July'22

Title

ECOLOGICAL IMPACT ASSESSMENT REPORT

Development Description

"Permission for the construction of a new Fire station building, together with associated training tower, shed, signage, landscaping, parking and yard areas, revised boundary treatments, connections to existing services and all associated site development works"

Location

St. Laurencesfields , Loughrea, Co. Galway

Applicants

Galway County Council

Prepared by:

Colette Casey (B.Sc (Hons)) in partnership with James O' Donnell (BA, MRUP, Dip APM)

James O' Donnell

BA, MRUP, Dip APM

Planning Consultancy Services

Suite 3,

Third Floor,

Ross House,

Victoria Place,

Eyre Square,

Galway

M: 087-6066166

info@planningconsultancy.ie

www.planningconsultancy.ie

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1 INTRODUCTION

This Ecological Impact Assessment Report has been prepared by Colette Casey (B.Sc (Hons)) in partnership with James O'Donnell, Planning Consultant (BA, MRUP, Dip APM) on behalf of Galway County Council who are applying for planning permission "*for the construction of a new Fire station building, together with associated training tower, shed, signage, landscaping, parking and yard areas, revised boundary treatments, connections to existing services and all associated site development works"* at St. Laurencesfields, Loughrea, Co. Galway (Grid Ref - Easting:160817.79, Northing:216957.15). The assessment is based on a field survey and a desk survey conducted in March 2022.

Colette Casey is an experienced and qualified ecologist. She has obtained a Bachelor's degree in Environmental Science (BSc Hons) at the National University of Ireland, Galway. She has been involved in the completion of numerous Appropriate Assessment Screening Reports (AASR's), Natura Impact statements (NIS's), Construction Environmental Management Plans (CEMP's), Otter, Hen Harrier and Bat Surveys in the Republic of Ireland. She is an active member of Birdwatch Ireland, Bat conservation Ireland. Colette is a registered member of CIEEM and has been issued a Bat Surveying license by National Parks and Wildlife services.

The proposed site has an area of 0.4213 ha. The proposed development is "*for the construction of a new Fire station building, together with associated training tower, shed, signage, landscaping, parking and yard areas, revised boundary treatments, connections to existing services and all associated site development works"* The surrounding area is a residential area with the Loughrea Hotel & Spa to the north, the application site is c. 1.31km west from Loughrea Centre. Access to the site will be via the public roadway adjacent to the site. A site layout of the proposed development is depicted in Figure 1.1. See Figure 1.2 for an aerial map of the proposed site.

This report follows a standard approach based upon the description of the current baseline conditions within the proposed site. A survey of the likely habitats and species present in the proposed site is provided, in addition to the identification of the potential ecological impacts, resulting from the construction and operational phases of the development. An assessment of the likely significance of the identified impacts on valued ecological receptors (VERs), within the site and in close proximity to the site, was also provided. Appropriate remedial mitigation measures are provided where significant negative impacts were identified, to prevent, reduce or counteract the impact.

1.1 LEGISLATIVE BACKGROUND

1.1.1 Legislative Context

The Irish Wildlife Act 1976 and the Wildlife (Amended) Act 2000 allows for the protection of most wild animals and birds. Licences are required for the interference with protected species. The act makes it illegal to interfere with or damage the resting or breeding places of any protected wild animal.

The Flora Protection Order 1999 provides protection in Ireland to several rare plant species from being purposefully cut, picked, uprooted or damaged. It is also illegal under this order to interfere, alter or damage the relevant habitats.

There are three main types of designation for nature conservation in Ireland: Special Areas of Conservation (SACs), Special Protection Areas (SPA) and Natural Heritage Areas (NHAs). NHAs are designated under the Irish Wildlife Act 1976 (amended 2000). A NHA is protected from damage for the presence of habitats and protected plant and animal species. As NHA are not part of the Natura 2000 network, the Appropriate Assessment process is not applicable to these sites.

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. Certain habitats, within the EU Habitats Directive are classed as 'priority' habitats and are afforded greater protection. For example, Irish priority habitats include turloughs, heaths, blanket bogs and raised bogs. Waterbodies are also afforded protection and are designated as SACs for the presence of species such as the Harbour seal, Salmon and Freshwater Pearl Mussel.

The Water Framework Directive (WFD) (2000/60/EC) was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722, 2003). The WFD aims to achieve good status in all waterbodies. It forms a framework for community involvement in the topic of water policy. The WFD updates existing legislation and provides for the management of River Basin Districts (RBDs). RBDs are administrative areas that consist of river basins (catchments) and cross-border basins assigned to an International RBD. RBD allow for a co-ordinated approach to water management. Currently, Ireland is in the 2nd Cycle of the WFD (2015-2021), where previous RBDs form one national RBD. The 2nd Cycle allows for greater community involvement in water management at a local level.

1.2 METHODOLOGY

The flora and habitats of the site were assessed using a desk study of information pertaining to the proposed and surrounding areas, ecological records and information pertaining to designations and legislation.

