Skerries Golf Club

Biodiversity Audit & Action Plan 2024

Allen and Mellon Environmental

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Contents

Executive Summary

Introduction

Skerries Golf Club was founded in 1905 and is a championship 18-hole parkland course located to the south-west of the seaside town of Skerries in County Dublin and just over one kilometre from the sea coast.

The site supports a variety of interesting wildlife habitats with potential for enhancement through simple management techniques or interventions. Allen and Mellon Environmental was commissioned to produce an audit of the site's biodiversity interest and potential with management options for the protection and enhancement of key assets. The audit complements a recent report - Skerries Golf Club Integrated Environmental Management Plan 2023-2028 (Calvey 2023).

Aim of the Audit

The aim of the biodiversity audit exercise is to identify the key natural resources of Skerries Golf Club based on recorded information and to provide recommendations relating to future management. The report does not set out provide a definitive account of biodiversity within the golf course.

Methods

Audit preparation involved a combination of desk study and primary data gathering. The site was visited by three ecologists in April 2024. The purpose of the visits was to:

a) Map the habitats across the entire golf course site;
b) Compile a species list and identify the potential for key species at the site and
c) Identify any threats, issues and opportunities for biodiversity.

Regulatory Context

There are many laws and regulations relating to biodiversity and wildlife protection. This includes the protection of sites designated for their nature conservation interest in addition to species which are protected by law against illegal killing, disturbance or exploitation. The Wildlife Acts 1976-2022 provide protection for a range of species including bats, hedgehogs and nesting birds all of which occur within the golf club site.

Habitats

The majority of land cover within the site of 48 hectares comprises the playing corridor of fairways and associated greens and sand bunkers. Although the majority of grassland habitat is of improved amenity value, there are some areas of less frequently managed or unmanaged grassland throughout the site.

Ornamental trees and tree lines are scattered throughout the course. Areas of woodland include planted mixed conifer woodland, but some remnants of the former Hacketstown Estate woodland remain in the northern part of the site. Many of the boundary hedgerows around the site are of high quality.

Some open sections of a small stream occur within the course, but there are no longer any ponds. Beyond the playing area, at the fringes of the site there is a small wetland in an area of dense scrub and tall vegetation, which has potential for investigation and enhancement.

Species

The site supports a wide range of species including several which are of conservation interest. The principal attributes are summarised in the table below.

Attribute	***Description***
Designated sites	None
Habitats of European Importance (Annex I)	None
European Protected Species	Bat species
Wildlife Acts protected species	Wild birds Badger, hedgehog, Irish hare, stoat, pygmy shrew
Red List Birds	Barn owl, kestrel
Amber list birds	Goldcrest, starling, swallow, herring gull, house martin, greenfinch
Other Red Data Species	Not known Potential for *Bombus muscorum*
Local Biodiversity Action Plan	Hedgerows Woodland Potential for Pollinators

Constraints

The principal biodiversity constraints reflect the need to safeguard protected species such as bats and nesting birds. The need to manage invasive plant species was also identified.

Opportunities & Actions

The Action Plan has identified 21 actions to assist the golf club to either meet its legal obligations or to enhance the biodiversity of the site. The actions cover:

a) Grassland management
b) Woodland management
c) Enhancement work for species
d) Managing invasive species
e) Working with members and partner organisations

1. Introduction

1.1 Skerries Golf Club was founded in 1905 and is a championship 18-hole parkland course located to the south-west of the seaside town of Skerries in County Dublin. The current 18-hole golf course was designed by E. Hackett in 1969 with a total playing distance of 6,116 metres for men and 5,284 metres for ladies. Skerries golf club is membership owned, and managed through a committee of management (COM) which is made up of members who are elected at the AGM.

1.2 The site is just over one kilometre from the sea coast and occupies approximately 48 hectares of grassland and wooded habitats. The course is surrounded by mixed arable farmland on all sides. The northern boundary is delineated by the Golf Links Road whilst the Dublin to Belfast railway line flanks the entire eastern side of the course. The site is undulating and low-lying with the highest point at 44 metres above level.

1.3 In common with many golf courses the site supports a wide variety of interesting wildlife habitats with potential for enhancement through simple management techniques or interventions. Allen and Mellon Environmental was commissioned to produce an audit of the site's biodiversity potential with actions for the protection and enhancement of key assets.

1.4 This plan complements and should be read in conjunction with the Skerries Golf Club Integrated Environmental Management Plan 2023-2028 (Calvey 2023) which sets out a strategy for the sustainable management of the area within the club's ownership.

Figure 1 Aerial view of Skerries Golf Course

Image © 2023 Google

2. Audit Aims and Methodology

Scope & Aims

2.1 The aim of this exercise is to identify the key natural resources of Skerries Golf Course based on recorded information and field visits and to provide recommendations relating to future management. Whist the audit encompasses the whole golf club site, the recommendations are mainly targeted at the non-playing areas where the potential for biodiversity gain is greatest.

2.2 Sustainable management of the playing areas including the greens and fairways is covered in detail by the Integrated Environmental Management Plan (Calvey 2023). That report also provides recommendations relating to biodiversity enhancement in non-playing areas and these are developed within this Biodiversity Audit report.

2.3 The audit does not set out to provide a definitive account of biodiversity within the golf course, since this is not possible within the constraints of the project. Instead the aim is to highlight the known natural assets and to identify areas where more information might be required.

2.4 The audit seeks to evaluate the Golf Club's importance for biodiversity and how it can be improved and protected, as part of the developing strategy for the golf course. It identifies constraints relating to the legal protection of certain species and habitats as well as opportunities for promoting and enhancing biodiversity.

2.5 The audit contributes to the aims of the Carr Golf Biodiversity Policy Statement & Framework Action Plan 2022 and seeks to contribute to the implementation of the All-Ireland Pollinator Plan 2021-2025[1]. Where appropriate, linkages are made to the Fingal Biodiversity Action Plan 2023-2030 and local initiatives such as Sustainable Skerries[2].

2.6 The Fingal Biodiversity Action Plan identifies the golf course as a Nature Development Area (NDA), a key element of the Fingal Ecological Network. This audit will make a direct contribution to this strategy and the role of the golf course within this network is referenced throughout this report.

Methods

2.7 Audit preparation involved a combination of desk study and primary data gathering. Desk study sources included a range of on-line resources including the National Biodiversity Data Centre (NBDC)[3] and the National Parks and Wildlife Service website[4].

2.8 The site was visited by three ecologists on 30th April 2024. The purpose of the visit was to:

a) Map the habitats across the entire golf course site;
b) Compile a species list and assess the potential for key species at the site and
c) Identify any threats, issues and opportunities for biodiversity.

[1] All-Ireland Pollinator Plan 2021-2025. National Biodiversity Data Centre Series No. 25, Waterford. March 2021.
[2] https://sustainableskerries.com/
[3] https://maps.biodiversityireland.ie/Dataset
[4] https://www.npws.ie/

2.9 The protected species assessment was undertaken by Clive Mellon MCIEEM, Director of Allen and Mellon Environmental, and the invertebrate / pollinator assessment by Anna Hart ACIEEM BSc. Hons. Consultant Ecologist with Allen and Mellon Environmental. Habitat mapping was carried out by Melanie Flexen using the Fossit habitat classification. Mel is an experienced botanist who specialises in habitat survey and classification with extensive expertise in National Vegetation Classification (Phase 2).

