

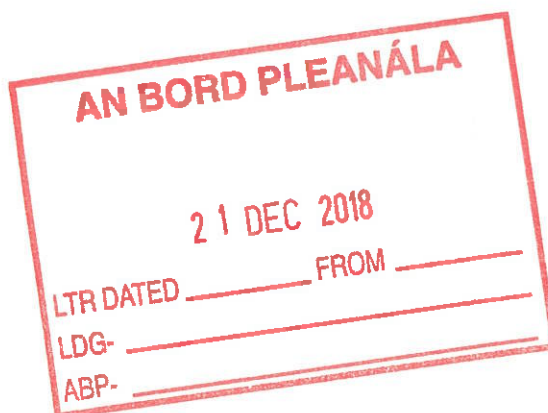


**An Roinn Cultúir,  
Oidhreacht agus Gaeltachta**  
Department of Culture,  
Heritage and the Gaeltacht

Your Ref: ABP-302885-18  
Our Ref: 177AE N6 Galway Ring Road

21 December 2018

The Secretary  
An Bord Pleanála  
64 Marlborough Street  
Dublin 1  
D01 V902  
Via email to [bord@pleanala.ie](mailto:bord@pleanala.ie)



Re: Notification to the Minister for Culture, Heritage and the Gaeltacht under the Planning and Development Act, 2000, as amended.

**Proposed Development: Section 177AE application for Galway County Council on behalf of itself and on behalf of Galway City Council is proposing to develop the N6 Galway City Ring Road (GCRR) around Galway City.**

A chara

On behalf of the Department of Culture, Heritage and the Gaeltacht, I refer to correspondence received in connection with the above.

Outlined below are heritage-related observations/recommendations of the Department under the stated heading(s).

### **Nature Conservation**

The Department refers to the current application for the proposed N6 Galway City Ring Road development (and Motorway Scheme) in Galway City and County. Reference is also made to the EIAR, Natura Impact Statement (NIS), associated volumes of figures and appendices, and other documentation that accompanies the application.

#### **Context of observations**

The following observations are made by the Department in its role as a prescribed body under planning legislation and as the authority with overarching responsibility for nature conservation and the implementation of the nature directives (i.e. the Birds and Habitats Directives) in Ireland. The observations are not exhaustive and are intended to assist An Bord Pleanála in its review and evaluation of the current proposal in the context of, among other things, obligations and commitments in relation to nature conservation, European sites, biodiversity and environmental protection, proper planning and sustainable development, and the undertaking of the environmental impact assessment (EIA) and the appropriate assessment (AA).

This submission is structured under a series of headings/topics, but should be read as a whole, noting that there are substantial overlaps, as well as key distinctions, between the implications of the proposed development for the conservation objectives and integrity of a European site or sites, for biodiversity and other aspects of the environment, and for the proper planning and sustainable

development of the area, taking relevant timeframes, past and future changes, and trends into account.

#### Consultations with NPWS

The Department acknowledges the series of pre-application meetings and consultations with NPWS (2013-2017) in relation to the proposed development, including meetings with the project team and with An Bord Pleanála. Submissions made by this Department (on a non-statutory basis) at pre-application stage are included in EIAR Appendix A.8.2. Draft documentation was reviewed by NPWS as an exceptional measure and this covered only the draft NIS and draft EIAR biodiversity chapter.

Consultations with NPWS regarding the related Galway Transport Strategy 2016-2036 are also acknowledged. This strategy was produced by the City and County Councils, and the National Transport Authority, and is given effect by Galway City and Galway County Development Plans, as varied. Submissions were made by this Department in relation to the Strategy, the Development Plans and Variations, and the associated environmental assessments, including the SEA Environmental Reports, Natura Impact Reports (NIRs) and NISs.

#### Scope of surveys and integration with design

The Department acknowledges the extent and detail of the surveys carried out in connection with the planning and design of the scheme, the consideration of constraints and alternatives, and the preparation of the EIAR and NIS, including as reported in appendices to main reports. The extent to which ecological and other data and information have informed and modified aspects of the design of the scheme to minimise adverse effects on biodiversity, as part of an iterative process, is also acknowledged.