A field study was completed by a qualified ecologist from Planning Consultancy Services, Colette Casey (Bsc. Hons) on the 16th of March 2022. 'A Guide to Habitats in Ireland' (Fossitt, 2000) was used to identify and assess habitats in and adjacent to the site, based on current vegetation composition and habitat management. The site was traversed and identified habitats were classified and sketched into field maps of the site.

The capability of the site to support certain species (particularly those of the conservation importance that may have been recorded during the field survey due their seasonal absence or cryptic/nocturnal habits) were assessed.

All habitats and species of interest were readily identifiable based on the field survey in March 2022. From the information collected during the field survey, the published information on the site and its environs, it is considered that a comprehensive ecological assessment was achieved.

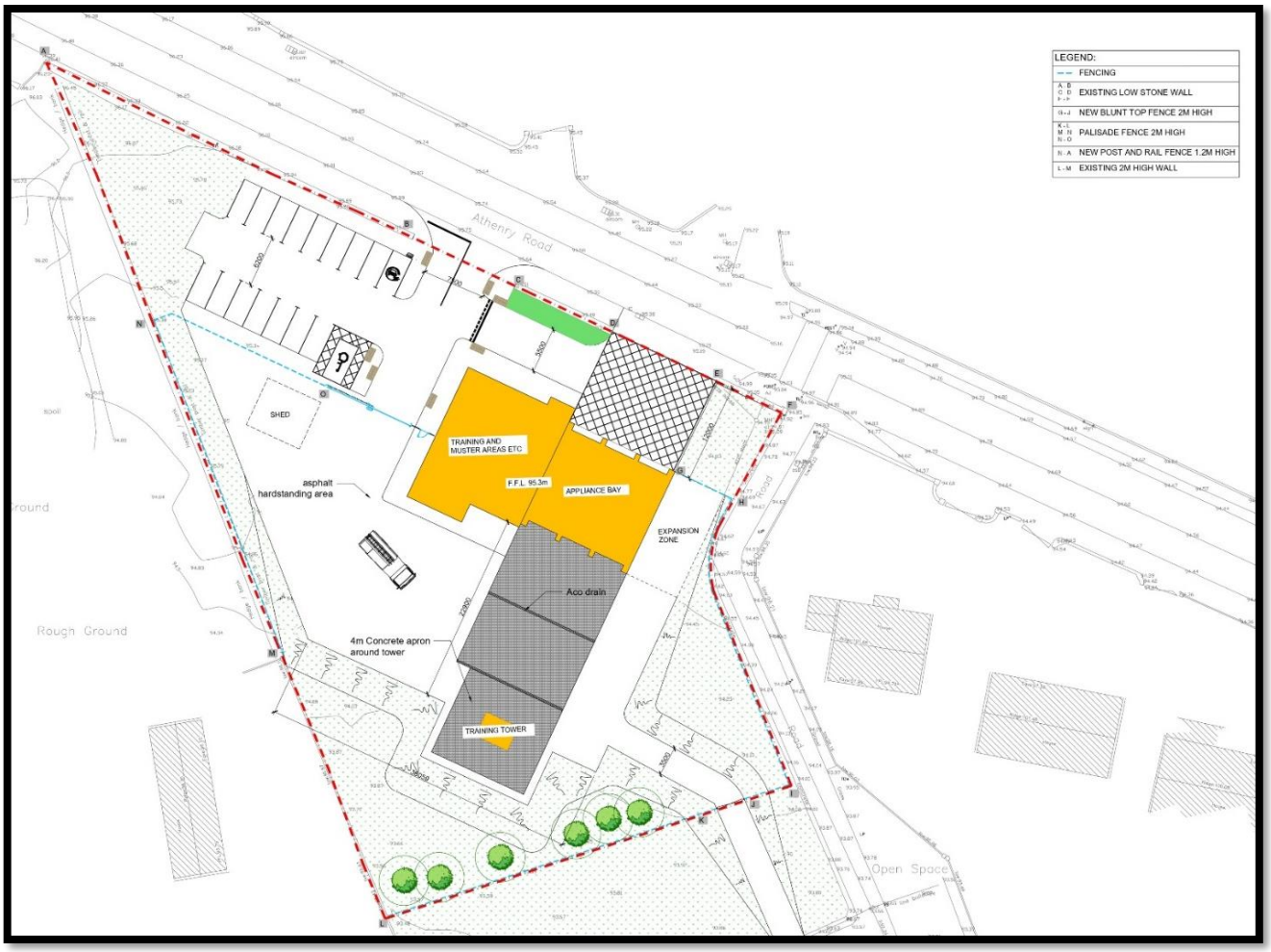

Figure 1.1: Site layout prepared by Vincent Hannon Architects

Fig 1.2: Application Site.

2 ESTABLISHING AN ECOLOGICAL BASELINE

2.1 DESK STUDY

A desk study was undertaken to review information that was available with regards to the flora and fauna of the area, including the application site. The following sections pertain to NPWS site synopses for designated conservations sites, birds and plant atlases and specialist research publications. These published sources were consulted for the completion of the Ecological Impact Assessment.

