverse effects will arise from the implementation of the <i>Gaeltacht Local Area Plan 2008-2018</i> • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Air Quality (i.e. Box 7 GTS – Habitat Degradation – Air Quality); Habitat

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Policy P.B. 11 – “Implement Article 6(3) of the EU Habitats Directive and to subject any plan or development proposal likely to directly or indirectly (or in combination with other plans or projects) impact Natura 2000 or European Sites (SACs or SPAs), to an appropriate assessment in order to inform decision making.” <p><i>Potential Impact Pathways –Habitat Degradation – Water Quality (Construction & Operation)</i></p> <p><u>Environmental Policies – Biodiversity/Flora and Fauna</u></p> <ul style="list-style-type: none"> • Policy P.B. 8 – “To protect rivers, streams, lakes, coastal waters and their associated wetlands both as functioning ecosystems and as ecological corridors and networks.” <p><u>Policies and Objectives included in Plan and Designed to protect Water Quality and Quantity</u></p> <ul style="list-style-type: none"> • Objective O.S.D. 5 Service Led Development – “Ensure that urban developments are preceded by sufficient capacity in the public waste water and potable water infrastructure and that developments in rural areas are accompanied by adequate infrastructure and services in accordance with applicable standards and requirements.” • Policy P.S. 3 Environmental Policies – “Protect fen and other wetland areas from the direct impact of development and infilling, or from indirect effects such as a change in water regime.” 	<p>Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)</p>
<p>Athenry Local Area Plan 2012-2018</p>	<p>The <u>Athenry Local Area Plan 2012-2018 will not have any adverse effects on the SAC Qualifying Interest habitats or species or SPA Special Conservation Interest bird species</u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following objectives and policies (as detailed in the plan):</p> <p><i>Potential Impact Pathways – Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction/Operation)</i></p> <ul style="list-style-type: none"> • Objective DS3 Natura 2000 Network and Habitats Directive Assessment – “Protect Natura 2000 sites, that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific knowledge and a Habitats Directive Assessment where necessary, that: 	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Athenry Local Area Plan 2012-2018</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the <i>Athenry Local Area Plan 2012-2018</i> alone, due to the policies and objectives • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will further more ensure no adverse effects will arise from the implementation of the <i>Athenry Local Area Plan 2012-2018</i> • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>(a) The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects); or</p> <p>(b) The plan or project will adversely affect the integrity of any Natura 2000 site (that does not host a priority habitat and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or</p> <p>(c) The plan or project will adversely affect the integrity of any Natura 2000 site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.”</p> <ul style="list-style-type: none"> • Objective DS5 Service Led Development - “Development under the Plan shall be preceded by sufficient capacity in the public waste water treatment plant and appropriate extensions in the existing public wastewater infrastructure.” • Policy UI 2 Water Quality – “It is the policy of Galway County Council to protect and improve water quality, in conjunction with other agencies and stakeholders in accordance with the EU Water Framework Directive (2006/60/EC) and to support the implementation of the Western River Basin District Management Plan and consider both when considering new development proposals.” • Objective UI 2 Wastewater Disposal – “New developments shall only be permitted where it can be clearly demonstrated that they can be serviced and that there is adequate capacity in the wastewater disposal infrastructure in accordance with applicable requirements and standards, including urban wastewater treatment disposal standards, in order to protect the River Clarin, the Galway Bay Complex and its qualifying interests. Any developments for single dwellings will be required to adhere to the EPA Code of Practice and will be subject to monitoring in order to assess impacts on water. Continue to support the delivery of the Galway Main Drainage scheme in relation to the Athenry Local Area Plan Area.” • Objective UI 6 Western River Basin District Management Plan and Protection of Waters – “Support the implementation of the relevant recommendations and measures as outlined in the Western River Basin Management Plan 2009-2015 or any other plan that may supersede same during the lifetime of this Local Area Plan. Development shall only be permitted where it can be clearly demonstrated that the proposal would not have an unacceptable impact on the water environment, including surface water, groundwater quality and quantity, river corridors and associated wetlands. Galway County Council is statutorily obliged to prevent any further deterioration in the quality status of the waters in Athenry (Clarin River and the Clare River Drainage Area) and to ensure good quality status by 2021.” 	<p>this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); and, Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments)</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Objective UI 13 Waterbodies and Watercourses – “Protect waterbodies and watercourses within the Plan Area from inappropriate development, including rivers, streams, associated undeveloped riparian strips and natural floodplains. This will include a 10m environmental management buffer on either side of the River Clarin and its tributary, measured from the near river bank. Promote the sustainable management and use of watercourses and avoid the culverting or realignment of these features.” • Objective NH1 Natura 2000 Network and Habitats Directive Assessment – “Protect Natura 2000 sites, that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the Natura 2000 Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific knowledge and a Habitats Directive Assessment where necessary, that: <ul style="list-style-type: none"> (a) The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects); or (b) The plan or project will adversely affect the integrity of any Natura 2000 site (that does not host a priority habitat and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or (c) The plan or project will adversely affect the integrity of any Natura 2000 site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.” • Objective NH4 Impact Assessment – “Ensure full compliance with the requirements of the EU Habitats Directive (92/43/EEC), SEA Directive (2001/42/EC) and EIA Directive 2011/92/EU, and associated legislation/regulations, including the associated European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011), European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004-2011, Planning and Development (Strategic Environmental Assessment) Regulations 2004-2011 and the European Communities (Environmental Impact Assessment) Regulations 1989-2011 (or any updated/superseding legislation). Planning applications for proposed developments within the Plan Area that may give rise to likely significant effects on the environment may need to be accompanied by one or more of the following: an Environmental Impact 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Statement, an Ecological Impact Assessment Report, a Habitats Directive Assessment Screening Report or a Natura Impact Statement, as appropriate. Ensure that Natura Impact Statements and any other environmental or ecological impact assessments submitted in support of proposals for development are carried out according to best practice methodologies and contain all necessary baseline assessment.”</i></p> <ul style="list-style-type: none"> • Objective NH6 Water Resources – “Protect all water resources in the Plan Area, including the River Clarin, its tributaries, other streams, springs, surface waters, and groundwater quality, in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended) and the Western River Basin Management Plan 2009-2015 (including any superseding versions of same). Support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development in the Plan Area.” • Objective NH7 Environmental Management Buffer – “Protect and seek to improve the water quality in the River Clarin. Limit development within the environmental management buffer so as to protect the qualifying interests of the Galway Bay SAC and Inner Galway Bay SPA which are linked directly to the Athenry Local Area Plan area via the River Clarin. Seek to ensure that a minimum setback of 10 metres is maintained on either side of the River Clarin, save for exceptional circumstances where it can be reasonably demonstrated that this setback is not feasible. Refer to the Specific Objectives Maps (2A/2B) of the LAP.” 	
<p>Bearna Local Area Plan 2007 – 2017</p>	<p>According to the conclusions of the Appropriate Assessment Screening Statement (CAAS Ltd., 2012a), no likely significant effects will arise from the <i>Bearna Local Area Plan 2007-2017</i>. Based on this in-combination effects assessment of the GTS, it is considered that the <u>Bearna Local Area Plan 2007-2017 will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following policies and objectives (as detailed in the plan):</p> <p><i>Potential Impact Pathways – Habitat Degradation – Water Quality (Construction & Operation), Habitat Degradation – Non-native Invasive Species, Disturbance/Displacement</i></p> <p><u>Natural Heritage Strategy Objectives (Galway County Council, 2007)</u></p> <ul style="list-style-type: none"> • Objective NH18 Buffer Area – “Establish an appropriate buffer around all environmental designations to protect them from land use and development impacts. This shall be determined on a site specific basis depending on local ecological and drainage conditions and other factors as appropriate and shall in no case be less than 10m in width. This shall apply along Silver Strand Road and the north-western corner of the Plan Area to protect these designated sites.” 	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Bearna Local Area Plan 2007-2017</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the <i>Bearna Local Area Plan 2007-2017</i> alone, due to the policies and objectives • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will further more ensure no adverse effects will arise from the implementation of the <i>Bearna Local Area Plan</i>, including those that may arise from the potential impact pathway of Non-native invasive species

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Objective NH14 European Sites and Habitats Directive Assessment – “Protect European Sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence and a Habitats Directive Assessment where necessary, that: <ul style="list-style-type: none"> (a) The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any European Site (either individually or in combination with other plans or projects); or (b) The plan or project will adversely affect the integrity of any European Site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or (c) The plan or project will adversely affect the integrity of any European Site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000” • Objective NH15 Protected Habitats and Species – “Support the protection of protected habitats and species listed in the annexes to the EU Habitats Directive (92/43/EEC) and Birds Directive (2009/147/EC). This includes the protection of bats and their roosts, and the maintenance of woodland, hedgerows, treelines, ecological networks and corridors that serve as feeding areas, flight paths and commuting routes for bats. Both the existing and amended LAP include provisions to ensure that pollution from waste water disposal and septic tanks is continuously controlled. The provision of adequate wastewater treatment and disposal in Bearna will be guided by the following: <ul style="list-style-type: none"> (a) EU Directives, in particular 91/271/EEC and 98/15/EEC Directive on Urban Wastewater Treatment, and associated Irish legislation, including Environmental Protection Agency Act 1992 and Urban Waste Water Treatment Regulations 1994. (b) Section 2.8.1 of this LAP and other relevant strategies, policies, objectives and standards in the Plan. (c) The SEA undertaken for the Bearna LAP, including the recommended mitigation measures and monitoring measures. <p>Development proposals that cannot connect to the existing wastewater network, will be restricted and discouraged. Where it is not possible to connect to a public sewerage system, development proposals will be dependent on ‘on site’ treatment systems. Proposals for such systems would need to demonstrate that they comply with all relevant</p> 	<ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: <ul style="list-style-type: none"> Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); and, Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement)

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>standards that they are environmentally sustainable, that they do not undermine residential amenity, that they do not result in ad hoc development and that the site can be reinstated and connected to any future public wastewater scheme.”</i></p> <ul style="list-style-type: none"> • Objective NH10 Designated Sites and Non-Designated Areas – <i>“Recognise that nature conservation is not just confined to designated sites and acknowledge the need to protect non-designated habitats and landscapes and to conserve the biological diversity of the area.”</i> • Objective NH23 Designated Sites – <i>“Protect the designated sites as core areas of high biodiversity that provide the basis for the ecological functioning of the EcoNet.”</i> • Objective NH25 Coastal Corridor – <i>“Protect the coastal buffer/amenity and adjacent lands as a coastal corridor that connects the various stream corridors, protects coastal habitats and processes and provides high amenity areas at the land-sea interface.”</i> • Objective NH26 Important Habitats – <i>“Protect important habitats in the Plan Area, particularly those in Class 1, 2 and 3 of the EcoNet, including the Class 2 areas of salt marsh, poor flush and orchid Class 2 areas and the Class 3 areas of trees and hedgerows.”</i> • Objective NH27 Buffer Areas – <i>“Provide adequate buffer areas around the main core areas, corridors and important habitats to protect them from development impacts and ensure their continued ecological functioning.”</i> • Objective NH36 Coastal Development Setback – <i>“Establish an appropriate coastal development setback appropriate to local conditions and requirements to:</i> <ul style="list-style-type: none"> <i>(a) Protect the sensitive coastal edge, coastal habitats and natural processes from destruction, degradation and/or disruption to ensure that their roles as ecological corridors, coastal flooding and storm surge buffers are retained and enhanced.</i> <i>(b) Maintain and improve public access to the seashore and the utilisation of the coastal edge as a focus for public use and recreation.</i> <i>(c) Provide a buffer to protect against coastal flooding and erosion and the increasing incidence and severity of storm surges, flooding and erosion that is likely to result from global warming and sea level rises.</i> <i>(d) Allow sufficient space for the development of important public infrastructure and amenities, such as a promenade, public ablutions, park areas, etc.</i> <i>(e) Provide for the creation of a positive relationship between new built development, the coastal amenity park, the promenade and the seashore.”</i> • Objective NH37 Coastal Edge – <i>“An appropriate coastal development setback will be required as follows in the Coastal Edge area:</i> <ul style="list-style-type: none"> <i>(a) A minimum horizontal setback of 100m from the foreshore field boundary line for new development or along the 10m natural contour line, whichever is the greater.</i> <i>(b) A consideration of the permanent line of vegetation and the 200 year tide level in the layout, design and installation of any new development, infrastructure or landscaping.</i> <i>(c) A high quality of siting and design in the area between the 100m setback/10m contour line and the R336.</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>(d) <i>No development seaward of Lenarevagh Stream in the eastern portion of the Coastal Edge, other than as permitted under other sections in the LAP or as considered by the Planning Authority to be in the interests of proper planning and sustainable development.</i></p> <p><i>Potential Impact Pathways – Habitat Degradation – Water Quality (Construction & Operation)</i></p> <p><u>Natural Heritage Strategy Objectives (Galway County Council, 2007)</u></p> <ul style="list-style-type: none"> • Objective NH5 Groundwater and Surface Water Protection – <i>“The surface and groundwaters should be protected from pollution. In particular, proposals for on-site septic tanks and/or effluent treatment systems should include specific proposals to deal with the shallow soil cover to granite bedrock, the high water table and the potential pollution of surface and groundwaters.”</i> • Objective NH6 Legislative and Policy Requirements – <i>“Support the application and implementation of the relevant international and national legislative and policy requirements as they apply in Bearnna, including the following:</i> <ul style="list-style-type: none"> (a) <i>The provisions of the EU Water Framework Directive 2000 and associated Irish legislation, namely the European Union (Water Policy) Regulations 2003, and projects, in particular the findings and recommendations of the Western RBD Project.</i> (b) <i>The recommendations of the OPW with regard to Flood Risk and Development.”</i> • Objective NH7 Local Streams – <i>“The existing streams in Bearnna should be protected as follows:</i> <ul style="list-style-type: none"> (a) <i>Restore and reinstate streams or portions of streams that have been filled in or covered over as part of new developments.</i> (b) <i>Culverting of the streams should be restricted.</i> (c) <i>There will be a general minimum 6m wide buffer on either side of streams to protect these watercourse and associated habitats. Additional areas should be incorporated as required to provide for attenuation, habitat conservation, etc.”</i> • Objective NH8 Catchment Impacts – <i>“Ensure that new developments consider the potential impact on existing developments, infrastructure and natural habitats, wildlife and processes within the same catchment.”</i> <p><i>Potential Impact Pathways – Disturbance/Displacement, Barrier Effect</i></p> <p><u>Natural Heritage Strategy Objectives (Galway County Council, 2007)</u></p> <ul style="list-style-type: none"> • Objective NH12 Interconnectivity – <i>“Maintain and enhance the area, quality and interconnectivity of woodlands, trees, hedgerows and stone walls and other associated features. Where boundaries have been removed or it is considered necessary for them to be removed, these should be replaced with similar boundary types.”</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Objective NH13 Wildlife – “Protect birds and bats and their roosts, and to maintain woodland, hedgerows, treelines and ecological networks and corridors which serve as feeding areas, flight paths and commuting routes for birds and bats.” • Objective NH24 Stream Corridors – “Protect the watercourses as stream corridors for wildlife that provide north-south ecological linkages connecting core areas. Liberty Stream, Trusky Stream and Barna Stream in particular provide opportunities to link the inland designated sites with the coastal designated sites, Galway Bay and the coastal corridor.” • Objective NH29 Ecological Functioning – “Support the ecological functioning of the open spaces and ecosystems within the Plan Area and their ability to deliver ecosystem services for the local and broader community.” • Objective NH30 New Development – “New developments should consider their potential impact on ecological functioning and the delivery of ecosystem services.” 	
<p>Gort Local Area Plan 2013-2019</p>	<p>According to the conclusions of its Natura Impact Report (RPS, 2013b), the <u>Gort Local Area Plan 2013-2019 will not have any adverse effects on the SAC Qualifying Interest habitats or species or SPA Special Conservation Interest bird species</u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following objectives and policies (as detailed in the plan):</p> <p><i>Potential Impact Pathways – Habitat Degradation – Water Quality (Construction/Operation)</i></p> <ul style="list-style-type: none"> • Objective DS 3 Natura 2000 Network and Habitats Directive Assessment – “Protect European Sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats), Regulations 2011 (SI No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any updated/superseding guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence, screening for Appropriate Assessment, and a Habitats Directive Assessment where necessary, that: <ul style="list-style-type: none"> (a) The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European Site (either individually or in combination with other plans or projects); or (b) The plan or project will have significant adverse effects on the integrity of any European Site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set 	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Gort Local Area Plan 2013-2019</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the <i>Gort Local Area Plan 2013-2019</i> alone, due to the policies and objectives; • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will further more ensure no adverse effects will arise from the implementation of the <i>Bearna Local Area Plan</i> • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments)