2.10 All parts of the golf course were accessible during the site visits although the playing corridor was avoided when golfers were present.

3. Golf and Biodiversity

3.1 Biological diversity – or biodiversity for short – describes the variety of life on our planet: all living plants and animals and the habitats and ecosystems upon which they (and we) depend.

3.2 Maintaining biodiversity and natural processes is essential for the health of the planet, providing a range of assets which society and the economy depend upon. The collective natural world of species, habitats, soils and water is often referred to as our "natural capital". This provides us with essential "ecosystem services" such as food, water, fuel, medicines, flood storage and carbon sequestration. Increasingly it has been recognised that these services also include well-being, recreation and aesthetic quality.

3.3 Unsustainable use of natural capital has led to a drastic loss of biodiversity and a breakdown of natural processes both locally and across the world, contributing to climate change which is now recognised as a significant threat to our way of life.

3.4 Golfing as a sport and industry has great potential for affecting natural capital both positively and negatively whether through course development or the management of non-playing areas. There is already compelling evidence that golf courses support a wealth of natural resources and in a recent UK study golf courses were found to support a greater diversity of birds, bees and ground beetles than the adjacent farmland[5].

3.5 Golf courses can cover large areas of land and non-playing areas often support diverse habitats such as woodland, wetlands, grasslands or coastal dunes. Whilst each individual golf course has a role to pay in biodiversity conservation, the sympathetic management of many golf courses could bring about significant cumulative benefits for wildlife.

3.6 This potential is increasingly being recognised and a number of initiatives in Ireland and in the UK have been designed to harness this. For example in Ireland the Golf Course Superintendents Association of Ireland supports the All-Ireland Pollinator Plan and has collaborated with the National Biodiversty Data Centre to produce guidelines for pollinator-friendly management[6].

[5] Tanner, Robert A. and Alan C. Gange. "Effects of golf courses on local biodiversity." Landscape and Urban Planning 71 (2005): 137-146.
[6] Pollinator-friendly management of: Golf Courses. All-Ireland Pollinator Plan, Guidelines 8. National Biodiversity Data CentreSeries No. 18, Waterford. April, 2019.

4. Biodiversity and the Law

4.1 Introduction

4.1.1 There are many laws and regulations relating to biodiversity and wildlife protection. This includes the protection of sites designated for their nature conservation interest in addition to species which are protected by law against illegal killing, disturbance or exploitation. The implications of these regulations for management of the golf course are set out in Section 8.

4.2 The Wildlife Acts 1976-2022

4.2.1 The most important wildlife protection legislation in Ireland is the Wildlife Act 1976 as amended over the years since then. Collectively the Acts are referred to as the Wildlife Acts 1976 – 2022.

Protection of Wild Birds and Animals

4.2.2 Except for certain exemptions, all wild birds, their nests and eggs are protected by law. This means, for example, that it is illegal to remove the nests of swallows and house martins, when there are eggs or chicks in the nest. It is also an offence to cut hedgerows or destroy vegetation on uncultivated land between the 1st March and the 31st August each year, in order to protect nesting birds.

4.2.3 The Wildlife Acts also contain a list of animal species which cannot be wilfully killed or injured without a special licence, subject to similar exemptions to those covering wild birds. The legislation protects their breeding places from wilful interference or destruction, and the Wildlife (Amendment) Act 2000 extends this protection to include resting places also. Many species on the protected list are mammals including bats, marine mammals, otter, badger and red squirrel.

Protection of Wild Plants

4.2.4 It is an offence to cut, pick, uproot or take the flowers of any species protected by a Flora Protection Order. The 2022 Flora Protection Order lists 89 vascular plant species which are protected along with 40 mosses, 25 liverworts, two stoneworts and one lichen species.

4.3 European Protected Species

4.3.1 Some species are also strictly protected by European legislation such as the EU Habitats Directive which is transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended).

4.3.2 These European Protected Species include otters and all species of bats which are likely to be of relevance to golf course management.

4.4 Protected Sites

Sites of European Importance – Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)

4.4.1 Special Protection Areas (SPAs) are areas that are of European importance specifically for bird species under the 1979 EU Directive on the Conservation of Wild Birds, otherwise known as the

Birds Directive. As a member of the EU, it is required that Ireland designates any site that meets the ecological criteria laid out.

4.4.2 Special Areas of Conservation (SACs) are areas that are of European Importance for important habitats, plants and animals other than birds. These are designated under the 1992 EU Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, otherwise known as the Habitats Directive. They are selected on a specific set of criteria that relate to habitats and species that are considered to be particularly important, rare or vulnerable in Europe.

4.4.3 Together, SPAs and SACs make up a European network of sites known as the Natura 2000 network, protected under Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). These regulations lay out rigorous tests that are designed to ensure that Natura 2000 sites are not impacted by plans or projects, except those with the highest levels of justification. Even if such a proposal is allowed, it is necessary to ensure that compensation is provided to maintain the coherence of the Natura 2000 network.

Sites of National Importance – Natural Heritage Areas and Proposed Natural Heritage Areas

4.4.4 Natural Heritage Areas (NHAs) are areas considered to be of importance for wildlife at a national level. The Wildlife (Amendment) Act 2000 provides a statutory basis for these sites which are legally protected from damage from the date they are formally proposed for designation. In addition, there are 630 proposed NHAs (pNHAs), which have not since been statutorily proposed or designated. These are afforded some limited protection including recognition of ther ecological value by planning and licencing authorities.

Designated sites near Skerries Golf Course

4.4.5 Skerries Golf Course is not within or adjacent to any statutory nature conservation sites. The closest statutory site is the North-West Irish Sea SPA which includes the marine area just over 1 kilometre east of the course. This large marine SPA was only classified in 2023 and supports an important assemblage of breeding and non-breeding seabirds. The Skerries Islands SPA lies a little further offshore. These islands are of particular importance for breeding seabirds including cormorant *Phalacrocorax corax* and shag *Phalacrocorax aristotelis.*

4.4.6 The closest pNHA is the Loughshinny Coast a site of primarily geological interest which is approximately 1.8 kilomteres to the east of the golf course.

5. Skerries Golf Club Habitats

5.1 Methodology

5.1.1 A habitat survey of the Skerries Golf Course was carried out on 30th April 2024 by Melanie Flexen for Allen and Mellon Environmental. Access to the site was largely unrestricted although some of the grassy areas in the playing areas of the golf course were not directly surveyed for health and safety reasons and to minimise disturbance to playing golfers.

5.1.2 Prior to fieldwork, land parcels were digitised using Quantum GIS software (QGIS) to improve survey efficiency. Mapping was carried out in the field using aerial photography with post-fieldwork editing to digitised shapefiles. Habitats were mapped according to the Fossitt classification (Fossitt 2000[7]) and digitised to produce a colour-coded map (Appendix 1).

5.1.3 Distinct areas of habitat were represented as polygons or habitat parcels. Linear features such as lines of trees were mapped as polylines, and other singular features such as buildings or features of note were mapped as points (Appendix 2). Photographs were taken of key habitat parcels as well as other features of interest.

5.2 Habitat Survey Results

Habitat Overview

5.2.1 The golf course is situated close to Skerries, Co.Dublin, with site elevation ranging between 30 to 44m. The site comprises the Skerries Golf Course, club house and carpark, as well as other buildings, hard surface and storage areas. Much of the land cover within the 48.8 ha site comprises the playing corridor of fairways and associated greens and sand bunkers. Although the majority of grassland habitat is of improved amenity value, there are a few small less-managed grassland areas throughout the site.

