Lamorlaye, Back Road, Malahide, Co. Dublin



Ecological Impact Assessment Report

DRAFT REPORT

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Table of Contents

| 1. | INT | RODUCTION | 3 |
|-----------|--------|--|----|
| 1. | .1 | Background | 3 |
| 2. | MET | THODOLOGY | 6 |
| 2 | .1 | Desk Study | 6 |
| 2 | .2 | Field Surveys - Habitat & Botanical Survey | 6 |
| 2 | .3 | Field Surveys - Fauna | |
| 3. | RES | ULTS | |
| 3. | .1 | Description of the site, its environs, habitats and fauna | |
| 3. | .2 | Sites Designated for Nature Conservation | |
| 4. | POT | ENTIAL IMPACTS | |
| 5. | REM | IEDIAL OR REDUCTIVE MEASURES | 34 |
| 5 | .1 | Mitigation by Avoidance | |
| 5 | .2 | Planting of Native Species | |
| 5 | .3 | Protective Measures for Retained Treelines, Hedgerows & the Hazelb | |
| | | 34 | |
| 5. | .4 | Invasive Species | |
| 5 | .5 | Mitigation Measures for Bats | |
| 5 | .6 | Mitigation Measures for Birds | |
| 5 | .7 | Watercourse Restoration | |
| 5 | .8 | Sediment Control | |
| 5 | .9 | Protection Measures for Fisheries | |
| 5 | .10 | Contractor Briefing | |
| | .11 | Soil Handling | |
| | .12 | SUDS Measures | |
| | .13 | Ecological Clerk of Works | |
| 6. | | O NOTHING SCENARIO | |
| о. 7. | | RST CASE SCENARIO | |
| 8. | | DICTED IMPACT OF THE PROPOSED DEVELOPMENT | |
| 0. 9. | | NCLUSION | |
|). 10. | | ERENCES | |
| 10. | | 'ENDIX 1 – Bat Derogation Licence | |
| TT | 1 71 1 | En DER E Der Der og under Electrice | |

Lamorlaye, Back Road, Malahide, Co. Dublin

Ecological Impact Assessment Report

1. INTRODUCTION

1.1 Background

Faith Wilson Ecological Consultant was commissioned by CE Cladewell Estates Ltd. to prepare an Ecological Impact Assessment Report as part of an application for the development of lands at Lamorlaye, Back Road, Malahide, Co. Dublin as shown on **Figure 1.1** below.

Planning permission is sought for a housing development on a site at Lamorlaye, Back Road, Malahide, Co. Dublin as shown on **Figure 1.2** below. Also shown is the extent of public works required on Back Road and Kinsealy Lane.

The proposed development consists of 83no. 2-storey houses (20no. 4-bed and 63no. 3-bed), a childcare facility and all associated and ancillary site and infrastructural works, hard and soft landscaping and boundary treatment works including public open space; private open space; primary vehicular, cyclist and pedestrian access serving the development is via a new access road off Back Road; a secondary pedestrian and cyclist access is provided off Back Road; provision of internal road network, including new road carriageways, pedestrian and cycle facilities, public lighting and street planting; revised access arrangement for the existing house; car and bicycle parking; 1no. ESB substation; demolition of out buildings/stables; provision of temporary foul sewage pumping station; laying a foul rising main along Back Road from the proposed new access to the development eastward to Kinsealy Lane and also along Kinsealy Lane.

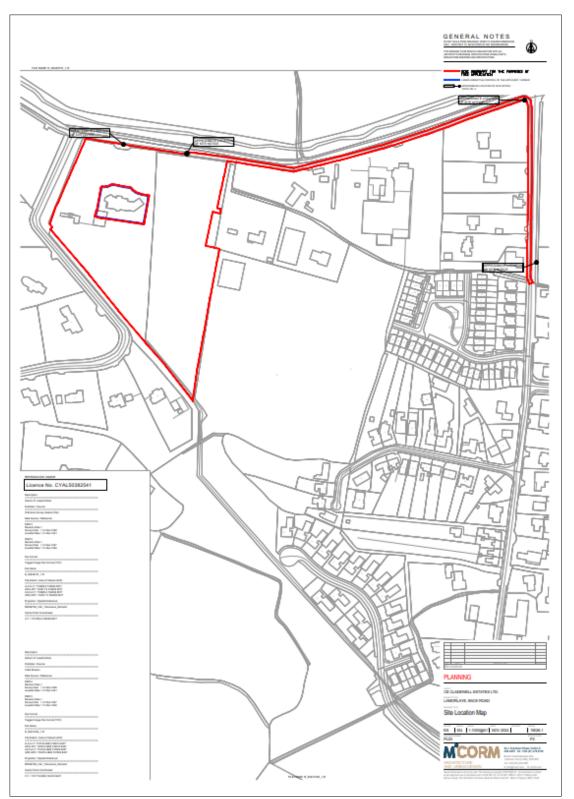


Figure 1.1 Location of proposed housing development site at Lamorlaye and the extent of public works required on Back Road and Kinsealy Lane, Malahide, Co. Dublin outlined in red.

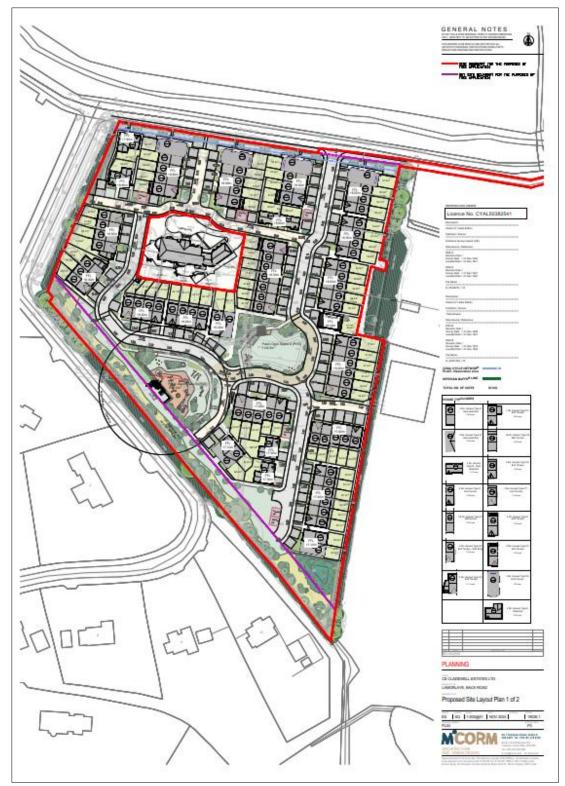


Figure 1.2 Proposed site layout of the housing development at Lamorlaye, Back Road, Malahide, Co. Dublin.

2. METHODOLOGY

2.1 Desk Study

A desk study was carried out to collate the available information on the ecological environment potentially impacted by the proposed development at Back Road and to determine the proximity of the proposed development to designated areas for conservation.

The National Parks and Wildlife Service (NPWS) of the Department of Housing, Local Government and Heritage database of designated conservation areas and NPWS records of rare and protected plant species as listed under the Irish Red List - Vascular Plants (Wyse Jackson, *et al.* 2016) were checked with regard to the location of the lands at Back Road.

Information on protected species of fauna and flora listed for protection under Annex II of the EU Habitats Directive (92/43/EEC), Annex I of the Birds Directive (79/409/EEC) and the Wildlife (Amendment) Act (2000) was also sought from NPWS, the National Biodiversity Data Centre and published sources. Recent, high resolution, colour aerial photographs were used to identify habitats of conservation value.

Other ecological sites and watercourses in the study area were identified by examining GIS datasets, maps and aerial photographs, and by drawing on existing information.

A review was also completed of the ecological and faunal interest from the general environs of Back Road. Much of this information was gathered by the author of this report during field surveys of lands to the east of here at Ashdown Hall and Broomfield and of studies conducted in Malahide Demesne for Fingal County Council Parks Department.

2.2 Field Surveys - Habitat & Botanical Survey

This ecological impact assessment has built on a series of previous ecological surveys conducted by the author of the lands at Lamorlaye.

The site was first surveyed on 31st August 2020 with subsequent surveys conducted on 16th September 2020, 10th June 2021, 5th October 2021, and most recently on 22nd July 2024, and 16th December 2024 to survey and map the habitats present using the habitat survey and mapping techniques described by Smith *et al.* (2011).

The habitats within the site were described to level three using the Heritage Council Guide to Habitats of Ireland (Fossitt (2000)). Plant species within the site were identified using Parnell and Curtis (2012).

A particular focus of the surveys was to determine if any protected species of plant under the Flora Protection Order (2022) or listed in the Irish Vascular Plants Red Data Book are present on the site or if any of the habitats present correspond to any of the habitats listed under Annex I of the EU Habitats Directive.

Invasive species present in the site were also identified and mapped if present. A particular focus of the surveys was for those invasive species listed in the Birds and

Habitats Regulations 2011. The habitats present were recorded and described to level 3 (Fossitt, 2000) and a check was made for the presence of any invasive species during all site visits.

2.3 Field Surveys - Fauna

Bat Survey

The bat survey consists of several elements – a desktop review and consultation with Bat Conservation Ireland, an inspection of trees within the site for their potential to support roosting bats, an inspection of the buildings on site and a bat detector activity survey of the property.

The aims of the surveys were to:

- a) To determine what species of bats are known from the site and the immediate environs.
- b) To identify roosting sites in buildings within the site.
- c) To determine the use of any mature trees and other habitats in the site as feeding and commuting areas for bats.
- d) To ensure that bats are considered and protected in the development.

Bat activity is usually detected by the following signs (though direct observations are also occasionally made):

- bat droppings (these will accumulate under an established roost or under access points);
- insect remains (under feeding perches);
- oil (from fur) and urine stains;
- scratch marks; and
- bat corpses.

The nature and type of habitats present are also indicative of the species likely to be present.