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or</p> <p>(c) <i>The plan or project will have significant adverse effects on the integrity of any European Site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.</i></p> <ul style="list-style-type: none"> • Objective DS 5 Service Led Development – “Ensure that development is preceded by sufficient capacity in the public waste water and potable water infrastructure.” • Policy UI 1 Water Supply, Wastewater and Surface Water Infrastructure – “It is the policy of Galway County Council to support the provision and maintenance of adequate wastewater disposal, water supply and surface water drainage infrastructure, in accordance with EU Directives, national legislation and applicable standards. This will include the provision of adequate capacity in the public wastewater, wastewater treatment plant and storm-water sewer network, an adequate quantity and quality of water supply and the promotion of Sustainable Drainage System approaches and techniques for developments within the Plan Area.” • Objective UI 1 Water Services Infrastructure – “Support the maintenance, improvement and monitoring of the public water supply, wastewater disposal and surface water drainage infrastructure, as necessary to address any deficiencies in infrastructure capacity and/or service the development needs of the town. This will include the following and any other projects approved during the period of the Plan: <ul style="list-style-type: none"> (a) Continue to carry out improvements to the existing infrastructure and quality of the town’s water supply system, including the partial network and reservoir upgrade works under the Water Conservation Rehabilitation works as proposed to commence in 2014/2015. (b) Monitor the capacity of the updated wastewater treatment plant as development takes place. (c) Ensure that trade effluent from new development is managed properly and discharged to sewer in accordance with relevant discharge licenses, where appropriate. (d) Progress the upgrading of the existing wastewater treatment plant and the sewer network for the town under the Water Services Investment Programme. (e) Improve and maintain an adequate surface water drainage system throughout the Plan Area.” • Objective UI2 Water Services for New Developments – “Require all new developments to be adequately serviced with water supply, wastewater disposal and surface water drainage in accordance with applicable legislation, standards and guidelines and to submit the necessary documentation with their planning applications to confirm same. Encourage only as much development, both in terms of quantity and type of development that can be provided for based on the utility services available and prohibit any proposed development that cannot be adequately serviced, 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>that would lead to a significant environmental effects or that would pose an unacceptable threat to the capacity of water, wastewater or surface water infrastructure in the Plan area.”</i></p> <ul style="list-style-type: none"> • Objective UI4 Wastewater Disposal – <i>“Restrict development that does not connect to the public sewer and discourage the proliferation of individual septic tanks and treatment plants in order to protect groundwaters, consolidate the town structure and control ribbon development along the approach roads into Gort. Ensure that any trade effluent from new development is managed properly and discharged to sewer in accordance with relevant discharge licenses, where appropriate.”</i> • Objective UI 5 Wastewater Treatment Plant Buffer – <i>“Provide and protect a 100m buffer around the wastewater treatment plant (Public Utilities Zoning Objective) site and protect buffer zones around any other treatment plant in the town as appropriate.”</i> • Objective UI 6 Surface Water Drainage and Sustainable Drainage Systems – <i>“Maintain and enhance, as appropriate, the existing surface water drainage system throughout the Plan Area and ensure that new developments are adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems in new developments. Surface water runoff from development sites will be limited to pre-development levels and planning applications for new developments will be required to provide details of surface water drainage and Sustainable Drainage Systems proposals.”</i> • Objective UI7 The Cannahowna/Gort River and Drainage Catchment – <i>“Require new development proposals within the catchment of the Cannahowna/Gort River or that potentially drain towards this river to include full details of proposals to address the high probability of flooding associated with the river and its catchment and the need to provide adequate surface water drainage, including the incorporation of Sustainable Drainage Systems.”</i> • Objective UI10 Water Bodies and Watercourses – <i>“Protect water bodies and watercourses within the Plan Area from inappropriate development, including lakes, rivers, canals, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include a 10 metre environmental management buffer on either side of the Cannahowna/Gort River, measured from the near river bank. Promote the sustainable management and uses of water bodies and avoid culverting or realignment of these features.</i> • Objective UI11 Groundwater and Pluvial Flood Risk – <i>“Planning applications on lands identified within groundwater and pluvial PFRA areas shall be accompanied by a Site-specific Flood Risk Assessment that corresponds with that outlined under Chapter 5 ‘Flooding and Development Management’ of the DEHLG Flood Guidelines (2009). Such assessments shall be prepared by suitably qualified experts with hydrological experience and shall quantify the risks and the effects of any necessary mitigation, together with the measures needed or proposed to manage residual risks.”</i> • Policy UI 4 Water Quality – <i>“It is the policy of Galway County Council to protect and improve water quality in all waters, in conjunction with other agencies and stakeholders in accordance with the EU Water Framework Directive (2006/60/EC), EU Groundwater Directive (2006/118/EC) and other relevant EU Directives, including associated national legislation and policy guidance, (including any superseding versions of same), and to support the implementation of the Western River Basin District Management Plan, Galway County Council will take account of the above requirements to protect and improve water quality when considering new development proposals.”</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Objective UI13 Western River Basin District Management Plan and Protection of Waters – “Support the protection of water quality in accordance with the EU Water Framework Directive (2006/60/EC) and the European Communities (Water Policy) Regulations 2003 (SI No. 722 of 2003) (as amended) (or any updated legislation), including the implementation of the relevant recommendations and measures as outlined in the Western River Basin District Management Plan 2009-2015, (and any updated/ superseding documents). Development will only be permitted where it can be clearly demonstrated that the proposal would not have an unacceptable impact on the water environment, including surface water, groundwater quality and quantity, river corridors and associated wetlands. Galway County Council is statutorily obliged to protect the existing good quality status of the waters in the Gort area (including the Cannahowna/Gort River and tributary/stream, the Kiltartan drainage area and including the surface water catchments of the Coole-Garryland turlough (a wetland system of global significance).” • Objective UI14 Groundwater and Aquifers – “Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the EU Groundwater Directive (2006/118/EC) and the European Communities Environmental Objectives (Groundwater) Regulations 2010 (SI No. 9 of 2010) (or any updated legislation). Protect the regionally important aquifer that under lays the Plan Area from risk of environmental pollution and have regard to any groundwater protection schemes and groundwater source protection zones where data has been made available by the Geological Survey of Ireland.” • Policy NH1 Natural Heritage and Biodiversity – “It is the policy of Galway County Council to support the conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European Sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas and proposed Natural Heritage Areas and the promotion of the development of a green/ecological network within the Plan Area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment. The protection of natural heritage and biodiversity, including European Sites that form part of the Natura 2000 network, will be implemented in accordance with relevant EU environmental directives and applicable national legislation, policies, plans and guidelines, including the following (and any updated/superseding documents): <ul style="list-style-type: none"> (a) EU Directives, including the Habitats Directive (92/43/EEC), the Birds Directive (2009/147/EC), the Environmental Impact Assessment Directive (85/337/EEC), the Water Framework Directive (2000/60/EC) and the Strategic Environmental Assessment Directive (2001/42/EC), (b) National legislation, including the Wildlife Act 1976, the European Communities (Environmental Impact Assessment) Regulations 1989 (SI No. 349 of 1989) (as amended), the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the Planning and Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011). (c) National policy guidelines, including the Landscape and Landscape Assessment Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessment Guidelines 2010. 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>(d) Catchment and water resource management plans, including the Western River Basin District Management Plan 2009-2015.</p> <p>(e) Biodiversity plans and guidelines, including Actions for Biodiversity 2011-2016: Ireland's National Biodiversity Plan, the Biodiversity Action Plan for County Galway 2008- 2013 and the Biodiversity Guidelines produced by Galway County Council."</p> <ul style="list-style-type: none"> • Objective NH1 European Sites - "Protect European Sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Environmental Liability Directive, the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence, screening for appropriate assessment, and a Habitats Directive Assessment where necessary, that: <ul style="list-style-type: none"> (a) The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European Site (either individually or in combination with other plans or projects); or (b) The plan or project will have significant adverse effects on the integrity of any European Site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or (c) The plan or project will have significant adverse effects on the integrity of any European Site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000." • Objective NH2 Protected Habitats and Species – "Support the protection of habitats and species listed in the annexes to and/or covered by the EU Habitats Directive (92/43/EEC, as amended) and Birds Directive (2009/147/EC), and regularly occurring-migratory birds and their habitats, and species protected under the Wildlife Acts 1976- 2000." • Objective NH4 Impact Assessment – "Ensure full compliance with the requirements of the EU Habitats Directive (92/43/EEC), SEA Directive (2001/42/EC) and EIA Directive 2011/92/EU and associated legislation/regulations, including the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011), European 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004-2011, the Planning and Development (Strategic Environmental Assessment) Regulations 2004-2011 and the European Communities (Environmental Impact Assessment) Regulations 1989-2011 (or any updated/superseding legislation). Planning applications for proposed developments within the Plan Area that may give rise to likely significant effects on the environment and/or any designated site may need to be accompanied by one of more of the following: an Environmental Impact Statement, an Ecological Impact Assessment Report, a Habitats Directive Assessment Screening Report or a Natura Impact Statement, as appropriate. Ensure that Natura Impact Statements and any other environmental or ecological impact assessments submitted in support of proposals for development are carried out in accordance with best practice methodologies and contain all necessary baseline assessments.”</i></p> <ul style="list-style-type: none"> • Objective NH6 Water Resources – <i>“Protect the water resources in the Plan Area, including the Cannahowna/Gort, its tributaries and downstream water bodies, other streams, springs, surface water and groundwater quality and wetlands in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the Western River Basin District Management Plan 2009-2015 and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same). Support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development in the Plan Area.”</i> • Objective NH7 Environmental Management Buffer – <i>“Protect and seek to improve the water quality in the Cannahowna/Gort River. Limit development within the environmental management buffer so as to protect the qualifying interests of all European Sites which are linked indirectly to the Gort Local Area Plan area via the Cannahowna/Gort River and to mitigate against pollution risks, reduce flooding potential and maintain habitat. Seek to ensure that a minimum setback of 10 metres is maintained on either side of the Cannahowna/Gort River, save for exceptional circumstances where it can be reasonably demonstrated that this setback is not feasible. In the event of lighting being proposed along watercourse corridors an Ecological Impact Assessment (and where necessary an Appropriate Assessment) including bat and otter survey shall be conducted by specialists. The recommendations of the specialist studies shall be implemented to the greatest extent possible. No lighting will be installed without prior consultation with NPWS and shall be in line with advances in knowledge into the impact of lighting on bats and other species and also to reflect advances in technology in the lighting industry. Support the carrying out of a river corridor habitat survey of the Cannahowna/Gort River as resources permit.”</i> 	
Headford Local Area Plan 2015-2021	<p>According to the conclusions of the Appropriate Assessment Screening Statement⁶ (Galway County Council, 2015), no likely significant effects will arise from the <i>Headford Local Area Plan 2015-2021</i>. Based on this in-combination effects assessment of the GTS, it is considered that the <u>Headford Local Area Plan 2015-2021 will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</u> via any of the</p>	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and <i>the Headford</i></p>

⁶ To note: Appropriate Assessment was only completed for the Material Alterations of the Plan. Ministerial Direction removed these material alterations.

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p>identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following policies and objectives (as detailed in the plan):</p> <p><i>Potential Impact Pathways – Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction/Operation)</i></p>	<p><i>Local Area Plan 2015-2021</i> This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the <i>Headford Local Area</i>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Objective DS 3 Natura 2000 Network and Habitats Directive Assessment – “Protect European Sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any updated/superseding guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence and a Habitats Directive Assessment where necessary, that: <ul style="list-style-type: none"> (a) The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects); or (b) The plan or project will adversely affect the integrity of any Natura 2000 site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or (c) The plan or project will adversely affect the integrity of any Natura 2000 site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.” • Objective DS 5 Service Led Development – “Development under the plan shall be preceded by sufficient capacity in the public waste water infrastructure and potable water infrastructure.” • Policy UI 1 Water Supply, Wastewater And Surface Water Infrastructure – “Support Irish Water in the provision and maintenance of adequate wastewater disposal and water supply and the maintenance of the existing combined (sewage and surface water) drainage infrastructure, in accordance with EU Directives, to service Headford. This will include satisfactory capacity for public wastewater and a satisfactory quantity and quality of water supply, Sustainable Drainage System approaches and techniques within the plan area shall also be supported.” • Objective UI 3 Wastewater Disposal – “New developments shall only be permitted where it can be clearly demonstrated that they can be serviced and that there is adequate capacity in the wastewater disposal infrastructure in accordance with applicable requirements and standards, including urban wastewater treatment disposal standards, in order to protect Lough Corrib cSAC and SPA and its respective qualifying interests.” 	<p>Plan5-2021 alone, due to the policies and objectives</p> <ul style="list-style-type: none"> • Adherence to the overarching policies and objectives of the Galway County Development Plan 2015-2021 will further more ensure no adverse effects will arise from the implementation of the Headford Local Area Plan 2015-2021 • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); and, Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments)

