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ENVIROPLAN CONSULTING
LIMITED

Title

APPROPRIATE ASSESSMENT
SCREENING REPORT

Development Description

"Construction of a new Galway Fire Brigade Mechanics Building."

Location

Ballyguarraun South, Athenry, County Galway

Applicants

Galway County Council

Prepared by:

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APPENDICES

Note: The scope of this report is to provide the necessary information to the competent authority, to assess whether the proposed development alone and in combination with other projects, could have significant effects on Natura 2000 sites in the area in view of the sites conservation objectives, in accordance with Article 6 of the Habitats Directive, and does not purport to be an ecological assessment of the subject sit

1. INTRODUCTION

This Appropriate Assessment Screening Report has been prepared by Edel Hardiman (B. Sc) in consultation with James O'Donnell, Planning Consultant (MA, MRUP, Dip APM) on behalf of Galway County Council who are applying for planning permission for the *"construction of a new Galway Fire Brigade Mechanics Building at Ballygarraun South, Athenry, Co. Galway."*

Edel Hardiman is a qualified ecologist and has obtained a Bachelor's degree in Environmental Science (BSc Hons) at the University of Galway. Edel has completed Appropriate Assessment Screening Reports, Natura Impact Statements, Ecological Impact Assessments, Bat Survey Reports and Environmental Impact Assessment Screening Reports for a wide range of public and private sector projects. She has conducted Bird Surveys and Bat Surveys in the Republic of Ireland. She is a registered member of CIEEM.

James O' Donnell is a qualified Town Planner and Project Manager with over 25 years planning experience in both the public and private sector in the west of Ireland, including 6 years-experience as a local authority planning officer. James has particular experience in the project management and delivery of a wide range of complex planning applications requiring environmental and ecological assessment, in accordance with the requirements of the EU Habitats Directive and EIA Directives.

The application site for proposed development lies 7.2 km to the north of the Rahasane Turlough SAC (Site code: 000322) and Rahasane Turlough SPA (Site code: 004089). These sites have been designated under the EU Habitats Directive & Birds Directive, and so it is necessary that the potential impacts of the proposed works be assessed by the competent authority, in accordance with Article 6 of the Habitats Directive. This report provides the information necessary for the competent authority to complete an Appropriate Assessment of the potential impacts of the proposed works on sites of European importance in the area. This report has also had regard to the provisions of the March 2021 publication entitled *"OPR Practice Note PN01- Appropriate Assessment Screening for Development Management."*

Table 1.1: Step One: Description of the project/proposal and local site characteristics.

Brief description of the project plan	*"Construction of a new Galway Fire Brigade Mechanics Building at Ballygarraun South, Athenry, Co. Galway."*
Brief description of site characteristics	The application site is located within the north of the operational Athenry Fire Station, to the southwest of the Athenry settlement. The Athenry Relief Road, L3124, borders the west of the site, while Prospect Road, R348 is to the south of the Fire Station. The Galway to Dublin railway line is located to the north of the site. The site itself is a greenfield site, and is 7016 sqm in size.

1.1 LEGISLATIVE BACKGROUND

1.1.1 EU Nature Conservation Legislation and Natura 2000 Sites.

There are three main types of designation for nature conservation in Ireland: Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Natural Heritage Areas (NHAs). NHAs are designated under the Irish Wildlife Act 1976 (amended 2000). SACs and SPAs are designated under European legislation, the EU Habitats Directive 92/43/EEC (transposed into Irish law in the European Union (Natural Habitats) Regulations, 1997 as amended in 1998 and 2005) and the EU Birds Directive 79/409/EEC, respectively. These European designated sites (SACs and SPAs) are also known as Natura 2000 sites. This means that they are part of the Natura 2000 Network, a network of important ecological sites across the European Union.

Sites are designated on the basis of the presence of certain 'Qualifying Features', i.e. the habitats listed under Annex I and the species listed under Annex II of the EU Habitats Directive.

Once a site is designated as a SAC/SPA and publicly advertised it is legally protected and becomes a proposed candidate SAC (pcSAC) or proposed candidate SPA (pcSPA). A three-month period follows during which landowners may lodge an objection to the designation. Details of each proposed SAC and proposed SPA are then given to the EU Commission, and thereafter the site is called a "candidate SAC" or "candidate SPA". Once the sites are approved by the commission, they are formally designated by the Minister.

1.1.2 Appropriate Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites

Due to the proximity of the proposed development site to a candidate Special Area of Conservation, also known as a Natura 2000 site, an Appropriate Assessment may be required under the Habitats Directive 92/43/EEC, Article 6(3) and (4), Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites. Such assessments are required where it is identified that a proposed plan or project could have significant impact on a Natura 2000 site. Articles 6(3) and (4) of the Directive, state the following;

6.3 'Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site's conservation objectives... 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…..'

6.4 '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… the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected...'

2 METHODOLOGY

The screening exercise will be conducted in line with the recommendations and protocol set out in the Guidance from the Commission (EC, 2021). This protocol involves a four-stage process to complete an Appropriate Assessment. At each stage, the findings of certain issues and tests will determine whether the next stage in the process is required.

2.1.1 Appropriate Assessment Stages

The four stages in the Appropriate Assessment process are outlined below:

Stage 1: Screening

This step consists of examining the likely potential impacts of a project or plan, alone or in combination with other projects, upon a Natura 2000 site or sites, and considers whether these impacts may be considered significant. If no significant impacts are foreseen, then a 'finding of no significant effects' (FONSE) statement is issued to the appropriate authority, and the process is complete. If the effects are considered significant or their significance is unknown, then the process moves on to Stage 2.

Stage 2: Appropriate Assessment

Where the screening process has identified potential impacts which are considered significant or unknown, this process examines these potential impacts in detail, in relation to the conservation interests of the Natura 2000 site or sites. Mitigation measures may be suggested to reduce the likelihood or severity of these impacts. If the impacts are still considered to be significant or unknown after this stage is complete, then alternative solutions must be considered (Stage 3).

Stage 3: Assessment of Alternative Solutions

If the potential impacts are still considered to be significant or unknown after the Appropriate Assessment stage, then alternative ways of implementing the project are considered at this stage. If no alternative solutions are possible, then it is considered whether the project or plan may go ahead regardless, if imperative reasons of overriding public interest (IROPI) are found.

Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)

If significant negative impacts on the Natura 2000 site are unavoidable, and no alternative solutions may be found, then this stage involves the consideration of whether the project or plan may go ahead despite these effects, for 'imperative reasons of overriding public interest' (IROPI).

The results of a Stage 1 (Screening) Exercise are detailed in **Section 3** of this report.

3 STAGE 1: SCREENING FOR APPROPRIATE ASSESSMENT

3.1 DESCRIPTION OF THE PLAN OR PROJECT

The proposed development will consist of the *"construction of a new Galway Fire Brigade Mechanics Building at Ballygarraun South, Athenry, Co. Galway."*

A Site Layout Plan is included as **Appendix A** to this report.

3.2 DESCRIPTION OF THE EXISTING ENVIRONMENT

3.2.1 Site Location in Relation to Natura 2000 Sites

The proposed site lies at Ballygarraun South, Athenry, County Galway (Grid Ref: Easting: 549373.66, Northing: 727502.84) (see **Figure 3.1** below). The application site lies 7.2 km to the north of the Rahasane Turlough SAC (Site code: 000322) and Rahasane Turlough SPA (Site code: 004089) (see **Figure 3.2** below).

The application site is not located within a known Lesser Horseshoe Foraging Range. The closest Lesser Horseshoe Foraging Range is over 13 km to the southwest of the application site and is associated with Lough Fingall Complex SAC (see **Figure 3.3** below). Considering the significant distance and the lack of continuous ecological corridors, no impacts are predicted on this species.

All Natura 2000 sites within a 15km buffer of the proposed development are listed in **Table 3.1** and **Figure 3.4**.