Trees were assessed for their potential use by bats using the following standard criteria, which were created by bat specialists from Bat Conservation Ireland for use in the assessments of tree roosts on large infrastructural projects and are summarised in NRA (2006):

- Presence or absence of bat droppings (these can be hard to find amongst leaf litter or may be washed away following periods of wet weather),
- Bat droppings may also be seen as a black streak beneath holes, cracks, branches, etc.,
- Presence or absence of smooth edges with dark marks at potential entrances to roosts,
- Presence or absence of urine stains at potential entrances to roosts,
- Presence of natural cracks and rot holes in the trunk or boughs of the tree,
- Hollow trees,
- Presence or absence of creepers such as ivy or honeysuckle on trees (ivy clad trees are often used by bat species such as pipistrelles as roosts),
- Presence or absence of loose bark such as that of sycamore, or flaky bark on coniferous species such as cedars, cypress and Scot's pine,

- Presence or absence of bracket fungi which may indicate a rotten or potentially hollow centre to the tree,
- Known bat roosts previously identified,
- Trees with storm or machinery damage or broken boughs,
- Clutter level where the branches and trunk are easily accessible, this is considered a better tree for bat roosts,
- Adjoining habitat if there are a variety of feeding opportunities for bats, this increases the potential of a tree as a bat roost,
- Adjoining potential roosts / known roosts. This raises the likelihood of a tree being of benefit as bats may move roosts if the roost becomes too hot or cold during roosting and a nearby alternative roost is highly desirable.

Potential roost features were also assessed using the criteria developed by the Bat Tree Habitat Key (2018).

In accordance with best practice a bat activity survey of the property was conducted during the active bat season. The buildings in the yard in Lamorlaye were first surveyed by Faith Wilson with on 31st August and 16th September 2020. A resurvey was then conducted on 10th June 2021. They were then resurveyed on 22nd July 2024, and am internal inspection of the Lamorlaye House (as well as the yard buildings) too place on 16th December 2024.

These surveys assisted in determining if any bat roosts are present in any of the buildings, what bat species occur within the site and how bats are using the property for foraging or commuting purposes.

Bat activity is predominantly bi-modal, with bats taking advantage of increased insect numbers on the wing during the periods after dusk and before dawn, (there is usually a lull in activity in the middle of the night). While this holds true for 'hawking' species (bats that capture prey in the open air), 'gleaning' species such as brown long-eared (*Plecotus auritus*), Natterer's (*Myotis nattereri*) and Whiskered/Brandt's bats (*Myotis mystacinus/brandtii*) remain active throughout the night, as prey is available on foliage for longer periods.

Badger Survey

A speedy and productive means of determining the mammal fauna within a site is to walk the entire site concerned, paying particular attention to all hedgerow, woodland, watercourses, fence lines, paths etc. to locate mammal signs. These include setts, old bedding material, feeding signs, latrines, badger tracks or paw prints, badger paths and badger hair caught on vegetation or fences.

Mammal surveys have been conducted at Lamorlaye over several years including on 31st August 2020, 16th September 2020, 10th June 2021 and 5th October 2021 and most recently on 22nd July 2024, and 16th December 2024.

The survey was carried out by an experienced mammal specialist (Faith Wilson) in accordance with best practice as described in the 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes' (NRA 2009) and 'Guidelines for the treatment of badgers prior to the construction of National Road Schemes' (NRA 2005).

Otter Survey

An otter survey was conducted along the Hazelbrook Stream during the site visits conducted on 31st August 2020, 16th September 2020, 10th June 2021 and 5th October 2021 and most recently on 22nd July 2024, and 16th December 2024 in accordance with best practice as described in the 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes' (NRA 2009), 'Otter Breeding Sites. Conservation and Management. Conserving Natura 2000 Rivers Conservation Techniques Series No. 5, (Liles, 2003)' and 'Guidelines for the treatment of otters prior to the construction of National Road Schemes' (NRA 2006).

Other Mammals

A dedicated survey for other mammals was carried out during the site visits on 31st August 2020, 16th September 2020, 10th June 2021 and 5th October 2021 and most recently on 22nd July 2024, and 16th December 2024 using the techniques as prescribed in Ecological Survey Techniques for Protected Flora and Fauna (NRA, 2008). This entailed searching for and identification of signs, tracks and droppings of various mammals (including pine marten, Irish stoat, Irish hare, red squirrel, hedgehog and pygmy shrew along with non-native species such as fallow deer, American mink, grey squirrel and rabbit) within the site.

Bird Survey

All birds seen and heard during the walkover surveys of the site on the 31st August 2020, 16th September 2020, 10th June 2021 and 5th October 2021 and most recently on 22nd July 2024, and 16th December 2024 were recorded.

3. RESULTS

3.1 Description of the site, its environs, habitats and fauna

The Lamorlaye lands at Back Road were visited on the 31st August 2020 by Faith Wilson. Subsequent surveys were completed on 16th September 2020, 10th June 2021 and 5th October 2021, and most recently on the 22nd July 2024, and 16th December 2024 when the site, its margins and any areas of intact habitat were examined.

The application site forms part of a larger landholding, which comprises two plots, one of which is currently occupied by a single dwelling in large grounds, together with a large agricultural field.

The site proposed for development consists of lands associated with Lamorlaye House which is located on Back Road, Malahide. These include two fields/paddocks used for grazing horses, the stable yard of the main house and the surrounding grounds. The house itself is excluded from the red line boundary of the site.

Malahide Castle demesne is located to the north of the property, private residences are found to the west, south and east and lands under horticultural use are found to the south east.

The 10km square in which the site is located (O24) contains a number of historical and more recent records of rare and scare botanical species – namely Hairy Violet (*Viola hirta*), Meadow Saxifrage (*Saxifraga granulata*), Red Hemp Nettle (*Galeopsis angustifolia*), Round Prickly Headed Poppy (*Papaver hybridum*), Annual knawel (*Scleranthus annuus*), Lesser Centaury (*Centaurium pulchellum*), Basil Thyme (*Acinos arvensis*), Meadow Barley (*Hordeum secalinum*) and Oyster Plant (*Mertensia maritima*).

None of these species were recorded from the lands at Back Road or are likely to occur within the proposed development given the nature of the habitats present.

The fields proposed for development at Back Road are currently used for grazing horses and are bounded to the north, west and east by a **treeline (WL2)**. The treeline along the southern boundary of the site is dominated by mature hybrid black poplar (*Populus* x *canadensis*), with copper beech (*Fagus sylvatica purpurea*), immature sycamore (*Acer pseudoplatanus*), and an understorey of hawthorn (*Crataegus monogyna*), bramble (*Rubus fruticosus* agg.), dog rose (*Rosa canina*), dense ivy (*Hedera helix*), blackthorn (*Prunus spinosa*), cherry laurel (*Prunus spinosa*), and ash (*Fraxinus excelsior*). This treeline is located on a shallow **earthen bank (BL2)** adjoining the Hazelbrook Stream, which is described as a **lowland depositing river (FW2)**. Further south this treeline merges into a length of **hedgerow (WL1)** adjoining the Hazelbrook Stream where field maple (*Acer campestre*) was recorded. This contains ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna*), bramble (*Rubus fruticosus agg.*), bramble (*Rubus fruticosus agg.*), and ivy (*Hedera helix*).

The **hedgerow** (WL1) along the eastern boundary of the site is dominated by ash (*Fraxinus excelsior*) found on an **earthen bank** (BL2) with numerous rabbit burrows. Other species recorded here include; hawthorn (*Crataegus monogyna*), ivy (*Hedera helix*) and bramble (*Rubus fruticosus* agg.). This then becomes a **treeline** (WL2) which is dominated by a line of hybrid black poplars (*Populus x canadensis*) with some silver

birch (*Betula pendula*), and non-native trees and shrubs including cherry laurel (*Prunus laurocerasus*), Leyland cypress (*Cupressocyparis leylandii*), field maple (*Acer campestre*), *Viburnum tinus* and *Eleagnus* sp. The invasive species Russian vine (*Fallopia baldschuanica*) is present near the northern end of this treeline.

A **hedgerow (WL1)** of beech (*Fagus sylvatica*) is found adjoining Back Road on the northern boundary of the eastern field.

The central hedgerow (WL1) between the two fields and to the south of the main house also consists of heavily clipped/trimmed non-native trees and shrubs including elder (*Sambuccus nigra*), cherry laurel (*Prunus laurocerasus*), bramble (*Rubus fruticosus* agg.), cotoneaster, *Viburnum tinus* and *Eleagnus* sp. with a treeline (WL2) of silver birch (*Betula pendula*), Norway maple (*Acer platanoides*), sycamore (*Acer pseudoplatanus*) and ash (*Fraxinus excelsior*) to the rear.

This links into a' ha ha' structure consisting of a block wall topped with red brick which forms the southern boundary of the formal gardens and lawn areas of the main house. An area of ornamental shrub planting and a small orchard of various apple (*Malus* sp.), pear (*Pyrus* sp.) and cherry (*Prunus* sp.) trees are located here with hedges of golden privet (*Ligustrum ovalifolium* 'Aureum').

Ash (*Fraxinus excelsior*), Italian alder (*Alnus cordata*), wild cherry (*Prunus avium*) and Wych elm (*Ulmus glabra*) were found in a **treeline (WL2)** along the western boundary of the site. Leyland cypress (x *Cupressocyparis leylandii*) is also present. A **hedgerow** (**WL1**) of *Eleagnus* is found along the driveway leading to the stable block.

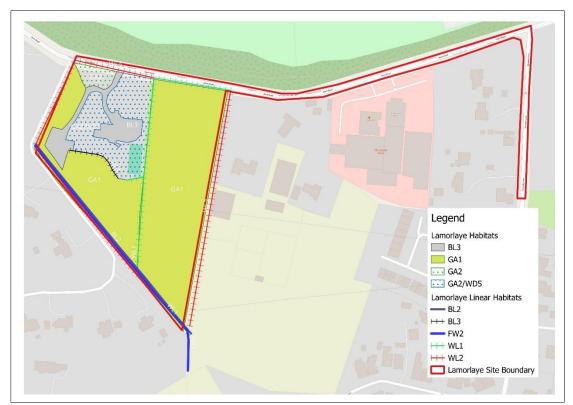


Figure 3.1. Habitat Map of the lands proposed for development at Lamorlaye, Back Road.