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Objective UI 5 Surface Water Drainage and Sustainable Drainage Systems – <i>“Maintain and enhance, as appropriate, the existing surface water drainage system throughout the plan area and ensure that new developments are adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems in new developments. Surface water runoff from development sites will be limited to pre-development levels and planning applications for new developments will be required to provide details of surface water drainage and Sustainable Drainage Systems proposals, with the developer responsible for the satisfactory disposal of surface water”</i> • Policy WQ 1 Water Quality – <i>“It is the policy of Galway County Council to seek the protection and improvement in water quality in all waters, in conjunction with other agencies and stakeholders in accordance with the EU Water Framework Directive (2006/60/EC), EU Groundwater Directive (2006/118/EC) and other relevant EU Directives, including associated national legislation and policy guidance, (including any superseding versions of same), and to support the implementation of the Western River Basin District Management Plan (as updated), including its Programme of Measures and the actions and measures that form part of the Corrib Water Management Unit Action Plan and consider the above when assessing new development proposals.”</i> • Objective WQ 2 Groundwater & Aquifer – <i>“Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010) as amended by the European Communities Environmental Objectives (Groundwater) (Amendment) Regulations 2012 or any other updates. In addition, protect the regionally important aquifer that underlays the plan area from risk of environmental pollution and have regard to any groundwater protection schemes and groundwater source protection zones where data has been made available by the Geological Survey of Ireland.”</i> • Objective FL 9 Water Bodies and Watercourses – <i>“Protect water bodies and watercourses within the plan area from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include a general 10 metre protection buffer from rivers within the plan area, as measured from the near river bank (this distance may be increased and decreased on a site by site basis, as appropriate). In addition, promote the sustainable management and uses of water bodies and avoid culverting or realignment of these features.”</i> • DM Guideline WQ 1 Water Bodies and Watercourses – <i>“Require all relevant applications, which are located in close proximity to water bodies or watercourses to submit measures to reduce and prevent pollution to the water body/watercourse, both during construction and after completion of the scheme.”</i> • Policy NH 1 Natural Heritage, Landscape and Environment – <i>“It is the policy of Galway County Council, to support the conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of Natura 2000 sites, the protection of Natural Heritage Areas and proposed Natural Heritage Areas and the promotion of the development of a green/ecological network within the plan area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment. The protection of natural heritage and biodiversity, including Natura 2000 sites, will be implemented in accordance with relevant EU environmental directives and</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>applicable national legislation, policies, plans and guidelines, including the following (and any updated/superseding documents): • EU Directives, including the Habitats Directive (92/43/EEC), the Birds Directive (2009/147/EC codified version of Directive), the Environmental Impact Assessment Directive (85/337/EEC) & EIA Directive (2014/52/EU), the Water Framework Directive (2000/60/EC) and the Strategic Environmental Assessment Directive (2001/42/EC); the Environmental Liability Directive 2004/35/EC; • National legislation, including the Wildlife Act 1976, the European Communities (Environmental Impact Assessment) Regulations 1989 (SI No. 349 of 1989) (as amended), the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the Planning and Development (Amendment) Act 2010 and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) and the Regulation of the European Parliament and of the Council on the Prevention and Management of the Introduction and Spread of Invasive Non-Native Species [2013/0307 (COD)] (adopted by European Council coming into effect January 2015) • National policy guidelines, including the Landscape and Landscape Assessment Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessment Guidelines 2010.</i></p> <ul style="list-style-type: none"> <i>(a) Catchment and water resource management plans, including the Western River Basin District Management Plan 2009-2015 (and as updated).</i> <i>(b) Biodiversity plans and guidelines, including Actions for Biodiversity 2011-2016: Ireland's National Biodiversity Plan, the Biodiversity Action Plan for County Galway 2008-2013 and the Biodiversity Guidelines produced by Galway County Council.</i> <i>(c) EU Directives, including the Habitats Directive (92/43/EEC), the Birds Directive (2009/147/EC codified version of Directive), the Environmental Impact Assessment Directive (85/337/EEC) & EIA Directive (2014/52/EU), the Water Framework Directive (2000/60/EC) and the Strategic Environmental Assessment Directive (2001/42/EC); the Environmental Liability Directive 2004/35/EC;</i> <i>(d) National legislation, including the Wildlife Act 1976, the European Communities (Environmental Impact Assessment) Regulations 1989 (SI No. 349 of 1989) (as amended), the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the Planning and Development (Amendment) Act 2010 and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) and the Regulation of the European Parliament and of the Council on the Prevention and Management of the Introduction and Spread of Invasive Non-Native Species [2013/0307 (COD)] (adopted by European Council coming into effect January 2015)</i> <i>(e) National policy guidelines, including the Landscape and Landscape Assessment Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessment Guidelines 2010.</i> <i>(f) Catchment and water resource management plans, including the Western River Basin District Management Plan 2009-2015 (and as updated).</i> <i>(g) Biodiversity plans and guidelines, including Actions for Biodiversity 2011-2016: Ireland's National Biodiversity Plan, the Biodiversity Action Plan for County Galway 2008-2013 and the Biodiversity Guidelines produced by Galway County Council.”</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Objective NH 1 Natura 2000 Sites – “Protect European Sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any updated/superseding guidance). A plan or project (e.g. proposed development) within the plan area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence and a Habitats Directive Assessment where necessary, that: <ul style="list-style-type: none"> (a) The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects); or (b) The plan or project will adversely affect the integrity of any Natura 2000 site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or (c) The plan or project will adversely affect the integrity of any Natura 2000 site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.” • Objective NH 2 Protected Habitats and Species – <ul style="list-style-type: none"> (a) “Support the protection of protected habitats and species listed in the annexes to the EU Habitats Directive 1992 (92/43/EEC) and the Birds Directive (2009/147/EC) and regularly occurring-migratory birds and their habitats, species protected under the Wildlife Acts and the Flora Protection Order. This includes the protection of the barn owl, otters, salmon, brook lamprey, bats and their roosts and the maintenance of woodland, hedgerows, tree lines, waterways and ecological networks and corridors which serve as feeding areas, flight paths and community routes for bats. (b) Areas for particular species afforded protection include in the vicinity of St. John the Baptist Church) where barn owl activity is known and in the vicinity of the Demesne Road, Lowery’s Stream where bat activity is known and the Annacurta (Headford) River and associated streams for otter, salmon and lamprey.” • Objective NH 6 Water Resources – “Protect all water resources in the plan area, including rivers, streams, springs, wetlands, surface waters and groundwater quality, in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the Western River Basin Management Plan 2009-2015 (including any updated or superseding document) and other relevant EU Directives, including associated national legislation and policy guidance (including any 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>superseding versions of same). Support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development in the plan area.”</i></p> <ul style="list-style-type: none"> • Objective NH 7 Wetlands, Springs, Rivers and Streams – <i>“Seek to preserve the wetlands of Headford, identify and protect natural springs, streams/rivers, where possible and ensure that any plans/projects with the potential to adversely affect groundwater, springs, streams or rivers, identify the presence of these features and adequately assess the impacts to them. Protect springs identified on Ordnance Survey mapping or any springs newly identified during project assessment, so that they are not impeded.”</i> • Objective NH 8 Riparian Zones – <i>“Protect the riparian zones of watercourse systems throughout the plan area, recognising the benefits they provide in relation to flood risk management and in relation to the ecological integrity of watercourse systems. This will include a general 10 metre protection buffer from rivers within the plan area as measured from the near river bank, (this distance may be increased and decreased on a site by site basis, as appropriate).”</i> • Objective NH 10 Geological and Geomorphological Systems – <i>“Protect and conserve geological and geomorphological systems, sites and features from inappropriate development that would detract from their heritage value and interpretation and ensure that any plan or project affecting karst formations are adequately assessed with regard to their potential geophysical, hydrological, hydro-geological or ecological impacts on the environment.”</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
<p>Loughrea Local Area Plan 2011-2018</p>	<p>According to the conclusions of the Appropriate Assessment Screening Statement (Doherty Environmental, 2012a), no likely significant effects will arise from the <i>Loughrea Local Area Plan 2011-2018</i>. Based on this in-combination effects assessment of the GTS, it is considered that the <u><i>Loughrea Local Area Plan 2011-2018 will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</i></u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following policies and objectives (as detailed in the plan):</p> <p><i>Potential Impact Pathways –Habitat Degradation – Water Quality (Construction/Operation)</i></p> <ul style="list-style-type: none"> • Objective DS 3 Natura 2000 Network and Habitats Directive Assessment – “<i>Protect European Sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any updated/superseding guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence and a Habitats Directive Assessment where necessary, that:</i> <ul style="list-style-type: none"> (a) <i>The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects); or</i> (b) <i>The plan or project will adversely affect the integrity of any Natura 2000 site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or</i> (c) <i>The plan or project will adversely affect the integrity of any Natura 2000 site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.”</i> • Objective DS 5 Service Led Development – “<i>Development under the plan shall be preceded by sufficient capacity in the public waste water infrastructure and potable water infrastructure.”</i> 	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Loughrea Local Area Plan 2011-2018</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the <i>Loughrea Local Area Plan 2011-2018</i> alone, due to the policies and objectives outlined in the plan • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will further more ensure no adverse effects will arise from the implementation of the <i>Loughrea Local Area Plan 2011-2018</i> • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments)