#### Project outline and setting

The proposed road development is generally routed around the outskirts of Galway City, extending from the R336 west of Bearna, in the west, to the new N6/M6 motorway at Briarhill in the east. It passes through areas of granite and limestone geology, and through areas of marginal farmland and substantial areas of natural and semi-natural habitats on the urban fringe. The road crosses the main channel of the River Corrib, and passes through one European site, and close to (within 200m of) three other European sites (see below). All but the western end of the scheme drains to surface water or groundwater bodies that are hydrologically and/or hydrogeologically connected to European sites and the water-dependent habitats and species they support. The proposed development boundary also borders part of one Natural Heritage Area (NHA).

The description of the proposed development and its construction and operation, the project drawings, and other related reports (e.g. the CEMP in EIAR Appendix A.7.5) are noted. It is understood that the mainline of the proposed road is approximately 17.5km in length, and comprises 5.6km of single carriageway and 11.9km of dual carriageway. The latter, from the N59 Letteragh junction eastwards, will be motorway. The proposed development comprises many other elements, including two tunnels with maintenance buildings, two viaducts and one large bridge, and associated link roads, side roads, junctions, structures, earth works, accommodation works, drainage, demolitions, fencing, lighting, landscaping, and ecological mitigation (EIAR, NIS) and compensation measures (EIAR). The total 'area of the development boundary' is approximately 280ha; of this, about 180ha is required for the proposed road development and its construction. Construction, including advance project stages and enabling works, will take a number of years. Some enabling works may occur or extend outside the proposed development boundary, e.g. diversion or relocation of utilities.

The construction phase elements and aspects of mitigation are set out in the CEMP. This includes an Incident Response Plan, a Sediment Erosion and Pollution Control Plan, and a Non-native Invasive Species Management Plan. Chapters 20 and 21 of the EIAR are also noted, namely the Summary of mitigation measures and Schedule of environmental commitments. It is stated that the latter is an integral element of the application for approval. It is indicated that further work in

developing the design of the proposed road development (i.e. post-consent stage) will lead to no material change in the predicted significance of the adverse effects on the environment, and that opportunities may be identified to further reduce these effects and provide the optimum solution based on available construction techniques and technologies at the time of construction.

The commitment to having a Project Ecologist as part of the Employer's team for the duration of the construction phase of the proposed development is welcomed (CEMP section 1.1). For the avoidance of any doubt, the construction phase must be understood to mean all advance contracts and enabling works, as well as the main construction phase, as substantial ecological damage and disturbance can be caused during such early phases. To be effective, the mitigation measures and environmental commitments from the EIAR and NIS must apply to all stages and aspects of the development from the time that permission is granted. Furthermore, noting the volume and complexity of application documentation and the potential for conflicts in the mitigation and other measures specified, particular care and robust systems will be required to ensure their correct and timely implementation to safeguard European sites, NHAs, natural habitats and protected species, and to protect the environment. Where any uncertainties exist regarding the likely success or deliverability of the mitigation and compensation measures, or the significance of the ecological effects that will result, these should be reflected in the EIA and AA carried out for the proposed development.

#### Receiving environment – biodiversity/ecology

The proposed development passes through and close to sites with nature conservation designations, Annex I habitats, the habitats of Annex I (Birds Directive) and Annex II and IV (Habitats Directive) species, and the habitats of other protected species, as well as through wetlands, woodlands, ecological networks, and local biodiversity areas on the margins of an area of progressively expanding urban development, population and associated pressures. The new road will interconnect with a network of recently-developed motorways and national roads between Dublin and Galway, and Limerick and Tuam.