Table 3.1:Step Two: Identification of relevant Natura 2000 sites using Source-Pathway-Receptor Model and Compilation of information on QI and Conservation Objectives

European Site (Code)	List of Qualifying Interest/Special Conservation Interest	Distance from the proposed development (km)	Receptor/Connection	Screen In – Yes/No
Rahasane Turlough SAC Site code: 000322	QIs – 1 Habitat https://www.npws.ie/protected-sites/sac/000322	7.2 km	Indirect impacts can be ruled out on this SAC during the construction and operational phase. **Construction Phase:** **Direct Impacts:** The application site lies outside of the SAC; therefore, no direct impacts are predicted during the construction phase. **Indirect Impacts:** There are no identifiable hydrological/ ecological connector receptor pathways between the application site and this Natura 2000 site. There is no identifiable potential flood risk	No

			on the site. Considering these factors, indirect impacts are not predicted during the construction phase of the proposed works. **Operational phase:** **Direct Impacts:** The application site lies outside of the SAC; therefore, no direct impacts are predicted during the operational phase. **Indirect Impacts:** No indirect impacts are predicted during the operational phase of the development. There are no identifiable hydrological/ ecological connector receptor pathways between the application site and this Natura 2000 site. There is no identifiable potential flood risk on the site. Considering these factors, indirect impacts are not predicted during the operational phase of the proposed works. A site-specific Flood Risk Assessment was prepared by TOBIN in 2021 for the construction of the fire station to the south of the site. This report included the application site for the proposed mechanics workshop within the assessment area for flood risk. This report concluded that "*Based on the results of this Flood Risk Assessment, the proposed Fire Station is appropriately located in Flood Zone C*." Furthermore, as per the Flood Info Maps (https://www.floodinfo.ie/map/floodmaps/#), there is no identifiable flood risk zone on site. Therefore, no impacts are predicted in regard to flood risk. Storm water runoff will be treated via a petrol interceptor before discharging into a soakaway, located to the east of the proposed building. No impacts are predicted in this regard. Wastewater will be discharged into the existing foul drainage network to the south of the site that serves the existing fire station. Given the nature	

			of the proposed development as a mechanics workshop, this will not result in a notable increase in foul discharge onto the existing sewer network. No impacts are predicted in this regard.	
Monivea Bog SAC Site code: 002352	QIs – 3 Habitats https://www.npws.ie/protected-sites/sac/002352	7.9 km	No significant direct/ indirect impacts predicted due to the lack of connectors/ receptors and significant distance from the proposed site.	No
Galway Bay Complex SAC Site code: 000268	QIs – 15 Habitats and 2 Species https://www.npws.ie/protected-sites/sac/000268	9.7 km	No significant direct/ indirect impacts predicted due to the lack of connectors/ receptors and significant distance from the proposed site.	No
Lough Corrib SAC Site code: 000297	QIs – 15 Habitats and 9 Species https://www.npws.ie/protected-sites/sac/000297	9.9 km	No significant direct/ indirect impacts predicted due to the lack of connectors/ receptors and significant distance from the proposed site.	No
Lough Fingall Complex SAC Site code: 000606	QIs – 6 Habitats and 1 Species https://www.npws.ie/protected-sites/sac/000606	13.4 km	No significant direct/ indirect impacts predicted due to the lack of connectors/ receptors and significant distance from the proposed site.	No
Castletaylor Complex SAC Site code: 000242	QIs – 5 Habitats https://www.npws.ie/protected-sites/sac/000242	12 km	No significant direct/ indirect impacts predicted due to the lack of connectors/ receptors and significant distance from the proposed site.	No
Kiltiernan Turlough SAC Site code: 001285	QIs – 1 Habitat https://www.npws.ie/protected-sites/sac/001285	13.8 km	No significant direct/ indirect impacts predicted due to the lack of connectors/ receptors and significant distance from the proposed site.	No
Ardrahan Grassland SAC Site code: 002244	QIs – 4 Habitats https://www.npws.ie/protected-sites/sac/002244	14.3 km	No significant direct/ indirect impacts predicted due to the lack of connectors/ receptors and significant distance from the proposed site.	No
Cregganna Marsh SPA Site code: 004142	QIs – 1 Species https://www.npws.ie/protected-sites/spa/004142	11 km	No significant direct/ indirect impacts predicted due to the lack of connectors/ receptors and significant distance from the proposed site.	No
Inner Galway Bay SPA Site code: 004031	QIs – 21 Species https://www.npws.ie/protected-sites/spa/004031	11 km	No significant direct/ indirect impacts predicted due to the lack of connectors/ receptors and significant distance from the proposed site.	No
Rahasane Turlough SPA Site code: 004089	QIs – 6 Species https://www.npws.ie/protected-sites/spa/004089	7.2 km	Indirect impacts can be ruled out on this SPA during the construction and operational phase. **Construction Phase:** **Direct Impacts:** The application site lies outside of the SAC; therefore, no direct impacts are predicted during the construction phase. **Indirect Impacts:** There are no identifiable hydrological/ ecological connector receptor	Yes

			pathways between the application site and this Natura 2000 site. There is no identifiable potential flood risk on the site. Considering these factors, indirect impacts are not predicted during the construction phase of the proposed works. There are no direct or indirect noise impacts/effects predicted on the QI bird species associated with the SPA. This is due to the existing levels of anthropogenic activity within the area surrounding the application site and the distance between the Rahasane Turlough SPA and the application site. **Operational phase:** **Direct Impacts:** The application site lies outside of the SPA; therefore, no direct impacts are predicted during the operational phase. **Indirect Impacts:** No indirect impacts are predicted during the operational phase of the development. There are no identifiable hydrological/ ecological connector receptor pathways between the application site and this Natura 2000 site. There is no identifiable potential flood risk on the site. Considering these factors, indirect impacts are not predicted during the operational phase of the proposed works. A site-specific Flood Risk Assessment was prepared by TOBIN in 2021 for the construction of the fire station to the south of the site. This report included the application site for the proposed mechanics workshop within the assessment area for flood risk. This report concluded that "*Based on the results of this Flood Risk Assessment, the proposed Fire Station is appropriately located in Flood Zone C*." Furthermore, as per the Flood Info Maps (https://www.floodinfo.ie/map/floodmaps/#), there is no identifiable flood risk zone on site. Therefore, no impacts are predicted in regard to flood risk.	

			Storm water runoff will be treated via a petrol interceptor before discharging into a soakaway, located to the east of the proposed building. No impacts are predicted in this regard. Wastewater will be discharged into the existing foul drainage network to the south of the site that serves the existing fire station. Given the nature of the proposed development as a mechanics workshop, this will not result in a notable increase in foul discharge onto the existing sewer network. No impacts are predicted in this regard. There are no direct or indirect noise impacts/effects predicted on the QI bird species associated with the SPA. This is due to the existing levels of anthropogenic activity within the area surrounding the application site and the distance between the Rahasane Turlough SPA and the application site.	

The Rahanse Turlough SAC and Rahanse Turlough SPA are not predicted to be impacted from the proposed development. These Natura 2000 sites lie completely outside of the application site, therefore no direct impacts are predicted during the construction or operational phase of the development. The constrution and operational phase activities are not predicted to indirectly impact these Natura 2000 sites due to the lack of identifable hydrological/ ecological connector/ receptor pathways between the application site and these Natura 2000 sites. There are no direct or indirect noise impacts/ effects predicted on the QI bird species associated with the SPA during the construction or operational phases of this development. This is due to the existing levels of anthropogenic activity within the area surrounding the application site and the distance between the Rahasane Turlough SPA and the application site.

No other designated Natura 2000 site has been highlighted for potential significant impacts from either construction or operational phases of the development. This is due to the significant distance between application site and the other designated Natura 2000 sites.