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Objective LU 9 Environmental Management Area (EM) – “Protect lands and sites with high biodiversity value and/or Environmental sensitivity and promote their sustainable management and use. This will include the protection of the integrity of European Sites that form part of the Natura 2000 network, in particular Special Protection Areas and Special Areas of Conservation, in accordance with the conservation management objectives for these sites and the requirements of the EU Habitats Directive (92/43/EEC).” • Objective UI2 Water Services for New Developments – “Require all new developments to be adequately serviced with water supply, wastewater disposal and surface water drainage in accordance with applicable legislation, standards and guidelines and to submit the necessary documentation with their planning applications to confirm same. Encourage only as much development, both in terms of quantity and type of development that can be provided for based on the utility services available and prohibit any proposed development that cannot be adequately serviced, that would lead to a significant environmental effects or that would pose an unacceptable threat to the capacity of water, wastewater or surface water infrastructure in the Plan area.” • Objective UI 4 Wastewater Disposal - “New developments shall only be permitted where it can be clearly demonstrated that they can be serviced and that there is adequate capacity in the wastewater disposal infrastructure in accordance with applicable requirements and standards, including urban wastewater treatment disposal standards, in order to protect the Galway Bay Complex and its qualifying interests.” • Objective UI 5 Surface Water Drainage and Sustainable Drainage Systems - “Maintain and enhance, as appropriate, the existing surface water drainage system throughout the plan area and ensure that new developments are adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems in new developments. Surface water runoff from development sites will be limited to pre-development levels and planning applications for new developments will be required to provide details of surface water drainage and Sustainable Drainage Systems proposals, with the developer responsible for the satisfactory disposal of surface water” • Objective UI 6 St. Cleran’s River Tributary and Drainage Catchment – “Require new development proposals within the catchment of the St. Cleran’s River tributary or that potentially drain towards this tributary to include full details of proposals to address the high probability of flooding associated with the tributary and the need to provide adequate surface water drainage, including the incorporation of Sustainable Drainage Systems.” • Objective UI 9 (Waterbodies and Watercourses) – “Protect waterbodies and watercourses within the Plan Area from inappropriate development, including the lake, rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include a 10 metre environmental management buffer on either side of St Cleran’s River and its tributary in the least of the Plan Area, measured from the near river bank. Promote the sustainable management and uses of watercourses and avoid the culverting or realignment of these features.” • Policy UI 3 Water Quality – “It is the policy of Galway County Council to protect and improve water quality in conjunction with other agencies and stakeholders and in accordance with the EU Water Framework Directive (2006/60/EC), EU Groundwater Directive (2006/118/EC) and associated national legislation and to support the implementation of the Western River Basin District Management Plan, including the actions and measures that 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>form part of the Clarin/Kilcolgan Water Management Unit Action Plan. Galway County Council will take account of the above requirements to protect and improve water quality when considering new development proposals.”</p> <ul style="list-style-type: none"> • Objective UI 10 Western River Basin District Management Plan and Protection of Waters - Support the protection of water quality in accordance with the EU Water Framework Directive (2006/60/EC) and the European Communities (Water Policy) Regulations 2003 (SI No. 722 of 2003) (as amended) (or any updated legislation), including the implementation of the relevant recommendations and measures as outlined in the Western River Basin District Management Plan 2009 2015, including the Clarin/Kilcolgan Water Management Unit Action Plan (and any updated/ superseding documents). Development will only be permitted where it can be clearly demonstrated that the proposal would not have an unacceptable impact on the water environment, including surface water, groundwater quality and quantity, river corridors and associated wetlands. Galway County Council is statutorily obliged to protect the existing good quality status of the waters in Loughrea (including Lough Rea, St. Cleran’s River and tributary and the Clarin/Kilcolgan drainage area). • DM Guideline UI 2 Waterbodies and Watercourses – “Require all relevant applications, which are located in close proximity to waterbodies or watercourses (including Lough Rea, St.Cleran’s River and tributaries), to submit measures to reduce and prevent pollution to the waterbody/watercourse, both during construction and after completion of the scheme.” • Policy NH 1 Natural Heritage, Landscape and Environment – “It is the policy of Galway County Council, to support the conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European Sites, the protection of Natural Heritage Areas and proposed Natural Heritage Areas and the promotion of the development of a green/ecological network within the Plan Area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment. The protection of natural heritage and biodiversity, including European Sites, will be implemented in accordance with relevant EU environmental directives and applicable national legislation, policies, plans and guidelines, including the following (and any updated/superseding documents): <ul style="list-style-type: none"> (a) EU Directives, including the Habitats Directive (92/43/EEC), the Birds Directive (2009/147/EC codified version of Directive), the Environmental Impact Assessment Directive (85/337/EEC), the Water Framework Directive (2000/60/EC) and the Strategic Environmental Assessment Directive (2001/42/EC). (b) National legislation, including the Wildlife Act 1976, the European Communities (Environmental Impact Assessment) Regulations 1989 (SI No. 349 of 1989) (as amended), the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the Planning and Development (Amendment) Act 2010 and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011). • National policy guidelines, including the Landscape and Landscape Assessment Guidelines 2000, the Environmental Impact Assessment SubUThreshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessment Guidelines 2010. (c) Catchment and water resource management plans, including the Western River Basin District Management Plan 2009U2015. 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>(d) <i>Biodiversity plans and guidelines, including Actions for Biodiversity 2011U2016: Ireland's National Biodiversity Plan, the Biodiversity Action Plan for County Galway 2008U2013 and the Biodiversity Guidelines produced by Galway County Council.</i>"</p> <ul style="list-style-type: none"> • Objective NH 1 European Sites – <i>“Protect European 2000 sites, (including Special Protection Areas and Special Areas of Conservation), that form part of the Natura 2000 network, in accordance with the requirements in the EU Habitats Directive'(92/43/EEC), EU Birds'Directive'2009/147/EC codified version of Directive), the Planning and Development (Amendment)'Act'2010, the European Communities (Birds and Natural Habitats) Regulations'2011 (S.I. No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence and a Habitats Directive Assessment where necessary, that:</i> <ul style="list-style-type: none"> (a) <i>The plan or project will not give rise to adverse direct, indirect or secondary impacts on the integrity of any European Site (either individually or in combination with other plans or projects); or</i> (b) <i>The plan or project will adversely affect the integrity of any European Site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure The protection of the overall coherence of Natura 2000; or</i> (c) <i>The plan or project will adversely affect the integrity of any European Site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.”</i> • Objective NH 2 Protected Habitats and Species – <i>“Support the protection of protected habitats and species listed in the annexes to the EU Habitats'Directive'1992 (92/43/EEC) and the Birds Directive'(2009/147/EC codified version of Directive). This includes the protection of bats and their roosts, and the maintenance of woodland, hedgerows, treelines, ecological networks and corridors which serve as feeding areas, flight paths and community routes for bats.”</i> • Objective NH 6 Water Resources – <i>“Protect all water resources in the Plan Area, including Lough Rea, St Cleran's River, its tributaries and downstream waterbodies, other streams, springs, surface water and groundwater quality, in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended) and the Western River Basin Management Plan 2009U2015 (including any superseding versions of same). Support the application and implementation of a</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development in the Plan Area.”</i></p>	
<p>Maigh Cuilinn Local Area Plan 2013-2019</p>	<p>According to the conclusions of the Appropriate Assessment Screening Statement (RPS, 2013a), no likely significant effects will arise from the <i>Maigh Cuilinn Local Area Plan 2013-2019</i>. Based on this in-combination effects assessment of the GTS, it is considered that the <u>Maigh Cuilinn Local Area Plan 2013-2019 will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following policies and objectives (as detailed in the plan):</p> <p><i>Potential Impact Pathways – Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction/Operation), Habitat Degradation – Air Quality, Non-native Invasive Species, Disturbance/Displacement, Barrier Effect</i></p> <ul style="list-style-type: none"> • Objective LU 8 Environmental Management (EM) – “<i>Protect lands and sites with high biodiversity value and/or environmental sensitivity and promote their sustainable management and use. This will include the protection of the integrity of European Sites that form part of the Natura 2000 network, in particular Special Areas of Conservation, in accordance with the conservation management objectives of these sites and the requirements of the EU Habitats Directive (92/43/EEC).</i>” <p><u>Natural Heritage & Biodiversity Policies</u></p> <ul style="list-style-type: none"> • Policy NH 1 Natural Heritage, Landscape and Environment – “<i>It is the policy of Galway County Council, to support the conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of Natura 2000 sites, the protection of Natural Heritage Areas and proposed Natural Heritage Areas and the promotion of the development of a green/ecological network within the Plan Area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment. The protection of natural heritage and biodiversity, including European Sites that form part of the Natura 2000 network, will be implemented in accordance with relevant EU environmental directives and applicable national legislation, policies, plans and guidelines, including the following (and any updated/superseding documents):</i> <ol style="list-style-type: none"> <i>EU Directives, including the Habitats Directive (92/43/EEC), the Birds Directive (2009/147/EC the Environmental Impact Assessment Directive (85/337/EEC), the Water Framework Directive (2000/60/EC) and the Strategic Environmental Assessment Directive (2001/42/EC).</i> <i>National legislation, including the Wildlife Act 1976, the European Communities (Environmental Impact Assessment) Regulations 1989 (SI No. 349 of 1989) (as amended), the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the Planning and Development Act 2000,</i> 	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Maigh Cuilinn Local Area Plan 2013-2019</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the <i>Maigh Cuilinn Local Area Plan 2013-2019</i> alone, due to the policies and objectives outlined in the plan • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will further more ensure no adverse effects will arise from the implementation of the <i>Maigh Cuilinn Local Area Plan 2013-2019</i> • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Air Quality (i.e. Box 7 GTS – Habitat Degradation – Air Quality); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>(as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011).</p> <p>(c) National policy guidelines, including the Landscape and Landscape Assessment Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessment Guidelines 2010.</p> <p>(d) Catchment and water resource management plans, including the Western River Basin District Management Plan 2009-2015.</p> <p>(e) Biodiversity plans and guidelines, including Actions for Biodiversity 2011-2016: Ireland's National Biodiversity Plan, the Biodiversity Action Plan for County Galway 2008-2013 and the Biodiversity Guidelines produced by Galway County Council."</p> <p>Natural Heritage & Biodiversity Objectives</p> <ul style="list-style-type: none"> • Objective NH 1 Natura 2000 Sites - "Protect European Sites that form part of the Natura 2000 network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any updated/superseding guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence and a Habitats Directive Assessment where necessary, that: <ul style="list-style-type: none"> (a) The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European Site (either individually or in combination with other plans or projects); or (b) The plan or project will have significant adverse effects on the integrity of any European Site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or (c) The plan or project will have significant adverse effects on the integrity of any European Site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000." • Objective NH 2 Protected Habitats and Species – "Support the protection of protected habitats and species listed in the annexes to the EU Habitats Directive 1992 (92/43/EEC), the Birds Directive (2009/147/EC) and regularly 	<p>native Invasive Species);</p> <p>Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>occurring-migratory birds and their habitats, and species that are protected under the Wildlife Acts 1976-2000. This includes the protection of bats and their roosts, and the maintenance of woodland, hedgerows, tree lines, ecological networks and corridors that serve as feeding areas, flight paths and commuting routes for bats.”</p> <ul style="list-style-type: none"> • Objective NH 5 Biodiversity & Ecological Networks – “Support the protection of biodiversity and ecological connectivity within the Plan area including woodlands, trees, hedgerows, rivers, streams, canals, natural springs, wetlands, stonewalls, fens, blanket bog, heath, rock outcrops, geological and geo-morphological systems, other landscape features and associated wildlife, where these form part of the ecological network. <ul style="list-style-type: none"> (a) Seek to retain and/or incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors and stepping stones. (b) Protect and enhance water quality and ecology of the Ballycurke Canal and the area of River Kip in the Plan area and their function of ecological corridors, by maintaining the existing banks and channels and ensuring that new developments in the Plan area are set back a minimum of 10 metres from the top bank of the watercourses. (c) Ensure greater biodiversity through the appropriate planting of native trees, shrubs and hedgerows indigenous to the Maigh Cuilinn area and of Irish provenance in public and private areas and new developments.” • Objective NH 7 Environmental Management Area – “Ensure that new development proposals on or near the Environmental Management Area that may impact on the Lough Corrib SAC are adequately assessed, undergo environmental and/or Habitats Directive Assessments, including the evaluation of cumulative/in combination effects, and any impacts identified can be avoided, reduced and/or mitigated, as appropriate, in accordance with applicable environmental legislation and policy prior to any consent being given.” • Objective NH 11 Screening for Appropriate Assessment – “Ensure that all development proposals in the Plan area are subject to an Appropriate Assessment Screening to determine whether they are likely to have a significant direct, indirect or cumulative effect on any European Site in view of its conservation objectives. Where significant effects are likely or uncertain, the Planning Authority may request such information from the applicant as it considers necessary to enable it to carry out „Screening for Appropriate Assessment” and/or Appropriate Assessment as the case may be. See ‘Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities 2000’ (or any superseding document) for guidance on the type of information that may be requested.” <p><i>Potential Impact Pathway – Habitat Degradation - Hydrogeology</i></p> <p><u>Water Quality Policy</u></p> <ul style="list-style-type: none"> • Objective UI 12 (b) Western River Basin District Management Plan and Protection of Waters - “Support the protection of water quality in accordance with the EU Water Framework Directive (2006/60/EC) and the European Communities (Water Policy) Regulations 2003 (SI No. 722 of 2003) and as amended (or any updated legislation), including the implementation of the relevant recommendations and measures as outlined in the Western River Basin District Management Plan 2009-2015, including the Corrib Water Management Unit Action Plan (and any 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>updated/or superseding documents). Development will only be permitted where it can be clearly demonstrated that the proposal would not have an unacceptable impact on the water environment, including surface water, groundwater quality and quantity, river corridors and associated wetlands. Galway County Council is statutorily obliged to protect existing good quality status of waters.”</p> <ul style="list-style-type: none"> • Objective UI 13 Groundwater & Aquifer – “Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010) or any updated legislation. Protect the regionally important aquifer to the east of the N59 and the poor aquifer to the west of the N59 that under lays the Plan Area, from risk of environmental pollution and have regard to any groundwater protection schemes and groundwater source protection zones where data has been made available by the Geological Survey of Ireland.” <p><u>Water Quality Development Management Guideline</u></p> <ul style="list-style-type: none"> • DM Guideline UI 2 Water Bodies and Watercourse – “Require all relevant applications, which are located in close proximity to water bodies or watercourses to submit measures to reduce and prevent pollution to the water body/watercourse, both during construction and after completion of the scheme.” <p><u>Natural Heritage & Biodiversity Objectives</u></p> <ul style="list-style-type: none"> • Objective NH 6 Water Resources – “Protect the water resources in the Plan Area, including Ballycurke Canal and the River Kip that falls within the Plan area, tributaries and downstream water bodies, other rivers, streams, springs, surface waters, and groundwater quality, in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended) and the Western River Basin Management Plan 2009-2015 (including any superseding versions of same) and other relevant EU Directives including associated national legislation and policy guidance. Support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development in the Plan Area.” • Objective NH 9 Geological and Geomorphological Systems – “Protect and conserve geological and geomorphological systems, sites and features from inappropriate development that would detract from their heritage value and interpretation and ensure that any plan or project affecting karst formations are adequately assessed with regard to their potential geophysical, hydrological, hydro-geological or ecological impacts on the environment.” 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Potential Impact Pathway – Habitat Degradation – Water Quality (Construction/Operation)</i></p> <ul style="list-style-type: none"> <li> <p>• Objective UI 1 Water Services Infrastructure – “Support the maintenance, improvement and monitoring of the public water supply, wastewater disposal and surface water drainage infrastructure as necessary to address any deficiencies in infrastructure capacity and/or service the development needs of the town. This will include the following and any other projects approved during the period of the plan:</p> <ul style="list-style-type: none"> <li>(a) Progress and facilitate the delivery of the Galway City Western Environs Water Supply Scheme network upgrade under the Water Services Investment Programme that relates to the Plan Area. <li>(b) Any appropriately approved necessary upgrades to the treatment plant. <li>(c) Facilitate and provide a surface water drainage network. <li>(d) Facilitate the provision of trunk water mains from which a distribution mains can be developed. <li>(e) Ensure that all new developments served by the public sewer are constructed with separate surface and foul water sewers in order to assist and optimise the use of the existing collection system and wastewater sewage system. <li>(f) Monitor the capacity of the wastewater treatment plant as development takes place. <li>(g) Improve and maintain an adequate surface water drainage system throughout the Plan. <li>(h) Ensure that trade effluent from new development is managed properly and discharged in accordance with the relevant discharge licences.” <li> <p>• Objective UI 2 Water Services for New Developments – “Require all new developments to be adequately serviced with water supply, wastewater disposal and surface water drainage in accordance with applicable legislation, standards and guidelines and to submit the necessary documentation with their planning applications to confirm same. Encourage only as much development, both in terms of quantity and type of development that can be provided for based on the utility services available and prohibit any proposed development that cannot be adequately serviced, that would lead to significant environmental effects or that would pose an unacceptable threat to the capacity of water, wastewater or surface water infrastructure in the Plan area.”</p> <li> <p>• Objective UI 4 Wastewater Disposal – “New developments shall only be permitted where it can be clearly demonstrated that they can be serviced and that there is adequate capacity in the wastewater disposal infrastructure in accordance with applicable requirements and standards, including urban wastewater treatment disposal standards, in order to protect Lough Corrib Special Area of Conservation, other nearby European Sites and their respective qualifying interests.”</p> <li> <p>• Objective UI 5 Development Not Connecting to Public Sewer – “Restrict development that does not connect to the public sewer and discourage the proliferation of individual septic tanks and treatment plants, in order to protect ground waters, consolidate the village structure and control ribbon development along approach roads into Maigh Cuilinn.”</p> <li> <p>• Objective UI 6 Wastewater Treatment Plant Buffer – “Provide and protect a 100 metre buffer around the wastewater treatment plant site and protect buffer zones around other treatment plants in the Plan area, as appropriate.”</p> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Objective UI 7 Surface Water Drainage and Sustainable Drainage Systems – <i>“Maintain and enhance, as appropriate, the existing surface water drainage system throughout the Plan Area and ensure that new developments are adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems in new developments. Surface water runoff from development sites will be limited to pre-development levels and planning applications for new developments will be required to provide details of surface water drainage and Sustainable Drainage Systems proposals.”</i> <p><u>Flood & Flood Related Objectives</u></p> <ul style="list-style-type: none"> • Objective UI 10 Water Bodies and Watercourses – <i>“Protect water bodies and watercourses within the Plan Area from inappropriate development, including lakes, rivers, canals, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include a 10 metre protection buffer from rivers/canal within the Plan Area or adjacent to the Plan Area, as appropriate, measured from the near river/canal bank. Promote the sustainable management and uses of water bodies and avoid culverting or realignment of these features.”</i> <p><u>Water Quality Policy</u></p> <ul style="list-style-type: none"> • Policy UI 3 Water Quality - <i>“It is the policy of Galway County Council to protect and improve water quality in all waters, in conjunction with other agencies and stakeholders in accordance with the EU Water Framework Directive (2006/60/EC), EU Groundwater Directive (2006/118/EC) and other relevant EU Directives, including associated national legislation and policy guidance, (including any superseding versions of same), and to support the implementation of the Western River Basin District Management Plan, including the actions and measures that form part of the Corrib Water Management Unit Action Plan. Galway County Council will take account of the above requirements to protect and improve water quality when considering new development proposals.”</i> • Objective UI 12 (b) Western River Basin District Management Plan and Protection of Waters - <i>“Support the protection of water quality in accordance with the EU Water Framework Directive (2006/60/EC) and the European Communities (Water Policy) Regulations 2003 (SI No. 722 of 2003) and as amended (or any updated legislation), including the implementation of the relevant recommendations and measures as outlined in the Western River Basin District Management Plan 2009-2015, including the Corrib Water Management Unit Action Plan (and any updated/or superseding documents). Development will only be permitted where it can be clearly demonstrated that the proposal would not have an unacceptable impact on the water environment, including surface water, groundwater quality and quantity, river corridors and associated wetlands. Galway County Council is statutorily obliged to protect existing good quality status of waters.”</i> <p><u>Water Quality Development Management Guideline</u></p> <ul style="list-style-type: none"> • DM Guideline UI 2 Water Bodies and Watercourse – <i>“Require all relevant applications, which are located in close proximity to water bodies or watercourses to submit measures to reduce and prevent pollution to the water body/watercourse, both during construction and after completion of the scheme.”</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><u>Surface water Network Development Management Guidelines</u></p> <ul style="list-style-type: none"> • DM Guideline UI 3 Surface Water Network – “Require all relevant applications to provide for separate surface and foul water sewers to assist and optimise the use of the existing collection system and the wastewater sewage system.” <p><u>Natural Heritage & Biodiversity Objectives</u></p> <ul style="list-style-type: none"> • Objective NH 6 Water Resources – “Protect the water resources in the Plan Area, including Ballycurke Canal and the River Kip that falls within the Plan area, tributaries and downstream water bodies, other rivers, streams, springs, surface waters, and groundwater quality, in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended) and the Western River Basin Management Plan 2009-2015 (including any superseding versions of same) and other relevant EU Directives including associated national legislation and policy guidance. Support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development in the Plan Area.” <p><i>Potential Impact Pathway – Non-native Invasive Species</i></p> <p><u>Natural Heritage & Biodiversity Objectives</u></p> <ul style="list-style-type: none"> • Objective NH 10 Control of Invasive and Alien Species – “Seek to 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 invasive species. Where the potential for spread of invasive species are identified as part of a development proposal the developer will be required to submit an invasive species management plan.” <p><i>Potential Impact Pathway – Disturbance/Displacement, Barrier Effect</i></p> <p><u>Natural Heritage & Biodiversity Objectives</u></p> <ul style="list-style-type: none"> • Objective NH 13 Protection of Bats and Bat Habitats – “Ensure that development proposals in areas recognised as potentially important for bats, including areas of woodland and hedgerows... shall be subject to suitable assessment for potential impacts on bats. This will include an assessment of the cumulative loss of habitat or the impact on bat populations and activity in the area and may include a specific bat survey. Any assessment shall be carried out by a suitably qualified professional and where development is likely to result in significant adverse 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>effects on bat populations or activity in the area, development will be prohibited or require mitigation and/or compensatory measures, as appropriate.”</p>	
<p>Oranmore Local Area Plan 2012 – 2018</p>	<p>According to the conclusions of its Natura Impact Report (Doherty Environmental, 2012b), the <u>Oranmore Local Area Plan 2012-2018 will not have any adverse effects on the SAC Qualifying Interest habitats or species or SPA Special Conservation Interest bird species</u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following objectives and policies (as detailed in the plan):</p> <p><i>Potential Impact Pathways – Habitat Loss, Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction/Operation), Habitat Degradation – Non-native Invasive Species, Displacement/Disturbance, Barrier Effect</i></p> <ul style="list-style-type: none"> • Policy DS 1 Development Strategy – “It is the overarching policy of Galway County Council to support and facilitate the sustainable development of the Plan Area in line with the preferred development strategy option, Option 3 - A Combination of a Future Strategic Development Area with Consolidation of the Town Centre and Surrounding Areas, Informed by Environmental Assessments, which allows Oranmore to develop in a manner, that maintains and enhances the quality of life of local communities, promotes opportunities for economic development, sustainable transport options and social integration, protects the cultural, built, natural heritage and environment and complies with relevant statutory requirements.” • Objective DS 3 Natura 2000 Network and Habitats Directive Assessment – “Protect Natura 2000 sites, including Special Protection Areas and Special Areas of Conservation, in accordance with the requirements in the EU Habitats Directive 1992 (92/43/EEC), EU Birds Directive 1979 (79/409/EEC), the European Communities (Natural Habitats) Regulations 1997 (S.I. No 94 of 1997), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific knowledge and a Habitats Directive Assessment where necessary, that: <ul style="list-style-type: none"> (a) The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects); or (b) The plan or project will adversely affect the integrity of any Natura 2000 site but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.” 	<p>There is no potential for adverse in-combination effects on European site integrity to occur as a result of the implementation of the GTS and the <i>Oranmore Local Area Plan 2012-2018</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the <i>Oranmore Local Area Plan 2012-2018</i> alone, due to the policies and objectives outlined in the plan • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will further more ensure no adverse effects will arise from the implementation of the <i>Oranmore Local Area Plan 2012-2018</i> • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Objective DS 5 Service Led Development – “Development under the Plan shall be preceded by sufficient capacity in the public waste water infrastructure.” • Objective LU 9 Environmental Management Area - “Promote the sustainable use and management of lands with high biodiversity value and/or environmental sensitivity, including flood risk and those with natural heritage designations such as Special Protection Areas and Special Areas of Conservation.” • Policy NH 1 Natural Heritage, Landscape and Environment – “It is the policy of Galway County Council, to support the conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of Natura 2000 sites, the protection of Natural Heritage Areas and proposed Natural Heritage Areas and the promotion of the development of a green/ecological network within the Plan Area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment. The protection of natural heritage and biodiversity, including Natura 2000 sites, will be implemented in accordance with relevant EU environmental directives and applicable national legislation, policies, plans and guidelines, including the following (and any updated/superseding documents): <ul style="list-style-type: none"> (a) EU Directives, including the Habitats Directive (92/43/EEC), the Birds Directive (2009/147/EC codified version of Directive), the Environmental Impact Assessment Directive (85/337/EEC), the Water Framework Directive (2000/60/EC) and the Strategic Environmental Assessment Directive (2001/42/EC). (b) National legislation, including the Wildlife Act 1976, the European Communities (Environmental Impact Assessment) Regulations 1989 (SI No. 349 of 1989) (as amended), the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the Planning and Development (Amendment) Act 2010 and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011). (c) National policy guidelines, including the Landscape and Landscape Assessment Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessment Guidelines 2010. (d) Catchment and water resource management plans, including the Western River Basin District Management Plan 2009-2015. (e) Biodiversity plans and guidelines, including Actions for Biodiversity 2011-2016: Ireland’s National Biodiversity Plan, the Biodiversity Action Plan for County Galway 2008-2013 and the Biodiversity Guidelines produced by Galway County Council.” • Objective NH 1 Natura 2000 Sites – “Protect Natura 2000 sites, including Special Protection Areas and Special Areas of Conservation, in accordance with the requirements in the EU Habitats Directive 1992 (92/43/EEC), EU Birds Directive 1979 (79/409/EEC), the European Communities (Natural Habitats) Regulations 1997 (S.I. No 94 of 1997), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the 	<p>Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>competent authority (Galway County Council) has ascertained, based on scientific knowledge and a Habitats Directive Assessment where necessary, that:</p> <p>(a) The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects); or</p> <p>(b) The plan or project will adversely affect the integrity of any Natura 2000 site but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.”</p> <ul style="list-style-type: none"> • Objective NH 5 Biodiversity & Ecological Networks – “Support the protection of biodiversity and ecological connectivity within the Plan area including woodlands, trees, hedgerows, rivers, streams, natural springs, wetlands, stonewalls, fens, salt marshes, geological and geomorphological systems, other landscape features and associated wildlife, where these form part of the ecological network. Seek to retain and incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors.” <p>Specific Mitigation Recommendations</p> <ul style="list-style-type: none"> • Objective DS 7 Strategic Reserve – “Protect and safeguard the lands within the designated Strategic Reserve Area from any development that would prejudice their potential as a reserve for the future, longer term strategic growth of Oranmore, the County or the Region. Ensure that any future plan or project within the Strategic Reserve that has the potential to result in likely significant effects to the environment and/or Natura 2000 Sites undergo environmental and/or Habitats Directive assessments, including the evaluation of the cumulative/in combination effects. Any future plan or project within the Strategic Reserve Area will be subject to the requirements of The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009, as appropriate.” <p>Potential Impact Pathways – Habitat Degradation - Hydrogeology</p> <ul style="list-style-type: none"> • Objective UI 8 Groundwater & Aquifer – “Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010) or any updates. Protect the regionally important aquifer that under lays the Plan Area from risk of environmental pollution and have regard to any groundwater protection schemes and groundwater source protection zones where data has been made available by the Geological Survey of Ireland.” • Objective UI 4 Development Not Connecting to Public Sewer – “Restrict development that does not connect to the public sewer and discourage the proliferation of individual septic tanks and treatment plants, in order to protect groundwaters, consolidate the town structure and control ribbon development along approach roads into Oranmore.” 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> • Objective UI 7 Western River Basin District Management Plan and Protection of Waters – “Support the implementation of the relevant recommendations and measures as outlined in the Western River Basin Management Plan 2009-2015 or any other plan that may supersede same during the lifetime of this Local Area Plan. Development shall only be permitted where it can be clearly demonstrated that the proposal would not have an unacceptable impact on the water environment, including surface water, groundwater quality and quantity, river corridors and associated wetlands, estuarine waters and coastal waters” <p><i>Potential Impact Pathways –Habitat Degradation – Water Quality (Construction/Operation)</i></p> <ul style="list-style-type: none"> • Policy UI 1 Water Supply, Wastewater And Surface Water Infrastructure – “It is the policy of Galway County Council to support the provision and maintenance of adequate wastewater disposal, water supply and surface water drainage infrastructure, in accordance with EU Directives, to service the development of Oranmore. This will include adequate capacity for public wastewater and storm-water sewers as appropriate, an adequate quantity and quality of water supply and the promotion of Sustainable Drainage System approaches and techniques within the Plan Area.” • Objective UI 1 Water Supply & Water Conservation – “Ensure that new developments are adequately serviced with a suitable quantity and quality of drinking water supply, promote water conservation to reduce the overall level of water loss in the public supply and require that new domestic developments provide for water supply metering.” • Objective UI 3 Wastewater Disposal – “New developments shall only be permitted where it can be clearly demonstrated that they can be serviced and that there is adequate capacity in the wastewater disposal infrastructure in accordance with applicable requirements and standards, including urban wastewater treatment disposal standards, in order to protect the Galway Bay Complex and its qualifying interests.” • Objective UI 7 Western River Basin District Management Plan and Protection of Waters – “Support the implementation of the relevant recommendations and measures as outlined in the Western River Basin Management Plan 2009-2015 or any other plan that may supersede same during the lifetime of this Local Area Plan. Development shall only be permitted where it can be clearly demonstrated that the proposal would not have an unacceptable impact on the water environment, including surface water, groundwater quality and quantity, river corridors and associated wetlands, estuarine waters and coastal waters” • Objective UI 5 Surface Water Drainage and Sustainable Drainage Systems – “Maintain, and enhance as appropriate, the existing surface water drainage system throughout the Plan Area and ensure that new developments are adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems in new developments. Surface water runoff from development sites will be limited to pre-development levels and planning applications for new developments will be required to provide details of surface water drainage and Sustainable Drainage Systems proposals” • Policy UI 2 Water Quality – “It is the policy of Galway County Council to protect and improve water quality in all waters, in conjunction with other agencies and stakeholders in accordance with the EU Water Framework Directive 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>(2006/60/EC and other relevant EU Directives, including associated national legislation and policy guidance, (including any superseding versions of same), and to support the implementation of the Western River Basin District Management Plan and consider the above when assessing new development proposals.”</i></p> <ul style="list-style-type: none"> • Objective UI 15 Waterbodies and Watercourses – <i>“Protect waterbodies and watercourses within the Plan Area from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include a 10 metre protection buffer from rivers within the plan area, measured from the near river bank. Promote the sustainable management and uses of waterbodies and avoid culverting or realignment of these features”</i> • Objective NH 6 Water Resources – <i>“Protect all water resources in the Plan Area, including rivers, streams, springs, surface waters, coastal waters, estuarine waters and groundwater quality, in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended) and the Western River Basin Management Plan 2009-2015 (including any superseding versions of same). Support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development in the Plan Area.”</i> • Objective NH 7 Wetlands, Springs, Rivers and Streams – <i>“Seek to preserve the wetlands of Oranmore, identify and protect natural springs, streams/rivers, where possible.”</i> <p><i>Potential Impact Pathways – Habitat Degradation – Non-native Invasive Species</i></p> <ul style="list-style-type: none"> • Objective NH 12 Control of Invasive and Alien Invasive Species – <i>“Seek to prevent and promote measures to prevent the spread of invasive and alien species. Require a landscaping plan to be produced for developments near water bodies and ensure that such plans do not include alien invasive species.”</i> <p><i>Potential Impact Pathways – Displacement/Disturbance, Barrier Effect</i></p> <ul style="list-style-type: none"> • Objective NH 2 Protected Habitats and Species – <i>“Support the protection of protected habitats and species listed in the annexes to the EU Habitats Directive 1992 (92/43/EEC) and the Birds Directive (2009/147/). This includes the protection of bats and their roosts, and the maintenance of woodland, hedgerows, treelines, ecological networks and corridors which serve as feeding areas, flight paths and community routes for bats.”</i> 	