The two fields are currently grazed by horses and have been subject to agricultural improvement and reseeding over time and are described as **improved agricultural grassland (GA1)**. The sward is dominated by perennial rye grass (*Lolium perenne*) with creeping buttercup (*Ranunculus repens*), dandelion (*Taraxacum* agg.), ragwort (*Senecio jacobaea*), docks (*Rumex* sp.), nettle (*Urtica dioica*), red clover (*Trifolium pratense*) and white clover (*Trifolium repens*).

Along the margins and adjoining the treelines/earthen banks are broad-leaved willowherb (*Epilobium montanum*), tall fescue (*Festuca arundinacea*), hoary willowherb (*Epilobium hirsutum*), tufted vetch (*Vicia cracca*), bush vetch (*Vicia sepium*), wood avens (*Geum urbanum*), seedlings of blackthorn, cow parsley (*Anthriscus sylvestris*), creeping bent grass (*Agrostis stolonifera*), red fescue (*Festuca rubra*), creeping thistle (*Cirsium arvense*), red bartsia (*Odontites vernus*), ribwort plantain (*Plantago lanceolata*) and yellow clover (*Trifolium dubium*).

Butterbur (*Petasites hybridus*) was recorded near the horse walker to the north of the stables.

The Hazelbrook Stream is found along the southern boundary of the site as can be seen on **Figure 3.2** below. This watercourse drains to the Sluice River and discharges into Baldoyle Bay.



Figure 3.2. The Hazelbrook Stream, a tributary of the Sluice River adjoins the site.

Invasive Species

There were no invasive species listed under the Birds and Natural Habitats Regulations 2011 recorded during the site surveys.

Ragwort (*Senecio jacobaea*), which is classified as a noxious weed was recorded in the paddock where it is used as a food plant by cinnabar moth caterpillars.

The invasive species Russian vine (*Fallopia baldschuanica*) is present at the northern end of the eastern treeline on the shared boundary.

Faunal Interest

The richest habitat for mammals in the general environs of the Back Road SHD lands is found in Malahide Castle Demesne, which is located on the north side of Back Road. Eight species of mammals are known from Malahide Demesne. These are:

- Rabbit (*Oryctolagus cuniculus*)
- Grey squirrel (*Sciurus carolinensis*)
- Fox (*Vulpes vulpes*)
- Brown rat (*Rattus norvegicus*)
- House mouse (*Mus musculus*)
- Badger (*Meles meles*)
- Stoat (Mustela erminea hibernica)
- Hedgehog (*Erinaceus europaeus*)

There was no evidence of badger (*Meles meles*) or otter (*Lutra lutra*) within the lands proposed for development at Back Road.

The badger setts in Malahide Castle Demesne are located in the woodland areas in the centre of the demesne – these are located c.600 and 900m from the Back Road SHD lands.

Rabbit (*Oryctolagus cuniculus*) burrows were frequently recorded within the site and fox (*Vulpes vulpes*) would be expected.

The Bat Conservation Ireland Database of bat records was searched for records of bats from the Malahide area. The database contains records of roosts, ad hoc observations and the results of surveys such as the BATLAS 2010 and 2020 projects and the All Ireland Daubenton's Monitoring Project. Bat species recorded from within a 10km radius of Malahide Village include:

- Common pipistrelle (*Pipistrellus pipistrellus*),
- Soprano pipistrelle (*Pipistrellus pygmaeus*),
- Daubenton's bat (Myotis daubentonii),
- Leisler's bat (*Nyctalus leisleri*),
- Brown long-eared bat (*Plecotus auritus*),
- Several unidentified *Myotis* species, and
- an unidentified pipistrelle species (*Pipistrellus* sp.).

The lands further east along Back Road and south of Malahide Demesne which form part of the Back Road SHD lands have been developed with residential housing at Ashwood Hall/Broomfield (Fingal County Council Planning Reg Ref: F13A/04 and An Bord Pleanála Reference Number: PL 06F.243863). These lands were the subject of several bat surveys between 2014 and 2024 which have been conducted by Faith Wilson.

These surveys recorded four species of bats as follows:

- Leisler's bat (*Nyctalus leisleri*)
- Common Pipistrelle (*Pipistrellus pipistrellus*)
- Soprano Pipistrelle (*Pipistrellus pygmaeus*)
- Brown long-eared bat (*Plecotus auritus*)

Surveys of Malahide Demesne conducted by Donna Mullen and Brian Keely (licensed bat specialists) recorded four species of bats from Malahide Demesne. These are:

- Common pipistrelle (*Pipistrellus pipistrellus*),
- Soprano pipistrelle (*Pipistrellus pygmaeus*),
- Leisler's bat (*Nyctalus leisleri*), and
- Brown long-eared bat (*Plecotus auritus*).

The buildings in the yard in Lamorlaye were first surveyed by Faith Wilson with on 31st August and 16th September 2020. A resurvey was then conducted on 10th June 2021. They were then resurveyed on 22nd July 2024, and an internal inspection of the Lamorlaye House (as well as the yard buildings) took place on 16th December 2024.

Building Inspection

The stable buildings in the yard at Lamorlaye were examined for evidence of roosting bats. The buildings here are roofed with tiles which are underlain with felt and fixed to battens. The buildings examined include stables/looseboxes, a tack room, a machinery room, and a small apartment. There is a small attic space within the apartment and potentially in the clock tower but no physical access to same was available.

The attic of the main house at Lamorlaye was examined in December 2024 and a single (old) bat dropping was recorded indicating that a bat had entered the house in the past. There was no other signs of bats and no evidence of a maternity roost.

Detector Surveys

The detector surveys, which were conducted on the 31st August 2020 and the 10th June 2021 recorded three species of bats utilising the property.

Generally the first bat recorded was Leisler's bat, which was recorded flying over the site, having approached it from the lands to the north (Malahide Castle and Demesne).

Five bats (three common pipistrelle and two soprano pipistrelle) emerged from the clock tower over the arch way into the yard exiting through the louvered openings on the 31st August 2020. **This building is therefore a confirmed bat roost.**

A similar level of activity was witnessed in June 2021 but numbers were not sufficient to indicate that the building contains a maternity roost.

Common pipistrelle and soprano pipistrelle were recorded foraging across the site and utilising the shelter afforded by the boundary hedgerow and treelines for commuting and hunting along as shown on **Figure 3.4** below.

The common pipistrelle was the most frequently encountered species on the property.

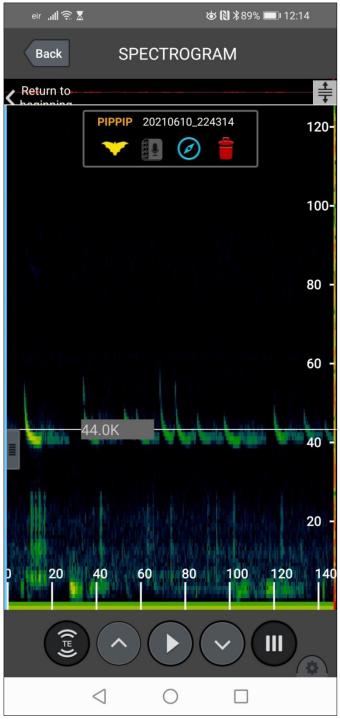


Figure 3.3. Common pipistrelle bat recorded in the stable yard in 2021.



Figure 3.4. Bat activity recorded across the site in 2021.

In 2024 a similar level of bat activity was recorded and the sonograms of the three species are presented below on **Figures 3.5, 3.6** and **3.7**.



Figure 3.5 Soprano pipistrelle bat in July 2024.

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Figure 3.6 Common pipistrelle bat in July 2024.

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Figure 3.7 Leisler's bat in July 2024.

Birds

A good variety of common species of open countryside such as woodpigeon, pheasant, greenfinch, chaffinch, blackbird, wren, robin, hooded crow, rook, starling and song thrush were recorded during the site visits. Buzzard was also observed and breeds locally. Swallow nests were recorded within the stables.

Fisheries

The Sluice River and Hazelbrook Stream are part of a locally important salmonid system which supports a resident population of Brown trout (*Salmo trutta*), Eel and lamprey species. Therefore the salmonid waters constraints apply to this development.

3.2 Sites Designated for Nature Conservation

In line with the European Commission Methodological Guidance (EC (2001) and EC (2021)) and the DoEHLG Guidance (DoEHLG (2010)) a review of all Natura 2000 sites that could be potentially affected by the proposed project was made using the NPWS online map viewer. These included any Natura 2000 sites within or adjacent to the Lamorlaye land at Back Road and any Natura 2000 sites within the likely zone of impact of the proposed development (using the source – pathway – receptor criteria) including any downstream. These are summarised in **Table 3.2.1** below and shown on **Figure 3.8**.

In addition to the identified European sites consideration was also given to relevant species listed under Annexes I and II and IV of the Birds and Habitats Directives respectively.

The lands at Back Road are not currently designated for any nature conservation purposes.