The proposed development and/or proposed development boundary:

- passes through parts of the European site, Lough Corrib SAC (site code 000297), and will, in part, drain towards that site;
- passes through, close to, under and over Annex I habitats and the habitats of Annex II species that are qualifying interests (QIs) of Lough Corrib SAC;
- passes within 200m of three other European sites, namely Lough Corrib SPA (site code 004042), Galway Bay Complex SAC (site code 00268) and Inner Galway Bay SPA (site code 004031);
- adjoins the boundary of part of Moycullen Bogs NHA (site code 002364), and will drain or drain towards that site (selected for the conservation of 'peatlands');
- passes through twelve Annex I habitats and 43 'Fossitt' habitat types;
- passes through the habitats and/or the breeding sites and resting places of Annex II and/or IV (Habitats Directive) species, including those of Lesser Horseshoe Bat, other bats, Otter and Marsh Fritillary;
- passes through the habitats of Annex I (Birds Directive) and other regularly occurring migratory bird species;
- passes through the breeding sites and resting places (and territories) of other protected species, e.g. badger and breeding birds.

In addition to the protection afforded to most of the above receptors under the Wildlife Acts, 1976-2000, and the European Communities (Birds and Natural Habitats) Regulations, 2011, they are also subject to protective objectives and policies in the Councils' Development Plans and other land use plans for the areas through which the proposed development passes.

## 1. LIKELY EFFECTS ON EUROPEAN SITES

### Adequacy of NIS

There is a requirement to consider whether the NIS, which accompanies this application, complies with section 177T of the Planning and Development Act, 2000 as amended. Among other things, an NIS is defined as a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of the proposed development for one or more European sites in view of its conservation objectives; an NIS must include a report of a scientific examination of evidence and data to identify and classify such implications. In the event that inadequacies or gaps in the NIS are covered by data and assessments from other sources, this should be made clear in the AA carried out. The final assessment and analysis should be with respect to the implications for the conservation objectives and integrity of the European site or sites in question.

Notwithstanding the detailed surveys and assessments undertaken, some aspects of the approach and scientific analyses in the NIS, and their sequencing and findings, are complex to follow. At the same time, it is acknowledged that there are challenges in preparing an NIS for a project of this size and complexity, and that no particular format for an NIS is prescribed in law.

### Annex I habitats – QIs

The European site most affected by the proposed development is Lough Corrib SAC. Approximately 4ha of the proposed development and/or proposed development boundary overlap directly with this SAC in multiple small and mainly peripheral locations. The extent and nature of habitat impacts and/or changes within the SAC are, at present, difficult to ascertain. It could assist interpretation if a clearer account of the direct and residual effects on habitats within the SAC, with clearer drawings, was provided. Areas for the extents of the predicted effects and overlaps with i) the proposed development boundary, and ii) the proposed development, would also be beneficial in supporting interpretation and the conclusions of the NIS in relation to the absence of implications for habitats and the conservation objectives of the SAC. The relationship of the road to nearby qualifying interest Annex I habitats within the SAC is also difficult to ascertain.

### SAC – hydrogeology

The application would benefit from clarity on the changes in hydrogeological regime the Lackagh Tunnel will have on the groundwater catchment area. Boreholes were drilled in the area, and groundwater level data collected, but spatial information is absent on directions of groundwater flow and hydraulic gradients. The tunnel is adjacent to the Lough Corrib Fen 1 (Lackagh) groundwater body (GWB) which contains groundwater-fed lakes and fens in the Lough Corrib SAC. The question of whether groundwater drainage associated with tunnelling construction work, during and post development, will not have an effect in Lough Corrib Fen 1 (Lackagh), may need interrogation. Whilst it is stated that the level of the tunnel will be below the groundwater table (and that “there will be no groundwater lowering within groundwater bodies that support groundwater dependant habitats within a European site”), it is also noted that groundwater seeps at the existing quarry face and base and that there are ‘perched’ water tables in local subsoil units above the limestone. The inclusion of ‘water-tight’ barriers is necessary for the operation, and this will divert groundwater flow. It is unclear what the hydrological connectivity between the groundwater dependent terrestrial ecosystems (GWDTEs) of the SAC are, particularly the habitats south of the proposed road.