5.2.2 The northern part of the golf course was formerly part of the Hacketstown Estate and the 1st Series Ordnance Survey map (1829-1842) illustrates the division of the estate by the new Dublin to Drogheda railway line. There are numerous blocks of planted trees and lines of trees within the golf course, some of which date back to the original estate. Woodland habitats account for approximately 14.3 ha, or almost 30% of the site.

5.2.3 There are two sections of stream and seasonally wet drains across the course, although the only small pond on the site is currently being filled in. All habitat types recorded within the site are listed in Table 1.

Grassland

5.2.4 **Amenity grassland** *(Fossitt GA2) (Figure 2)*
Amenity grassland includes the greens and fairways on the golf course which have very short mown grass and are generally species-poor. Adjacent areas of short rough which is mowed weekly have

[7] Fossitt, J. A. (2000) A Guide to Habitats in Ireland. The Heritage Council

also been included here. This habitat comprises the vast majority of the site, although the fairways are often separated by lines of trees which add diversity to the landscape. Such intensively managed grassland is generally of limited biodiversity value.

Table 1 Habitats Recorded (Fossitt)

Habitat Code	**Habitat Description**
BL3	Buildings & Artificial Surfaces
ED2	Spoil and bare ground
ED3	Re-colonsing bare ground
FS1	Swamp
FW2	Streams
FW4	Drainage ditches
GA2	Amenity Grassland (improved)
GS1	Neutral Grassland
WD1	Mixed Broadleaved Woodland
WD2	Mixed Broadleaved / Conifer Woodland
WD3	Mixed Conifer Woodland
WD5	Scattered Trees and Parkland
WL1	Hedgerows
WL2	Tree lines
WS1	Scrub
WS3	Ornamental / Non-native Shrubs

5.2.5 **Neutral Grassland** *(Fossitt GS1) (Figure 3)*

A small damp area of mown neutral grassland occurs between woodland strips adjacent to the 8th and 17th hole (TN2). Plant species include dandelion *Taraxacum officinale* agg, daisy, broad-leaved plantain *Plantago major* and lesser celandine *Ranunculus ficaria.*

5.2.6 There is a small area of long rough located east of the 7th hole which is species-poor (TN3, Figure 3). Plant species recorded here include yorkshire fog *Holcus lanatus*, creeping bent *Agrostis stolonifera*, creeping buttercup *Ranunculus repens*, daisy and dandelion.

Figure 2 Golf course amenity grassland

Figure 3 Neutral grassland

Woodland Habitats

5.2.7 **Mixed broadleaved woodland (WD1), Mixed broadleaved/conifer woodland (WD2), Mixed conifer woodland (WD3)**

These three woodland types are classified depending on the proportion of broadleaved trees to conifers. Most of the woodland blocks have a mixture of broadleaved and conifer species (Figure 4) often with mature or semi-mature trees. Wide lines of mature trees have also been included as woodland strips (Figure 5).

5.2.8 Broadleaved trees present include sycamore *Acer pseudoplatanus*, lime *Tilia* sp., beech *Fagus sylvatica*, birch *Betula* spp. oak *Quercus* spp., horse-chestnut *Aescuclus hippocastanum* and alder *Alnus* spp. The highest quality woodland is the strip of mature trees along the road in the north-west of the site (TN 4), including some veteran beech trees, which has been present since the Hacketstown Estate. Ground flora in this area includes ferns, ivy *Hedera helix*, nettles *Urtica dioica*, hogweed *Heracleum sphondylium* and bramble *Rubus fruticosus*.

5.2.9 Many of the planted conifers are Scot's pine *Pinus sylvestris,* with a few specimens of other conifer species including cypress *Cupressus/Chaemecyparis*, larch *Larix* sp. and cedar of Lebanon *Cedrus libani*. The large block of conifer woodland in the west of the site (TN5) includes one of the oldest trees on the site, a Monterey pine *Pinus radiate* which presumably also dates from the original demesne (Fig. 6). The ground flora of this woodland is generally poor and sparse with herb robert *Geranium robertianum*, ivy, bramble, elder *Sambucus nigra* and occasional sycamore saplings.

5.2.10 **Scattered trees (WD5)**

There are numerous areas planted with clusters of younger native and ornamental broadleaved trees (Fig. 7). The grass below these trees is usually mown.

Figure 4 Typical block of mixed broadleaved/conifer woodland

5.2.11 **Scrub (WS1)**

Two small areas have been classified as scrub habitat. The south-east corner of the course adjacent to the railway line has a small dense area of bramble and gorse *Ulex europaeus*. Along the road there is a scrubby area adjacent to woodland with bramble, blackthorn *Prunus spinosa* and nettle.

5.2.12 **Ornamental/non-native shrub (WS3)**

A small area of ornamental shrubs and small trees is present including Portuguese laurel *Prunus lusitanica*, hebe, flowering cherry and *Pittosporum* (TN6). Although these are exotic non-native species some of these shrubs can be important for pollinators. A long bed with low flowering shrubs is also nearby.

Figure 5 Line of mature lime trees

Figure 6 Veteran Monterey pine

5.2.13 **Hedgerows (WL1)**

Hedgerows flank most of the golf course boundaries and some of these are long-established, forming the boundaries of the old Hacketstown Demesne (Fig. 8 & 9). Most of the boundary hedges are in excellent condition as they are not intensively managed, and many support mature trees, such as ash and sycamore. The main shrub species is hawthorn *Crataegus monogyna* with occasional elder, bramble, blackthorn and gorse present.

5.2.14 Many of the hedges have been established for many years and are of high biodiversity value. There is one recently planted replacement hawthorn hedge along the boundary fence with the railway at the extended yard (TN7). A small number of clipped non-native hedges have been planted with species including *Griselinia, Leylandii* and cherry laurel *Prunus laurocerasus.*

5.2.15 Banks below the hedgerows have mainly ivy and weedy species such as alexanders *Smyrmium olusatrum*, bush vetch *Vicia sepium*, cleavers, nettle, spear thistle *Cirsium vulgare,* creeping thistle *Cirsium arvense* and prickly sow thistle *Sonchus asper*. There is also frequent primrose *Primula vulgaris* and ferns on a hedge bank in the west of the course (TN8, Fig. 10). However, many of the banks appear to have been sprayed with herbicide.

5.2.16 **Lines of trees (WL2)**

Several lines of planted trees occur cross the course, with the wider examples included as strips of woodland (see above).

Figure 7 Scattered broadleaved trees

Figure 8 Mature hawthorn hedge on boundary of golf course.

Figure 9 Hedge with mature trees and seasonally wet ditch.

Figure 10 Primroses along bank below hedge

Wetland Habitats

5.2.17 **Streams (FW2)**

Two sections of a natural shallow stream are present on the site (Fig. 11). These are the only remaining sections of the stream which used to form the southern boundary of the Hacketstown Estate as the remainder has been culverted to flow underneath the golf course.

5.2.18 **Drainage ditches (FW4)**

There are a number of artificial drainage ditches across the course (Fig. 12) and shallow water was flowing within some of these at time of survey. Watercress *Nasturtium officinale* is present in some of these although the steep banks have been sprayed with herbicide and are now dominated by mosses. Seasonally wet ditches also occur along the base of some of the boundary hedges.