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
<p>Tuam Local Area Plan 2011-2017</p>	<p>According to the conclusions of the Appropriate Assessment Screening Statement (EcoFact Environmental Consultants Ltd., 2010) no likely significant effects will arise from the <i>Tuam Local Area Plan 2011-2017</i>. Based on this in-combination effects assessment of the GTS, it is considered that the <u>Tuam Local Area Plan 2011-2017 will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following policies and objectives (as detailed in the plan):</p> <p><i>Potential Impact Pathways – Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction & Operation), Habitat Degradation – Air Quality, Habitat Degradation – Non-native Invasive Species, Disturbance/Displacement</i></p> <p><u>Natural Heritage & Biodiversity Policies and Objectives</u></p> <ul style="list-style-type: none"> • Policy NH5 – “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.” • Policy NH14 – “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.” • Objective NH4 – “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.” • Objective NH5 – “Ensure a minimum setback of 10 metres is maintained in any new development proposals along the Rivers Nanny/Clare and their tributaries.” • Objective NH6 – “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.” • Objective NH7 – “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.” • Objective NH18 – “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.” 	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the <i>Tuam Local Area Plan 2011-2017</i>. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the <i>Tuam Local Area Plan 2011-2017</i> alone, due to the policies and objectives outlined in the plan • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will further more ensure no adverse effects will arise from the implementation of the <i>Tuam Local Area Plan 2011-2017</i> • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Air Quality (i.e. Box 7 GTS – Habitat Degradation – Air Quality); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); and, Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement)

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><u>Water Services Policies and Objectives</u></p> <ul style="list-style-type: none"> • Objective 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.” <p><i>Potential Impact Pathways – Habitat Degradation – Hydrogeology</i></p> <p><u>Natural Heritage & Biodiversity Objective</u></p> <ul style="list-style-type: none"> • Objective NH16 – “Ensure that proposed developments do not adversely affect groundwater resources.” <p><u>Water Services Objective</u></p> <ul style="list-style-type: none"> • Objective WS4 – “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.” <p><i>Potential Impact Pathways – Habitat Degradation – Water Quality (Construction & Operation)</i></p> <p><u>Natural Heritage & Biodiversity Objective</u></p> <ul style="list-style-type: none"> • Objective NH15 – “Implement water protection measures to prevent any deterioration of ‘good status’ waters, and to restore substandard waters to ‘good status’.” <p><u>Water Services Policies</u></p> <ul style="list-style-type: none"> • Policy 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.” • Policy 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.” <p><i>Potential Impact Pathways – Habitat Degradation – Non-native Invasive Species</i></p> <p><u>Natural Heritage & Biodiversity Policy</u></p> <ul style="list-style-type: none"> • Policy NH13 – “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.” 	

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathways – Disturbance/Displacement</i></p> <p><u>Natural Heritage & Biodiversity Objective</u></p> <ul style="list-style-type: none"> <li>• Objective NH9 – “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.” 	
<i>Greenway Projects</i>		
<p>Galway Dublin Greenway and Oranmore to Ballinasloe Cycleway</p>	<p>Based on the level of project information available at present, it is possible that the Galway-Dublin Greenway and the Oranmore-Ballinasloe Cycleway in isolation will have adverse effects on European site integrity. Construction and operation stages of the Galway-Dublin Greenway and the Oranmore to Ballinasloe Cycleway will have to adhere to policies and objectives described in the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i>. Based on our professional judgement, these specific policies and objectives will ensure that no adverse effects on site integrity will arise from the Galway Dublin Greenway (and more specifically from the Oranmore to Ballinasloe Cycleway) via any of the identified potential impact pathways set out below and outlined in Table E-1 above (see Section above on <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> for more detail on each policy and objective).</p> <p><i>Potential Impact Pathways – Habitat Loss, Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction), Non-native Invasive Species</i></p> <p>Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive (Galway County Council, 2014a)</p> <p>Natural Heritage, Recreation and Amenity Aim; Natural Heritage, Recreation and Amenity Strategy; Policy 4.1 Green Network; European Designated sites; Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way; Environment and Infrastructure Aim; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.5 Sustainable Building Design and Construction; Policy 9.14 Energy and Associated Infrastructure; Zoning objective for RA; Specific Developments Objectives for RA Zones;</p>	<p>Following on from this strategic level assessment, it is determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the Galway Dublin Greenway Oranmore to Ballinasloe Cycleway. This is due to the following reasons:</p> <ul style="list-style-type: none"> <li>• Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will arise from the Galway Dublin Greenway Oranmore to Ballinasloe Cycleway. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site. If, despite the implementation of mitigation measures, there remains a risk that the project element will adversely affect the integrity of a European site via any of the identified potential impact pathways, the project element

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p>Specific Development Standard 11.28 Extract Industries/Quarries; Specific Development Standard 11.31 Natura Impact Assessment (Galway City Council, 2016)</p> <p><i>Potential Impact Pathways – Habitat Degradation – Hydrogeology</i></p> <p>Objective NHB12 Soil/Ground Water Protection; Objective WS 1 Protection of Ground Waters; Objective WS 11 Regionally & Locally Important Aquifers; and, Policy WS 4 Water Quality (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathways – Habitat Degradation – Water Quality (Construction)</i></p> <p>Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.6.2 Open Spaces: Agricultural Lands; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.8 Sustainable Urban Drainage Systems (SUDS); Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Non-native Invasive Species</i></p> <p>Policy NHB 7 Invasive Species (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance (Galway City Council, 2016)</p>	<p>concerned will not be progressed unless that risk is resolved</p> <ul style="list-style-type: none"> No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); and, Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species) <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>
Connemara Greenway	<p>Based on the level of project information available at present, it is possible that the Connemara Greenway Clifden to Oughterard Cycleway in isolation will have adverse effects on European site integrity. Construction and operation stages of the Connemara Greenway Clifden to Oughterard Cycleway will have to adhere to policies and objectives described in the <i>Galway County Development Plan 2015-2021</i>. Based on our professional judgement, the specific policies and</p>	<p>Following on from this strategic level assessment, it is determined that there is no potential for adverse in-combination effects on European site integrity to occur as a result of the implementation of the GTS</p>

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
Clifden to Oughterard Cycleway	objectives will ensure that no adverse effects on site integrity will arise from the Connemara Greenway (and more specifically from the Clifden to Oughterard Cycleway) via any of the identified potential impact pathways set out below and outlined in Table E-1 above (see Section above on <i>Galway County Development Plan 2015-2021</i> for more detail on each policy and objective).	and the Connemara Greenway Clifden to Oughterard Cycleway. This is due to the following reasons: <ul style="list-style-type: none"> Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will ensure no adverse effects will arise from the Connemara Greenway Clifden to Oughterard Cycleway. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site. If, despite the implementation of mitigation measures, there remains a risk that the project element will adversely affected the integrity of a European site via any of the identified potential impact pathways, the project element concerned will not be progressed unless that risk is resolved No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments);
	<i>Potential Impact Pathways – Habitat Loss, Habitat Degradation – Water Quality (Construction), Non-native Invasive Species, Disturbance/Displacement</i>	
	Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive (Galway County Council, 2014a)	
	<i>Potential Impact Pathways – Habitat Degradation – Water Quality (Construction)</i>	
	Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4 ; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)	
	<i>Potential Impact Pathway – Non-native Invasive Species</i>	
	Policy NHB 7 Invasive Species (Galway County Council, 2014a)	

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
		<p>Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); and, Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement)</p> <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>
<p>Galway to Spiddal Greenway and Bearna to Spiddal Cycleway</p>	<p>It is possible that the Galway to Spiddal Greenway and the Bearna to Spiddal Cycleway in isolation will have adverse effects on European site integrity. Construction and operation stages of the Galway to Spiddal Greenway and the Bearna to Spiddal Cycleway will have to adhere to policies and objectives described in the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i>. Based on our professional judgement, the specific policies and objectives will ensure that no adverse effects on site integrity will arise from the Galway to Spiddal Greenway (and more specifically from the Bearna to Spiddal Cycleway) via any of the identified potential impact pathways set out below and outlined in Table E-1 above (see Section above on <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> for more detail on each policy and objective).</p> <p><i>Potential Impact Pathways – Habitat Degradation – Water Quality (Construction), Non-native Invasive Species, Disturbance/Displacement</i></p> <p>Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive (Galway County Council, 2014a)</p> <p>Natural Heritage, Recreation and Amenity Aim; Natural Heritage, Recreation and Amenity Strategy; Policy 4.1 Green Network; European Designated sites; Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way; Environment and Infrastructure Aim; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.5 Sustainable Building Design and Construction; Policy 9.14 Energy and Associated Infrastructure; Zoning objective for RA; Specific Developments Objectives for RA Zones;</p>	<p>Following on from this strategic level assessment, it is determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the Galway to Spiddal Greenway and the Bearna to Spiddal Cycleway. This is due to the following reasons:</p> <ul style="list-style-type: none"> Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will ensure no adverse effects will arise from the Galway to Spiddal Greenway and the Bearna to Spiddal Cycleway. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site. If, despite the implementation of mitigation measures, there remains a risk that the project element will adversely affected the integrity of a European site via any of the identified potential impact pathways, the project element