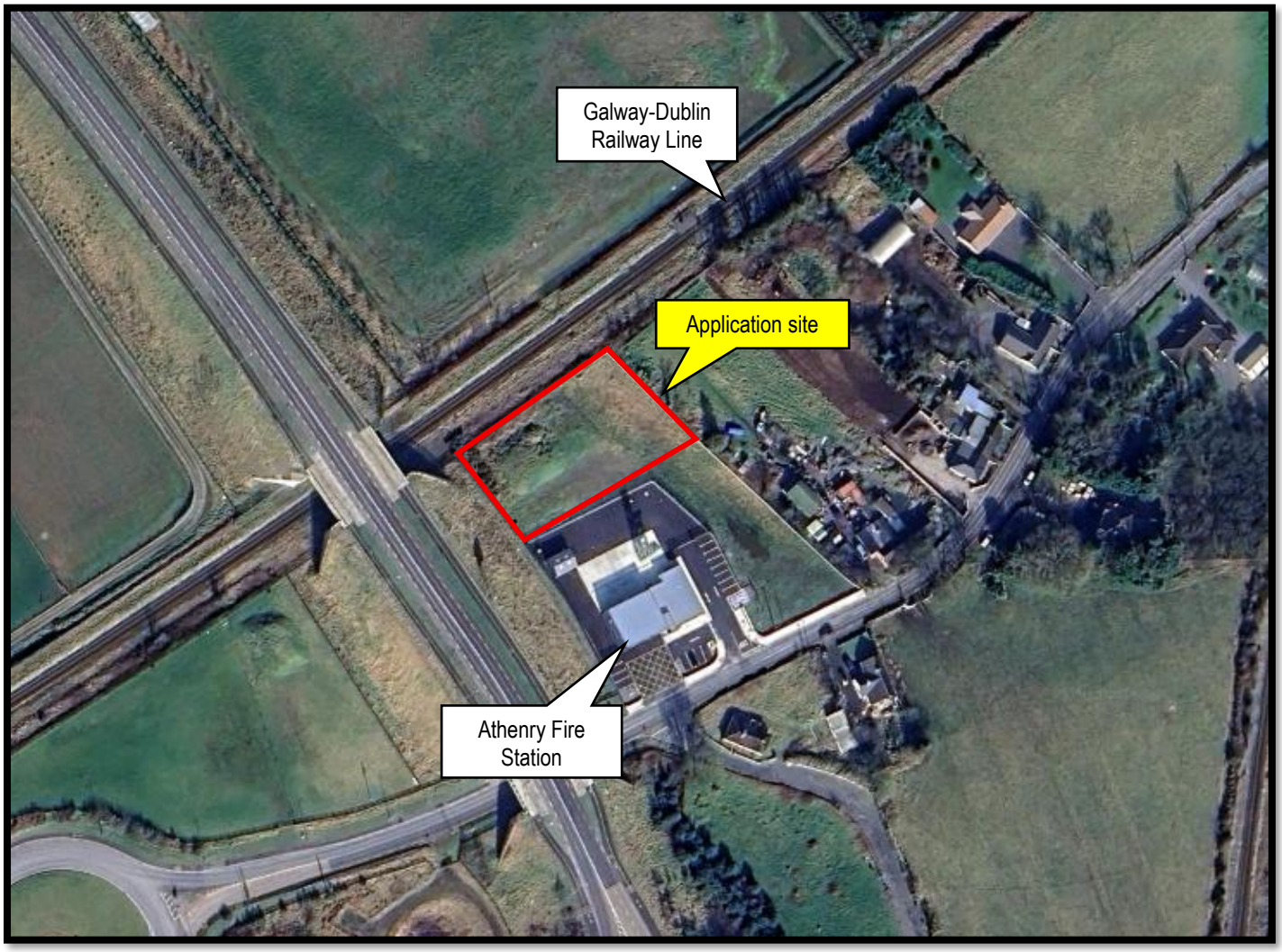

Figure 3.1: Indicative Site Location of the application site outlined in red

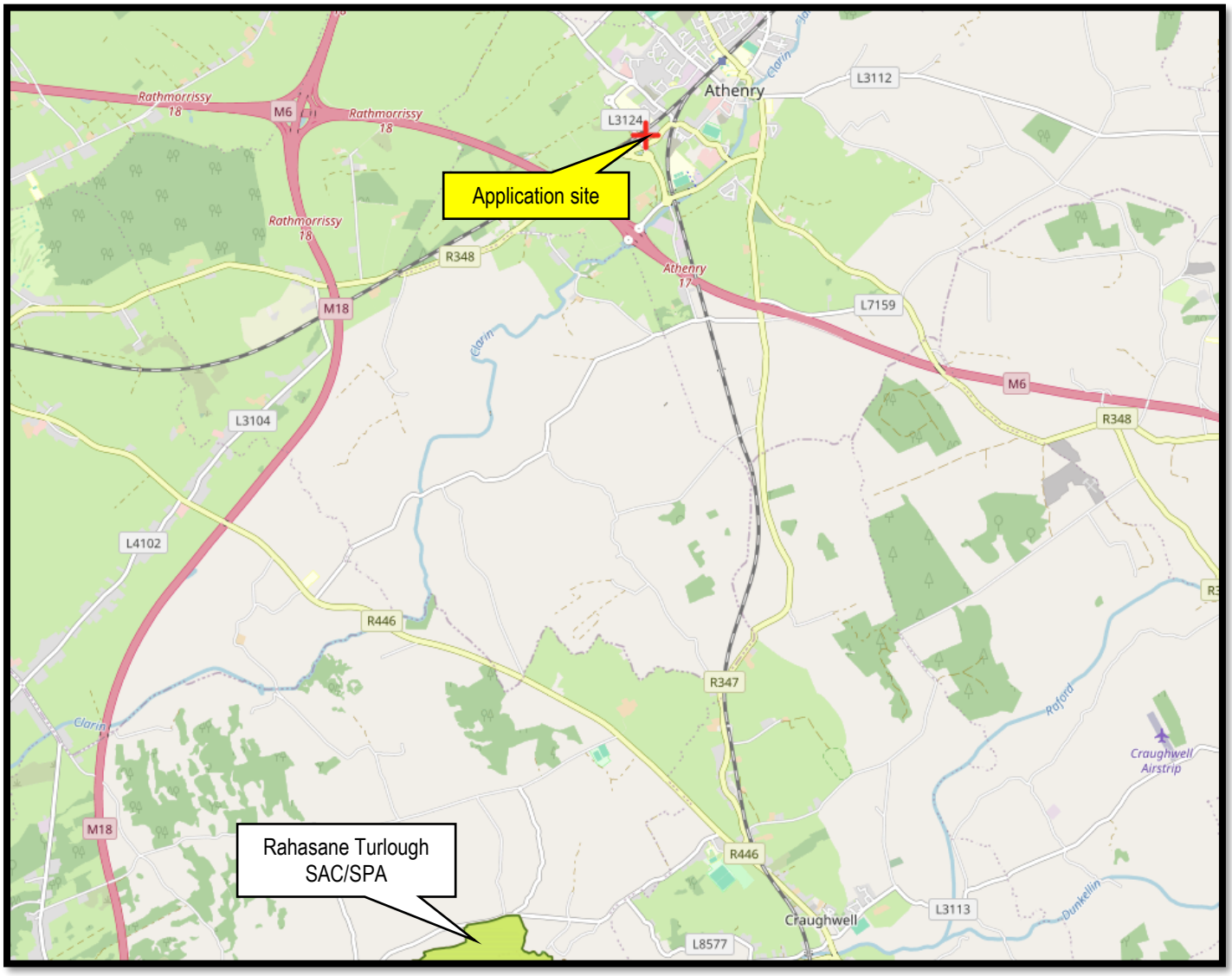

Figure 3.2: Site Location (Red X) in Relation to the Rahasane Turlough SAC/SPA Natura 2000 sites

Figure 3.3: Site Location (Red X) in Relation to the closest Lesser Horseshoe bat foraging range associated with Lough Fingall Complex SAC