5.2.19 **Swamp (FS1)**

A small disturbed fragment of marshy habitat remained at the location of the infilled pond at the time of the visit (TN9, Fig. 13). Common reed *Phragmites australis* was present with other wetland species including greater willowherb *Epilobium hirsutum* and the non-native invasive species skunk cabbage *Lysichiton americanus*, along with nettle and bindweed. There is an associated small stream with water cress and fool's water cress *Apium nodiflorum*.

5.2.20 At the south-western corner of the site a small area of swamp vegetation is concealed by a dense thicket of willow and alder with rank tall ruderal vegetation (TN11). This area was not accessible during the survey but a remnant of open water may be present and this area has potential for further investigation and possibly enhancement.

Figure 11 Natural stream section

Figure 12 Drainage ditch with sprayed banks

Figure 13 Remnants of wetland habitat at edge of infilled pond

Disturbed ground

5.2.21 **Spoil and bare ground (ED2)**

These are temporary areas of disturbed ground and heaps of earth or spoil, for example due to the infilling of the former pond (TN9, Fig. 13) and elsewhere on site.

5.2.22 **Recolonising bare ground (ED3)**

There are several locations around the edges of the golf course where grass cuttings and other mateials have been dumped. These areas are revegetating and have been colonised by tall ruderal species including nettle *Urtica dioica*, broad-leaved dock *Rumex obtusifolius*, cleavers *Galium aparine*, alexanders and hogweed, also with some bramble and gorse scrub (Fig.14).

5.2.23 More recently dumped earth has annual species such as charlock *Brassica arvensis*, rape *Brassica napus*, chickweed *Stellaria media*, common fumitory *Fumaria officinalis* and shepherds purse *Capsella bursa-pastoris*. The tall bank created near the second entrance to the golf course also has frequent knapweed *Centaurea nigra* and couch grass *Elymus repens* (TN10).

5.2.24 These areas can be very valuable for pollinating invertebrates with plentiful supplies of nectar from the flowering plants (Fig. 15) and potential nesting sites for bees and other species in any patches of bare ground.

Figure 14 Tall ruderal vegetation on recolonised spoil

Figure 15 Area of importance for pollinators

6. Skerries Golf Club Wildlife

6.1 Species Data

6.1.1 The National Biodiversity Data Centre (NBDC) database was searched for species records from the Stackstown area. The golf course falls within the 10 km square O25 and all records from that square along with records from within the golf course boundary have been collated and are contained in a spreadsheet which accompanies this report as a separate appendix. The following sections highlight the most notable of these records along with species information obtained during the site visits.

6.2 Birds

6.2.1 The timing of the visit at the end of April permitted the recording of a breeding bird assemblage. A typical assemblage of common or widespread bird species associated with woodland and hedgerows was recorded during the site visit (Appendix 4). No species which are red-listed as species of conservation concern were recorded[8], but a number of amber-listed species were seen including goldcrest, swallow, greenfinch and starling. Skylarks (also Amber-listed) were recorded singing from the adjacent farmland.

6.2.2 Of particular note is the population of nesting rooks *Corvus frugilegus* which is located within two areas of the course (Fig. 16). One rookery (c.20 nests) is located within the linear mixed plantation which separates the 1st and 18th hole fairways whilst the other smaller colony (8 nests) is within the old beech trees at the northern boundary of the site (Fig. 17).

Figure 16 Location of rookeries

Figure 17 Rookery in beech trees

[8] Gilbert, Gillian & Stanbury, Andrew & Lewis, Lesley. (2021). Birds of Conservation Concern in Ireland 4:2020-2026. 43. 1-22.

6.2.3 In addition to the bird species recorded during the site visit, there are records of other species of interest both from the NBDC database and birds seen by members and club staff[9]. These include red-listed bird of prey species such as barn owl *Tyto alba* and kestrel *Falco tinnunculus.* It is unknown how recently these species have been seen around the golf club, but the database includes recent (2022 & 2023) records of both species from square O25.

6.2.4 Both barn owls and kestrels are rare and declining species often associated with rough grassland and areas of mixed farmland. The golf course does not currently support any significant areas of suitable habitat for these species and so the birds seen are likely to have been associated with the adjacent farmland habitats.

6.3 Mammals

6.3.1 Sightings or evidence of seven mammal species was recorded during the site visit on 30th April.

- Brown rat *Rattus norvegicus*
- Eurasian badger *Meles meles*
- Eurasian hedgehog *Erinaceus europaeus*
- European rabbit *Oryctolagus cuniculus*
- Fox *Vulpes vulpes*
- Grey squirrel *Sciurus carolinensis*
- Irish hare *Lepus timidus hibernicus*

6.3.2 Of these badger, hedgehog and Irish hare are protected under the Wildlife Acts. Other protected species which have been recorded from the golf course are the pine marten *Martes martes,* pygmy shrew *Sorex minutus* and the stoat *Mustela erminea.* Otters *Lutra lutra* are protected under European legislation but there is no suitable habitat for this species at Skerries golf course.

Protected species - Bats

Bat suitability assessment – foraging and commuting

6.3.3 Although bats are often seen by Members and staff around the club house and Golf Links Road the species involved are unknown. There are records of 6 bat species from the Skerries Golf Club area on the NBDC database. These are:

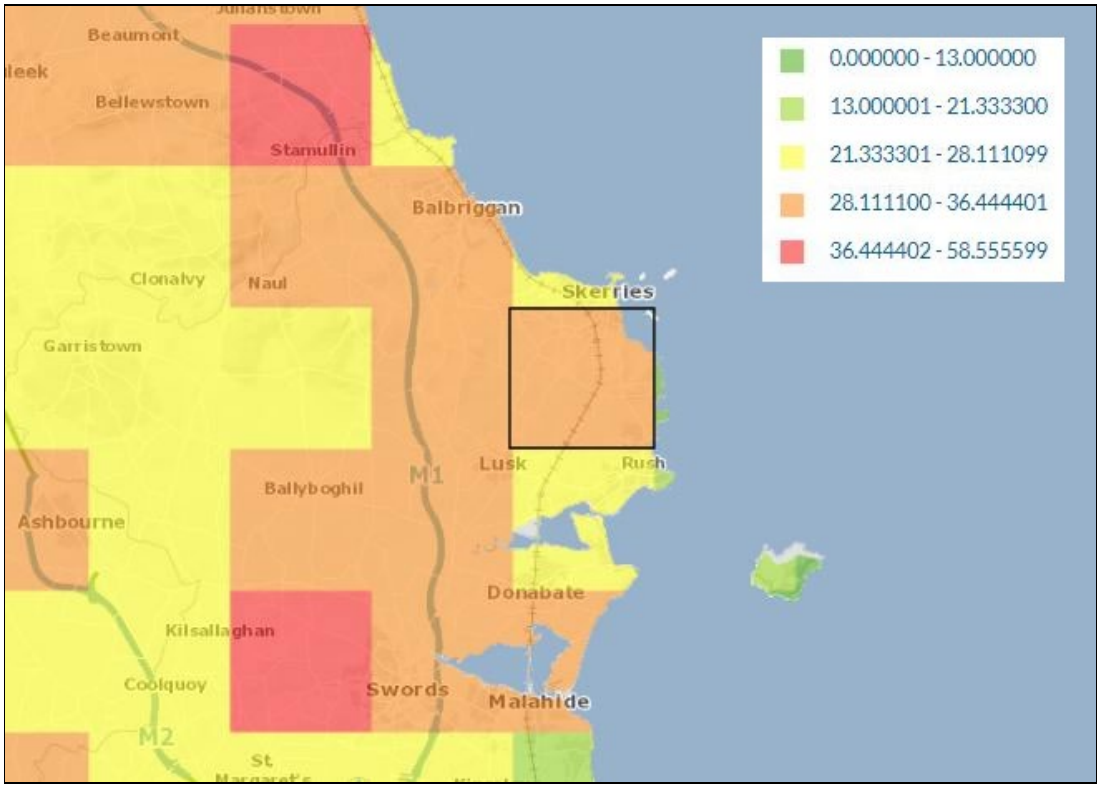
- Common pipistrelle *Pipistrellus pipistrellus*
- Soprano pipistrelle *Pipistellus pygmaeus*
- Nathusius' pipistrelle *Pipistrellus nathusii*
- Daubenton's bat *Myotis daubentoni*
- Leisler's bat *Nyctalus leisleri*
- Brown long-eared bat *Plecotus auritus*