2.1.1 Designated Sites

All European and National designated sites within a 15km radius of proposed site were identified in relation to this development. Designated sites located further than 15km were also identified, however no pathways for impacts on these sites were identified due to the nature and scale of the development, in addition to the lack of hydrological connectivity. Table 2.1 indicates the proximity of designated sites to the proposed development. The locations of the Natura 2000 sites in relation to the proposed site can be seen in Figure 2.1. The locations of National Heritage Areas and proposed National Heritage Areas in relation to the proposed site can be seen in Figure 2.2.

Table 2.1 Designated sites within the 15km of the proposed development and proximity of these sites to the proposed development. Sites requiring further consideration of impacts are in bold.

Designated Site and Site Code	Distance from Proposed Site (km)
SACs	
Lough Rea SAC (Site code: 000304)	600 meters
Sonnagh Bog SAC (Site code 001913)	8.17km
Rahasane Turlough SAC (Site code 000322)	10.92km
Peterswell Turlough SAC (Site code 000318)	11.35km
Castletaylor Complex SAC (Site code 000242)	14.39km
Lough Coy SAC (Site code 002117)	14.87km
SPAs	
Lough Rea SPA (Site code 004134)	609 meters
Slieve Aughty Mountains SPA (Site code 004168)	4.43km
Rahasane Turlough SPA (Site code 004089)	10.98km

NHAs	
Slieve Aughty Bog NHA (Site code 001229)	10.9km
Raford River Bog NHA (Site code 000321)	11km
pNHAs	
Lough Rea pNHA (Site code: 000304)	600 meters
Sonnagh Bog pNHA (Site code 001913)	8.3km
Rahasane Turlough pNHA (Site code 000322)	11.0km
Peterswell Turlough pNHA (Site code 000318)	11.4km
Castletaylor Complex pNHA (Site code 000242)	14.5km