Following this, it is not clear how the GWDTEs in the Lough Corrib SAC are working ‘hydrogeologically’ and if flow paths may change post-construction. It appears that the lakes are underlain by significant thicknesses of low permeability substrate, with the fens developing on their margins, presumably due to artesian conditions and spring inputs (it is suggested the lake is fed by the Western Coolagh Spring), as indicated by the recorded alkaline conditions. The road will traverse the ‘Lough Corrib Fen 1 (Menlough)’ groundwater body. The road intercepts recharge and whilst the change in infiltration and aquifer loss is reported as minimal, it may be important considering the small catchment area(s) that appear to support the fen habitats. Further elucidation could be beneficial.

### Conservation objectives and scope of NIS

Lough Corrib SAC has site specific conservation objectives, and these specify whether the conservation objective is to maintain or to restore the favourable conservation condition of the individual qualifying interest habitats and species, as defined by certain attributes and targets that are listed, within that site. Substantial analyses in the NIS are (or appear to be) undertaken without reference to the conservation objectives, as they are detailed first in Table 9.16. In Tables 9.1 and 9.15, prior to this, the qualifying interests, Petrifying springs of the tufa formation (Cratoneurion) and Lesser Horseshoe Bat, appear not to have been recorded in the 'zone of influence' and/or are omitted from further consideration and assessment of the likely effects on European sites. The justifications for these findings are unclear in Section 9 of the NIS, but may be explained elsewhere and that should be clarified.

### Otter

The proposed development passes through mapped areas of Otter habitat in Lough Corrib SAC, and close to parts of Galway Bay Complex SAC. The two SACs are interconnected and both have been selected for the conservation of Otter. Otter were widely recorded along the River Corrib corridor. Other watercourses and lakes within and connected to these SACs, e.g. Bearna Stream, are likely to form part of Otter territories and be used as commuting and foraging habitat.

No Otter breeding sites or resting places (holts or couches) were recorded along or within 150m of the proposed development, meaning disturbance and displacement effects should not result. However, increased human presence and/or noise and vibration associated with construction works, particularly associated with the construction of the proposed River Corrib bridge, have the potential to (at least temporarily) displace commuting or foraging Otter. Bankside works are required to install the drainage outfalls on both banks of the Corrib and this will result in the severance of the bankside habitat used by Otter, at least temporarily, during construction. Blasting at some locations over extended periods (e.g. approximately 9 months in Ballagh) will cause some level of disturbance to Otter using the Bearna and Tonabrocky Streams. Operation of the road has potential to result in the mortality of Otter through the increased risk of road traffic collisions and this could affect the Otter populations of the two SACs, and the conservation objectives and integrity of these European sites. In terms of longer term potential in combination effects resulting from disturbance and displacement, the commitments to having a greenway along the western bank of the River Corrib and the current application for the proposed Galway Harbour Extension (PA0033), should be noted in particular (see below in relation to in combination effects).

The potential effects on Otter are to be avoided and reduced to insignificant by a series of design and other mitigation measures that are specified in the NIS and EIAR. The conclusions reached in the NIS in relation to Otter are contingent on i) the effective and timely implementation of these mitigation measures at or prior to construction stage, ii) their continued effective functioning (e.g. in the case of mammal passage facilities and fencing) for the lifetime of the project, and iii) their safeguarding in any future projects and development planning. Monitoring and the taking of timely and effective corrective action if problems arise are integral to their success, and to the conclusions and predictions that may be reached as part of the AA and EIA.