6.3.4 The scattered trees, wooded areas and boundary hedges around the golf course all present good opportunities for foraging or commuting bats. Data from the bat landscape suitability resource[10] [11]shows that the golf course lies within a landscape of moderate to high suitability for

[9] Skerries Golf Club Integrated Environmental Management Plan 2023 -2028
[10] https://maps.biodiversityireland.ie/Map

bats (Fig. 18). The database indicates that the site is of particular suitability for five of the species listed above from the NBDC database. The exception is Nathusius's pipistrelle which is a rare species in this part of Ireland and there is only one record of this species from the Skerries area in August 2009.

Figure 18 Bat landscapes map for Skerries



Bat suitability assessment – roosting

6.3.5 Many of the more mature trees on the golf course, especially the beech trees, have potential to support roosting bats within crevices, knot holes or even in thick ivy cover. These trees should not be felled or pruned without a bat assessment and survey being carried out, as destruction of a bat roost is prohibited under both National and European legislation.

6.3.6 Some of the best examples of potential bat roost trees have been recorded and mapped in Appendix 5. Details of each tree are set out in Table 2. These trees were all classified as having moderate or high suitability for roosting bats, but to be safe all mature trees should be surveyed before they are pruned or felled.

[11] Lundy MG, Aughney T, Montgomery WI, Roche N (2011) Landscape conservation for Irish bats & species specific roosting characteristics. Bat Conservation Ireland.

Table 2 Trees of Moderate – High Bat Roost Potential

Number	Species	Location	Potential Roost Features (PRFs)
1	Beech	O 2494 5866	• cavities and knot holes
2	Beech	O 2483 5871	• cavities and knot holes
3	Beech (group)	O 2454 5850	• cavities and knot holes
4	Lime (row)	O 2491 5875	• knot holes
5	Beech	O 2488 5872	• cavities and knot holes
6	Sycamore & Oak	O 2447 5836	• line of trees with thick ivy and crevices
7	Cedar sp.	O 2480 5795	• fluting in main stem
8	Beech	O 2492 5846	• cavities and knot holes

Figure 19 Trees No. 1 & 2

6.3.7 A preliminary roost assessment was carried out of the club house building and Pro shop. The club house has red brick walls, extensive areas of glass and a pitched roof with traditional slates and an array of solar panels on the southern side (Fig. 20).

Figure 20 Club house building from the south

6.3.8 The building supports a number of potential roost features (PRFs) including:

- gaps in PVC soffits and fascia boards beneath roof (Fig. 21)
- small gap under ridge tiles
- gaps between slats and under lead flashing in roof dormers (Fig. 21)
- gaps under solar panels

6.3.9 The Pro shop has a close-fitting metal tiled roof and PVC soffits / fascias with little potential for bats to access the building.

6.3.10 The assessment concluded that the club house has moderate bat roost potential and the pro shop low bat roost potential. Any works on the roofs or upper walls of these buildings should be preceded by a detailed assessment and if required bat emergence surveys to establish whether bats are present.

Figure 21 Potential Roost Features in clubhouse

Protected species – Badgers

6.3.11 Mammal tracks and feeding scuff marks were found in the overgrown area at the south-west corner of the site and it is considered likely that these were made by badgers (Fig. 22). No sett was found but much of this area is inaccessible due to dense vegetation and there are many suitable hedge banks in the surrounding agricultural land which could support a badger sett.

Figure 22 Mammal tracks

6.4 Amphibians

6.4.1 No amphibians were recorded during the field visit and there is little suitable habitat for these species particularly following drainage of the small pond. The hidden "pond" at Target Note 11 may have sufficient standing water to support common frogs *Rana temporaria* or smooth newts *Lissotriton vulgaris* and this area should be investigated for its potential for these species.

6.5 Invertebrates

6.5.1 The field visit was undertaken on a cool day in April with a moderate breeze and so only a small selection of invertebrates was recorded (see Appendix 6). This includes two rarely recorded species of carabid beetles *Leistus fulvibarbus* and *Paradromius linearis* with 3 and 7 NBDC records respectively.

6.5.2 The old hedgerows around the golf course boundary are of particular interest for invertebrate communities, supporting species such as Hairy (Sloe) shieldbug (Fig. 23). The golf course has potential to be managed positively for key pollinators and other invertebrate species, for example through creation of meadow grassland and banks of bare earth where bees and other insects can nest. Some of these opportunities are explored in Section 9.

Figure 23 Hairy (Sloe) shieldbug *Dolycoris baccarum*

6.5.2 Areas of importance for invertebrates include:

- exposed earth mounds and banks (especially south facing)
- areas of rough grassland or tall ruderal vegetation with abundant native flowering plants
- well-established native hedgerows and woodland
- old stone walls (especially when vegetated)
- flowering plants and shrubs attractive to pollinators