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>Specific Development Standard 11.28 Extract Industries/Quarries; Specific Development Standard 11.31 Natura Impact Assessment (Galway City Council, 2016)</p> <p><i>Potential Impact Pathways – Habitat Degradation – Water Quality (Construction)</i></p> <p>Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.6.2 Open Spaces: Agricultural Lands; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.8 Sustainable Urban Drainage Systems (SUDS); Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Non-native Invasive Species</i></p> <p>Policy NHB 7 Invasive Species (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance (Galway City Council, 2016)</p>	<p>concerned will not be progressed unless that risk is resolved</p> <ul style="list-style-type: none"> No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); and, Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement) <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>
<i>Road Projects</i>		
<p>M6 Motorway Service Area (Rathmorrissy Interchange)</p>	<p>Based on the level of project information available at present, it is possible that the M6 Motorway Service Area (Rathmorrissy Interchange) in isolation will have adverse effects on European site integrity. Construction and operation stages of the M6 Motorway Service Area will have to adhere to policies and objectives described in the <i>Galway County Development Plan 2015-2021</i>. Based on our professional judgement, the specific policies and objectives will ensure that no adverse effects on site integrity will arise from the M6 Motorway Service Area (Rathmorrissy Interchange) via the identified potential impact pathway set out below and outlined in Table E-1 above (see Section above on <i>Galway County Development Plan 2015-2021</i> for more detail on each policy and objective).</p>	<p>Following on from this strategic level assessment, it is determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the M6 Motorway Service Area (Rathmorrissy Interchange). This is due to the following reasons:</p>

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathway – Habitat Degradation – Hydrogeology</i></p> <p>Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive, Objective NHB12 Soil/Ground Water Protection; Objective WS 1 Protection of Ground Waters; Objective WS 11 Regionally & Locally Important Aquifers; and, Policy WS 4 Water Quality (Galway County Council, 2014a)</p>	<ul style="list-style-type: none"> • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will ensure no adverse effects will arise from the M6 Motorway Service Area (Rathmorrissy Interchange). This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR) <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>
M17 Galway to Tuam	<p>The following mitigation measures (as outlined in the EIS (PCP, 2007)) will ensure no adverse effects will arise on European site integrity via the potential impact pathways of Habitat Degradation – Hydrogeology; Habitat Degradation – Water Quality (Construction/Operation); and, Air Quality.</p>	<p>Following on from this strategic-level assessment, it is determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the M17 Galway to Tuam proposed road development. This is due to the following reasons:</p>

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathways –Habitat Loss; Habitat Degradation – Hydrogeology; Habitat Degradation – Water Quality (Construction/Operation); Air Quality; Habitat Degradation – Non-native Invasive Species; Disturbance/Displacement; Barrier Effect, and, Mortality Risk</i></p> <ul style="list-style-type: none"> <li>• “... A combination of traditional piped drainage and a series of sustainable drainage measures. These would regulate flows of road related run-off to achieve discharge rates reflecting existing greenfield run-off. They would also ensure that pollutants associated with the road drainage would be intercepted prior to discharge. Where sections of the drainage would be close to the underlying aquifer they would be sealed or filtered to prevent release of concentrations of the pollutants to the watercourses and groundwater.” <li>• “The design of the two open span bridges and other culverts would be in accordance with guidelines published by the NRA and the requirements of the OPW. This would ensure that there would be minimal potential disturbance to the watercourse within the cSAC. The combination of these two approaches would ensure that the value of the watercourses and their fisheries interests would be appropriately safeguarded.” 	<ul style="list-style-type: none"> <li>• No adverse effects on site integrity will arise from the M17 Galway to Tuam proposed road development via the impact pathways Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction/Operation) and Air Quality alone, due to the mitigation measures outlined in the NIS <li>• Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will arise from the M17 Galway to Tuam proposed road development. <li>• It is not possible to state that no adverse effects on European site integrity will arise from the M17 Galway to Tuam proposed road development in isolation via the potential impact pathways of Habitat Degradation – Invasive Species, Disturbance/Displacement, Barrier Effect and Mortality, however the GTS will not have any adverse effect on the same sites via the same potential impact pathways, and therefore there is no potential for in-combination effects to occur, due to the following mitigation measures outlined in Section 3.2, and Section 9.3.5 of the GTS, of this report for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathways –Habitat Degradation – Air Quality</i></p> <ul style="list-style-type: none"> • “The relocation of existing traffic on the N1 7 to a new line to the east, would result in a reduction in concentrations of traffic related pollutants along the existing road. There would be a resultant improvement in local air quality for residents close to the road. It would result in potential increases in concentrations of these pollutants where the new motorway would be introduced close to properties currently not associated with such flows of traffic.” 	<p>(Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Air Quality (i.e. Box 7 GTS – Habitat Degradation – Air Quality); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); Barrier Effect (i.e. Box 10 GTS – Barrier Effect), and Mortality Risk (i.e. Box 11 GTS – Mortality Risk).</p> <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>
<p>N18 Oranmore to Gort</p>	<p>It is considered that the N18 Oranmore to Gort proposed road development will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species in Co. Galway via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the following mitigation measures outlined in the Environmental Impact Statement (McCarthy Hyder Tobin Consulting Engineers, 2006):</p> <p><i>Potential Impact Pathways – Habitat Degradation – Hydrogeology</i></p> <ul style="list-style-type: none"> • “Pollution control facilities developed as part of the detailed drainage design for the proposed road will entail the construction of attenuation ponds specifically designed to collect surface water run-off from the road and attenuate it. This will then pass through a constructed wetland system at all attenuation ponds before discharging to surface or groundwater, depending on location.” 	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the N18 Oranmore to Gort proposed road development. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the N18 Oranmore to Gort proposed road development via any of the identified potential impact pathways alone due to the mitigation measures outlined in the EIS. • Adherence to the overarching policies and objectives of the <i>Galway County Development</i>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<ul style="list-style-type: none"> “A series of surface treatment measures are proposed (interceptors, lined swales and attenuation ponds that will reduce the concentration of contaminants to a minimum, and to a concentration that will not affect the integrity of the sensitive ecological site in the area. These mitigation measures will also temporarily contain any accidental spillages to allow them to be recovered prior to their discharge to the environment. As these mitigation measures will not completely remove contaminants from the runoff, and as an added precaution, all groundwater supplies within 200m of a soakaway have been identified as being at risk. To mitigate these potential impacts, further information will be obtained on the domestic water supplies identified as being at risk of derogation and on the local groundwater regime. If they are still considered to be at risk they will be monitored, or an alternative supply found” <p><i>Potential Impact Pathway –Habitat Degradation – Water Quality (Construction/Operation)</i></p> <ul style="list-style-type: none"> “Sustainable Drainage Systems (SuDS) will be used wherever possible, to minimise the environmental impact of the road drainage system.” “Swales (one type of SuDS) are shallow flat grass channels that collect and convey road run off slowly before being discharges to attenuation ponds. Where possible swales will be used to channel surface water run-off. Attenuated ditches, or swales, are linear grassed or vegetated drainage features in which surface water can be stored or conveyed.” “Drainage ponds will be used at each of the outfall locations. These ponds are vegetated depressions formed by the construction of bunds or below the surrounding ground level and incorporate a permanent wetland to facilitate extended retention times. The ponds provide storage to allow flow attenuation, and also improve water quality by extending the pond detention to facilitate the settlement of course silts.” “Petrol/Oil interceptors will be used upstream of each inlet to the location of each outfall upstream of the ponds. Bypass interceptors are used in low risk areas such as roadways and car parks because the majority of containments will be washed from the surface in the early stages of rainfall. Flows up to 1 0% of peak flows are retained in the separation chamber for long enough to promote quiescent conditions, so that lighter than water pollutants such as oils and petrol can rise to the surface of the water. The pollutants are stored in a separator and the separated water discharges from the unit by gravity. If the flow rate rises above 1 0% of peak flows the excess is diverted by a bypass arrangement at the inlet and discharged without passing through the separation chamber. This ensures that peak flows will not cause “wash out” of stored pollutants.” “Best practice during construction will considerably reduce the risk of pollution of receiving watercourses.” 	<p>Plan 2015-2021 will further more ensure no adverse effects will arise from the implementation of the N18 Oranmore to Gort proposed road development</p> <ul style="list-style-type: none"> No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments). <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>
<p>N17 Tuam Bypass</p>	<p>According to the conclusions of the Appropriate Assessment Screening (McCarthy Keville O’Sullivan Ltd., 2009), no likely significant effects will arise from the N17 Tuam Bypass. Based on this in-combination effects assessment for the GTS, the mitigation measures (and relevant project information) provided in the AA Screening and the EIR (Ryan Hanley WSP, 2006) will ensure that the N17 Tuam Bypass will not adversely affect site integrity via any of the potential impact pathways set out below and outlined in Table E-1 above.</p>	<p>Following on from this strategic level assessment, it is determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Potential Impact Pathway – Habitat Degradation - Hydrogeology</i></p> <ul style="list-style-type: none"> • “All oils, solvents and chemicals used during construction will be stored within temporary bunded areas or specifically designed chemical storage containers. Oil and fuel storage tanks will be stored in designated areas, and these areas will be bunded to a volume of 110% of the capacity of the largest tank/container within the bunded area(s) (plus an allowance of 30 mm for rainwater ingress). Filling and drawoff points will be located entirely within the bunded area(s). Drainage from the bunded area(s) will be diverted for collection and safe disposal.” • “Where possible refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles, will take place in a designated area of the site, using a drip tray and this area will be away from water courses or excavations where bedrock is exposed or has only a shallow covering of subsoil.” • “Fuel will be transported in a mobile double skinned tank. Spill kits and hydrocarbon adsorbent packs will be stored along the proposed route. Personnel will be fully trained in the use of this equipment. These measures will ensure that contamination of ground water and surface water does not occur during normal and/or emergency conditions.” • “All associated hazardous construction waste will be stored within temporary bunded storage areas prior to removal by an appropriate EPA approved waste management contractor. Other construction waste will be disposed of appropriately.” • “Any surface water run-off collecting in excavations or groundwater ingress to excavations will be pumped from the excavation and treated by use of suitably sized grit chambers and a 3 chamber Class I hydrocarbon interceptor prior to discharge to a holding tank. Once the water is deemed to be uncontaminated with respect to suspended solids and hydrocarbons, it will be discharged at a controlled rate to the surface water courses.” <p>During operation the bedrock aquifer will be protected by overlying substrata. The mitigation measures for soils and geology outlined</p> <p><i>Potential Impact Pathway - Habitat Degradation – Water Quality (Construction/Operation)</i></p> <p>Mitigation measures to ensure no negative impacts on water quality during construction:</p> <ul style="list-style-type: none"> • “Any potential impacts on water quality are not considered significant due to the contractual obligations on the PPP contractor to adhere to the relevant NRA and CIRIA guidelines and to design and implement an Environmental Operating System (EOP), which will include details of pollution control methods and management of surface runoff. In addition, the NRA’s Guidance on the Crossing of Watercourses during the Construction of National Road Schemes states that all works should be agreed and documented in consultation with the Central Fisheries Board (CFB), the relevant Fisheries Board and the National Parks and Wildlife Service (NPWS) in order to safeguard ecological and fisheries interests. The guidelines also state that any works not agreed at the design stage by these and other relevant parties should not be carried out unless there is a written agreement between the relevant statutory body and the contractor. The use of silt traps and lagoons are mentioned as a method of 	<p>and the N17 Tuam Bypass. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise via the potential impact pathways of Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality, Air Quality, Non-native Invasive Species and Disturbance/Displacement from the N17 Tuam Bypass alone due to the mitigation measures, outlined in the Appropriate Assessment Screening and EIR, to be implemented during construction and operation • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Air Quality (i.e. Box 7 GTS – Habitat Degradation – Air Quality); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); and, Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement) <p>Any projects implemented through the GTS must take into account any other plans and/or projects that</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>control for site run off. Possible locations of these silt traps for the N17 Tuam Bypass have been identified on the attached drawing number 2077/ELAAS/001. However, it will be the responsibility of the contractor to determine the most appropriate methods of pollution control for the project and agree this with the Western Regional Fisheries Board (WRFB) and NPWS. Based on the objective information available, such as; the distance of the Natura 2000 site from the proposed works; the lack of instream works, the fact that only competent contractor's will be allowed to bid; and the fact that the contractor's method of construction will have to be planned and implemented in accordance with strict contractual requirements with respect to pollution control, it is considered that the risk of a significant effect on the site can be excluded."</i></p> <p><u>Mitigation measures to ensure no negative impacts on water quality during Operation:</u></p> <ul style="list-style-type: none"> • <i>"...In the operational phase of a road project, the primary source of potential water pollution is surface run-off from the road carriageway, which may carry elevated levels of hydrocarbons and possibly grit. The drainage design for the proposed road development will both attenuate run-off via the use of the drainage system itself and attenuation ponds to greenfield rates and provide treatment via interceptor drains, petrol/oil interceptors and sedimentation in the attenuation ponds. Appropriate vegetation will be planted in the attenuation ponds to provide further treatment. Therefore, the treatment provided via the drainage system will prevent any significant impacts on the River Clare and hence Lough Corrib cSAC."</i> <p><u>Potential Impact Pathway – Air Quality</u></p> <ul style="list-style-type: none"> • A satisfactory dust minimisation plan will be implemented during construction to ensure only a slight effect on air quality. • <i>"Results of the dispersion modelling study indicate that no site-specific mitigation measures are required during the operational phase of the proposed road development. Levels of traffic-derived air pollutants will not exceed the ambient air quality standards either with or without the proposed road development in place. Thus, the impact of the proposed road development in terms of NO2, PM10, PM2.5, CO and benzene is imperceptible."</i> <p><u>Potential Impact Pathway – Non-native Invasive Species</u></p> <ul style="list-style-type: none"> • <i>"Only native species will be used..."</i> 	<p>may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Potential Impact Pathway - Disturbance/Displacement</i></p> <p><u>Mitigation measure to ensure no disturbance to species during construction:</u></p> <ul style="list-style-type: none"> <li>• “Any potential impacts during the construction phase on Annex II species using the River Nanny in the vicinity of the proposed road bridge are not likely to be significant due to the temporary nature of the impact, the relatively small area of river to be affected by the works and the lack of any instream works on the River Nanny. As there will be no physical barrier for fish or other aquatic species such as Crayfish, it is unlikely that these species will experience any significant disturbance at this location. Otter is the species most likely to be disturbed by the works as it uses bankside or riparian habitat to rest up. However the highly mobile and crepuscular nature of this species and the fact that they have large home ranges and are largely solitary in nature means that it is likely that individuals rather than entire populations would be affected in any manner. Although an Otter spraint was identified during the field survey, no definite evidence of Otter holts was observed within the vicinity of the proposed road bridge location over the River Nanny; therefore it is highly unlikely that any direct impact would affect this species. Temporary habitat fragmentation may occur. However Otter are a highly mobile, crepuscular species and therefore are unlikely to experience any significant habitat fragmentation as a result of these temporary works. Works to culvert the Ballygaddy Stream will include diversions as per the NRA’s Guidance on the Crossing of Watercourses during the Construction of National Road Schemes, in order to allow for the passage of aquatic fauna. Therefore no physical barriers will impede the movement of any aquatic species using this small watercourse. In the operational phase, potential impacts also include disturbance due to noise from traffic and fragmentation of habitat along the River Nanny and other watercourses to be traversed by the proposed road development. Where culverts are to be installed such as at the Ballygaddy Stream, suitable mammal ledges will be provided according to the NRA’s Guidance on the Crossing of Watercourses during the Construction of National Road Schemes. Likewise access along the riverbank will be maintained under the bridge to cater for the movement of Otter and other species. As mentioned above, Otter are crepuscular in nature, being active chiefly at dawn and dusk and therefore would not be using the river when noise due to traffic is at its peak. Therefore it is considered that there will not be a significant impact on any Annex II as a result of the operation of the proposed bypass.” 	
<p>N59 Clifden to Maam Cross Proposed Road Development</p>	<p>This scheme has been refused permission by An Bord Pleanala, and therefore, does not have a status at this time. A decision on whether an alternate development proposal will be advanced in the future has not been made at this time. Based on the level of project information available at present, it is possible that the N59 Clifden to Maam Cross Proposed Road Development in isolation will have adverse effects on European site integrity via the potential impact pathway of habitat loss. Construction and operation stages of the N59 Clifden to Maam Cross Proposed Road Development will have to adhere to policies and objectives described in the <i>Galway County Development Plan 2015-2021</i>. Based on our professional judgement, these specific policies and objectives will ensure that no adverse effects on site integrity will arise from the N59 Clifden to Maam Cross Proposed Road Development via the identified potential impact pathways that are in common</p>	<p>Following on from this strategic-level assessment, it is determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the N59 Clifden to Maam Cross Proposed Road Development. This is due to the following reasons:</p>