### Birds

The NIS determines that the River Corrib bridge is the only structure that is "of a scale to pose a collision risk to birds". The NIS subsequently concludes, having considered the design of the proposed structure and the low number of special conservation interest (SCI) species, and individuals, that pass along the river corridor, that the proposed structure is "not predicted to pose a collision risk of a magnitude that would have any long-term effects on the numbers, distribution, or the existing population trend for any SPA". The SPAs specifically mentioned in the NIS in this regard are Lough Corrib SPA and Inner Galway Bay SPA, and these SPAs are considered with the following references to SCIs. The risk of bird collisions with the bridge is given no further consideration beyond identifying potential impacts. The data considered on the number of SCI

species and individuals using the river corridor are from a previous proposal and different structure in a different location on the river (RPS report, 2006). The specifications for that structure stated the bridge height would be 6m above the river, while the current proposed bridge is a minimum of 8m above the river. Consideration of the range of flight heights for the SCI species known to use the corridor, or the potential interaction of these flight heights and the proposed bridge would be appropriate. The previous survey report did not assess the nocturnal movements of bird species, e.g. typically nocturnal species and species that are known to migrate at night, and this also needs to be considered. Therefore, the Board could consider if it is satisfied that the collision risk of birds with the proposed River Corrib bridge is adequate and complete if its Appropriate Assessment would be facilitated by further consideration and assessment.

The NIS concludes that the effects of habitat loss and fragmentation arising from the proposed development will not significantly negatively affect the SCIs for surrounding SPAs, and no mitigation measures for SCIs (breeding or wintering species) are provided. For breeding species, this is based on i) the absence of a spatial overlap between known SCI breeding sites and the proposed development area, and ii) aspects the SCI species' foraging ecology. The rationale and evidence to support the latter claim is not made clear (i.e. with respect to foraging ecology).

It is considered the above points should be addressed by presenting further information from, and rationale based upon, completed survey work, additional available data sources and published literature.

Matters relating to the AA

The AA has yet to be carried out, and should take the NIS and this submission into account. Any scientific uncertainties or discrepancies regarding the implications for the conservation objectives and integrity of European sites will need to be addressed and resolved.

## 2. LIKELY EFFECTS ON THE ENVIRONMENT

### EIAR – biodiversity

The following additional matters should be taken into account and addressed in relation to the likely effects of the proposed development on biodiversity, including in the context of the EIA which has yet to be carried out. Likely significant effects on European sites are also a matter for the EIA.

### NHA – hydrogeology

The location of the road adjacent to Moycullen Bogs NHA and the possible effects on bog eco-hydrology. This peatland area is underlain by the 'Galway Granite Batholith', which will be dewatered (during construction and operation) within cutting areas. This could potentially result in a lowering of the peatland water table, peatland subsidence and a potential negative impact on bog ecology. Clarity may be needed on where dewatering/drainage are proposed in relation to the NHA area, together with a demonstration of the likelihood of impact (negligible or otherwise).

### Habitats – general

The detailed habitat survey and mapping for the area of the proposed development and surrounds are noted. Text and tables in EIAR chapter 8 contain details of the areas and types of habitats that will be affected by the proposed development. Of the overall 280ha of the proposed development boundary, 196ha is habitat that is deemed to be of low ecological value, and about 84ha is of higher ecological value. Some of the habitats are linear habitats. In total, it appears that 43 'Fossitt' habitat types and twelve Annex I habitats were recorded within the proposed development boundary and/or will be impacted by the proposed development. Some of the habitat losses will be compensated by habitat creation or management measures within the proposed development boundary, and will be replacing pre-existing habitats or areas subject to temporary disturbance, including some sites used as 'material deposit areas'.



The combined length of linear habitats recorded (11.8km) includes hedgerows and treelines, but not stone walls (which are not the boundaries of properties). It is unclear if the figures represent the total resource of these habitats in the area of the proposed development, or those that will be affected. Based on figures quoted, it appears that the entire linear habitat resource, which was recorded, will be lost and further clarification would be useful in this regard.

It is unclear if abandonment of grazing and/or mowing, including because of fragmentation and isolation of land holdings, has been included among the potential significant effects on habitats that were considered and assessed. The habitats of species such as Marsh Fritillary could also be affected by such changes arising in connection with the development of the road and could lead to loss of habitat in 'favourable management'.