A number of Natura 2000 designated sites occur near the site. These include the following Special Areas of Conservation (SACs) and Special Protection Areas (SPAs);

- Baldoyle Bay SAC (Site Code: 000199)
- Howth Head SAC (Site Code: 000202)
- Ireland's Eye SAC (Site Code: 002193)
- Lambay Island SAC (Site Code: 000204)
- Malahide Estuary SAC (Site Code: 000205)
- North Dublin Bay SAC (Site Code: 000206)
- Rockabill to Dalkey Islands SAC (Site Code: 003000)
- Rogerstown Estuary SAC (Site Code: 000208)
- South Dublin Bay SAC (Site Code: 000210)
- Baldoyle Bay SPA (Site Code: 004016)
- Howth Head Coast SPA (Site Code: 004113)
- Ireland's Eye SPA (Site Code: 004117)
- Lambay Island SPA (Site Code: 004069)
- Malahide Estuary SPA (Site Code: 004025)
- North Bull Island SPA (Site Code: 004006)
- Rogerstown Estuary SPA (Site Code: 004015)
- South Dublin Bay/Tolka Estuary SPA (Site Code: 004024)
- North-west Irish Sea SPA (Site Code: 004236)

Some of these and a number of other sites in the area are also designated as proposed Natural Heritage Areas:

- Baldoyle Bay pNHA (Site Code: 000199),
- Booterstown Marsh pNHA (Site Code: 001205),
- Dolphins, Dublin Docks pNHA (Site Code: 000201),
- Feltrim Hill pNHA (Site Code: 001218),
- Grand Canal pNHA (Site Code: 002104),
- Howth Head pNHA (Site Code: 000202),
- Ireland's Eye pNHA (Site Code: 000203),
- Lambay Island pNHA (Site Code: 000204),
- Loughshinny Coast pNHA (Site Code: 002000),

- Malahide Estuary pNHA (Site Code: 000205),
- North Dublin Bay pNHA (Site Code: 000206),
- Portraine Shore pNHA (Site Code: 001215),
- Rogerstown Estuary pNHA (Site Code: 000208),
- Royal Canal pNHA (Site Code: 002103),
- Santry Demesne pNHA (Site Code: 000178),
- Sluice River Marsh pNHA (Site Code: 001763),
- South Dublin Bay pNHA (Site Code: 000210).

Hydrological Links to Natura 2000 sites:

There are no Natura 2000 sites located either within or directly adjacent to the proposed development lands at Back Road.

The most relevant of the protected sites is Baldoyle Bay SAC/SPA/pNHA, which is hydrologically connected to the lands at Back Road via the Hazelbrook Stream.

The Hazelbrook Stream is found along the southern boundary of the site. This watercourse and the surface waters from the site drain to the Sluice River and discharges into Baldoyle Bay, which is designated as the Baldoyle Bay SAC/SPA.

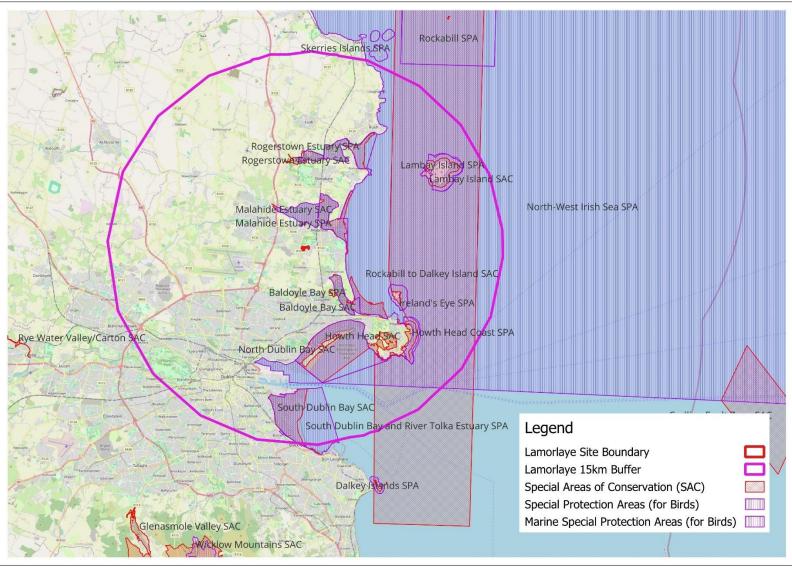


Figure 3.8. Designated sites within a 15km radius of the lands at Lamorlaye, Back Road.

| Site Code | Site Name and Designation | Approximate distance from the Lamorlaye Lands | Qualifying Interest | General Conservation Objectives |
|--------------|---------------------------------|--|--|---|
| 000205 | Malahide Estuary SAC | 1.5km N | (1140) Mudflats and sandflats not covered by seawater at low tide (1310) Salicornia and other annuals colonizing mud and sand (1320) Spartina swards (Spartinion maritimae) (1330) Atlantic salt meadows (Glauco-Puccinellietalia maritimae) (1410) Mediterranean salt meadows (Juncetalia maritimi) (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes)* (2120) Shifting dunes along the shoreline with Ammophila arenaria (white dunes) | Source: NPWS (2013) Conservation Objectives: Malahide Estuary SAC 000205. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected: (1140) Mudflats and sandflats not covered by seawater at low tide (1310) Salicornia and other annuals colonizing mud and sand (1320) Spartina swards (Spartinion maritimae) (1330) Atlantic salt meadows (Glauco-Puccinellietalia maritimae) (1410) Mediterranean salt meadows (Juncetalia maritimi) (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes)* (2120) Shifting dunes along the shoreline with Ammophila arenaria (white dunes) |
| 004025 | Malahide Estuary SPA | 1.5km N | Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Pintail (<i>Anas acuta</i>) [A054] Goldeneye (<i>Bucephala clangula</i>) [A067] Red-breasted Merganser (<i>Mergus serrator</i>) [A069] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A149] | Source: NPWS (2013) Conservation Objectives: Malahide Estuary SPA 004025. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21 st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • [wintering] <i>Podiceps cristatus</i> |

Table 3.2.1. Designated Natura 2000 sites of relevance to the lands at Lamorlaye, Back Road.

| Site Code | Site Name and Designation | Approximate distance from the Lamorlaye Lands | Qualifying Interest | General Conservation Objectives |
|--------------|---------------------------------|--|---|--|
| | | | Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Redshank (<i>Tringa totanus</i>) [A162] Wetlands & Waterbirds [A999] | [wintering] Branta bernicla hrota [wintering] Tadorna tadorna [wintering] Anas acuta [wintering] Bucephala clangula [wintering] Mergus serrator [wintering] Haematopus ostralegus [wintering] Pluvialis squatarola [wintering] Calidris canutus [wintering] Limosa limosa [wintering] Tringa tetanus To maintain the favourable conservation condition of the wetland habitat in Malahide Estuary SPA as a resource for the regularly-occurring migratory waterbirds that utilise it. |
| 000199 | Baldoyle Bay SAC | 2.7km SE | (1140) Mudflats and sandflats not covered by seawater at low tide (1310) Salicornia and other annuals colonizing mud and sand (1330) Atlantic salt meadows (Glauco-Puccinellietalia maritimae) (1410) Mediterranean salt meadows (Juncetalia maritimi) | Source: NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected: (1140) Mudflats and sandflats not covered by seawater at low tide (1310) Salicornia and other annuals colonizing mud and sand (1330) Atlantic salt meadows (<i>Glauco-Puccinellietalia</i> <i>maritimae</i>) (1410) Mediterranean salt meadows (<i>Juncetalia</i> <i>maritimi</i>) |
| 004016 | Baldoyle Bay SPA | 2.7km SE | Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Golden Plover (<i>Pluvialis apricaria</i>) [A140] | Source: NPWS (2013) Conservation Objectives: Baldoyle Bay SPA 004016. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. |

| Site Code | Site Name and Designation | Approximate distance from the Lamorlaye Lands | Qualifying Interest | General Conservation Objectives |
|--------------|---------------------------------|--|---|--|
| | | | Grey Plover (<i>Pluvialis squatarola</i>) [A141] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Wetlands & Waterbirds [A999] | Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: [wintering] Branta bernicla hrota [wintering] Tadorna tadorna [wintering] Charadrius hiaticula [wintering] Pluvialis squatarola [wintering] Limosa lapponica To maintain the favourable conservation condition of the wetland habitat in Baldoyle Bay SPA |
| 004236 | North-West Irish Sea SPA | 2.8km E | Common Scoter (<i>Melanitta nigra</i>) [A065] Red-throated Diver (<i>Gavia stellata</i>) [A001] Great Northern Diver (<i>Gavia immer</i>) [A003] Fulmar (<i>Fulmarus glacialis</i>) [A009] Manx Shearwater (<i>Puffinus puffinus</i>) [A013] Shag (<i>Phalacrocorax aristotelis</i>) [A018] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Little Gull (<i>Larus minutus</i>) [A177] Kittiwake (<i>Rissa tridactyla</i>) [A188] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Common Gull (<i>Larus canus</i>) [A182] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Herring Gull (<i>Larus argentatus</i>) [A184] Great Black-backed Gull (<i>Larus marinus</i>) [A187] Little Tern (<i>Sterna albifrons</i>) [A195] Roseate Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Puffin (<i>Fratercula arctica</i>) [A200] Guillemot (<i>Uria aalge</i>) [A199] | Source: NPWS (2023) Conservation Objectives: Northwest Irish Sea SPA 004236. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage. Accessed 21st October 2024. To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. • A001 Red-throated Diver Gavia stellata • A003 Great Northern Diver Gavia immer • A009 Fulmar Fulmarus glacialis • A017 Cormorant Phalacrocorax carbo • A018 Shag Phalacrocorax aristotelis • A055 Common Scoter Melanitta nigra • A179 Black-headed Gull Chroicocephalus ridibundus • A183 Lesser Black-backed Gull Larus fuscus • A187 Great Black-backed Gull Larus marinus |