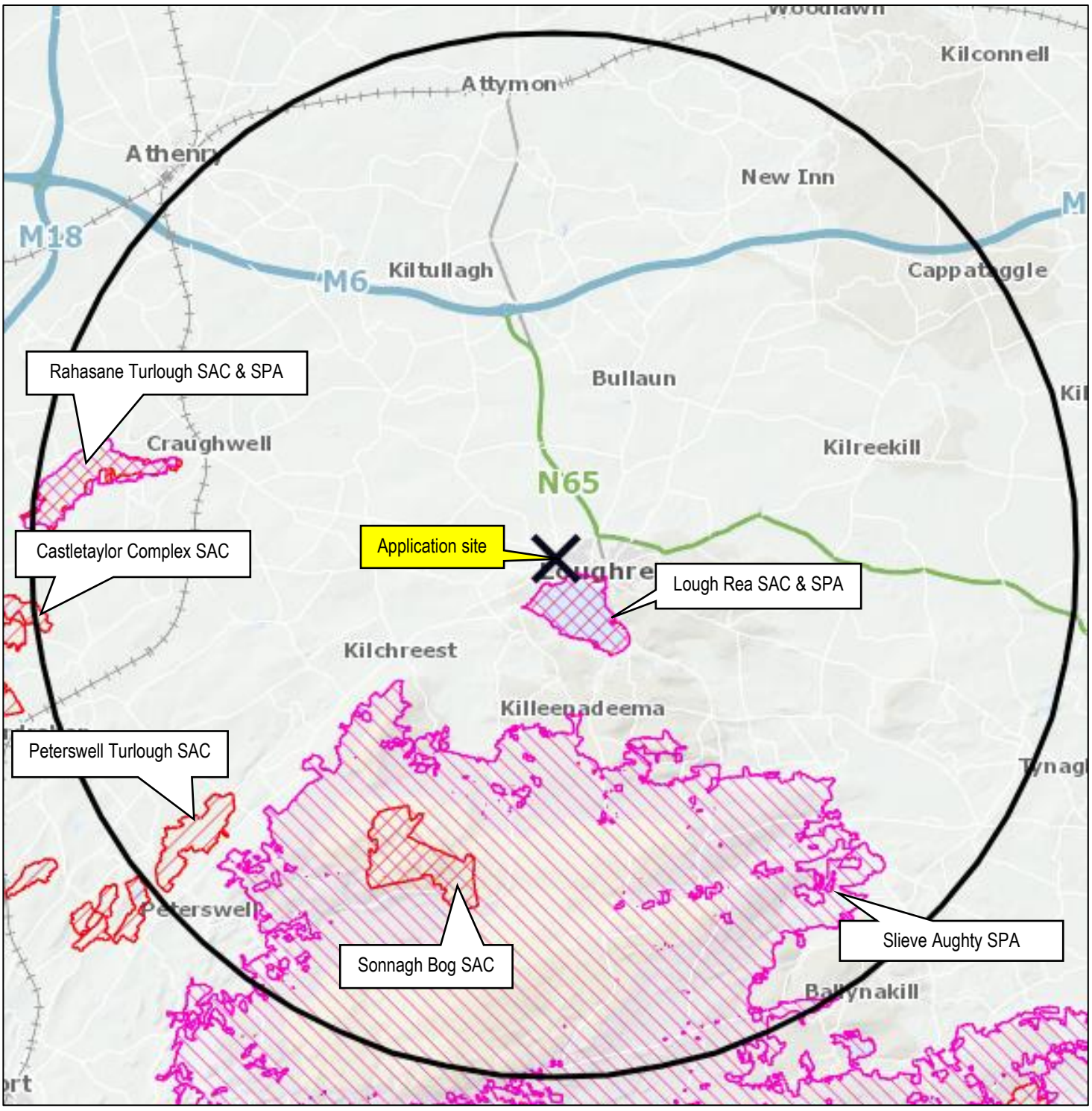

Fig 2.1: Location of the proposed site (Black X) in relation to the Natura 2000 sites.

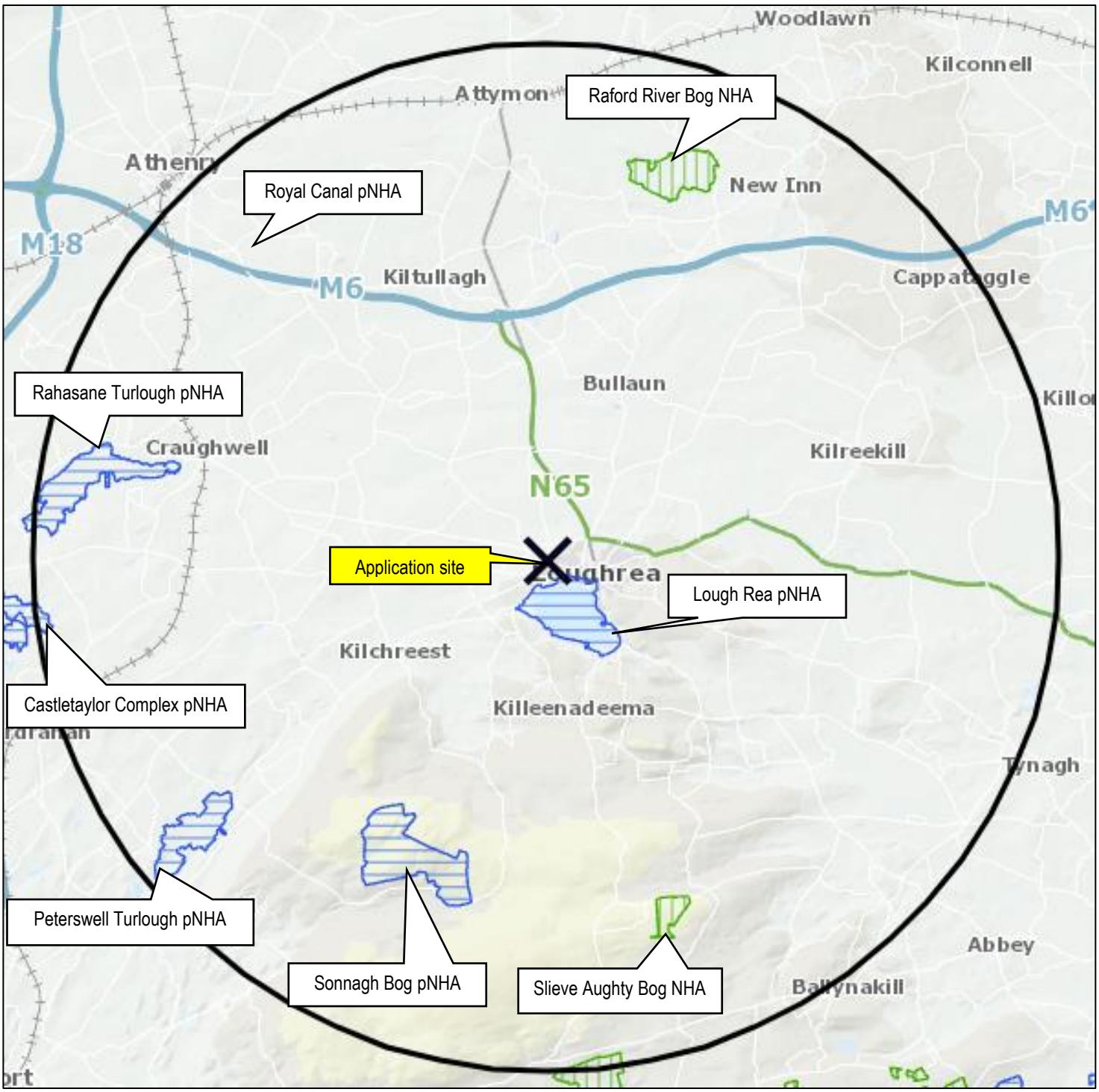

Fig 2.2: Location of the proposed site (Black X) in relation to Heritage Areas and proposed National Heritage Area.