#### Annex I habitats

The losses of Annex I habitats (outside European sites) are presented in terms of losses resulting from the proposed development, and residual or permanent effects after the implementation of mitigation and compensation measures.

Some of the losses are to be compensated by translocating habitat from one location (donor site) to another location (receptor site) within the proposed development boundary. Some of the receptor sites are also identified as 'material deposit areas' where surplus inert materials will be recovered or disposed. The steps and methods to be followed in relation to habitat compensation are set out in EIAR Appendix A.8.26. It would assist interpretation if a table with the details of donor and receptor sites, including areas and habitat types present in each, was provided to clarify, among other things, what habitats will be lost in the receptor sites as a result of the compensation measures and what habitat gains are predicted to accrue. Future management of the compensatory habitats is likely to be required, and it should be clear how this will be achieved and delivered in the short- to long-term.

#### Otter

See above.

#### Bats

The EIAR, including appendices, documents one of the most detailed and comprehensive surveys for bats ever undertaken in Ireland. The bat survey work has identified and catalogued the diversity of bat species around Galway City. In summary, a total of 88 roost sites, and all nine Irish bat species, were recorded within the study area during the field surveys. All bat species occurring in Ireland are listed on Annex IV of the Habitats Directive and are strictly protected. Lesser Horseshoe Bat is also an Annex II species and qualifying interest of Lough Corrib SAC, primarily for the maternity roost at Ebor Hall, near Cong, to the north.

The EIAR provides a comprehensive and detailed assessment of the likely effects of the proposed development on bats, including with respect to loss and disturbance of roosts, loss and fragmentation of foraging and commuting habitat, barrier effects and collision risks with traffic. There is potential for short- and long-term effects on the favourable conservation status of Lesser Horseshoe Bat arising from the proposed development. Mortalities and ecological disruptions to other bats species (e.g. pipistrelles, Leisler's and Brown Long-eared) may also occur but these species are more widespread and abundant.

On the basis of the mitigation and compensation measures specified, the EIAR concludes that the predicted residual effects for Lesser Horseshoes will reduce from national to local significance. The predicted residual effects on all other bat species are also of local significance. The broad suite of mitigation and compensation measures specified in the EIAR is noted and includes the provision of new roosting sites (i.e. new buildings, buildings retrofitted to create roost sites, and bat boxes), underpasses, a 'green' bridge and habitat enhancement measures (e.g. hedgerow planting), among other things. The conclusions in the EIAR are contingent on i) the effective and timely implementation of these mitigation and compensation measures at or prior to construction stage, ii)

their continued effective functioning for the lifetime of the project, and iii) their safeguarding in any future projects and development planning. Monitoring and the taking of timely and effective corrective action if problems arise are integral to their success, and to the conclusions and predictions that may be reached.

#### Badger

Three badger setts will be lost as a result of the proposed development (setts 9, 11 and 14), and one replacement sett is to be constructed north of the new road (close to sett 9). There will be fragmentation and isolation of lands to the south, i.e. between the new road and the Lackagh tunnel, and the N84, in an area with no mammal underpass. Clearance of scrub and resurveys prior to construction may reveal other badger setts. In the case of impacts on badgers that are not considered and assessed as part of the current application, and covered by the consent for the proposed development, a licence may be required from the Minister of this Department under the Wildlife Acts, 1976-2000.

#### Animal passage

The general locations and details of the animal underpasses and the wildlife overbridge are noted. While not always clear from the scheme drawings, underpasses must extend as far as, and integrate with the boundary fencing to be effective and fit for purpose, and to mitigate fragmentation and the barrier effects of the proposed development. All relevant details and specifications for underpasses, fencing and guide planting in relevant TII/NRA guidance should be followed, and underpasses should be confirmed (by an ecologist) to be correctly installed and fully functional before the road becomes operational. Mammal-proof fencing should be installed to the minimum extent necessary for safety and to exclude animals from the road. All other fencing provided should allow the general passage of wild animals (e.g. sheep wire or larger mesh) so that the overall extent of fragmentation and barrier effects resulting from the road are reduced. In the case of the wildlife overbridge, the general configuration and planting, including guide planting, should facilitate and encourage its use by wildlife in general, including (but not only) bats.