| Site Code | Site Name and Designation | Approximate distance from the Lamorlaye Lands | Qualifying Interest | General Conservation Objectives |
|--------------|---------------------------------|--|--|---|
| 000206 | North Dublin Bay SAC | Lands 6.1km SE | (1140) Mudflats and sandflats not covered by seawater at low tide (1210) Annual vegetation of drift lines (1310) Salicornia and other annuals colonizing mud and sand (1320) Spartina swards (Spartinion maritimae) (1330) Atlantic salt meadows (Glauco-Puccinellietalia maritimae) (1395) Petalwort (<i>Petalophyllum ralfsii</i>) (1410) Mediterranean salt meadows (Juncetalia maritimi) (2110) Embryonic shifting dunes (2120) Shifting dunes along the shoreline with Ammophila arenaria (white dunes) (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes) (2190) Humid dune slacks | A188 Kittiwake <i>Rissa tridactyla</i> A192 Roseate Tern <i>Sterna dougallii</i> A193 Common Tern <i>Sterna hirundo</i> A194 Arctic Tern <i>Sterna paradisaea</i> A195 Little Tern <i>Sterna albifrons</i> A199 Guillemot <i>Uria aalge</i> A200 Razorbill <i>Alca torda</i> A204 Puffin <i>Fratercula arctica</i> A862 Little Gull <i>Hydrocoloeus minutus</i> Source: NPWS (2013) Conservation Objectives: North Dublin Bay SAC 000206. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected: (1140) Mudflats and sandflats not covered by seawater at low tide (1210) Annual vegetation of drift lines (1310) <i>Salicornia</i> and other annuals colonizing mud and sand (1320) <i>Spartina</i> swards (Spartinion maritimae) (1330) Atlantic salt meadows (Glauco-Puccinellietalia maritimae) (1395) Petalwort (<i>Petalophyllum ralfsii</i>) (1410) Mediterranean salt meadows (Juncetalia maritimi) (2110) Embryonic shifting dunes |
| | | | | (2110) Entryonic stinting duties (2120) Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes) |

| Site Code | Site Name and Designation | Approximate distance from the Lamorlaye Lands | Qualifying Interest | General Conservation Objectives |
|--------------|---------------------------------------|--|--|---|
| | | | | • (2190) Humid dune slacks |
| 004006 | North Bull Island SPA | 6.1km SE | Light-bellied Brent Goose (Branta bernicla hrota) Shelduck (Tadorna tadorna) Teal (Anas crecca) Pintail (Anas acuta) Shoveler (Anas clypeata) Oystercatcher (Haematopus ostralegus) Golden Plover (Pluvialis apricaria) Grey Plover (Pluvialis squatarola) Knot (Calidris canutus) Sanderling (Calidris alba) Dunlin (Calidris alpina) Black-tailed Godwit (Limosa limosa) Bar-tailed Godwit (Limosa lapponica) Curlew (Numenius arquata) Redshank (Tringa totanus) Turnstone (Arenaria interpres) Black-headed Gull (Larus ridibundus) Wetlands & Waterbirds | Source: NPWS (2015) Conservation Objectives: North Bull Island SPA 004006. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: Branta bernicla hrota [wintering] Tadorna tadorna [wintering] Anas crecca [wintering] Anas crecca [wintering] Anas clypeata [wintering] Haematopus ostralegus [wintering] Pluvialis apricaria [wintering] Calidris canutus [wintering] Calidris alba [wintering] Calidris alpina [wintering] Limosa limosa [wintering] Numenius arquata [wintering] Arenaria interpres [wintering] Chroicocephalus ridibundus [wintering] Wetlands |
| 003000 | Rockabill to Dalkey Islands SAC | 6.3km E | (1170) Reefs (1351) Harbour Porpoise (<i>Phocoena phocoena</i>) | Source: NPWS (2013) Conservation Objectives: Rockabill to Dalkey Island SAC 003000. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. |

| Site Code | Site Name and Designation | Approximate distance from the Lamorlaye Lands | Qualifying Interest | General Conservation Objectives |
|--------------|---------------------------------|--|--|--|
| | | | | To maintain the favourable conservation condition of the Annex I habitat and the Annex II species for which the SAC has been selected: (1170) Reefs (1351) Harbour Porpoise (<i>Phocoena phocoena</i>) |
| 004117 | Ireland's Eye SPA | 6.9km SE | Cormorant (<i>Phalacrocorax carbo</i>) [A017] Herring Gull (<i>Larus argentatus</i>) [A184] Kittiwake (<i>Rissa tridactyla</i>) [A188] Guillemot (<i>Uria aalge</i>) [A199] Razorbill (<i>Alca torda</i>) [A200] | Source: NPWS (2022). Conservation objectives for Ireland's Eye SPA [004117]. First Order Site specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage. Accessed 21st October 2024. To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • [breeding]Phalacrocorax carbo • [breeding] Larus argentatus • [breeding] Rissa tridactyla • [breeding] Uria aalge • [breeding]Alca torda |
| 002193 | Ireland's Eye SAC | 7.2km SE | Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] | Source: NPWS (2017) Conservation Objectives: Ireland's Eye SAC 002193. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Accessed 21st October 2024. To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected: Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] |
| 000208 | Rogerstown Estuary SAC | 6.3km N | (1130) Estuaries (1140) Mudflats and sandflats not covered by seawater at low tide | Source: NPWS (2013) Conservation Objectives: Rogerstown Estuary SAC 000208. Version 1. National |

| Site Code | Site Name and Designation | Approximate distance from the Lamorlaye Lands | Qualifying Interest | General Conservation Objectives |
|--------------|---------------------------------|--|---|---|
| | | | (1310) Salicornia and other annuals colonizing mud and sand (1330) Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) (1410) Mediterranean salt meadows (<i>Juncetalia maritimi</i>) (2120) Shifting dunes along the shoreline with Ammophila arenaria (white dunes) (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes)* | Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected: (1130) Estuaries (1140) Mudflats and sandflats not covered by seawater at low tide (1310) Salicornia and other annuals colonizing mud and sand (1330) Atlantic salt meadows (Glauco-Puccinellietalia maritimae) (1410) Mediterranean salt meadows (Juncetalia maritimi) (2120) Shifting dunes along the shoreline with Ammophila arenaria (white dunes) (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes)* |
| 004015 | Rogerstown Estuary SPA | 6.5km N | Greylag Goose (Anser anser) [A043] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Shelduck (Tadorna tadorna) [A048] Shoveler (Anas clypeata) [A056] Oystercatcher (Haematopus ostralegus) [A130] Ringed Plover (Charadrius hiaticula) [A137] Grey Plover (Pluvialis squatarola) [A141] Knot (Calidris canutus) [A143] Dunlin (Calidris alpina) [A149] Black-tailed Godwit (Limosa limosa) [A156] Redshank (Tringa totanus) [A162] Wetlands & Waterbirds [A999] | Source: NPWS (2013) Conservation Objectives: Rogerstown Estuary SPA 004015. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: [wintering] Anser anser [wintering] Branta bernicla hrota [wintering] Tadorna tadorna [wintering] Anas clypeata |

| Site Code | Site Name and Designation | Approximate distance from the Lamorlaye Lands | Qualifying Interest | General Conservation Objectives |
|--------------|---|--|--|---|
| 004024 | South Dublin Bay and River Tolka Estuary SPA | | Brent goose (<i>Branta bernicla hrota</i>), Sandwich Tern (<i>Sterna sandvicensis</i>), Roseate Tern (<i>Sterna dougallii</i>), Common Tern (<i>Sterna hirundo</i>), Arctic Tern (<i>Sterna paradisaea</i>), Oystercatcher (<i>Haematopus ostralegus</i>), Ringed Plover (<i>Charadrius hiaticula</i>), Knot (<i>Calidris canuta</i>), Sanderling (<i>Calidris alba</i>), Dunlin (<i>Calidris alpina</i>), Bar-tailed Godwit (<i>Limosa lapponica</i>) | [wintering] Haematopus ostralegus [wintering] Charadrius hiaticula [wintering] Pluvialis squatarola [wintering] Calidris canutus [wintering] Limosa limosa [wintering] Tringa totanus To maintain the favourable conservation condition of wetland habitat in Rogerstown Estuary SPA as a resource for the regularly occurring migratory waterbirds that utilise it. Source: NPWS (2015). Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: Brent goose (Branta bernicla hrota), Sandwich Tern (Sterna sandvicensis), Roseate Tern (Sterna paradisaea), |
| | | | | Oystercatcher (<i>Haematopus ostralegus</i>), Ringed Plover (<i>Charadrius hiaticula</i>), Knot (<i>Calidris canuta</i>), Sanderling (<i>Calidris alba</i>), Dunlin (<i>Calidris alpina</i>), Bar-tailed Godwit (<i>Limosa lapponica</i>) To maintain the favourable conservation condition of wetland habitat in South Dublin and the River Tolka |

| Site Code | Site Name and Designation | Approximate distance from the Lamorlaye Lands | Qualifying Interest | General Conservation Objectives |
|--------------|---------------------------------|--|--|---|
| | | | | Estuary SPA as a resource for the regularly occurring migratory waterbirds that utilise it. |
| 000202 | Howth Head SAC | 8.6km SE | Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030] | Source: NPWS (2016). Conservation objectives: Howth Head SAC 000202. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. |
| | | | | Accessed 21st October 2024. |
| | | | | To maintain or restore the favourable conservation condition of the Annex I habitats for which the SAC has been selected: |
| | | | | • Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] |
| 004113 | Howth Head Coast SPA | 11.5km SE | • Kittiwake (<i>Rissa tridactyla</i>) [A188] | European dry heaths [4030] Source: NPWS (2022). Conservation objectives for Howth Head Coast SPA [004113]. First Order Site specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage. |
| | | | | Accessed 21 st October 2024. To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • [breeding] <i>Rissa tridactyla</i> |
| 000210 | South Dublin Bay SAC | 10.6km S | Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Embryonic shifting dunes [2110] | Source: NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21 st October 2024. To maintain or restore the favourable conservation |
| | | | | condition of the Annex I habitats for which the SAC has been selected: |

| Site Code | Site Name and Designation | Approximate distance from the Lamorlaye Lands | Qualifying Interest | General Conservation Objectives |
|--------------|---------------------------------|--|--|---|
| | | | | Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Embryonic shifting dunes [2110] |
| 000204 | Lambay Island SAC | 10.9km NE | (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts (1170) Reefs (1364) Halichoerus grypus (1265) Phoca vitulina | Source: NPWS (2013) Conservation Objectives: Lambay Island SAC 000204. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. |
| | | | | To maintain the favourable conservation condition of the Annex I habitat and the Annex II species for which the SAC has been selected: (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts (1170) Reefs (1364) Halichoerus grypus (1265) Phoca vitulina |
| 004069 | Lambay Island SPA | 10.9km NE | Fulmar (Fulmarus glacialis) [A009] Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Greylag Goose (Anser anser) [A043] Lesser Black-backed Gull (Larus fuscus) [A183] ^ Herring Gull (Larus argentatus) [A184] ^ Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204] | Source: NPWS (2022). Conservation objectives for Lambay Island SPA [004069]. First Order Site specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage. Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: Fulmar (<i>Fulmarus glacialis</i>) [A009] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Shag (<i>Phalacrocorax aristotelis</i>) [A018] |
| | | | | Greylag Goose (Anser anser) [A043] Lesser Black-backed Gull (Larus fuscus) [A183] ^ |

| Site Code | Site Name and Designation | Approximate distance from the Lamorlaye Lands | Qualifying Interest | General Conservation Objectives |
|--------------|---------------------------------|--|---------------------|--|
| | | | | Herring Gull (<i>Larus argentatus</i>) [A184] ^ Kittiwake (<i>Rissa tridactyla</i>) [A188] Guillemot (<i>Uria aalge</i>) [A199] Razorbill (<i>Alca torda</i>) [A200] Puffin (<i>Fratercula arctica</i>) [A204] |