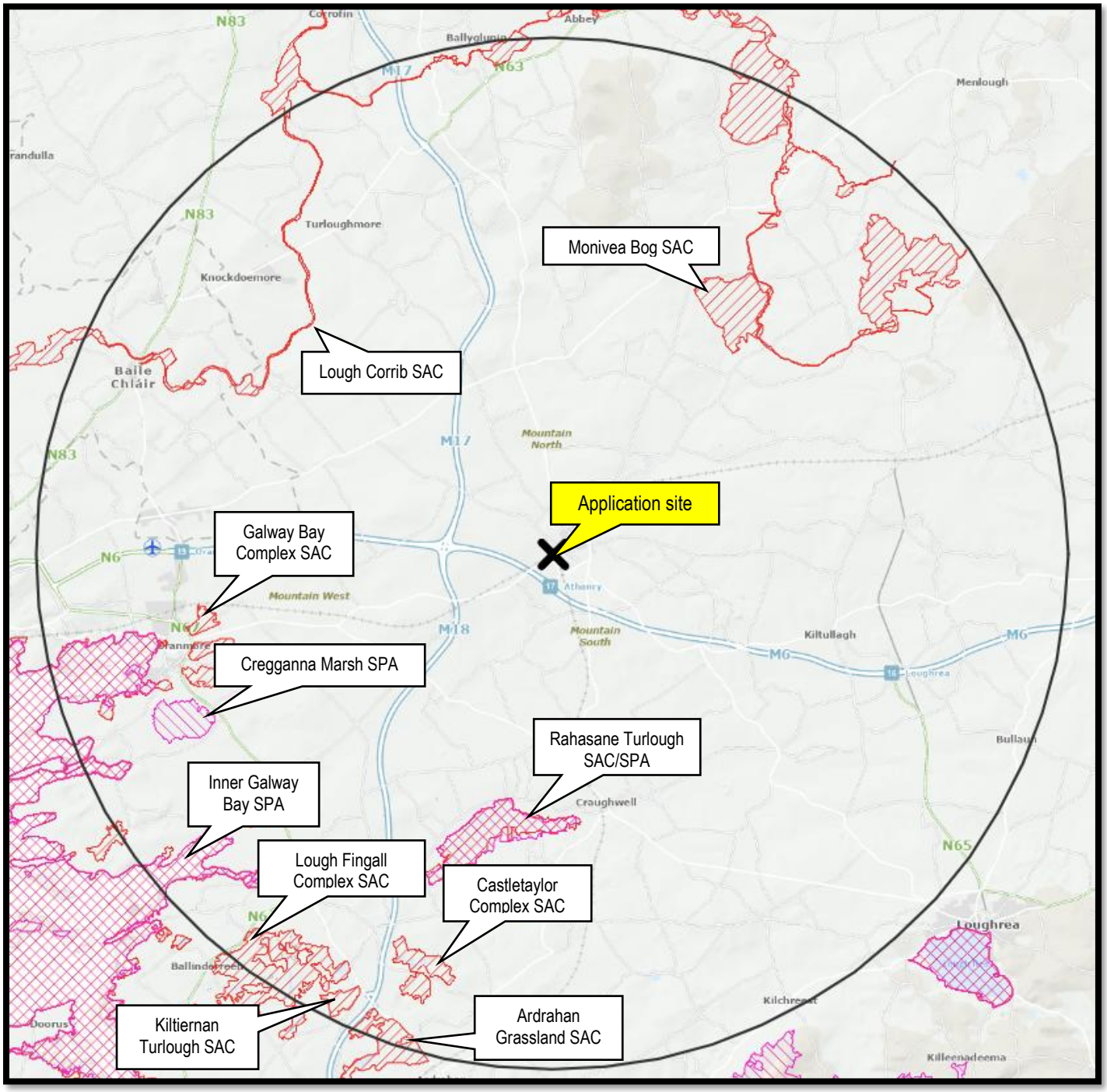

Figure 3.4: 15km Buffer Surrounding Site

4 BRIEF DESCRIPTION OF THE NATURA 2000 SITES WHICH MAY BE AFFECTED

4.1 QUALIFYING FEATURES

Natura 2000 sites are designated on the presence of certain habitats and species which are afforded protection under the Birds and Habitats Directives. These habitats and species are regarded as 'qualifying features' of the Natura 2000 sites. The following section provides details on the qualifying features of the Natura 2000 site in question the Rahasane Turlough SAC and the Rahasane Turlough SPA. The NPWS site synopses for the Rahasane Turlough and the Rahasane Turlough SPA are given as Appendix B and Appendix C of this report, respectively.

Table 4.1 Rahasane Turlough SAC Habitat Information

Habitat code	Habitat name	Cover (ha)	Representativity
3180	Turloughs	257.237	A

For species, a value is given for 'Population Significance'. This value is based on the relative density or size of the population of that species within the Natura 2000 site with that of the national population. Population Significance is ranked on a scale from A to D where A - 100>=p>15%, B - 15>=p>2%, C - 2>=p>0% and D - Non-significant population. The qualifying species found in the Rahasane Turlough SPA Natura 2000 sites are outlined in Table 4.2 below.

Table 4.2 Rahasane Turlough SPA Species Information

Species Code	English Name	Scientific Name	Representativity
A054	Northern Pintail	*Anas acuta*	C
A056	Northern Shoveler	*Anas clypeata*	C
A052	Eurasian Teal	*Anas crecca*	C
A050	Eurasian Wigeon	*Anas penelope*	B
A053	Mallard	*Anas platyrhynchos*	C
A395	Greenland White-fronted Goose	*Anser albifrons flavirostris*	C
A061	Tufted Duck	*Aythya fuligula*	C
A149	Dunlin	*Calidris alpina*	C
A038	Whooper Swan	*Cygnus cygnus*	C
A179	Black Headed Gull	*Larus ridibundus*	C
A156	Black-tailed Godwit	*Limosa limosa*	B
A160	Eurasian Curlew	*Numenius arquata*	C
A140	European Golden Plover	*Pluvialis apricaria*	B
A162	Common Redshank	*Tringa totanus*	C
A142	Northern Lapwing	*Vanellus vanellus*	C

4.2 Potential Pressures and Threats to the Natura 2000 Sites

The European Nature Information System (EUNIS) website contains data on all Natura 2000 sites, including details of the main threats to and pressures on their qualifying features. Potential threats to and pressures on the qualifying features of the Rahasane Turlough SAC and the Rahasane Turlough SPA Natura 2000 sites are listed in Table 4.3 and Table 4.4 below.

Table 4.3 Potential Pressures and Threats to the Rahasane Turlough SAC Natura 2000 Site

Activity	Location	Intensity	Influence
Disposal of inert materials	Inside	Low	Negative
Disposal of household / recreational facility waste	Inside	Low	Negative
Landfill, land reclamation and drying out, general	Inside	Medium	Negative
Diffuse pollution to surface waters due to household sewage and waste waters	Both	Medium	Negative
Diffuse groundwater pollution due to agricultural and forestry activities	Both	Medium	Negative
Hunting	Inside	Medium	Negative
Removal of hedges and copses or scrub	Inside	Medium	Negative
Agricultural intensification	Both	Medium	Negative
Management of aquatic and bank vegetation for drainage purposes	Both	Medium	Negative
Intensive mixed animal grazing	Inside	High	Negative
Fertilisation	Both	High	Negative
Modification of hydrographic functioning, general	Both	High	Negative

Table 4.4 Potential Pressures and Threats to the Rahasane Turlough SPA Natura 2000 Site

Activity	Location	Intensity	Influence
Hunting	Inside	Low	Negative
Grazing	Outside	High	Negative
Fertilisation	Outside	Low	Negative
Grazing	Inside	High	Negative

4.3 Conservation Objectives of the Natura 2000 Sites

Once a site has been designated as a Natura site, a management plan should be put together for the site which sets out the Conservation Objectives for the site. Every effort should then be made to ensure that these objectives are fulfilled, in order to prevent potential impacts to the qualifying features of the site and maintain as far as possible their favourable conservation status.

European and national legislation places a collective obligation on Ireland and its citizens to maintain at favourable conservation status sites designated as Special Areas of Conservation and Special Protection Areas. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

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

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

Site-Specific Conservation Rahasane Turlough SAC and the Rahasane Turlough SPA have been published**.** Qualifying interests and objectives (bulleted) are listed below.

Rahasane Turlough SAC

[3180] Turloughs*

- Habitat area is stable or increasing, subject to natural processes.
- No decline in habitat distribution, subject to natural processes.
- Maintain appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat.
- Maintain variety, area and extent of soil types necessary to support turlough vegetation and other biota.
- Maintain nutrient status appropriate to soil types and vegetation communities.
- Maintain sufficient wet bare ground, as appropriate.
- Maintain appropriate calcium carbonate deposition rate and concentration in soil The areas with marl and shell deposits reported by Goodwillie (1992) will have a high calcium carbonate content.
- Maintain active peat formation.
- Maintain appropriate water quality to support the natural structure and functioning of the habitat.
- Maintain area of sensitive and high conservation value vegetation communities/units.
- Maintain vegetation zonation/mosaic characteristic of the turlough.
- Maintain sward heights appropriate to the vegetation unit, and a variety of sward heights across the turlough.
- Maintain typical species within the turlough.
- Maintain marginal fringing habitats that support turlough vegetation, invertebrate, mammal and/or bird populations.
- Maintain appropriate turlough woodland diversity and structure.

Predicted Impacts- No impacts are predicted on this qualifying interest. This is due to the lack of identifiable hydrological/ecological receptor/connector pathways, the distance and intervening environment between this application site and the Natura 2000 site.