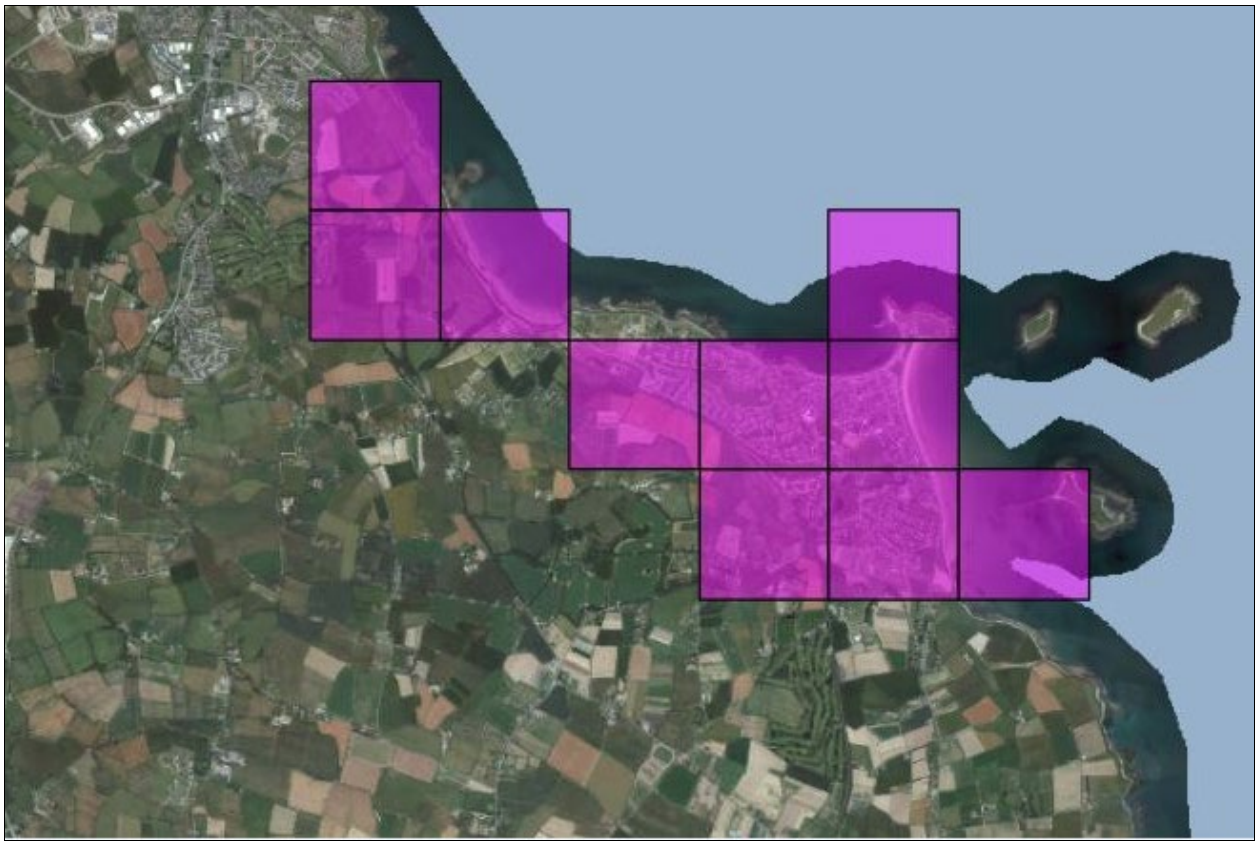
Large Carder Bee *Bombus muscorum*

6.5.3 The Large Carder Bee (also known as the Moss Carder) has been identified by Sustainable Skerries as a flagship species for biodiversity in Skerries. It is listed as Near Threatened in Ireland, but has continued to decline across its range leading to a classification of Vulnerable on the European Bee Red List in 2014. It is becoming increasingly restricted to coastal areas in Ireland where it can be found in species-rich grasslands.

6.5.4 An action plan[12] has been prepared which sets out a number of simple actions designed to improve the extent and quality of habitat for the species. Although the bee has not been recorded from the golf course it occurs just a short distance to the north (Fig. 24). The bee favours kidney vetch *Anthyllis vulneraria,* but the action plan lists a number of plant species which are also attractive to the bees, including common species such as dandelion *Taraxacum agg.*, red clover *Trifolium pratense,* white clover *Trifolium repens* and common knapweed *Centaurea nigra.*

6.5.5 It is important that the golf course plays a part in the implementation of this plan by providing areas of meadow and encouraging these species to flourish. It is thought that the bees do not move large distances from their nest so it is important that frequent stepping stones of suitable habitat are provided to enable the bees to survive and spread.

Figure 24 Distribution of the Large Carder Bee in Skerries



[12] Barron, S.J., (2021) Action Plan for the Large Carder Bee, Skerries Co. Dublin. A report for Sustainable Skerries.

6.6 Fungi & Lichens

6.6.1 Fungi are an important part of soil biodiversity, and are closely interlinked with vegetation and carbon and nutrient cycling. As a result, they are major drivers of soil health and carbon sequestration, among other ecosystem functions. Golf courses can support a wide diversity of fungi species particularly from late summer, but few were recorded during the field visit in spring. However the rarely recorded Alexanders rust *Puccinia smyrnii* was found to be widespread on the Alexanders *Smyrnium olusatrum* growing in the boundary hedges.

6.6.2 Lichens are a complex life form that is a symbiotic partnership of two separate organisms, a fungus and an alga. They often signify good air quality since most lichens are very sensitive to air pollution and so won't grow if there are high levels of pollutants. Several trees within the golf course supported excellent lichen communities such as this young tree between the club house and the Pro shop (Fig. 25).

Figure 25 Tree with rich lichen community

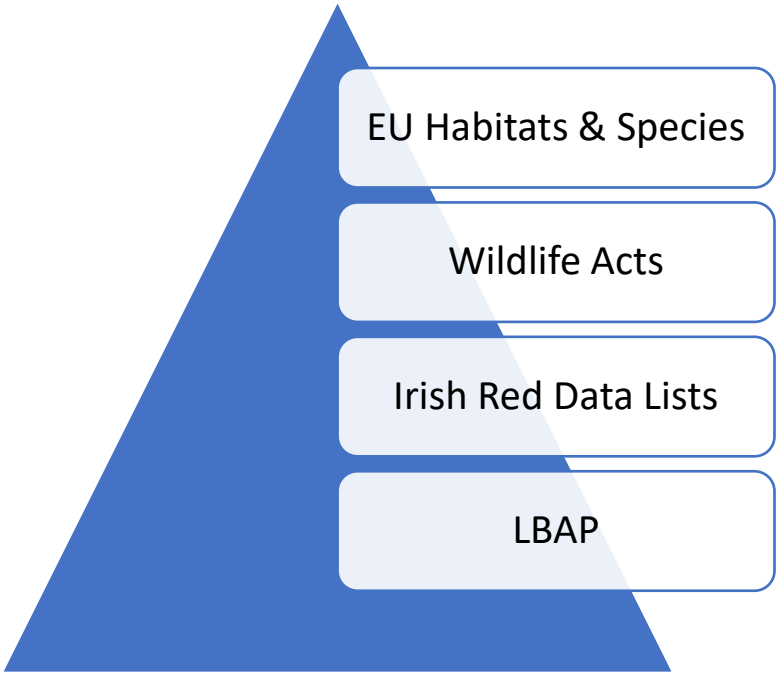
7. Evaluation of Skerries Golf Club's Biodiversity

7.1 Introduction

7.1.1 Whilst the diversity of species is important in its own right, it is also important to assess which of the species and habitats are important in both a local and wider context. This is achieved by adopting a hierarchy of criteria identifying species and habitats which are scarce, endangered or protected by legislation (Fig. 26). This hierarchy identifies the following:

- Species and habitats protected by European law
- Species protected by domestic law (e.g. Wildlife Acts)
- Species listed in Irish Red Data Lists – these lists identify species threatened with extinction
- Species and habitats identified in Dun-Laoghaire-Rathdown Biodiversity Action Plan

Figure 26 Hierarchy of Biodiversity Importance



7.2 European Habitats

7.2.1 There are no EU listed habitats represented within the golf course.

7.3 European Species

7.3.1 All bat species are listed in Annex IV of the EU Habitats Directive which requires all Member States to establish a strict protection regime for these species. The golf course is of moderate to high suitability for foraging, commuting and roosting bats. In particular the mature beech trees at the north of the site present many opportunities for roosting bats, whilst the tree lines and mature boundary hedges provide excellent corridors for foraging and commuting. In addition the club house was assessed as having moderate suitability for roosting bats.