4. **POTENTIAL IMPACTS**

Planning permission is sought for the following:

The proposed development consists of 83no. 2-storey houses (20no. 4-bed and 63no. 3-bed), a childcare facility and all associated and ancillary site and infrastructural works, hard and soft landscaping and boundary treatment works including public open space; private open space; primary vehicular, cyclist and pedestrian access serving the development is via a new access road off Back Road; a secondary pedestrian and cyclist access is provided off Back Road; provision of internal road network, including new road carriageways, pedestrian and cycle facilities, public lighting and street planting; revised access arrangement for the existing house; car and bicycle parking; 1no. ESB substation; demolition of out buildings/stables; provision of temporary foul sewage pumping station; laying a foul rising main along Back Road from the proposed new access to the development eastward to Kinsealy Lane and also along Kinsealy Lane.

The development of the lands at Lamorlaye, Back Road will result in:

- permanent landtake;
- demolition of buildings and structures on site;
- construction activities (e.g. runoff and other pollution, increase of suspended solids, alteration of hydraulic conditions, noise and dust emissions, lighting, movement of vehicles, presence of construction personnel);
- occupation once completed.

All areas of grassland, shrubs and some sections of hedgerow, shrubs and trees will be removed during the construction phase. All buildings and structures within the site will be demolished. There will be no direct impacts on the Hazelbrook Stream itself although the banks will be affected. The other potential impacts during the construction phase arise from the risk of damage to areas of retained vegetation and habitats within the environs of the site. These include the site boundary treelines and hedgerows and the Hazelbrook Stream, (which ultimately flows to the Baldoyle SAC/SPA).

A confirmed bat roost is present within the clock tower building which will be lost and nesting sites for swallows will be lost from within the stables. There will be loss of foraging areas, resting sites and breeding habitat for birds and other fauna arising from the removal of grassland, and areas of hedgerows, trees and shrubs scheduled for site clearance. The lighting design for the scheme could also interfere with the movement of bats and other fauna through the site.

The physical disturbance of the soil within the site will result in the potential for runoff from soil disturbance on the site to the adjoining Hazelbrook Stream and ultimately the Baldoyle Bay SAC/SPA unless some remedial measures are put in place. There is also some potential for leaks of oil and petrol from machinery and equipment used on site to enter the European site via this pathway.

During the operational phase of the development there is potential for contamination of Hazelbrook Stream and ultimately the Baldoyle Bay SAC/SPA from surface water run off from the site.

5. REMEDIAL OR REDUCTIVE MEASURES

5.1 Mitigation by Avoidance

The principal mitigation that should be considered in any development is avoidance of impact. The site layout has been designed to avoid impacts on the adjoining Hazelbrook Stream and the majority of the boundary treelines and hedgerows surrounding the site.

5.2 Planting of Native Species

The majority of internal hedgerows and trees/shrubs being removed are ornamental and consist of non-native species. They would have been planted as part of the wider landscaping of 'Lamorlaye' house.

Native species appropriate to the area (such as hawthorn, elder, ash, alder, holly, hazel, willows, oak, dog rose, gorse and bramble) have been used within the landscaping plans for the development.

These will, as they mature, provide a food source, shelter and habitat for foraging bats, nesting habitat for birds and a food source for pollinators. All species used will be of certified native origin and sourced locally to ensure genetic provenance to the area – certified material is available from the forestry nurseries who supply the native woodland scheme.

All planting within gardens and public spaces within the scheme will be pollinator friendly as per the All Ireland Pollinator Plan – see https://pollinators.ie/wordpress/wp-content/uploads/2018/04/Gardens_actions-to-help-pollinators-2018-WEB.pdf

5.3 Protective Measures for Retained Treelines, Hedgerows & the Hazelbrook Stream The Hazelbrook Stream, hedgerows and treelines, which form the existing site boundaries, are to be retained.

A 10 - 15 metre wide riparian buffer strip has been retained along the Hazelbrook Stream in line with Objective IUO26 – Riparian Corridors in the Fingal County Development Plan 2023 – 2028.

These retained treelines, hedgerows & the Hazelbrook Stream will be given protection from accidental damage by machinery during site works prior to any works commencing in the development and as set out in the arboricultural impact statement. **These areas will be clearly delineated by fencing or other measures. Fences will be erected outside the drip-line or canopy of each tree in accordance with BS 5837 (2012)** – **Trees in Relation to Construction.** Please refer to the arboricultural tree protection drawings.

5.4 Invasive Species

There is potential for Japanese knotweed and other invasive species to spread/become established within the development site through poor site management or the import of contaminated topsoil. All plant and machinery will be verified as being free of invasive species prior to utilisation on site.

The invasive species Russian vine (*Fallopia baldschuanica*) is present at the northern end of the eastern treeline. It is recommended that treatment of this species to control and eradicate it commences immediately and will require the agreement of the adjoining landowner as it is on the shared boundary.

5.5 Mitigation Measures for Bats

Bat Derogation Licence

The clock tower contains a confirmed minor bat roost of pipistrelle bats. A bat derogation licence is therefore required for the demolition of this building and this has been previously granted by National Parks and Wildlife Service - see **Appendix 1**.

The grounds on which the bat derogation licence was sought for the demolition of this bat roost are:

'In the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment'.

The lands are zoned for development and the project design and density of housing does not allow for the retention of the stable yard buildings.

A number of mitigation measures are proposed to accommodate bats within the development. These include the erection of bat boxes on trees, integrated bat boxes within the building fabric and the development of a dedicated bat roost within the development.

The retention and enhancement of the riparian corridor along the Hazelbrook Stream and the retention of the site boundary hedgerows coupled with sensitive lighting design also ensures that suitable habitat for bats remains within the site.

These have been demonstrated to work on a number of previous projects including the M11 Rathnew to Arklow motorway (bat boxes), and Rockingham House, Glenamuck Road, Co. Dublin.

The loss of a minor roost for common and soprano pipistrelle bats will not have a detrimental effect on the local bat population given the rich habitat and roosting potential in Malahide Castle and Demesne adjoining the site and the provision of roosting alternatives for the bats. The loss of this roost is highly unlikely to affect the conservation status of either of these species which is currently 'Favourable' at a national level.

Provision of Bat Boxes

Fifteen bat boxes will be erected on suitable buildings or trees (i.e. not illuminated and above 3 metres height and close to green areas) within the development. The most successful box types are "woodcrete" boxes made by Schwegler and available from www.alanaecology.com.

Several designs are available including some of which can be incorporated into the walls and the surface fabric of new buildings. Suitable locations for these will be agreed by the project ecologist with the architect and set out for the contractor on detailed drawings.

Provision of Dedicated Bat Roost within the development

A dedicated bat roost will be erected on site to compensate for the loss of the roost in the clock tower of the building. This will be designed and constructed to the specification of a licensed bat specialist and provide suitable roosting opportunity for species of crevice dwelling bats. The exact location of this will be determined on site.

Retention of Foraging Areas

The other main protective measure for bats is in the retention of hedgerows, treelines and the Hazelbrook Stream adjoining the site and the protective measures put in place for these features. The use of native species in the landscaping proposals for the site will also assist in ensuring that bats continue to forage and remain in the area.

Sensitivity in the provision of lighting is also important to ensure that bats continue to use the site. The retained hedgerows, treelines and drainage ditches and newly created areas of planted vegetation will be retained as dark zones and the amount of lighting shining on such areas limited.

Building Demolition

Prior to demolition the buildings on site will be checked for roosting bats by a licensed bat specialist as they may have taken up residence in other locations than the clock tower in the interim period.

The bat specialist will further advise on the procedure for dismantling the buildings based on these results. A new bat derogation licence will be required if additional roosts are identified or if a significant time has passed before construction commences.

Buildings will be demolished during the winter months (ideally between October – November) when bat numbers in building are fewer, but bats remain active and will require the supervised manual stripping of roofs and inspection of tiles etc. by a bat specialist during same.

Felling of Potential Bat Roosts in trees

All trees proposed for removal will be subject to appropriate felling measures as detailed in NRA *Guidelines for the Treatment of Bats during the Construction of National Road Schemes* (National Roads Authority 2006). The felling/clearance of trees will be scheduled for the autumn months of September/October when bats are less likely to be using trees. This also avoids the bird breeding season.

Prior to tree felling works the trees will be inspected by a licensed bat specialist in the presence of the tree surgeons and an appropriate felling methodology agreed.

The felling of those trees, which have been identified as potential bat roosts, must be supervised by a bat specialist holding a bat handling licence issued by the National Parks and Wildlife Service, (Department of Environment, Heritage and Local Government). If bats are encountered they should be removed by the licence holder to a bat box, to be sited on a nearby tree and the NPWS notified.