2.2 FLORA

Species listed in Annex II of the Habitat's Directive (CEC, 1992)

No vascular plant species listed in the Annex II of the Habitat's Directive in the site in the Atlas of British and Irish flora.

Species listed in the Flora (Protection) Order:

No plant species listed in the Flora (Protection) Order were present in the site.

Species listed in 'The Irish Red Data Book.10. Vascular Plants' (Jackson, *et al*, 2016)

No plant species listed in The Irish Red Data Book.10.

2.3 FAUNA

Bats

A search of the NBDC database was carried out to examine the suitability of the proposed site for bat species found in Ireland. The Bat suitability index from the NBDC ranges from 0 to 100, with 0 showing least favourable conditions and 100 most favourable for bats. The suitability is based off a 10km grid (M61) as seen below in Figure 2.3. The results of the search are shown in Table 2.2.

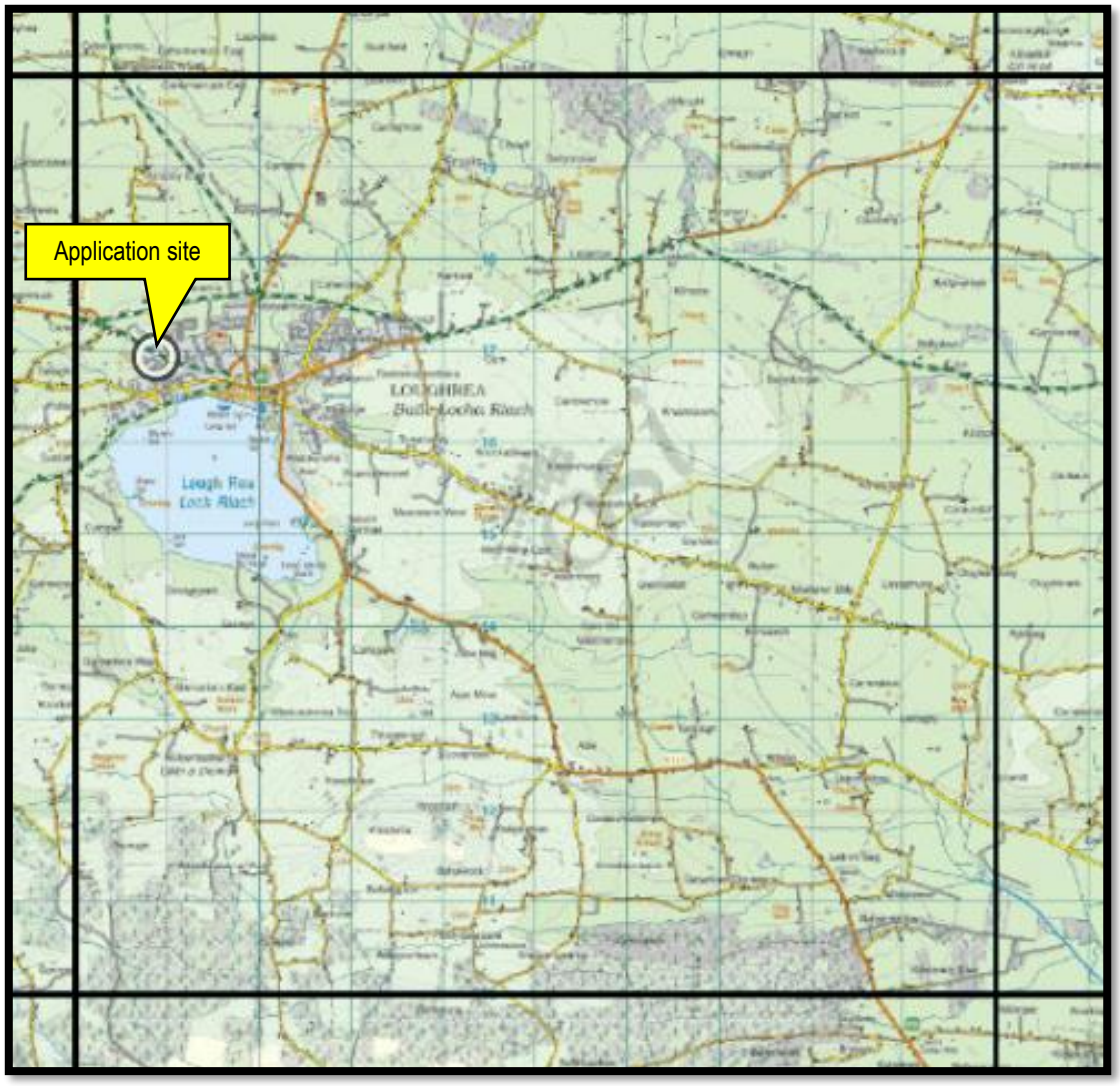

Fig 2.3: Extent of Grid M61 as on NBDC and Indicative location of Application site