Rahasane Turlough SPA

[A038] Whooper Swan (*Cygnus cygnus*)

- Long term winter population trend is stable or increasing.
- Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population target.
- The intensity, frequency, timing and duration of disturbance occurs at levels that do not significantly impact the achievement of targets for population trend and spatial distribution.
- The number, location, shape and area of barriers do not significantly impact the wintering population's access to the SPA or other ecologically important sites outside the SPA.
- Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target.
- Sufficient number of locations, area and availability of suitable roosting habitat to support the population target.
- Sufficient area of utilisable habitat available in ecologically important sites outside the SPA.

Predicted Impacts- No impacts are predicted on this qualifying interest. This is due to the lack of identifiable hydrological/ecological receptor/connector pathways, the distance and intervening environment between this application site and the Natura 2000 site.

[A050] Wigeon *(Anas penelope)*

- Long term winter population trend is stable or increasing.
- Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population target.
- The intensity, frequency, timing and duration of disturbance occurs at levels that do not significantly impact the achievement of targets for population trend and spatial distribution.
- The number, location, shape and area of barriers do not significantly impact the wintering population's access to the SPA or other ecologically important sites outside the SPA.
- Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target.
- Sufficient number of locations, area and availability of suitable roosting habitat to support the population target.
- Sufficient area of utilisable habitat available in ecologically important sites outside the SPA.

Predicted Impacts- No impacts are predicted on this qualifying interest. This is due to the lack of identifiable hydrological/ecological receptor/connector pathways, the distance and intervening environment between this application site and the Natura 2000 site.

[A140] Golden Plover (*Pluvialis apricaria*)

- Long term winter population trend is stable or increasing.
- Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population target.
- The intensity, frequency, timing and duration of disturbance occurs at levels that do not significantly impact the achievement of targets for population trend and spatial distribution.
- The number, location, shape and area of barriers do not significantly impact the wintering population's access to the SPA or other ecologically important sites outside the SPA.
- Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target.
- Sufficient number of locations, area and availability of suitable roosting habitat to support the population target.
- Sufficient area of utilisable habitat available in ecologically important sites outside the SPA.

Predicted Impacts- No impacts are predicted on this qualifying interest. This is due to the lack of identifiable hydrological/ecological receptor/connector pathways, the distance and intervening environment between this application site and the Natura 2000 site.

[A156] Black-tailed Godwit (*Limosa limosa*)

- Long term winter population trend is stable or increasing.
- Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population target.
- The intensity, frequency, timing and duration of disturbance occurs at levels that do not significantly impact the achievement of targets for population trend and spatial distribution.
- The number, location, shape and area of barriers do not significantly impact the wintering population's access to the SPA or other ecologically important sites outside the SPA.
- Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target.
- Sufficient number of locations, area and availbility of suitable roosting habitat to support the population target.
- Sufficient area of utilisable habitat available in ecologically important sites outside the SPA.

Predicted Impacts- No impacts are predicted on this qualifying interest. This is due to the lack of identifiable hydrological/ecological receptor/connector pathways, the distance and intervening environment between this application site and the Natura 2000 site.

[A395] Greenland White-fronted Goose (*Anser albifrons flavirostris*)

- Long term winter population trend is stable or increasing.
- Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population target.
- The intensity, frequency, timing and duration of disturbance occurs at levels that do not significantly impact the achievement of targets for population trend and spatial distribution.
- The number, location, shape and area of barriers do not significantly impact the wintering population's access to the SPA or other ecologically important sites outside the SPA.
- Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target.
- Sufficient number of locations, area and availability of suitable roosting habitat to support the population target.
- Sufficient area of utilisable habitat available in ecologically important sites outside the SPA.

Predicted Impacts- No impacts are predicted on this qualifying interest. This is due to the lack of identifiable hydrological/ecological receptor/connector pathways, the distance and intervening environment between this application site and the Natura 2000 site.

[A999] Wetland

- No significant loss to wetland habitat within the SPA, other than that occurring from natural patterns of variation.
- No significant impact on the quality or functioning of the wetland habitat within the SPA, other than that occurring from natural patterns of variation

Predicted Impacts- No impacts are predicted on this qualifying interest. This is due to the lack of identifiable hydrological/ecological receptor/connector pathways, the distance and intervening environment between this application site and the Natura 2000 site.

5 SOILS, GEOLOGY & HYDROGEOLOGY

5.1 GEOLOGY

The Geological Survey of Ireland (GSI) website was consulted for available geological / hydrological information. The site is underlain by Limestone till (Carboniferous). Topsoil on site consists of Brown Earth: Well drained mineral soils. The groundwater vulnerability within the site is rated as Moderate throughout the site. Vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease at which groundwater may be contaminated by human activities.

Table 5.1- Details information gleaned from catchments.ie on the water status of the groundwater waterbody. This concludes that the groundwater is rated as good overall status.

Clarinbridge Waterbody Information	
Name	Clarinbridge
Code	IE_WE_G_0008
WFD Catchments	29 Galway Bay South East 30 Corrib
Longitude	53.2932876
Latitude	-8.761284
Cycle 1 RBD	Western
Local Authority	Galway County Council
Waterbody Category	Groundwater
WFD Risk	Not At Risk
Protected Area	N/A
High Status Objective	No
Heavily Modified	N/A
Artificial	N/A
Area (km^2)	N/A
Length (km)	N/A
Transboundary	No
Canal	No
GW 2019-2024 Overall Groundwater Status	Good

5.2 FLOOD RISK

A site-specific Flood Risk Assessment was prepared by TOBIN in 2021 for the construction of the fire station to the south of the site. This report included the application site for the proposed mechanics workshop within the assessment area for flood risk. This report concluded that "*Based on the results of this Flood Risk Assessment, the proposed Fire Station is appropriately located in Flood Zone C.*" Furthermore, as per the Flood Info Maps (https://www.floodinfo.ie/map/floodmaps/#), there is no identifiable flood risk zone on site. Therefore, no impacts are predicted in regard to flood risk.

6 OTHER PLANS AND PROJECTS IN THE AREA

It is a requirement of the Appropriate Assessment process to consider the 'in combination' effects of the proposed development with other plans and projects in the area. **Table 6.1** below gives details of the other plans and projects in the area which may be affecting the Rahasane Turlough SAC and the Rahasane Turlough SPA Natura 2000 sites.

Table 6.1: Other Plans and Projects Affecting the Natura 2000 Sites

Name of Plan or Project	Key policies/issues/objectives directly related to the relevant Natura 2000 sites	Potential cumulative or in-combination effects on the relevant Natura 2000 sites
Athenry Local Area Plan 2024-2030	Policy Objectives LSST Environmental Assessment and Policy Objectives LSST67 Biodiversity and Ecological Networks.	Positive Impact
Galway County Development Plan 2022-2028	Designated Sites, Habitats and Species Policies and Objectives, Natural Heritage and Biodiversity Policies and Objectives, Natural Water Systems Policies Improve water quality, nature conservation/ biodiversity. The integration of Green/Blue Infrastructure and ecosystems services	Positive Impact
All Ireland Pollinator Plan	Reverse declines in pollinating insects. Pollinators are impacted by the actions of everyone ranging from the local authorities to community groups, farmers, schools, gardeners and businesses	Positive Impact
River Basin Management Plan for Ireland 2022-2027	The River Basin Management Plan for Ireland sets out a number of objectives and measures for all national water bodies which aim: (1) to prevent the deterioration of water bodies and to protect, enhance and restore them with the aim of achieving at least good status and (2) to achieve compliance with the requirements for designated protected areas.	Positive impact
NPWS Conservation Management Plans	Site-Specific Conservation objectives have been published for the Rahasane Turlough SAC and Rahasane Turlough SPA sites and its aims and objectives are outlined from page 17 - 20 above.	Positive impacts
Inland Fisheries Ireland (IFI) Corporate Plan 2021-2025	Goals: To protect, manage and conserve Ireland's inland fisheries and sea angling resources and to maximize their sustainability and natural biodiversity. To play a leadership role in achieving our climate action and biodiversity goals	Positive impact
Planning Applications in the area	A search was carried out on Galway County Council's online planning query system and Galway County Councils Consultation Portal on the 23rd of April 2026. It was ascertained that the following local planning applications were granted within a 300m radius of the site in the past 5 years. **Part 8** LA 11/21 Proposed New Fire Station, Ballygarraun South, Athenry **Development Description:** *In accordance with Part 8 of the Planning & Development Regulations 2001 as amended, notice is hereby given that Galway County Council proposes the construction of a new Fire Station at Ballygarraun South, Athenry, County Galway. Proposals include site clearance*	Neutral Impact