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p>with GTS impact pathways (i.e. Habitat Degradation – Water Quality during construction and operation) (see Section above on <i>Galway County Development Plan 2015-2021</i> for more detail on each policy and objective). It should be noted that the original NIS (Galway County Council, 2014b) set out specific mitigation measures to ensure no adverse effects will arise via the potential impact pathways of Habitat Degradation – Water Quality (Construction/Operation). These included implementation of general pollution prevention control measures, an erosion and sediment control plan and principal avoidance measures.</p> <p><i>Potential Impact Pathway - Habitat Degradation – Water Quality (Construction/Operation)</i></p> <p>Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive (Galway County Council, 2014a)</p> <p>Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)</p>	<ul style="list-style-type: none"> Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will ensure no adverse effects will arise from the N59 Clifden to Maam Cross Proposed Road Development, if it was to be progressed again through the planning process. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation –Water Quality (Construction/Operation) (i.e. Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments) <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>
<p>N59 Maam Cross to Oughterard</p>	<p>According to the conclusions of its Natura Impact Statement (Galway County Council, 2012), the N59 Maam Cross to Oughterard Road Development will not have adverse effects on European site integrity via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following mitigation measures (as detailed in the NIS):</p>	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the N59 Maam</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
Proposed Road Development	<p><i>Potential Impact Pathways – Habitat Loss; Habitat Degradation – Hydrogeology; Habitat Degradation – Water Quality (Construction/Operation); Habitat Degradation – Non-native Invasive Species; Disturbance/Displacement; and Barrier Effect</i></p>	<p>Cross Oughterard Proposed Road Development. This is due to the following reasons:</p> <ul style="list-style-type: none"> No adverse effects on European site integrity will arise from the N59 Maam Cross to Oughterard Proposed Road Development via the impact pathways Habitat Loss, Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction/Operation) and Habitat Degradation – Non-native Invasive Species alone, due to the mitigation measures outlined in the NIS Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will further more ensure no adverse effects will arise from the implementation of the N59 Maam Cross to Oughterard Proposed Road Development No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS –
	<ul style="list-style-type: none"> “Lands within Lough Corrib cSAC/SPA will be excluded from proposed borrow sites or potential recovery areas and construction site compounds. Access to these lands will be restricted outside the landtake of the road. To reduce the risk of damage due to trampling, operation of machinery, etc, this area will be fenced off prior to site clearance.” “Prior to any works, all personnel involved with the construction works will receive an on-site induction relating to bridge operations and the environmentally sensitive nature of the proximity of the Natura 2000 site and reemphasise the precautions that are required as well as the mitigation to be implemented. The site agent will ensure that the engineer setting out the works is fully aware of the ecological constraints and mitigation requirements. All matters relating to the bridge operations within the vicinity of the European Sites will be reported on a regular basis to the site agent for on-going review. Any incident or observation of anything that may be considered as causing or likely to cause disturbance or damage to the European Sites will be reported to the site agent immediately. The site agent will take immediate action to prevent or limit the impact and will notify the Client contact of the incident and the actions taken. The amount of bare ground created by excavation and vegetation removal will be minimised to prevent erosion and spread of invasive species. In-stream works will be carried out outside of the salmonid spawning season and the times that early life stages of salmonid fish will be present. In-stream work within the period October to May (inclusive) will only be undertaken with advanced approval of Inland Fisheries Ireland and the NPWS.” “All access scaffolding used within watercourses and all footwear/ waders, etc used within watercourses must be steam cleaned prior to arrival on site to prevent the spread of invasive aquatic species such as Zebra Mussel. A sign off sheet must be maintained to confirm cleaning, Establish site boundary markings to safeguard features of interest/value, Tools and equipment are not to be cleaned in watercourses, Chemicals used shall be stored in sealed containers in the Contractor’s vans prior to use, The chemicals shall be applied in such a way as to avoid any spillage or leakage. Any and all excavated material is NOT to be temporarily stored adjacent to watercourses, and Temporary gangways should be erected if required between river banks and working platforms to avoid the need for walking through watercourses.” 	
	<p><i>Potential Impact Pathway – Habitat Degradation – Hydrogeology and Habitat Degradation – Water Quality (Construction/Operation)</i></p>	
<ul style="list-style-type: none"> “Fuelling and lubrication will not be conducted within 50m of the watercourses, Storage areas, machinery depots and site offices will be located at least 50m from the watercourses, Foul drainage from the site offices and facilities will be properly treated and removed to a suitable treatment facility, Spill kits will be made available close to streams and all staff will be properly trained on correct use, All fuels, lubricants and hydraulic fluids will be kept in secure 		

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>bunded areas at a minimum of 50m from the watercourses. The bunded area will accommodate 110% of the total capacity of the containers within it. Containers will be properly secured to prevent unauthorised access and misuse. An effective spillage procedure will be put in place with all staff properly briefed. Any waste oils or hydraulic fluids will be collected, stored in appropriate containers and disposed of offsite in an appropriate manner, All plant shall be well maintained with any fuel or oil drips attended to on an ongoing basis, and Any minor spillage during this process will be cleaned up immediately. Should any incident occur, the situation will be dealt with and coordinated by the nearest supervisor who will be responsible for instructions by the site agent.”</i></p> <ul style="list-style-type: none"> • <i>“Disposal of raw or uncured waste concrete will be controlled to ensure that watercourses or other sensitive areas will not be impacted, Demolition and removal of bridge structures will be undertaken in such way as to prevent any debris falling into the watercourses. A “crash deck” will be provided at each structure to contain the demolition product. At each location the crash deck will be fully boarded out and effectively screened and sealed on all edges to ensure that no demolition products enter the watercourse. Debris will be removed from the crash deck at the end of each working day to avoid the build up of material on the crash deck. The crash decking described above for the removal of the structural deck slabs will be modified to provide retention of the demolition product from the abutment wall partial demolitions. Where existing bridge or culvert structures will need to be demolished and will include in-stream works in order to fully remove the existing structure from the watercourse channel; All waste material resulting from the demolition of the bridge will be removed from the site with no stockpiling near the river channel, Demolition of bridges should occur in two stages with the river being channelled firstly under one side of the bridge and then the other allowing the demolition of the bridge superstructure to occur in the dry, and Inland Fisheries Ireland must be consulted to agree all methods of demolition and construction over watercourses.”</i> • <i>Implementation of a Preliminary Erosion and Sediment Control Plan which will include “water quality mitigations for avoidance, reduction and remediation of impacts”.</i> <p><i>Potential Impact Pathway – Habitat Degradation – Non-native Invasive Species</i></p> <ul style="list-style-type: none"> • <i>Non-native invasive species will be managed following best practice guidelines (including <i>Guidelines on The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads (NRA, 2008c)</i>. Physical and/or chemical control measures will be employed (dependent on the invasive species present). The NIR includes specific control measures to be followed for individual invasive species. In the event a non-native invasive species is identified within a European site, only physical control methods will be adopted.</i> 	<p>Habitat Degradation – Water Quality (Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect).</p> <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Potential Impact Pathways – Displacement/Disturbance and Barrier Effect</i></p> <ul style="list-style-type: none"> • “Upgraded water crossings will provide more accessible to otter crossing under the road. Natural riparian vegetation cover will be retained, to ensure that watercourses may continue as contiguous natural habitat for this species.” • “Bridge Works at the watercourse should make a ‘short-start’ to activities to allow salmon and other fish to move away before the full intensity of works begins, and Work will be undertaken during daylight hours, starting no earlier than two hours after dawn and finishing no later than two hours before dusk, between March and October; and to start no earlier than one hour after dawn and finish one hour before dusk from November to February; and shall not continue for periods of more than 12 hours, to prevent disturbance to nocturnal species.” 	
<p>N59 Maigh Cuilinn (Moycullen) Bypass Road Project</p>	<p>According to the conclusions of its Natura Impact Statement (Galway County Council, 2011), the N59 Maigh Cuilinn (Moycullen) Bypass Road Project will not have adverse effects on European site integrity via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the implementation of the following mitigation measures (as detailed in the NIS):</p>	<p>There is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the N59 Maigh Cuilinn (Moycullen) Bypass Road Project. This is due to the following reasons:</p> <ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the N59 Maigh Cuilinn (Moycullen) Bypass Road Project via the impact pathways Habitat Degradation – Hydrogeology and Habitat Degradation – Water Quality (Construction/Operation) alone, due to the mitigation measures outlined in the NIS • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> will further more ensure no adverse effects will arise from the implementation of the N59 Maigh Cuilinn (Moycullen) Bypass Road Project

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p><i>Potential Impact Pathways – Habitat Degradation – Hydrogeology; Habitat Degradation – Water Quality (Construction/Operation)</i></p> <ul style="list-style-type: none"> • <i>“Release of suspended solids to all surface waters will be controlled by interception and management of site run-off. Any surface water run-off will be treated appropriately to ensure that suspended solids levels are minimised. Silty water shall be treated using ponds and temporary interceptors and silt traps will be installed until such time as permanent facilities are constructed. Dewatering and surface water runoff discharges from the construction site, including any advance works, during and for the duration of the construction works will be controlled, collected and routed via appropriate treatment measures. These measures will be in accordance with the CIRIA publication C648, ‘Control of Water from Linear Construction Project’ (CIRIA, 2006), as a minimum, will be appropriately sized settlement ponds (providing at least 6 hours retention time based on a 0.5m deep pond and for a 1 in 10 year rainfall event), with a double silt curtain at the outfall from the pond and a further double silt fence located between the pond and the discharge point. These facilities will be maintained at least on a daily basis and the maintenance record will be maintained and available for inspection by the Client and other statutory organisations.”</i> • <i>“In-addition straw bales or silt fences shall be appropriately located near watercourses to help prevent untreated surface water run-off entering any watercourse. Due to the sensitivity of many of the watercourses, discharges to watercourses shall therefore not exceed 25mg/l of total suspended solids in accordance with the Second Schedule of the European Communities (Quality Of Salmonid Waters) Regulations, 1988 (S.I. No. 293/1988). The outflows from the interceptor facility must be monitored to ensure the water quality complies with the standards and monitoring regimes must be agreed with the NPWS and IFI.”</i> • <i>“The works area either side of any watercourse or land drain crossing will be fenced with silt fencing comprising Terram or equivalent geo-textile fencing, secured to the ground to prevent the wash-out of suspended solids from the site to the watercourse. Silt Fence Installation Guidelines are as follows;</i> <ol style="list-style-type: none"> <i>(a) Silt fences are to be constructed on a level contour. Sufficient area should exist behind the fence for ponding to occur without flooding or overtopping the fence,</i> <i>(b) Construct silt fences with a setback of at least 900mm from the toe of a slope. Where a silt fence is determined to be not practicable due to specific site conditions, the silt fence may be constructed at the toe of the slope, but should be constructed as far from the toe of the slope as practicable. Silt fences close to the toe of the slope will be less effective and difficult to maintain,</i> <i>(c) A trench should be excavated approximately 150mm wide and 150mm deep along the line the proposed silt fence,</i> <i>(d) Bottom of the silt fence should be keyed-in a minimum of 300mm,</i> <i>(e) Posts should be spaced a maximum of 3.5m apart and driven securely into the ground a minimum of 300mm below the bottom of the trench,</i> 	<ul style="list-style-type: none"> • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); and, Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments) <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>

Plan or Project	Potential for Adverse Effects on European site Integrity Alone?	Potential for Adverse Effects on European site Integrity In-combination?
	<p>(f) When standard strength filter fabric is used, a plastic or wire mesh support fence should be fastened securely to the upslope side of posts using heavy-duty wire staples at least 25mm long. The mesh should extend into the trench. When extrastrength filter fabric and closer post spacing are used, the mesh support fence may be eliminated,</p> <p>(g) Filter fabric should be purchased in a long roll, then cut to the length of the barrier. When joints are necessary, filter cloth should be spliced together only at a support post, with a minimum 150mm overlap and both ends securely fastened to the post,</p> <p>(h) The trench should be backfilled with compacted native material.”</p> <ul style="list-style-type: none"> • “Maintenance of the silt fence is imperative. Repairs must be carried out immediately in the event of damage and collected must be removed and disposed of in material recovery sites on site or at a licensed facility off site.” • “All culverts installed will be oversized, as per IFI recommendations, to allow for the retention of the existing riparian features and avoidance of impacts to the bed of the river. Oversized culverts will also allow for the passage of mammals (including otter)” • “All instream and riparian works along the minor watercourses crossed by the project will incorporate a silt-trap placed within the watercourse directly downstream of the works. Furthermore, sedi-mats will be placed on the bed of the stream, downstream of the silt trap to provide additional reduction of suspended solids and silt load which may occur during instream/bankside works” • “Silty water shall be treated using silt trays/settlement ponds and temporary interceptors and traps will be installed until such time as permanent facilities are constructed. Straw bales or silt fences shall be appropriately located near watercourses to help prevent untreated surface water run-off entering any watercourse” • “All fuels, lubricants and hydraulic fluids will be kept in secure bunded areas at a minimum of 50m from watercourses. The bunded area will accommodate 110% of the total capacity of the containers within it. Containers will be properly secured to prevent unauthorised access and misuse. An effective spillage procedure will be put in place with all staff properly briefed. Any waste oils or hydraulic fluids will be collected, stored in appropriate containers and disposed of offsite in an appropriate manner” • “Fuelling and lubrication will not be conducted within 50m of watercourse” • “Storage areas, machinery depots and site offices will be located at least 50m from the nearest watercourses” • “Foul drainage from the site offices and facilities will be properly treated and removed to a suitable treatment facility” • “Spill kits will be made available close to streams and all staff will be properly trained on correct use” • “Disposal of raw or uncured waste concrete will be controlled to ensure that watercourses or other sensitive areas will not be impacted” <p>“The proposed outfall design provides for each of the outfalls to be routed via a hybrid pond/wetland treatment system before final discharge to the receiving environment. Such wetland systems have proved to be the most effective attenuation system for treating road runoff.”</p>	

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
R336 Bearnna to Scrib via Ros an Mhíl Road Scheme	<p>Based on the level of project information available at present, it is possible that the R336 Bearnna to Scrib via Ros an Mhíl Road Scheme in isolation will have adverse effects on European site integrity. Construction and operation stages of the R336 Bearnna to Scrib via Ros an Mhíl Road Scheme will have to adhere to policies and objectives described in the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i>. Based on our professional judgement, these specific policies and objectives will ensure that no adverse effects on site integrity will arise from the R336 Bearnna to Scrib via Ros an Mhíl Road Scheme via any of the identified potential impact pathways set out below and outlined in Table E-1 above (see Section above on <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> for more detail on each policy and objective).</p> <p><i>Potential Impact Pathway – Habitat Degradation - Hydrogeology</i></p> <p>Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive, Objective NHB12 Soil/Ground Water Protection; Objective WS 1 Protection of Ground Waters; Objective WS 11 Regionally & Locally Important Aquifers; and, Policy WS 4 Water Quality (Galway County Council, 2014a)</p> <p>Natural Heritage, Recreation and Amenity Aim; Natural Heritage, Recreation and Amenity Strategy; Policy 4.1 Green Network; European Designated sites; Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way; Environment and Infrastructure Aim; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.5 Sustainable Building Design and Construction; Policy 9.14 Energy and Associated Infrastructure; Zoning objective for RA; Specific Developments Objectives for RA Zones; Specific Development Standard 11.28 Extract Industries/Quarries; Specific Development Standard 11.31 Natura Impact Assessment (Galway City Council, 2016)</p>	<p>Following on from this strategic-level assessment, it is determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the R336 Bearnna to Scrib via Ros an Mhíl Road Scheme. This is due to the following reasons:</p> <ul style="list-style-type: none"> • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will arise from the R336 Bearnna to Scrib via Ros an Mhíl Road Scheme. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR) <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
<i>Coastal Protection Schemes</i>		
<p>Sáilín to Silverstrand Coastal Protection Scheme</p>	<p>Based on the level of project information available at present, it is possible that the Sáilín to Silverstrand Coastal Protection Scheme in isolation will have adverse effects on European site integrity</p> <p>Construction and operation stages of the Sáilín to Silverstrand Coastal Protection Scheme will have to adhere to policies and objectives described in the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i>.</p> <p>Based on our professional judgement, the specific policies and objectives relating to all other impact pathways in common with GTS (i.e. aside from habitat loss) will ensure that no adverse effects on site integrity will arise from the Sáilín to Silverstrand Coastal Protection Scheme (i.e. Habitat Degradation – Hydrogeology, Habitat Degradation - Water Quality during construction and operation, Non-native Invasive Species, Displacement/Disturbance and Barrier Effect) (see Section above on <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> for more detail on each policy and objective).</p> <p><i>Potential Impact Pathways – Habitat Loss, Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction/Operation), Non-native Invasive Species, Displacement/Disturbance, Barrier Effect</i></p> <p>Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive (Galway County Council, 2014a)</p> <p>Natural Heritage, Recreation and Amenity Aim; Natural Heritage, Recreation and Amenity Strategy; Policy 4.1 Green Network; European Designated sites; Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way; Environment and Infrastructure Aim; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.5 Sustainable Building Design and Construction; Policy 9.14 Energy and Associated Infrastructure; Zoning objective for RA; Specific Developments Objectives for RA Zones; Specific Development Standard 11.28 Extract Industries/Quarries; Specific Development Standard 11.31 Natura Impact Assessment (Galway City Council, 2016)</p> <p><i>Potential Impact Pathways – Habitat Degradation - Hydrogeology</i></p>	<p>Following on from this strategic level assessment, it is determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the Sáilín to Silverstrand Coastal Protection Scheme.</p> <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites.</p> <p>No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS –Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)</p>