7.4 Wildlife Acts

7.4.1 Skerries golf course supports a variety of other species which are protected by the Wildlife Acts, including all wild birds which are protected during the breeding season (March to August). Other protected species include the badger, hedgehog and Irish hare which have all been recorded in the area.

7.5 Red Data Book Species

7.5.1 Whilst many species listed in the Red Data Books do not have statutory protection, the RDB process seeks to identify species which are at risk and therefore need conservation action. No Red Data Book endangered species were recorded during fieldwork although the Near Threatened Large Carder Bee *Bombus muscorum* is a speciality of the Skerries area and subject to its own Action Plan (see Section 6.5). Further survey work would be required to establish whether the site supports any RDB species, particularly invertebrates.

7.5.2 The equivalent of the RDB lists for birds is Birds of Conservation Concern in Ireland which presents a traffic-light list in which the Red-listed specieas are of greatest conservation concern[13]. Red-listed species such as barn owl and kestrel have been recorded in the past whilst several amber-listed species (including starling and swallow) are known to breed within the golf course.

Table 3 Key attributes at Skerries based on current knowledge

Attribute	***Description***
Designated sites	None
Habitats of European Importance (Annex I)	None
European Protected Species	Bat species
Wildlife Acts protected species	Wild birds Badger, hedgehog, Irish hare, stoat, pygmy shrew
Red List Birds	(Barn owl, kestrel)
Amber list birds	Goldcrest, starling, swallow, herring gull, house martin, greenfinch
Other Red Data Species	Not known Potential for *Bombus muscorum*
Local Biodiversity Action Plan	Hedgerows Woodland Potential for Pollinators

[13] Gilbert G, Stanbury A and Lewis L (2021), "Birds of Conservation Concern in Ireland 2020 –2026". Irish Birds 43: 1–22

8. Biodiversity Constraints

8.1 Protected Species

8.1.1 Species protected by European legislation (e.g. bats) have the strictest protection. In particularit is an offence to:

(a) deliberately capture or kill any specimen of these species in the wild,

(b) deliberately disturb these species particularly during the period of breeding, rearing, hibernation and migration,

(c) damage or destroy a breeding site or resting place of such an animal.

8.1.2 At Skerries this is relevant to the protection of potential bat roosts particularly at the club house and in the larger trees around the site. Any proposed work involving trees or buildings should therefore be preceded by an ecological survey or assessment relating to bats (see also Section 9).

8.1.3 The most obvious constraint in respect of the species protected under the Wildlife Acts involves nesting birds. With some exceptions all wild birds, their nests and eggs are fully protected. The nesting season is between March 1st and the August 31st each year and it is an offence to cut or remove vegetation such as hedges, trees or bushes during this period. Care should also be taken to avoid disturbance to any birds nesting in or around buildings including the clubhouse.

8.2 Invasive Species

8.2.1 Alien invasive species of plant and animal pose a serious threat to our native wildlife and natural habitats. Legislation has been introduced to prevent the illegal introduction or spread of certain species. The European Communities (Birds and Natural Habitats) Regulations 2011 contain a list of 76 plant and animal species for which restrictions apply in relation to breeding, planting or causing them to spread.

8.2.2 Regulation 49 of the 2011 Regulations states:
Save in accordance with a licence granted under paragraph (7), any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place specified in relation to such plant in the third column of Part 1 of the Third Schedule, any plant which is included in Part 1 of the Third Schedule, shall be guilty of an offence.

8.2.3 American Skunk Cabbage *Lysichiton americanus* is listed in this Schedule and this species was found at the remnant swamp on the site of the former pond (TN 9) (Fig. 27). Skunk cabbage was once commonly planted at garden ponds and other artifiifcal sites and is considered to currently be a minor risk in Ireland[14]. However if introduced to high quality wetlands the plant could proliferate to the detriment of native species.

[14] https://species.biodiversityireland.ie/profile.php?taxonId=43099&taxonName=Lysichiton

Figure 27 American skunk cabbage leaves (TN9)

8.2.4 The Fingal Biodiversity Action Plan also identifies invasive species as a key threat to the area's natural heritage. The plan highlights cherry laurel *Prunus laurocerasus* in particular as a problem for woodlands since it casts a dense shade and prevents native species from becoming established. As a result of the cherry laurel's potential effects on native woodlabnds it is classified as high impact invasive species in Ireland[15].

8.2.4 Cherry laurel has been planted for hedging in some locations within the golf course. A section of the old native boundary hedge parallel to the 11th fairway has been under-planted with cherry laurel (Fig. 28) and this could reduce the value of this hedge for wildlife over time. It is recommended that the planting of this species should be discontinued under this plan.

8.2.5 The Eastern grey squirrel *Sciurus carolinensis*is the most high profile non-native animal species which occurs within the golf course. This animal is now found across the north and east of Ieland and has been classified as a High Impact Invasive Species due to its negative effect on the native Eurasian red squirrel population.

8.2.6 There are no known populations of red squirrel in the Skerries area. However grey squirrels can impact upon other native wildlife through predation of birds eggs and nestlings and they are controlled throughout the year around the golf course (Calvey 2023).

[15] Kelly, J., O'Flynn, C., and Maguire, C. 2013. Risk analysis and prioritisation for invasive and non-native species in Ireland and Northern Ireland. A report prepared for NIEA and NPWS as part of Invasive Species Ireland.

Figure 28 Cherry laurel planted under native mature hedgerow

9. Opportunities & Actions

9.1 Introduction

9.1.1 In this section we highlight a range of potential opportunities for biodiversity enhancement at Skerries golf course and list a number of management options. The section also includes a number of recommended actions relating to the constraints identified in Section 8. All of these actions are summarised in Appendix 6.

9.2 Fingal Biodiversity Action Plan 2023-2030[16]

9.2.1 The new Biodiversity Action Plan for Fingal introduced in October 2023 sets out a range of actions for the Council and its partners. Of particular resonance are the actions in relation to pollinators and the All-Ireland Pollinator Plan since it highlights the need for raising awareness and collaboration with other authorities. Creating and maintaining wildlife corrdors as part of the county-wide Fingal Ecological Network is also something the golf club can contribute to.

9.2.2 The Fingal Biodiversity Action Plan identifies the golf course as a Nature Development Area (NDA), a key element of the Fingal Ecological Network (Appendix 7). The NDAs are areas where it has been identified that nature conservation can be combined with existing land uses such as golf courses. These sites can act as stepping stones to connect areas of high ecological value. There are 24 golf courses in Fingal and it is the aim of the Biodiversity Strategy that many of these will develop and implement ecological management plans by 2030. This report provides an opportunity for collaboration between the Golf Club and the Council in order to maximise the potential of the Nature Development Area.

9.3 Grassland management

Action G1 – Manage the identified meadow areas for biodiversity

9.3.1 Areas of intensively mown amenity grassland outside the playing corridor should be managed for wildlife where possible. The benefits of grassland management include:

- Increasing cover of native flowering plants for pollinators and other invertebrates
- Increasing cover for small mammals (e.g. pygmy shrew) which in turn provide food for predators such as kestrels or owls

9.3.2 Several areas have already been identified for meadow creation (Calvey 2023) and these are target noted in Appendix 1 (TN1-3). Areas TN2 and TN3 are small shaded patches of long rough under the trees between fairways. Mowing has already been relaxed in these areas, and although they are currently species-poor, wild flowers such as creeping buttercup, daisy and dandelion are already providing diversity and food for invertebrates.