	works, a training tower, signage, landscaping, parking, connections to existing services, public footpaths and all associated site development works. **PI ref:** 2361035 **Development Description:** *for the proposed development will consist of: • construction of a 4no. storey medical device manufacturing facility providing warehousing, production areas, administration offices & restaurant (GIA: 40,226.6 m2); • construction of a central utilities compound to comprise a gas insulated switchgear substation building (GIA: 124.57 m2), pumphouse building (GIA: 84.79 m2) & MV building (GIA: 306.46 m2); • the development includes 4no. surface car park areas, which comprise a total of 500no. car parking spaces (including 100no. EV charging spaces & 18no. accessible spaces), 10no. motorcycle parking spaces & 178no. bicycle parking spaces; • provision of an outdoor landscaped 'Wild Plaza' & a 2.1km nature trail; • provision of roof mounted solar PV panels & plant equipment on the roof of the manufacturing facility; • provision of water, foul & surface water drainage infrastructure, including – o wastewater treatment plant, o processed wastewater holding, treatment, testing & filtration facility, & o pumping stations & attenuation areas, • provision of access roads, landscaping, alterations/removal of existing field boundaries, public lighting & all other site development works & services ancillary to the proposed development; • provision of pedestrian connectivity infrastructure on the R348, Prospect Road & L3103 including footpaths, pedestrian crossings & all associated works; • provision of temporary construction compound during the construction phase of the development. A Natura Impact Statement (NIS) & Environmental Impact Assessment Report (EIAR) will be submitted to the planning authority with the planning application.* **Grant Date:** 24/10/2023 **PI ref:** 241 **Development Description:** *of the existing pedestrian accessway to the new Clarin College* **Grant Date:** 19/08/2024 **PI ref:** 212026 **Development Description:** *for the upgrade of the sewerage network in the town of Athenry and the townlands of Caherroyn, Gorteenacra, Knockaunglass, Athenry, Baunmore, Gortnahown, Prospect, Newford, Ballygarraun South, Raheen and Cullairbaun in Co. Galway. The Athenry Town Walls and Gateway (Record of Proteccted Structure No. 132) is located within the subject site. The development will consist of; Decommissioning of an existing combined sewer overflow at North Gate street within the centre of Athenry Town; upgrade/replacement of the sewers from the Cuirt Ard/Caheroyan Road junction to the Caheroyan Pumping Station; decommissioning and removal of above ground structures of the Caheroyan Pumping station; construction of a new sewer from the decommissioned Caheroyan Pumping including crossing of the River Clarin and lands to the south east; construction of a new sewer which starts at North Gate, crosses the River Clarin at Bridge Street, flows via a new sewer to a pumping station adjacent to Pairc na hAbhainn housing estate, crossing a tributaryof the River Clarin to the pumping station site; construction of a new main wastewater pumping station adjacent to Pairc na hAbhainn housing estate including underground chambers, emergency storage tank, wet kiosk, above ground control kiosk, generator, lifting gantry (max 4m in height) and vent stack; Rising main from the pumping station, crossing the R348, to Athenry wastewater treatment plant; Construction of new boundary fencing of 2.4m in height around the pumping station and stormwater overflow outfall to stream to the north of the pumping station site; Decommissioning and removal of existing on-site package wastewater treatment plant at the pumping station site; construction of a new*	

	sewer which begins at a small estate in Raheen, passes through the Presentation College school site, crosses 2 no. railway lines and connects into a newly built sewer within the Clarin College school site and then flows to the Athenry Wastewater Treatment Plant; and connecting the existing rising main from the Presentation College to the new sewer; Installation of a new access gate between Caheroyan Drive and Caheroyan House to facilitate access to the sewer for maintenance and for agricultural purposes; and all associated site development works above and below ground. A Natura Impact Statement (NIS) accompanies this planning application. **Grant Date:** 13/06/2022 **PI ref:** 24348 **Development Description:** *to construct 3 No. dwelling houses including all associated works and services. The proposed works includes the removal of an existing wastewater treatment system and percolation which was approved under PI Ref no. 07/2841* **Grant Date:** 15/07/2025 Due to the extent of the permitted development in the area as set out above, no cumulative/ in-combination impacts are anticipated.	

7 SCREENING MATRIX FOR APPROPRIATE ASSESSMENT IN LINE WITH EU COMMISSION GUIDANCE

Having established the extent of the proposed project and the details of the Natura 2000 sites, a screening assessment for possible impacts can be generated. This section follows the format of the Screening Matrix provided in Annex 2 of the following document.

"Assessment of plans and projects significantly affecting Natura 2000 sites- Methodology guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission, 2001".

Table 7.1: Step Three: Assessment of Likely Significant Effects

Identify all potential direct and indirect impacts that may have an effect on the conservation objective of a European site taking into account the size/scale of the project under the following headings:	
Impacts:	Possible significance of Impacts (Duration/Magnitude)
Construction Phase (Examples) • Vegetation Clearance • Demolition • Surface water runoff from excavation/infill • Dust, noise, vibration • Lighting disturbance • Impact on groundwater • Storage of excavation/construction materials • Access to site • Pests	There are no direct impacts/effects predicted on the Rahasane Turlough SAC/SPA during the construction phase as the application site is located outside of these Natura 2000 sites. There are no identifiable hydrological/ ecological connector receptor pathways between the application site and these Natura 2000 sites. There is no identifiable potential flood risk on the site. Considering these factors, indirect impacts are not predicted during the construction phase of the proposed works. No indirect noise impacts are predicted on QI Bird species during the construction phase of the development due to the significant distance and the intervening environment between the application site and this SPA.

Operation Phase (Examples) • Direct emissions to air and water • Surface water runoff containing contaminant/sediment • Lighting Disturbance • Noise/vibration • Changes to water/groundwater due to drainage/abstraction • Presence of people, vehicles and activities • Physical presence of structures (collision risks) • Potential for accidents/incidents	There are no direct impacts/effects predicted on the Rahasane Turlough SAC/SPA during the operational phase as the application site is located outside of these Natura 2000 sites. There are no identifiable hydrological/ ecological connector receptor pathways between the application site and these Natura 2000 sites. There is no identifiable potential flood risk on the site. Considering these factors, indirect impacts are not predicted during the operational phase of the proposed works. No indirect noise impacts are predicted on QI Bird species during the operational phase of the development due to the significant distance and the intervening environment between the application site and this SPA. A site-specific Flood Risk Assessment was prepared by TOBIN in 2021 for the construction of the fire station to the south of the site. This report included the application site for the proposed mechanics workshop within the assessment area for flood risk. This report concluded that "*Based on the results of this Flood Risk Assessment, the proposed Fire Station is appropriately located in Flood Zone C.*" Furthermore, as per the Flood Info Maps (https://www.floodinfo.ie/map/floodmaps/#), there is no identifiable flood risk zone on site. Therefore, no impacts are predicted in regard to flood risk. Storm water runoff will be treated via a petrol interceptor before discharging into a soakaway, located to the east of the proposed building. No impacts are predicted in this regard. Wastewater will be discharged into the existing foul drainage network to the south of the site that serves the existing fire station. Given the nature of the proposed development as a mechanics workshop, this will not result in a notable increase in foul discharge onto the existing sewer network. No impacts are predicted in this regard.
In combination/ other:	No likely significant in-combination effects are identified.
(a) Describe any likely changes to the European site:	
Examples of the type of changes to give consideration to include: • Reduction/fragmentation of habitat • Disturbance to QI species • Habitat/species fragmentation • Reduction/fragmentation in species density • Changes in key indicators of conservation status value • Changes to areas of sensitivity/threats to QI • Interference with the key relationships that define the structure or ecological function of the site	There are no identifiable hydrological/ ecological connector receptor pathways between the application site and these Natura 2000 sites. There is no identifiable potential flood risk on the site. Considering these factors, indirect impacts are not predicted during the construction and operational phase of the proposed works. No indirect noise impacts are predicted on QI Bird species during the construction and operational phase of the development due to the significant distance and the intervening environment between the application site and this SPA.
(b) Are 'mitigation' measures necessary to reach a conclusion that likely significant effects can be ruled out at screening?	
☐ Yes ☒ No	

The findings of the screening matrix are summarized in **Table 7.2** below.