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p>Objective NHB12 Soil/Ground Water Protection; Objective WS 1 Protection of Ground Waters; Objective WS 11 Regionally & Locally Important Aquifers; and, Policy WS 4 Water Quality (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Habitat Degradation – Water Quality (Construction/Operation)</i></p> <p>Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.6.2 Open Spaces: Agricultural Lands; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.8 Sustainable Urban Drainage Systems (SUDS); Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Non-native Invasive Species</i></p> <p>Policy NHB 7 Invasive Species (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Displacement/disturbance, Barrier Effect</i></p> <p>Objective NHB 2 Biodiversity and Ecological Networks; and, Objective NHB 6 Protection of Bats and Bats Habitats (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; and, Policy 4.3 Blue Spaces: Coast, Canals and Waterways (Galway City Council, 2016)</p>	<p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
<p>Salthill Coastal Protection Works (Blackrock to Galway Golf Club)</p>	<p>Based on the level of project information available at present, it is possible that the Salthill Coastal Protection Works (Blackrock to Galway Golf Club) in isolation will have adverse effects on European site integrity, or other works along the coastline here may have had in the past through habitat loss.</p> <p>Any works will have to adhere to policies and objectives described in the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i>. Based on our professional judgement, the specific policies and objectives will ensure that no adverse effects on site integrity will arise from any coastal protection works here in the future via any of the identified potential impact pathways in common with the GTS, as set out below and outlined in Table E-1 above (see Section above on <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> for more detail on each policy and objective).</p> <p><i>Potential Impact Pathways – Habitat Loss, Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction/Operation), Non-native Invasive Species, Displacement/Disturbance, Barrier Effect</i></p> <p>Objectives DS 6 Natura 2000 Network and Habitats Directive Assessment; Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; Objective DS 10 Impacts of Development on Protected Sites; Objective EQ 4 Compliance with Article 6(3) of the EU Habitats Directive; Policy NHB 1 Natural Heritage and Biodiversity; Objective NHB 1 Protected Habitats and Species; and, Objective AFF 5 Compliance with the EU Habitats Directive (Galway County Council, 2014a)</p> <p>Natural Heritage, Recreation and Amenity Aim; Natural Heritage, Recreation and Amenity Strategy; Policy 4.1 Green Network; European Designated sites; Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.5.1 Community Spaces: Greenways and Public Rights of Way; Environment and Infrastructure Aim; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.5 Sustainable Building Design and Construction; Policy 9.14 Energy and Associated Infrastructure; Zoning objective for RA; Specific Developments Objectives for RA Zones; Specific Development Standard 11.28 Extract Industries/Quarries; Specific Development Standard 11.31 Natura Impact Assessment (Galway City Council, 2016)</p> <p><i>Potential Impact Pathways – Habitat Degradation - Hydrogeology</i></p> <p>Objective NHB12 Soil/Ground Water Protection; Objective WS 1 Protection of Ground Waters; Objective WS 11 Regionally & Locally Important Aquifers; and, Policy WS 4 Water Quality (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p>	<p>Following on from this strategic level assessment, it is determined that there is <u>no potential for adverse in-combination effects</u> on European site integrity to occur as a result of the implementation of the GTS and the Salthill Coastal Protection Works (Blackrock to Galway Golf Club) or in relation to any past works here which may have affected Galway Bay Complex SAC and Inner Galway Bay SPA.</p> <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p> <p>No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS –Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect)</p>

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathway – Habitat Degradation – Water Quality (Construction/Operation)</i></p> <p>Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.6.2 Open Spaces: Agricultural Lands; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.8 Sustainable Urban Drainage Systems (SUDS); Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Non-native Invasive Species</i></p> <p>Policy NHB 7 Invasive Species (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway – Displacement/disturbance, Barrier Effect</i></p> <p>Objective NHB 2 Biodiversity and Ecological Networks (Galway County Council, 2014a)</p> <p>Policy 4.2 Protected Spaces: Sites of European, National and Local Ecological Importance; and, Policy 4.3 Blue Spaces: Coast, Canals and Waterways (Galway City Council, 2016)</p>	
<i>Other Infrastructure Projects</i>		
Proposed Galway Harbour Port Extension	<p>According to the conclusions of its Natura Impact Statement (Galway Harbour Company, 2013), the Proposed Galway Harbour Port Extension will have adverse effects on the integrity of Galway Bay Complex SAC, Inner Galway Bay SPA, Lough Corrib SAC and Lough Corrib SPA via the identified impact pathways of Habitat Loss, Displacement/Disturbance (on birds, Otter and Harbour seal) and Barrier effect (on birds). The following mitigation measures (as outlined in the NIS) will ensure no adverse effects will arise via the potential impact pathways of Habitat Degradation – Hydrogeology; Habitat Degradation – Water Quality (Construction/Operation); Habitat Degradation – Non-native Invasive Species; and, Displacement/Disturbance (excluding other Annex II species):</p>	<p>There is no potential for adverse in-combination effects on European site integrity to occur as a result of the implementation of the GTS and the Proposed Galway Harbour Port Extension. This is due to the following reasons:</p>

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathways – Habitat Loss, Habitat Degradation – Hydrogeology, Habitat Degradation – Water Quality (Construction/Operation), Non-native Invasive Species, Displacement/Disturbance, Barrier Effect</i></p> <p><u>Mitigation by Design</u></p> <ul style="list-style-type: none"> • The layout and footprint of the proposed development has evolved over the course of the design processes with a view to minimising the impact on Natura 2000 sites and their qualifying interests. • Rock built sea walls on the eastern side will more than replace existing rock walls to be lost. • The use of textured construction material to enhance settlement by algae and invertebrates. <p><i>Potential Impact Pathway – Habitat Degradation – Water Quality (Construction/Operation)</i></p> <p><u>Mitigation by Design</u></p> <ul style="list-style-type: none"> • Storm water treated using control valves on outfall lines with petrol interceptor and silt traps. <p><u>Construction Methods and Timing</u></p> <ul style="list-style-type: none"> • The proposed use of geotextiles to minimise escape of silt during construction of lagoons will ensure minimised impact on water quality and associated impacts on qualifying interests of Natura 2000 sites. • Monitoring of suspended solids and dissolved oxygen as part of Environmental Management Plan. • Restricting dredging of sediments within 800m of the mouth of Lough Atalia during ebb tides to avoid the possibility of suspended sediments entering Lough Atalia. • Implementation of Best Practice construction methods and Environmental Management Framework (see Appendix 4.2 of the EIS). • Implementation of Emergency Spill Contingency Plan in the form of Galway Harbour Company’s Oil Spill Contingency Plan (see Appendix 4.3 of the EIS). <p><u>Mitigation Measures during Operation:</u></p> <ul style="list-style-type: none"> • Water Pollution and Increased Risk of Spillage when Operational - This new system will divert storm water to petrol interceptors fitted with silt traps prior to its discharge to sea. In the event of an oil or other spill entering the storm water system, the discharge of contaminated water will be prevented by the use of control valves. A detailed spill response plan has been prepared. This will limit the negative effects of any spills. In addition, Galway Harbour Company GHC has an Environmental Management policy to ensure that there are no spillages to the sea. • Disposing of Maintenance Dredge Material - Spoil from maintenance dredging will be disposed of to an EPA permitted site located outside Natura 2000 sites. 	<ul style="list-style-type: none"> • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will further more ensure that this project will comply with the requirements of Article 6(4) of the Habitats Directive (including the provision of compensatory measures) • Despite the fact that the Proposed Galway Harbour Port Extension will have adverse effects on Galway Bay Complex SAC, Inner Galway Bay SPA, Lough Corrib SAC and Lough Corrib SPA via the potential impact pathways of Habitat Loss, Displacement/Disturbance and Barrier Effect, the GTS will not have any adverse effects on these European sites via the same potential impact pathways due to the mitigation measures outlined in Section 3.2 of this report and Section 9.3.5 of the GTS:. There is therefore no potential for in-combination effects to occur. Habitat Loss (i.e. Box 1a GTS - Habitat Loss: Cycle Network Greenways; Box 1b GTS – Habitat Loss: Public Transport Network and Non-greenway Cycle Network, and Pedestrian Network; and, Box 1c GTS – Habitat Loss: N6 GCRR); Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathway – Non-native Invasive Species</i></p> <p><u>Mitigation by Design</u></p> <ul style="list-style-type: none"> • Native species to be used as part of landscaping plan. • Sensitive lighting plan to avoid lighting of water body. <p><i>Potential Impact Pathway – Displacement/disturbance, Barrier Effect</i></p> <p><u>Mitigation by Design</u></p> <ul style="list-style-type: none"> • Semi-vertical breakwaters have been proposed to mitigate seal predation on salmonids. <p><u>Construction Methods and Timing</u></p> <ul style="list-style-type: none"> • Limit timing of works in line with sensitive months for salmon avoiding April – July inclusive. <p><u>Monitoring Programmes</u></p> <ul style="list-style-type: none"> • Marine Mammal Watch Plan including marine observers prior to blasting and use of acoustic deterrent devices if required. • Monitoring of birds and common seal populations prior to, during and after construction as part of the environmental management plan. <p><u>Mitigation Measures during Operation:</u></p> <ul style="list-style-type: none"> • Lighting - Mitigation for impacts of lighting during the operational phase has been provided through the use of energy efficient lighting in a configuration designed to provide the minimum lighting level required for safety. The lights used will be of a design that casts light downwards only and the lamp standards will be positioned in such a way that only the newly reclaimed land or new breakwater will be illuminated, not any areas of water. • Predation of Fish by Seals - The design of the proposal with steel sheet pile to act as a toe for the rock armour will create a steep drop into the water and thus mitigate against the possibility of seal haul out areas being created in this area (mitigation by design). • Regulation of vessel speeds - Commercial vessels approach Black Head at ca 12 knots and by the Outer Margareta Buoy, have reduced this to 6 knots. Pilot transfer takes place at 3.5 /4 knots and vessels enter the docks at a velocity of ca 3 knots. 	<p>(Construction) – New Road Developments); Habitat Degradation – Non-native Invasive Species (i.e. Box 8 GTS – Habitat Degradation – Non-native Invasive Species); Disturbance/Displacement (i.e. Box 9 GTS – Disturbance/Displacement); and, Barrier Effect (i.e. Box 10 GTS – Barrier Effect).</p> <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>
Water supply schemes	It is considered that <u>water supply schemes will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species</u> via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the fact that any water supply scheme developments located within Co. Galway	Following on from this strategic level assessment, it has been determined that there is <u>no potential for adverse in-combination effects</u> on European site

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p>will have to adhere to the following policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> (as detailed in each plan):</p> <p><i>Potential Impact Pathway – Habitat Degradation – Hydrogeology</i></p> <p>Objective NHB12 Soil/Ground Water Protection; Objective WS 1 Protection of Ground Waters; Objective WS 11 Regionally & Locally Important Aquifers; and, Policy WS 4 Water Quality (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway - Habitat Degradation – Water Quality (Construction/Operation)</i></p> <p>Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.6.2 Open Spaces: Agricultural Lands; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.8 Sustainable Urban Drainage Systems (SUDS); Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p>	<p>integrity to occur as a result of any water supply schemes. This is due to the following reasons:</p> <ul style="list-style-type: none"> • Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will occur from any water supply schemes alone. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site • No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); and, Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments)
<p>Wastewater Treatment Works</p>	<p>It is considered that wastewater treatment works will not have any adverse effects on SAC Qualifying Interest habitats or species, or SPA Special Conservation Interest bird species via any of the identified impact pathways set out below and outlined in Table E-1 above. This is due to the fact that any wastewater treatment developments located within Co. Galway will have to adhere to the following policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> (as detailed in each plan):</p>	<p>Following on from this strategic level assessment, it has been determined that there is no potential for adverse in-combination effects on European site integrity to occur as a result of the implementation of</p>

Plan or Project	<i>Potential for Adverse Effects on European site Integrity Alone?</i>	<i>Potential for Adverse Effects on European site Integrity In-combination?</i>
	<p><i>Potential Impact Pathway – Habitat Degradation – Hydrogeology</i></p> <p>Objective NHB12 Soil/Ground Water Protection; Objective WS 1 Protection of Ground Waters; Objective WS 11 Regionally & Locally Important Aquifers; and, Policy WS 4 Water Quality (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p> <p><i>Potential Impact Pathway - Habitat Degradation – Water Quality (Construction/Operation)</i></p> <p>Policy WS 4 Water Quality; Objective WS 2 EU Policies and Directives; Objective WW 1 EU Policies and Directives; Objective WW 6 Adherence to Environmental Standards; Policy NHB 4; and, Objective NHB 3 Water Resources (Galway County Council, 2014a)</p> <p>Policy 4.3 Blue Spaces: Coast, Canals and Waterways; Policy 4.6.2 Open Spaces: Agricultural Lands; Environment and Infrastructure Strategy; Policy 9.3 Flood Risk Assessment; Policy 9.6 Water Quality; Policy 9.7 Water Services; Policy 9.8 Sustainable Urban Drainage Systems (SUDS); Policy 9.12 Waste Management; and, Specific Development Standard 11.22 Water Quality (Galway City Council, 2016)</p>	<p>the GTS and the wastewater treatment works. This is due to the following reasons:</p> <ul style="list-style-type: none"> <li>• Adherence to the overarching policies and objectives of the <i>Galway County Development Plan 2015-2021</i> and the <i>Galway City Council Development Plan 2017-2023</i> will ensure no adverse effects will occur from any wastewater treatment development alone. This will include the requirement for any development taking place within the county to undergo Screening for Appropriate Assessment and/or Appropriate Assessment where necessary and in doing so to demonstrate that the project will not give rise to any adverse direct, indirect or secondary effects on the integrity of any European site <li>• No adverse effects on European site integrity will arise from the GTS, due to the following mitigation measures outlined in Section 3.2 of this report, and Section 9.3.5 of the GTS, for: Habitat Degradation – Hydrogeology (i.e. Box 2a GTS – Hydrogeology General and Box 2b GTS – Hydrogeology N6 GCRR); and, Habitat Degradation – Water Quality (Construction/Operation) (i.e. Box 4 GTS – Habitat Degradation - Water Quality (Construction), Box 5a GTS – Habitat Degradation – Water Quality (Construction) – Park & Ride Facilities; and, Box 5b GTS – Habitat Degradation – Water Quality (Construction) – New Road Developments) <p>Any projects implemented through the GTS must take into account any other plans and/or projects that may act in-combination with it to affect any European sites, including any damage to the Site since its designation.</p>

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