#### Marsh Fritillary

Comprehensive surveys carried out for the Annex II species, Marsh Fritillary, recorded extensive areas of suitable habitat for Marsh Fritillary and the presence of the species in a number of locations within the area of the proposed development, mainly in the west. Breeding sites for Marsh Fritillary are mobile and can change, and are linked to the presence of suitable habitat containing the food plant, Devil's-bit Scabious (*Succisa pratensis*).

The proposed development will result in the loss of areas of occupied habitat in four locations, as well as other areas of suitable habitat for Marsh Fritillary. Of particular concern is the habitat area where the species was recorded in three survey years at Trusky More. Much of this area will be lost as a result of the proposed development. In addition to permanent losses of suitable Marsh Fritillary habitat, including habitat patches supporting larval webs, the proposed development will cause fragmentation of individual habitat patches and of the wider network of areas of suitable habitat for the species.

Details of mitigation measures could benefit from more clarity and consideration would need to be given to the extent to which they may be deliverable. A key element of mitigation is the translocation of larval webs that occur along the proposed development. Translocation sites need to contain suitable habitats and should also have good long-term prospects. In the case of any predictions made regarding the long-term survival of Marsh Fritillary, including in relation to the areas of habitat required within a network of sites, it should be clear that any figures quoted refer to habitat in favourable management (presumably meaning good or optimal condition) and with good long-term future prospects.

Further information on mitigation measures for Marsh Fritillary is available from the English Nature and Highways Agency publication: The Butterfly Handbook: General Advice Note on Mitigating the Impacts of Roads on Butterfly Populations (<http://publications.naturalengland.org.uk/file/130004>).



## Birds

**Barn Owl:** the proposed development will reduce the extent of suitable foraging habitat for the local Barn Owl population. The Barn Owl mitigation measures proposed in the EIAR are primarily designed to reduce the risk of road traffic collision events, and include planting vegetation to deter owls from foraging alongside the proposed road margins, and installing barriers to force commuting birds to fly higher over the proposed road. These measures, which are necessary, will compound the likely reduction of foraging opportunities for the local Barn Owl population. To counterbalance this, Barn Owl foraging habitat should be conserved and enhanced in key areas close to the most suitable sites identified as active or potential nest sites for the species. The objective of such compensatory long-term habitat management would be to provide alternative foraging opportunities to the north and northwest of the proposed development, thereby further reducing the risk of road-related mortality events impacting the local population. Such long-term habitat management areas should dictate where the three Barn Owl nest boxes would be sited.

**Peregrine Falcon:** in the EIAR, there is a degree of uncertainty as to whether Lackagh Quarry will remain a suitable breeding site for Peregrine during and post-construction. No alternative breeding site for the Peregrine pair associated with this nest site is known locally. To counterbalance the potential loss of this breeding resource, a suitable alternative nest site(s) needs to be created, noting that the most recent National Peregrine Survey did not record any urban nesting pairs from Galway City. There may be opportunities to install artificial nesting platforms or boxes on other suitable features or buildings. Failing that, a bespoke nesting structure in an appropriate area should be constructed.

The EIAR could benefit from more clarity as to the efficacy of the mitigation measure to temporarily dissuade active breeding of Peregrine at Lackagh Quarry by commencing works from the Lackagh Tunnel to the N84 Headford Road Junction prior to mid-February. The appropriateness of potentially working in the vicinity of, and disturbing an active nest site to install rock bolts on the cliff face may be challenging. If an alternative suitable Peregrine nesting resource was created prior to any road development works being undertaken then the possibility of temporarily rendering the nesting ledges at Lackagh Quarry unavailable for Peregrine during the construction period as a mitigation measure to avoid the disruption of a breeding attempt could be considered.