Table 7.2 Stage 1 - Screening Matrix for the Proposed Development

Brief Description of the Project or Plan

Location: The proposed site lies at Ballygarraun South, Athenry, County Galway (Grid Ref: Easting: 549373.66, Northing: 727502.84).

Distance from Designated Site: The site for proposed development lies 7.2 km to the north of the Rahasane Turlough SAC (Site code: 000322) and Rahasane Turlough SPA (Site code: 004089).

Brief Description of the Project: Planning permission is being sought for the *"construction of a new Galway Fire Brigade Mechanics Building at Ballygarraun South, Athenry, Co. Galway."*

A Site Layout Plan for the proposed development is included as **Appendix A** to this report.

Brief Description of the Natura 2000 Site

Site Designation Status: The Rahasane Turlough SAC is designated under EU Habitats Directive (92/43/EEC). The Rahasane Turlough SPA is designated under the EU Birds Directive (79/409/EEC).

Qualifying Features
The Rahasane Turlough SAC is of conservation significance due to the presence of Turloughs* habitat which is listed under Annex I of the EU Habitats Directive.

The Rahasane Turlough SPA is designated for the presence of bird species listed on Annex I of the EU Birds Directive (see below).

Qualifying Habitats

Rahasane Turlough SAC
- Turloughs* [3180]

(EU Habitats Directive 92/43/EEC)

Qualifying Species

Rahasane Turlough SPA
- Whooper Swan (*Cygnus cygnus*) [A038]
- Wigeon (*Anas penelope*) [A050]
- Golden Plover (*Pluvialis apricaria*) [A140]
- Black-tailed Godwit (*Limosa limosa*) [A156]
- Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]
- Wetland and Waterbirds [A999]

(EU Birds Directive 79/409/EEC).

Habitats and Species of Interest

Full details of the sites are found in the Rahasane Turlough SAC Site Synopses included as Appendix B in this report. Full details of the sites are found in the Rahasane Turlough SPA Site Synopses included as Appendix C in this report.

Unit Size:
Rahasane Turlough SAC: 351.6600 ha
Rahasane Turlough SPA: 372.3000 ha

ASSESSMENT CRITERIA

Describe the individual elements of the project likely to give rise to impacts on the Natura 2000 site.

There are no identifiable hydrological/ ecological connector receptor pathways between the application site and these Natura 2000 sites. There is no identifiable potential flood risk on the site. Considering these factors, indirect impacts are not predicted during the construction and operational phase of the proposed works.

No indirect noise impacts are predicted on QI Bird species during the construction and operational phase of the development due to the significant distance and the intervening environment between the application site and this SPA.

Describe any likely direct, indirect or secondary impacts of the project on the Natura 2000 site by virtue of the following;

- **Size and Scale**
  The application site comprises an overall site area of 7016 sqm, the proposed development floor space is 359.5 sqm. Due to the fact that the works will be located within built up area, entirely outside the designated area, it is not expected that the development will have any significant impact (direct, indirect or secondary in nature) on the Natura 2000 site in this regard.

- **Land-Take**
  The proposed works will be entirely located outside the designated site and so there will be no impacts in this regard.

- **Distance from Natura 2000 site or key features of the site**
  The application site is located 7.2 km to the north of the Rahasane Turlough SAC (Site code: 000322) and Rahasane Turlough SPA (Site code: 004089). There are no identifiable hydrological/ ecological connector receptor pathways between the application site and these Natura 2000 sites.

- **Resource Requirements**
  It is not expected that the proposed development will have any significant impact (direct, indirect, or secondary in nature) on the designated sites in this regard.

- **Emissions**
  Storm water runoff will be treated via a petrol interceptor before discharging into a soakaway, located to the east of the proposed building. No impacts are predicted in this regard.

  Wastewater will be discharged into the existing foul drainage network to the south of the site that serves the existing fire station. Given the nature of the proposed development as a mechanics workshop, this will not result in a notable increase in foul discharge onto the existing sewer network. No impacts are predicted in this regard.

  A site-specific Flood Risk Assessment was prepared by TOBIN in 2021 for the construction of the fire station to the south of the site. This report included the application site for the proposed mechanics workshop within the assessment area for flood risk. This report concluded that "*Based on the results of this Flood Risk Assessment, the proposed Fire Station is appropriately located in Flood Zone C*." Furthermore, as per the Flood Info Maps (https://www.floodinfo.ie/map/floodmaps/#), there is no identifiable flood risk zone on site. Therefore, no impacts are predicted in regard to flood risk.

- **Excavation Requirements**
  No impacts are expected on the Natura 2000 site in this regard.

- **Transportation Requirements**
  During the construction phase of the proposed development, there will be a slight increase in the volume of traffic in the area for a short time. It is not expected that this slight increase will result in direct, indirect, or secondary impacts on the Natura 2000 site.

- **Duration of construction, operation, decommissioning**
  The construction phase of the proposed development will last approximately 1-2 years. It is expected that this development will remain in use for at least 100 years. Neither the operation nor the eventual decommissioning of the proposed development is likely to result in direct, indirect, or secondary impacts on the Natura 2000 sites.

Describe any likely changes to the site arising as a result of the following;

- **Reduction of Habitat**
  There will be no changes in this respect.

Disturbance to Key Species

- There will be no changes in this respect.

- **Habitat or Species Fragmentation**
  There will be no changes in this respect.

- **Reduction in species density**
  There will be no changes in this respect.

- **Changes in key indicators of conservation value**
  There will be no changes in this respect.

- **Climate change**
  There will be no changes in this respect.

Describe any likely impacts on the Natura 2000 site as a whole in terms of the following;

- **Interference with key relationships that define the structure and function of the site**

  No potential impacts which are likely to interfere with the key relationships that define the structure or function of the site are expected.

Provide Indicators of significance as a result of the identification of effects set out above in terms of the following;

- **Loss**
  No loss is expected.

- **Fragmentation**
  No fragmentation is expected.

- **Disruption**
  No disruption is expected.

- **Disturbance**
  No disturbance is expected.

- **Change to key elements of the site**
  No change is expected.

Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.

There are no identifiable hydrological/ ecological connector receptor pathways between the application site and these Natura 2000 sites. There is no identifiable potential flood risk on the site. Considering these factors, indirect impacts are not predicted during the construction and operational phase of the proposed works.

No indirect noise impacts are predicted on QI Bird species during the construction and operational phase of the development due to the significant distance and the intervening environment between the application site and this SPA.

8 CONCLUSIONS

Planning is being sought for the *"construction of a new Galway Fire Brigade Mechanics Building at Ballygarraun South, Athenry, Co. Galway."* A Site Layout Plan for the proposed development is included as **Appendix A** to this report. The screening exercise examined impacts on the Rahasane Turlough SAC and the Rahasane Turlough SPA Natura 2000 sites.

There are no identifiable hydrological/ ecological connector receptor pathways between the application site and these Natura 2000 sites. There is no identifiable potential flood risk on the site. Considering these factors, indirect impacts are not predicted during the construction and operational phase of the proposed works.

No indirect noise impacts are predicted on QI Bird species during the construction and operational phase of the development due to the significant distance and the intervening environment between the application site and this SPA.

Storm water runoff will be treated via a petrol interceptor before discharging into a soakaway, located to the east of the proposed building. No impacts are predicted in this regard.

Wastewater will be discharged into the existing foul drainage network to the south of the site that serves the existing fire station. Given the nature of the proposed development as a mechanics workshop, this will not result in a notable increase in foul discharge onto the existing sewer network. No impacts are predicted in this regard.

A site-specific Flood Risk Assessment was prepared by TOBIN in 2021 for the construction of the fire station to the south of the site. This report included the application site for the proposed mechanics workshop within the assessment area for flood risk. This report concluded that "*Based on the results of this Flood Risk Assessment, the proposed Fire Station is appropriately located in Flood Zone C*." Furthermore, as per the Flood Info Maps (https://www.floodinfo.ie/map/floodmaps/#), there is no identifiable flood risk zone on site. Therefore, no impacts are predicted in regard to flood risk.

Therefore, the conclusion of this screening exercise is that no significant effects are expected on the qualifying interests or conservation objectives of the surrounding Natura 2000 sites, as a result of the proposed development in question, alone or in combination with the other plans and projects in the area, and therefore, a Natura Impact Statement is **not** required in this case.