Identified trees must be felled carefully. Specific advice in relation to individual trees will be given on site by a bat specialist. Gradual dismantling of some mature trees may be necessary to ensure the safety of any bats which may be roosting within significant sized boughs or in the trunk. The tree will be inspected by a bat specialist, and depending on the structure of the tree they may need to be left intact on the ground for 24 hours to allow any bats within them to escape prior to processing.

Lighting Design

Detailed information on lighting design for bats and other wildlife is presented in the document prepared by the Bat Conservation Trust and the Institute of Lighting Professionals '*BCT* (2018). *Guidance Note* 08/18 - *Bats and artificial lighting in the UK*. *Bats and the Built Environment series*' and the *EUROBATS Guidance* available from:

- <u>https://cdn.bats.org.uk/pdf/Resources/ilp-guidance-note-8-bats-and-artificial-lighting-compressed.pdf?mtime=20181113114229&focal=none</u>
- <u>https://cdn.bats.org.uk/pdf/Resources/EUROBATSguidelines8_lightpolluti</u> <u>on.pdf?mtime=20181113114256&focal=none</u>

These guidelines have been implemented in the project lighting design where possible and have been considered by the lighting designer.

5.6 Mitigation Measures for Birds

The removal of several trees and sections of hedgerow is required to facilitate the development. No clearance of vegetation shall be carried out from March 1st to August 31st (except in circumstances of immediate danger to the public). This will protect nesting birds, eggs and nestlings from injury or death. No clearance of vegetation suitable for nesting birds within the site (shrubs, bramble tangles, etc.) will take place during this period. Should such clearance be required than the area proposed for clearance should be inspected by an ecologist to ascertain if any nesting birds are present.

Similarly the removal and demolition of the buildings on site will be done during the winter months to avoid the bird breeding season – swallows are currently using the buildings for nesting purposes.

Provision of Bird Boxes

Forty bird boxes of varying designs will be erected on suitable buildings or trees within the development. Several designs are available including some which can be incorporated into the walls and the surface fabric of the new buildings. These include integrated designs for swift, house sparrow, swallows, starling, etc. Suitable locations for these will be agreed by the project ecologist with the architect and set out for the contractor on detailed drawings.

5.7 Watercourse Restoration

It is proposed to naturalise the Hazelbrook Stream along the southern boundary of the site and to enhance it for wildlife through suitable planting.

A buffer of 10-15m has been retained along this watercourse in line with Objective IUO26 – Riparian Corridors in the Fingal County Development Plan 2023 – 2028.

This objective sets out to establish riparian corridors free from new development along all significant watercourses and streams in the County by ensuring that a minimum 10m wide riparian buffer strip measured from the top of the bank either side of all watercourses is retained.

Excellent guidance on watercourse rehabilitation is provided in the Inland Fisheries Ireland document 'Planning For Watercourses In The Urban Environment A Guide to the protection of Watercourses through the use of Buffer Zones, Sustainable Drainage Systems, Instream Rehabilitation, Climate / Flood Risk and Recreational Planning *Including one-off developments'.

Suitable species for planting along this watercourse have been specified by the project ecologist to the landscape designer.

Care should be taken when purchasing aquatic plants from nurseries as many species have the potential to become invasive. Attention is drawn to the invasive species listed under the Birds and Natural Habitats Regulations 2011.

5.8 Sediment Control

Sediment control practices are used on building sites to prevent sand, soil, cement and other building materials from reaching watercourses such as the Hazelbrook Stream and water dependent habitats such as the reedbeds and saltmarshes downstream. Even a small amount of pollution from a site can cause significant environmental damage by killing aquatic life, silting up streams and blocking storm water pipes. Storm water can contain many pollutants which can enter our local drainage ditches, streams, rivers and marine systems, causing harm to native animals, plants, fish breeding habitats and recreational areas.

Soil erosion, sediment and litter from building sites can be major sources of storm water pollution, and can cause:

- significant harm to the environment e.g. loss of valuable foraging areas in adjoining mudflats for wintering birds
- weed infestation of waterways caused by sediment settling on the creek beds and transporting nutrients
- loss of valuable topsoil
- o significant public safety problems when washed onto roads and intersections
- o blocked drains creating flooding and increased maintenance costs
- o damage to recreational and commercial fishing.

Sediment control usually requires little effort and results in:

- Cleaner waterways and healthier aquatic life.
- Improved site conditions.
- Improved wet weather working conditions.

- Reduced wet weather construction delays.
- Reduced losses from material stockpiles.
- Fewer mud and dust problems.

Good site management in relation to sediment control during the construction phase should prevent this from occurring and possible mitigation measures for consideration are outlined below. Other measures to be implemented on site include briefing of all site contractors regarding the sensitivity of the adjoining watercourse and the need for strict site management in relation to potential run off.

Minimising site disturbance:

Prevention is better than cure. Careful design and an efficient construction sequence will minimise disturbance to the site. This will save money and reduce environmental impact.

Design to avoid excessive cut and fill, unnecessary clearing of vegetation and to preserve existing site drainage patterns. Clear only those areas necessary for building work to occur. Preserve grassed areas and vegetation where possible. This helps filter sediment from storm water run off before it reaches the watercourse and stops rain turning exposed soil into mud. Delay removing vegetation or commencing earthworks until just before building activities start. Avoid building activities that involve soil disturbance during periods of expected heavy or lengthy rainfall.

Implement sediment control:

Install sediment control measures before commencing any excavation or earth moving. Regularly maintain them until construction is complete and the site is stabilised.

Prevent sediment-contaminated water leaving the site

Use barriers to trap coarse sediment at all points where storm water leaves the site, before it can wash into the watercourse and down to the Natura 2000 site downstream. Relocate sediment on site or dispose of it suitably. Remove accidental spills of soil or other material immediately. Maintain vegetation on the site in the vicinity of watercourses as in a healthy state as it can function as an additional filter for sediment. Cut brick, tile or masonry on a pervious surface such as grass or loosened soil within the property boundary. The same applies when cleaning equipment. Waste concrete, paint and other solutions used on site should be properly disposed of so they do not contaminate storm water.

5.9 **Protection Measures for Fisheries**

Various measures will be required to ensure that there is no deterioration in water quality in the Hazelbrook Stream along the southern boundary of the site arising from the development.

These relate mainly to the control of silt and sediment runoff during construction and the installation of hydrocarbon/petrol interceptors on surface water drainage systems leaving the development.

For any instream works the guidelines presented in the Eastern Regional Fisheries Board 'Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites' should be reviewed and followed where applicable and the contractor informed of the sensitivity of the catchment. This and other guidance is available from:

http://www.fisheriesireland.ie/fisheries-management-1/86-planning-forwatercourses-in-the-urban-environment-1/file

http://www.fisheriesireland.ie/fisheries-management-1/90-requirements-for-theprotection-of-fisheries-habitat-during-construction-and-development-works-at-ri-1/file

5.10 Contractor Briefing

All site contractors should be briefed regarding the biodiversity value of the retained watercourse, trees and vegetation to ensure that there are no accidental or unintentional actions conducted during the project construction that could lead to a reduction in water quality/damage to same. Such matters often arise through ignorance or by accident rather than as a result of an intentional action.

5.11 Soil Handling

Soil should be handled with care as it is a living entity. The topsoil and subsoil layers will be stripped, stored and maintained separately. Topsoil will be temporarily stored upon geotextile such as Terram 1000 (www.terram.com). The contractor should submit proposals for supplier and product, which should be a nonwoven geotextile manufactured from UV stabilised, high tenacity, virgin polypropylene fibres that have been both mechanically and thermally bonded with a minimum of 5 years lifespan in all soil conditions. Note that soil levels within the root spread of those trees that are to be retained should not be raised. From this temporary storage heap the topsoil should be distributed as required for landscaping purposes. In general the topsoil should not be firmed, consolidated or compacted when laying. Tipping and grading to approximate levels should be done in one operation with minimum of trafficking by plant.

The topsoil, which is to be retained and reused should not be mixed with: subsoil, stone, hardcore, rubbish or material from demolition work, or the other grades of topsoil, including those contaminated with non-native invasive species. The topsoil should be handled in the driest condition possible. Topsoil should not be handled during or after heavy rainfall or when it is wetter than the plastic limit less 3%, to BS 1377-2.

Depending on how long the construction period is expected to last it might be necessary to seed the stored topsoil to prevent weed establishment. A recommended mixture is: 35% Chewings fescue, 35% Slender red fescue, 20% Smooth stalked meadow grass and 10% Brown top bent. This should be applied to the manufacturer's recommendations (min. 15g/m2) and the following wildflower mix @ 5g/m2 added:

- Native Origin Irish Wildflower Seed Mixture Product Code/Name: MM12 Wild Flora for Raw Impoverished Sub Soil
- Supplier: Design by Nature <u>www.wildflowers.ie</u>
- Species List: Bird's-foot Trefoil, Black Medick, Corn Marigold, Corn Pansy, Corn Poppy, Corncockle, Cornflower, Cowslip, Devil's Bit Scabious, Eyebright,

Meadow Buttercup, Fleabane, Greater Trefoil, Lesser Knapweed, Scented Mayweed, Meadowsweet, Ox-eye Daisy, Purple Loosestrife, Ragged Robin, Red Rattle, Red Bartsia, Red Clover, Ribwort Plantain, Rough Hawksbit, Sorrel, St. John's-wort, White Campion, Wild Angelica, Wild Carrot, Yarrow, Yellow Rattle, Lady's Smock, Yellow Clover.

5.12 SUDS Measures

The drainage system has been designed with the aim of providing a sustainable drainage solution ensuring, in so far as feasible, that the development has a minimal impact on the existing public surface water sewer system. The proposed development has been designed to incorporate best drainage practice.

It is proposed to incorporate a Storm Water Management Plan through the use of various SuDS techniques (i.e. permeable paving, rain gardens, filter drains, green roofs, filter drains, Tree Pits, rain gardens, detention basins) to treat and minimise surface water runoff from the site.