Table 2.2 NBDC bat suitability index for Loughrea, Co. Galway

Species Name	Scientific Name	Conservation Status	Bat Suitability Index
Brown long-eared bat	*Plecotus auritus*	EU Habitats Directive: Annex IV; Wildlife Acts 1976-2017	51
Lesser Noctule	*Nyctalus leisleri*	EU Habitats Directive: Annex IV; Wildlife Acts 1976-2017	44
Lesser horseshoe bat	*Rhinolophus hipposideros*	EU Habitats Directive: Annex II & IV; Wildlife Acts 1976-2017	6
Common pipistrelle	*Pipistrellus pipistrellus*	EU Habitats Directive: Annex IV; Wildlife Acts 1976-2017	49
Soprano pipistrelle	*Pipistrellus pygmaeus*	EU Habitats Directive: Annex IV; Wildlife Acts 1976-2017	38
Natterer's bat	*Myotis nattereri*	EU Habitats Directive: Annex IV; Wildlife Acts 1976-2017	62
Nathusius' pipistrelle	*Pipistrellus nathusii*	EU Habitats Directive: Annex IV; Wildlife Acts 1976-2017	7
Daubenton's bat	*Myotis daubetonii*	EU Habitats Directive: Annex IV; Wildlife Acts 1976-2017	29
Whiskered bat	*Myotis mystacinus*	EU Habitats Directive: Annex IV; Wildlife Acts 1976-2017	35

From the table above the overall area would be suitability for bats with a suitability rating of 35.67. The species that would be predicted to frequent the area would be Natterer's Bat, Brown Long-eared bat and Common pipistrelle, all of these species are common in Ireland. This site also shows a suitability index of 6 for Lesser horseshoe bat. This suitability assessment gives a broad over view of the area and is not site specific in terms of the suitability of the application site.

Based off the ecological survey which was undertaken on the site the suitability for Bat species is low. With a lack of tree lines and suitable vegetation, the presence of public lighting, proximity to a regional road and residential unit the site overall has a low suitability for both bat roosts and foraging habitats.

Other mammals

During the site survey carried out on the 16th of March 2022, no mammals were identified using the site. This is likely due to the high levels of human activity surrounding the site and the lack of suitable vegetation for shelter and feeding.

Birds

The application site is highly managed and lacks treelines and suitable habitats for nesting birds. During the ecological survey a number of birds were recorded, Ravens (*Corvus corax*), Magpies *(Pica pica),* Hooded crow (*Corvus cornix*), Starlings (*Sturnus vulgaris)* and Feral pigeons (*Columba livia domestica*).

3 PLANNING SEARCH

A search of Galway County Council planning files was carried out to establish the nature and scale of developments within 300 meters of the application site and granted within the last 5 years are listed below:

Planning Reference: 171552- for the construction of a residential development comprising of: 1. The construction of 14 residential units consisting of two storey dwellings containing 8 semi-detached houses and 6 Townhouses. 2. All ancillary site works, services, roads, footpaths, public parking, shared surfaces, street lighting, hard and soft landscaping and level playing area. 3. The provision of landscaped public open spaces and children's play area. 4. The connection of the development to the public sewer and for all anxillary works
69 meters west of the development

Planning Reference: 171773-for 1) Construction of a two storey dwellinghouse, and domestic garage, 2) Construction of a new entrance and access road onto the Athenry Road, and all associated services. Gross floor space of proposed works 268.9sqm.
126 meters north of the development

Planning Reference: 18318- and completion of a new first floor level (1,128 sqm) over an existing department store unit (previously granted PL Ref. No. 08/2505) including associated access stairs works, openings within the northern elevation and roof alterations. Planning permission is also sought for the use of the new first floor level as offices to include the creation of a lightwell, provision of new windows to north, south & west elevations at first floor level, erection of associated signage, extension of the existing
148 meters north east of the development

Planning Reference: 191910- and completion of a ground floor extension to an existing supermarket incorporating 64 M2 of the adjacent unit 2 retail use at Supervalu, unit 1, Loughrea Shopping Centre on behalf of Greenstream ULC. Gross floor space of proposed works: 64 sqm. Gross floor space of work to be retained: 64 sqm
268 meters west of the development

Planning Reference: 19333- or the provision of a 192.09 kWp roof mounted solar photovoltaic (PV) installation for the purposes of generating on site green electricity to reduce the applicant's energy consumption and all associated external works at Supervalu, Unit 1, Loughrea Shopping Centre
268 meters west of the development

Planning Reference: 19160- for development to the existing Loughrea Hotel & Spa consisting of: 1. Construction of new hotel suite building adjacent to existing hotel which will form part of existing hotel complex, consisting of 8 new bedroom suites along with amenity spaces and all associated services. 2. Demolition of existing unoccupied dwelling on site to accommodate same. 3. Construction of new parking area adjacent to hotel, accessed from existing parking area, to provide additional parking spaces to include all
148 meters north east of the development

Planning Reference: 20928- for the provision of a new exit / access door to the side of existing supermarket at Supervalu, Unit 1, Loughrea Shopping Centre, Athenry Road, Loughrea, Co. Galway.
268 meters west of the development