**Mitigation measures:** as also noted below, there could be potential tensions between mitigation measures set out in the NIS and EIAR.

The NIS states that, in order to minimise disturbance to wintering birds at Ballindooly Lough, blasting at Lackagh Quarry (and Castlegar) will only be undertaken between the months of April to September (inclusive). The EIAR determines that construction activities at Lackagh Quarry, including rock breaking and rock blasting, have the potential to have long-term effects on the Peregrine population nesting in the quarry. Thus, the EIAR proposes mitigation measures specifying that works from the proposed Lackagh tunnel to the N84 Headford Road Junction commence prior to mid-February (i.e. wintering period). The EIAR does not specify whether the works proposed to begin in mid-February include blasting; if blasting was to be included in these works, this would contradict the mitigation approach outlined in the NIS for wintering birds.

It is important that the nature and extent of the proposed planting (likely to provide foraging habitat for general bird species) in close proximity to the proposed development does not act to attract foraging Barn Owl and thereby increase the risk of road collision mortality events.

It is proposed to install 20 nest boxes to further minimise the effects of breeding bird habitat loss. Post construction monitoring and reporting with regard to the rate of uptake of the boxes by birds and their breeding outcomes is recommended in order to determine the efficacy of this mitigation measure.

## Mitigation measures – general

The following general observations are made in relation to mitigation measures:

- As outlined above, it should be clear that all relevant mitigation measures and commitments must apply, from the outset, to all parts of the development as permitted, including enabling works, site preparation and advance contracts, as well as at construction stage.
- Owing to the complexity and detail of the ecological or biodiversity mitigation measures specified, and the importance of knowing where, when and how these apply, competent ecologists will need to be involved directly at all project stages. There is a commitment to having a Project Ecologist as part of the Employer's team; references to an Ecological Clerk of Works are also noted in appendices. The main contractor will also require ecologists, and ecological supervision of other contractors will be necessary.
- The timings of many ecological mitigation measures are critical and, in many cases, are specified. Among these, some of the timings seem to be conflicting or competing (examples relating to birds above, and see also Common Lizard and vegetation clearance) and it needs to be clear how these discrepancies can be managed and resolved. Measures for other environmental topics could also be conflicting or competing, and will require review.
- Resurveys in advance of works being carried out may introduce additional and new considerations, and it should be clear how these will be addressed and managed.
- The scale of the documentation pertaining to this application and the range, specificity and detail of the mitigation measures to be delivered means that robust and interactive or real-time/live mapping systems will need to be developed, possibly in conjunction with 'permits to work' and sign off by the Project Ecologist of the correct completion and functioning of the measures.
- Consideration should be given to making reports on implementation and monitoring of measures available, including to NPWS, via a dedicated website.
- Locations of key ecological mitigation measures should be mapped with records kept that are able to interface with, for example, the Councils' GIS and planning systems, so they can be taken into account and safeguarded in future projects and plans.
- Any non-performance, non-compliances or other issues that arise should be addressed in a timely manner.

## Monitoring/corrective measures

- A clearer schedule of monitoring commitments and responsibilities, including locations, methods and frequency, may be required for biodiversity in general, and for bats in particular. It is noted, for example, that the EIAR states that monitoring of artificial roosts "may be undertaken by NPWS staff, Galway bat group or others to be decided by the local authority". It should be noted that no such agreement has been discussed or reached with NPWS.
- Monitoring of certain measures, such as the wildlife overpass and hedgerow planting, is to continue for 5 years. It should be understood that, after the monitoring period, maintenance and management of various features will be required in the long-term.

You are requested to send further communications to this Department's Development Applications Unit (DAU) at [REDACTED] (team monitored); if this is not possible, correspondence may alternatively be sent to:

The Manager  
Development Applications Unit (DAU)  
Department of Culture, Heritage and the Gaeltacht  
Newtown Road  
Wexford  
Y35 AP90

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