Potential negative impacts could arise should untreated surface water enter the Hazelbrook Stream from the proposed development. These impacts have been addressed through careful consideration of the ground conditions within the site and the installation of silt traps and hydro-carbon traps as outlined in the Engineering Assessment Report and accompanying drawings prepared by Waterman Moylan Consulting Engineers, which will ensure that all surface water leaving the site is treated before it ultimately enters the Baldoyle Bay SAC/SPA.

5.13 Ecological Clerk of Works

An ecological clerk of works will be appointed to oversee the project and sign off on the above mitigation measures.

6. A DO NOTHING SCENARIO

Under a 'do-nothing' scenario the lands would continue to be managed and grazed by horses. If they were unmanaged and ungrazed rank grassland would develop and over time would become dominated by brambles. This would develop into and be replaced by scrub and ultimately woodland over time.

7. WORST CASE SCENARIO

Under a worst case scenario none of the mitigation measures recommended will be implemented during the construction phase when the main damage and losses to local biodiversity can occur.

It is for this reason that an ecological clerk of works is to be appointed to brief the contractor and oversee same.

8. PREDICTED IMPACT OF THE PROPOSED DEVELOPMENT

The overall impact on flora and fauna within this site is deemed permanent and moderately negative as they are undeveloped and presently offer ecological structure and diversity. They provide habitat for wildlife in what is becoming an increasingly urbanised area along Back Road. This will be permanently altered through their development for residential purposes.

This land is zoned for Residential Development and is identified as such within the Fingal County Council Development Plan. As such residential development will occur on this site and the environment on the site will change.

The proposed development retains and enhances some of the natural features of the site where possible and includes positive planting proposals which will add some diversity to the site which will favour some species.

9. CONCLUSION

The proposed construction of a residential development at Lamorlaye, Back Road has been assessed from the perspective of ecology and detailed mitigation measures have been presented to reduce impacts on same in the vicinity of the proposed development and surrounding lands.

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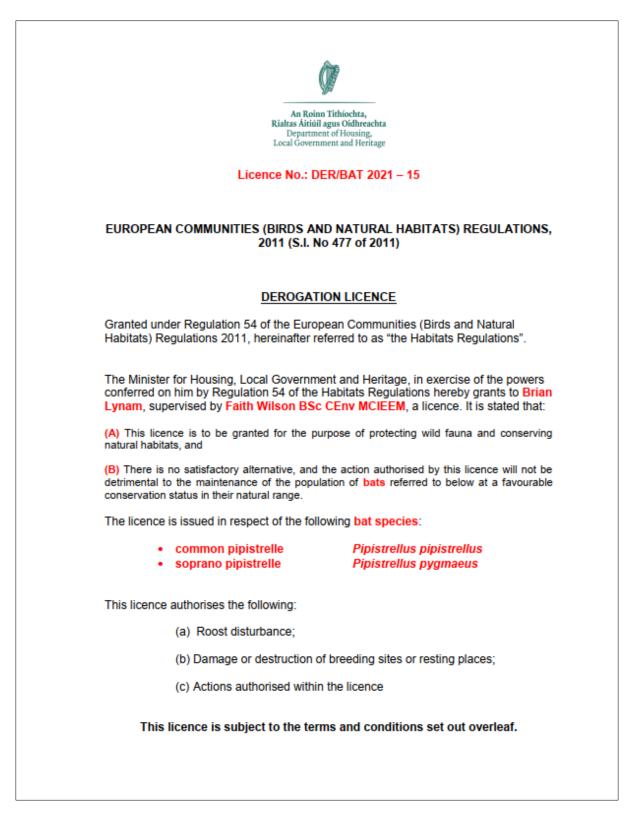
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11. APPENDIX 1 - BAT DEROGATION LICENCES - 2021 AND 2022



Terms and Conditions

- This licence is granted solely to allow the activities specified in connection with the Demolition Works located at Lamorlaye, Back Lane, Malahide, Co. Dublin for Brian Lynam.
- All activities authorised by this licence, and all equipment used in connection herewith, shall be carried out, constructed and maintained (as the case may be) so as to avoid unnecessary injury or distress to any species of BAT.
- 3. This licence may be modified or revoked, for stated reasons, at any time.
- 4. The mitigation measures outlined in the application report (Baseline Ecological Report, pgs. 28 30), together with any changes or clarification agreed in correspondence between NPWS and the agent or applicant, are to be carried out. Strict adherence must be paid to all the proposed measures in the application.
- The timing of the demolition is to be carried out in the winter months to avoid the bat breeding season.
- The works will be supervised by a licensed bat specialist agent.
- The area is to be resurveyed by a qualified licenced bat worker before demolition of the building.
- The demolition shall take place under the supervision of a qualified licenced bat worker.
- This licence shall be produced for inspection on a request being made on that behalf by a member of An Garda Siochána or an authorised NPWS officer appointed under Regulation 4 of the Habitats Regulations.
- 10. The local National Parks and Wildlife Service field officer Roy Thompson, Roy.Thompson@chg.gov.ie, 076 100 2593 should be contacted prior to the commencement of any activity, and if bats are detected on site during the course of the work, under the terms of this licence.
- 11.A report shall be submitted to Wildlife Licensing Unit, National Parks and Wildlife Service Department of Housing, Local Government and Heritage, R. 2.03, 90 North King Street, Smithfield, Dublin 7, D07 N7CV on completion of the actions which this licence authorises, describing the activities carried out in pursuance of this licence.

2

Claire Gouley

Claire Crowley (a person authorised by the Minister to sign on his behalf)

17/02/2021

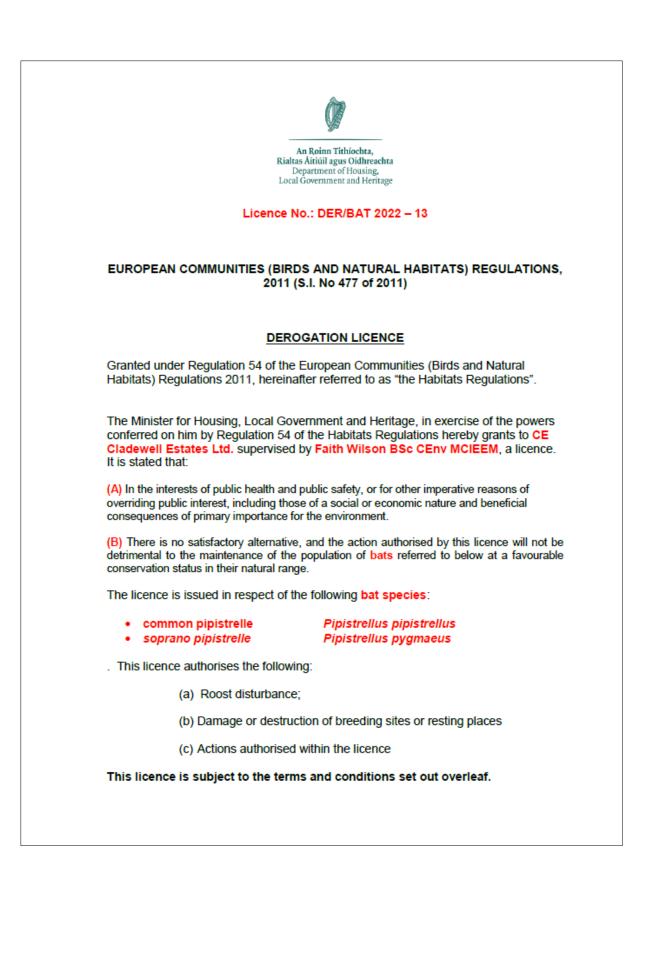
Wildlife Licensing Unit National Parks and Wildlife Service Housing, Local Government and Heritage R. 2.03 90 North King Street Smithfield Dublin 7 D07 N7CV



NOTES (1 to 2).

- This licence is granted for the period specified and subject to compliance with the conditions specified. Anything done other than in accordance with the terms of this licence may constitute an offence.
- · This licence applies to bats and to no other species.

3



Terms and Conditions

- This licence is granted solely to allow the activities specified in connection with the demolition and construction works located at Lamorlaye, Back Road, Malahide, Co. Dublin for CE Cladewell Estates Ltd.
- All activities authorised by this licence, and all equipment used in connection herewith, shall be carried out, constructed and maintained (as the case may be) so as to avoid unnecessary injury or distress to any species of BAT.
- 3. This licence may be modified or revoked, for stated reasons, at any time.
- 4. The mitigation measures outlined in the application report (Lamorlaye Malahide Proposal Residential Development, pgs.38-40), together with any changes or clarification agreed in correspondence between NPWS and the agent or applicant, are to be carried out. Strict adherence must be paid to all the proposed measures in the application.
- No work can begin before September 1st 2022 and must be completed by April 30th 2023.
- 6. The works will be supervised by a licensed bat specialist Faith Wilson.
- This licence shall be produced for inspection on a request being made on that behalf by a member of An Garda Síochána or an authorised NPWS officer appointed under Regulation 4 of the Habitats Regulations.
- The local National Parks and Wildlife Service field officer Roy Thompson, <u>Roy.Thompson@housing.gov.ie</u>, 353 15393237 should be contacted prior to the commencement of any activity, and if bats are detected on site during the course of the work, under the terms of this licence.
- A report shall be submitted to Wildlife Licensing Unit, National Parks and Wildlife Service Department of Housing, Local Government and Heritage, R. 2.03, 90 North King Street, Smithfield, Dublin 7, D07 N7CV on completion of the actions which this licence authorises, describing the activities carried out in pursuance of this licence.

2

Claire Conten

Claire Crowley (a person authorised by the Minister to sign on his behalf)

09/02/2022

Wildlife Licensing Unit National Parks and Wildlife Service Housing, Local Government and Heritage R. 2.03 90 North King Street Smithfield Dublin 7 D07 N7CV



NOTES (1 to 2).

- This licence is granted for the period specified and subject to compliance with the conditions specified. Anything done other than in accordance with the terms of this licence may constitute an offence.
- This licence applies to bats and to no other species.