Planning Reference: 201735- For [1] Demolition of existing service station building / shop, canopy and fuel dispensing pump islands, adjacent tyre store building, storage building to rear, existing car wash, and removal of associated forecourt equipment. [473.2 msq] [2] Construction of a new two storey service station building [460msq] comprising of retail area [92 msq] with ancillary off license section, deli / food offer, seating area, toilets, cash room, and ancillary storage and food preparation area to ground floor
179 meters east of the development

Planning Reference: 211508- for the construction of a new Leisure Centre building with swimming pool, along with new service connections, and access, with all ancillary associated site works and services. Gross floor space of proposed works: 2445 sqm.
229 meters north of the development

4 FIELD SURVEY

4.1 HABITATS

A habitat survey of the application site was conducted on the 16th of March 2022. The habitat classifications and codes correspond to habitats described in 'A Guide to Habitats in Ireland' (Fossitt, 2000). The habitats observed during the site visit are listed below on Table 4.1. A habitat map of the application site is provided for in Figure 4.1

Table 4.1 Habitats recorded in the application site and corresponding habitat codes

Habitat	Code
Scrub	WS1
Amenity Grassland	GA2
Stonewall & other stonework	BL1

Figure 4.1: A Habitat Map of the application site.

Upon examining the application site from the north, the first habitat observed in the application site was the stone wall (BL1) which faces onto the public road. Inside the site was areas of scrub (WS1), this habitat was composed of: Brambles (*Rubus fruticosus agg.),* Creeping Buttercup (*Ranunculus repens*) and Common Nettle (*Urtica dioica*). Scrub had been managed and has been prevented from encroaching onto the site. The main habitat on site was an amenity grassland area (GA2), this habitat shows signs of management and human influence. Species present in this habitat are dominate grass species such as Cocks foot (*Dactylis glomerata*), Perennial ryegrass (*Lolium perenne*) and Yorkshire fog (*Holcus lanatus*). Some flowering plants that were recorded on site were Clover (*trifolium spp.*), Ribwort (*Plantago lanceolata*), Dock leaves (*Rumex Obtusifolius*), Dandelions (*Taraxacum spp.)* and Wild Buttercup *(Ranunculus repens).*

Plate 4.1 – Looking South at Application site

Plate 4.2 – Looking south at Stonewall and dwelling houses

Plate 4.3 –Treelines to the West of the application site

Plate 4.4 –Cluster of vegetation to the west

4.2 FAUNA

Invertebrates

A cranefly (*Tipulidae spp.),* Bumblebee (*Bombus spp*.) and Meadow Brown Butterfly (*Maniola jurtina*) were the invertebrates identified in the application site.

Birds

A Ravens (Corvus corax), Magpies (Pica pica), Hooded crow (Corvus cornix), Starlings (Sturnus vulgaris) and Feral pigeons (Columba livia domestica) were the birds identified in the application site.

No species, or any signs of their presence, considered as Qualifying Interests or Conservation objectives of the Lough Rea SAC, SPA or pNHA were recorded on the proposed site. Furthermore, no Annex II species, or any signs of their presence, were recorded on site.

Bats

Due to the lack of hedgerows and treelines habitats present on site, there is the minimal potential for the application site to be utilized by the existing bat population as a foraging and commuting areas. This is due to the lack of the suitable vegetation and habitats present on site, it is also noted that due to the location of the site being surrounded by residential units, hotel to the North east and a busy public road adjacent to the site all decrease the likelihood of bats using the site. Based off the site visit carried out a Bat survey was not deemed necessary due to the nature, location and suitability of the application site

Habitats were classified according to A Guide to Habitats in Ireland (Fossitt, 2000). The entire site was walked and the potential for suitable roosting, foraging and commuting habitats to occur were assessed based on the 'Negligible, Low, Moderate and High' classification described in Table 4.1 of Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins (ed.), 2016). The application site was rated to have Low potential for roosting, foraging and commuting.

5 ECOLOGICAL IMPACT ASSESSMENT

5.1 DO NOTHING IMPACT

If the proposed development did not go ahead, it is likely that the site will continue to be a greenfield site, with management measures no encroaching of scrub or vegetation is expected.

5.2 IMPACTS DURING CONSTRUCTION

5.2.1 Impacts to Fauna

Bats

Temporary Neutral Impact

It is unlikely that the proposed development will result in any reduction of suitable habitats for bats.therefore, the potential impact of public lighting is not relevant in this case.

General Fauna

Permanent Slight Negative Impact

If the proposed development did not go ahead, it is likely that the site will continue to be a greenfield site. There is limited potential for the construction activity to cause disturbance to wildlife in areas surrounding the application site, due to a lack of biodiversity on site, a lack of shelter or potential feeding grounds on site and the close proximity of the application site to a residential units and spaces utilized by humans. The proposed development works will be temporary in duration and will be confined to the application site.

Best Practice Incorporated into the project design

- A solid fence will be erected around the perimeter of the proposed development site prior to the commencement of construction works. This will create a solid boundary between the site and the surrounding area.