This report is therefore issued as a '**Finding of No Significant Effects'(FONSE)** statement, in accordance with the EU Commission's methodological guidance (EC, 2001).

APPENDIX A-Site Layout Plan

APPENDIX B

NPWS Site Synopses for Rahasane Turlough SAC

Site Name: Rahasane Turlough SAC

Site Code: 000322

Rahasane Turlough lies in gently undulating land, approximately 2 km west of Craughwell, Co. Galway. It consists of two basins which are connected at times of flood but separated as the waters decline. The larger of these, the northern basin, takes the Dunkellin River westwards.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes): [3180] Turloughs*

Rahasane Turlough was formerly the natural sink of the Dunkellin River, but now an artificial channel takes some of the water further downstream. Water escapes the artificial channel to sweep around the northern basin, and again in the west, where it flows into an active swallow-hole system. The main swallow-holes here are constantly changing, but reach 5 m in diameter and 2-3 m deep. Some minor collapses are found elsewhere in the turlough, as well as a small number of more permanent pools. Mostly, the edges of the turlough rise gradually into the surrounding land, but in places, rocks mark a more sudden transition. The southern basin is an impressive feature, with high rocky sides above an undulating base, strewn with boulders. There is a low hill on the south side of the main basin, and another on the north-east, near Shanbally Castle, where smooth limestone pavement is evident. The major part of the turlough is open, flat and grassy, with occasional depressions and dry channels. The substrate consists largely of silty clay with shell fragments, reaching over 3 m in thickness. Locally in the main basin there are signs of marl, but peat is absent everywhere. Like the southern basin, the eastern end of the main (northern) basin is distinguished by the presence of large rocks scattered over the floor.

The vegetation of Rahasane is divided between dry and wet communities. Because of its large catchment, the turlough is naturally eutrophic and this, together with a lack of peat, limits the sedges (*Carex* spp.) which are usually abundant in turlough vegetation. In places with outcropping limestone, the vegetation is predominantly dry grassland with Red Fescue (*Festuca rubra*) and Crested Dog's-tail (*Cynosurus cristatus*), among a generally calcicole community. Large areas in the drier parts of the turlough are covered by a community characterised by an abundance of Creeping Cinquefoil (*Potentilla reptans*), with Common Sedge (*Carex nigra*), Silverweed (*Potentilla anserina*) and Creeping Bent (*Agrostis stolonifera*). Where the soil is less well-drained, Creeping Cinquefoil disappears from this community and the rare species, Fen Violet (*Viola persicifolia*), which is listed in the Irish Red Data Book, occurs. In these areas, the presence of Common Spike-rush (*Eleocharis palustris*) suggests that water is close to the surface.

Wet communities are associated with the river channels and pools. Fully aquatic communities include such species as Fan-leaved Water Crowfoot (*Ranunculus circinatus*), Fennel Pondweed (*Potamogeton pectinatus*), Lesser Pondweed (*P. pusillus*), Fat Duckweed (*Lemna gibba*), Whorled Water-milfoil (*Myriophyllum verticillatum*) and Needle Spike-rush (*Eleocharis acicularis*). Semi-aquatic communities fringe the main channel of the river and colonise muddy pools in the basin. Species such as Lesser Water-parsnip (*Berula erecta*), Fool's Water-cress (*Apium nodiflorum*), River Waterdropwort (*Oenanthe fluviatilis*) and Amphibious Bistort (*Polygonum amphibium*) occur, along with the rare species, Northern Yellow-cress (*Rorippa islandica*), which is listed in the Irish Red Data Book. There are also some narrow fields with Yellow Iris (*Iris pseudacorus*).

There are small areas of scrub on the southern and north-western sides of the turlough, but the area of flooded woodland is small. The scrub is made up of Buckthorn (*Rhamnus cathartica*), Ash (*Fraxinus excelsior*) and Hazel (*Corylus avellana*). The trees support a range of epiphytic mosses such as *Leskea polycarpa, Amblystegium riparium, Isopterygium elegans, Isothecium myosuroides* and *Thuidium tamariscinum.*

Rahasane Turlough is renowned for its wintering wildfowl populations, but it also supports nesting waders in summer, which include Lapwing, Redshank, Snipe and Dunlin. Figures stated in the following account represent mean (and peak) counts obtained during the three seasons, 1984/85 to 1986/87. Internationally important numbers of Whooper Swan 179, Golden Plover 17680, Wigeon 7760 and Shoveler 498 are found. The first two species, together with Bewick's Swan, below, are listed on Annex I of the E.U. Birds Directive. Species recorded in nationally important numbers are Bewick's Swan 132, Mute Swan 125, Teal 3005, Mallard 777, Pintail 102, Pochard 356, Tufted Duck 381, Coot 1289, Lapwing 3995, Dunlin 3569 (5653), Blacktailed Godwit 170 and Curlew 1205. Small numbers of the internationally important Greenland White-fronted Goose regularly overwinter at Rahasane (average count, as above, 59), but numbers have been declining over the years.

There is a small run of Atlantic Salmon (*Salmo salar*) through the Dunkellin River when it is flowing overground. The fish pass through the turlough but do not use it for spawning. This species is listed on Annex II of the E.U. Habitats Directive.

The Fairy Shrimp (*Tanymastix stagnalis,* Class Crustacea) was first recorded in Ireland from the southern basin at Rahasane, though it has since been recorded elsewhere. It requires isolation from predators to grow to reproductive age and so cannot occur in permanent waterbodies.

The turlough is closely grazed by cattle, sheep and horses. Grazing is a critical factor in maintaining a balance between open swards and woodland development at the edges of the turlough. Drainage is a major threat to turloughs, but the Dunkellin River has not been arterially drained. The river was straightened many years ago where it crosses the turlough, and the artificial channel was dredged again in 1992, but this does not appear to have affected winter flooding. Some

degree of artificial enrichment of the basin is occurring from the farming areas upstream, and local enrichment is associated with grazing practices. Eutrophication is among the major threats to turlough systems in general..

Rahasane Turlough is of major ecological significance as one of only two large turloughs in the country which still function naturally. It is the most important turlough in Ireland for birdlife. In a relatively recent national survey, it was also rated very highly for its vegetation, and supports two rare species listed in the Irish Red Data Book. Turloughs are a rare habitat type and are given priority status under Annex I of the E.U. Habitats Directive.

APPENDIX C

NPWS Site Synopses for Rahasane Turlough SPA

Site Name: Rahasane Turlough SPA

Site Code: **004089**

Rahasane Turlough lies in gently undulating land, approximately 2 km west of Craughwell, Co. Galway. It consists of two basins which are connected at times of flood but separated as the waters recede. The larger of these, the northern basin, takes the Dunkellin River westwards. Rahasane was formerly the natural sink of the Dunkellin River, but now an artificial channel takes some of the water further downstream. Water escapes the artificial channel to sweep around the northern basin, and again in the west, where it flows into an active swallowhole system. Some minor collapses are found elsewhere in the turlough, as well as a small number of more permanent pools. The substrate consists largely of silty clay.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation importance for the following species: Whooper Swan, Greenland Whitefronted Goose, Wigeon, Golden Plover and Black-tailed Godwit. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Rahasane is a traditional site for Greenland White-fronted Goose, and supports a population of national importance (157 individuals - five year mean peak for the period 1994/95 to 1998/99). It is of international importance for Black-tailed Godwit (437 - all figures are five year mean peaks for the period 1995/96 to 1999/2000). It also has nationally important populations of Whooper Swan (165), Wigeon (3,430), and Golden Plover (6,613). The site has the largest inland population of Dunlin (864) in the country and also supports Mute Swan (57), Teal (307), Mallard (142), Pintail (19), Shoveler (28), Tufted Duck (32), Grey Heron (31), Lapwing (2,220), Curlew (197), Redshank (134) and Black-headed Gull (280). Little Egret, a species which has recently colonised Ireland, also occurs at this site.

Rahasane Turlough SPA is of high ornithological importance; it supports nationally important populations of four species and an internationally important population of one. The Wigeon and Golden Plover populations are of particular note as they each represent approximately 4% of the All-Ireland totals of these species. The regular occurrence of Greenland White-fronted Goose, Whooper Swan and Golden Plover is of note as these species are listed on Annex I of the E.U. Birds Directive.