- All works will be located within the confines of these fences. No works will take place outside the fences to prevent damage to areas outside the necessary development footprint.

Residual Impact

No residual significant impacts on fauna are expected.

5.2.2 Loss of Floral Habitat

The degree of impact on floral habitat, in absence of best practice, is assessed as:

Permanent Slight Negative Impact

The proposed development will result in the permanent loss on site of scrub (WS1) and Stonewall (BL1).

The proposed development will plant a new treeline of along the southern boundary of the site, this should consist of native species. Additionally, it is recommended that the Amenity Grassland area of the proposed development will be managed in a pollinator friendly way to allow for wildflower to come to a flowering head and increase the biodiversity surrounding the proposed development.

Best Practice incorporated into the project design

- Habitat loss and disturbance will be minimized by temporary fencing off the construction site during the construction phase of the development and the confinement of construction works to within this fence.

Residual Impact

The proposed development will not result in any significant impact on floral habitat within the proposed development site. No significant residual impacts are anticipated.

6 POLLUTION OF THE WIDER AREA

Temporary Moderate Negative Impact

The construction phase of the proposed development will involve earth moving and levelling which create the potential for pollution in various forms to run off the site and enter the surrounding environment. Chemicals used in construction including hydrocarbons and cement-based products could potentially be washed off the site. Good construction practices will be in place to prevent any risk of pollution running off the site.

The degree of impact, in the absence of best practice, is assessed as **Temporary Moderate Negative Impact.**

Best Practice incorporated into the project design

- All machinery maintenance and re-fuelling shall be carried out off-site. Spill kits for contaminants such as fuels oils and lubricants must be used.
- All petroleum products to be bunded during the construction stage of the development.
- The works shall be planned and executed in accordance with Environmental Protection Agency Guidelines.
- Wash water from on-site mixers or lorries shall be disposed of appropriately off site.
- To prevent run off from stripped ground, banks are to be placed on the downstream side of stock piles.
- Water from excavations shall be pumped to land and allowed to settle.
- Washing out of concrete trucks should not be permitted within the site and should be conducted in hard standing areas.
- Works with concrete shall be done during dry conditions for a period sufficient to cure the concrete (at least 48 hours).
- Portable toilets and sanitary facilities will be provided for site use.
- Plant will be re-fuelled away from watercourses.
- All site operatives will have immediate access to spill kits when machinery is being used.

Residual Impact

With best practice incorporated into the design and the above mitigation in place, the potential for significant run off of pollutants from the site is greatly reduced. No significant residual impacts are anticipated.

7 SPREAD OF INVASIVE SPECIES

Long Term Slight Negative Impact

The proposed development will involve the movement of soil on the site and will create disturbed ground. No Third Schedule Invasive species were recorded within the application site, however, construction related activity has the potential to result in the introduction and establishment of problematic invasive plant species (Rhododendron and Japanese Knotweed). In the absence of suitable control measures this impact is classed as **Long Term Slight Negative Impact.** An invasive species report prepared by Connacht Weed Management accompanies this application.

General Good Construction Management

If gravel or handstand materials are being brought onsite ensure that the source is free of invasive species such as Japanese Knotweed, Gunnera and Rhododendron.

Residual Impacts

With control measures in place, the potential for the introduction and establishment of invasive alien species deemed to be No Impact.

8 IMPACTS DURING OPERATION

8.1.1 Increased human activity

The proposed development will serve as a Fire station so it is anticipated that that there will an increase in human activity at the site.

Disturbance to Fauna

The site of the proposed development is of low ecological significance. The proposed development will plant a new treeline of along the southern boundary of the site, this should consist of native species.. Additionally, the Amenity Grassland area of the site will be managed in a pollinator friendly way to allow for wildflower to come to a flowering head and increase the biodiversity surrounding the proposed development.

8.1.2 Pollution of the Environment

Moderate Long-Term Negative

The development will be serviced by a connection to the existing public sewer, the existing water supply and the existing storm drain. The sewer system will have the capabilities to deal and effectively treat waste in accordance with EPA requirements.

8.2 IMPACTS ON NATIONALLY DESIGNATED SITES

Any potential impacts on European sites, have been ruled out in the Appropriate Assessment Screening report submitted with this application. There is no impact expected on the surrounding Natura 2000 sites or on the proposed Natural Heritage Areas and Natural Heritage Areas.

9 CONCLUSION

Following consideration of the residual effects (post mitigation) it is noted that the proposed development will not result in any significant effects on any of the flora and fauna of the existing environment. No effects on receptors of Internationally, Nationally, County or Local value.

There are no Annexed habitats on site, no rare or protected Flora on site and no signs of mammals. There are no Third Schedule Invasive species on the site. Overall, the application site shows Low Local Ecological value and is not sensitive in this respect.

Provided that the proposed development, is constructed and operated in accordance with the design, best practice and mitigation that is described within this application, significant effects on ecology are not anticipated at any geographical scale.

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