[16] https://www.fingal.ie/sites/default/files/2023-12/Fingal%20Biodiversity%20Action%20Plan%202023-2030.pdf

9.3.3 In all meadow areas the use of herbicides should be avoided and all grass cuttings should always be removed. This helps to reduce nutrient enrichment of the sward which will favour flowering plants over coarse grass species.

Southern Wildlife Corridor

9.3.4 Area TN1 (Fig. 29) provides an opportunity to manage a more significant area of grassland for biodiversity. This area, which extends to approximately 0.7 hectares, was still intensively managed as amenity grassland at the time of the field visit. This area will connect with the thick hedges and unmanaged dense vegetation along the southern boundary to form a Southern Wildlife Corridor

9.3.5 There are three management options for this area and it is recommended that at least 60% is managed under option A.

A. Grass mowed once annually in August or September and all the cuttings removed;
B. Grass managed for short-flowering meadows;
C. Sowing native wild flower seed with yellow rattle

9.3.6 Option A is the preferred option to encourage the development of rough grassland which over time supports an increasing proportion of native flowering plants such as clover, buttercups, dandelion and knapweed. The vegetation should be cut once per year in August or September and all cuttings must be removed. If there is vigorous growth over winter an additional cut could be made in February or March, provided all cuttings are again removed. Under this option uncut strips should be retained for sheltering invertebrates.

9.3.7 Option B involves cutting areas of grass on a 6-weekly rotation but no earlier than mid- April, which allows for a maximum of five cut and lifts per year. This approach allows some plants such as dandelions and clovers to flower, providing a food source for pollinators. This management would be ideal in sections where long grass is less acceptable to golfers. The recommended regime[17] is:

1. First cut mid-April – dandelions are an important source of nectar in early-spring
2. Second cut - end May
3. Third cut - mid/late July
4. Fourth cut - end August
5. Fifth cut - after mid-October

9.3.8 Option C could be trialled on small areas but only if 100% native wild flower mix can be sourced. Mixes with mostly perennial rather than annual plants should be used. The exception is Yellow rattle *Rhinanthus minor* an annual plant which draws nutrients from grass roots and encourages the growth of less robust flowering plants. Yellow rattle should be sowed in late summer after the grass has been cut. Once the cuttings have been lifted the area should be raked and scarified so that at least 50% bare soil is exposed, providing ideal conditions for the seeds to germinate. Other native wildflower seeds can be sown at the same time. The area may need an additional cut in early winter to give the yellow rattle space to germinate in February.

[17] Pollinator-friendly management of: Golf Courses. All-Ireland Pollinator Plan, Guidelines 8. National Biodiversity Data Centre Series No. 18, Waterford. April, 2019.

9.3.9 The earth mound within TN1 should be retained and managed so that flowering plants including thistles continue to be available for pollinators. In addition bare unvegetated banks should be created for invertebrates to use on the south facing slope of the mound.

9.3.10 This management area will enhance the nature-rich corridor along the southern boundary of the site, including the wet area at TN11 and will connect with the tall hedges in the adjacent farmland. The extent of the management area is illustrated in Appendix 3.

Action G2 – Investigate potential to introduce rotational mowing of selected played rough areas

9.3.11 Where possible, selected areas of played rough could be mown less frequently than currently and maintained at a higher level than the current 57mm. This would create a more diverse mosaic of grass structure which can beneft a wider range of plant and animal species. In all cases cut material should be removed to prevent thatching and nutrient build-up. It is recognised that this may not be suitable under current playing conditions.

Figure 29 Potential management area (TN1) – Southern Wildlife Corridor

Action G3 – Reduce use of herbicides

9.3.12 The use of herbicides (glyphosate) has prevented vegetation from establishing along many of the watercourses within the course which can significantly reduce biodiversity interest. In addition the control of vegetation under trees using herbicide has a negative effect on invertebrates which would ordinarily depend on basal vegetation under the trees.

9.3.13 Use of herbicides should be reduced where possible and avoided at all times within the identified Habitat Management Areas (Appendix 3). The development of vegetation could be encouraged alongside water features or beneath trees and hedges to enhance diversity of plants and invertebrates. It is recognised that this may not be possible for all areas under current playing conditions. Nevertheless opportunities should be identified to reduce or avoid spraying in these areas. For example a few internal ditches could be selected for re-wilding, as agreed by the Members.

9.3.14 Where control of growth is necessary in a specific area, hand pulling, weed-wiping or spot treatment could be used instead of widespread application. Pesticide-free areas are promoted through the All-Ireland Pollinator Plan and should be highlighted by signage (Fig. 30). Printable sign templates are available at www.pollinators.ie/resources.

9.3.15 Insecticides have not been used at Skerries for at least five years and this should be highlighted on information posters and materials.

Figure 30 Pesticide-free zone signage

9.4 Woodland & hedgerow management

Action W1 – Manage at least two woodland areas for wildlife enhancement (TN4 & TN5)

9.4.1 The wooded areas at TN4 & TN5 have been identified as areas for nature conservation enhancement (Calvey 2023) (see Appendix 3). These areas should be allowed to develop as naturally as possible with minimum intervention. The long-established woodland at TN4 is a remnant of the estate woodland and the under-storey should be permitted to develop and dead wood retained. All of the actions set out below should be applied to these areas.

Action W2 – Retain dead wood within woodland areas

9.4.2 Dead wood should always be retained in woodlands where it is safe to do so, as this is of high importance for invertebrates. This includes standing dead or dying trees, and even large stumps, which can provide cavities for roosting bats and nesting birds.

9.4.3 It was noted that piles of logs have been retained within some plantations where maintenance has been carried out (Fig. 31). This is good practice and is extremely important to retain and enhance invertebrate populations. Branches can also be assembled as habitat piles in the under-storey which can be used by nesting birds and hedgehogs.

Action W3 – Replace dead ash trees with native species

9.4.4 Ash dieback is affecting the ash trees in the woodland areas, which cannot be prevented. However, consideration should be given to options for replacing these in the future with other native trees such as sessile oak *Quercus petraea,* aspen *Populus tremula,* wych elm *Ulmus glabra* or alders *Alnus glutinosa* and willows *Salix spp.* in wetter areas.

Figure 31 Log pile in wooded area

Action W4 - Avoid cutting or removal of trees or scrub in the breeding bird season

9.4.5 No trees, scrub or other vegetation should be cut or removed between March 1st to August 31st to protect nesting birds.

Action W5 - Avoid dumping soil, cuttings or other materials in woodland areas

9.4.6 No sand, topsoil or other material should be deposited in the woodland areas at any time. Any such material should be removed from the site or deposited in an approved area away from woodland, species-rich grassland or water courses.

Action W6 – Maintain vegetation at the base of trees and hedges and avoid removal of all leaf litter

9.4.7 Where possible the vegetation at the base of trees and hedges should be retained and not regularly mowed or treated with herbicides. This is important because many species of invertebrate such as moth caterpillars feed on the trees then drop down to the ground to pupate and complete their life cycles in long vegetation or leaf litter.

Action W7 – All new planting should be with native species

9.4.8 Landscape planting around the golf course should always use native species. Suitable species include oak *Quercus sp.,* rowan *Sorbus aucuparia,* hawthorn *Crataegus monogyna,* birch *Betula sp.* and holly *Ilex aquifolium* since such species provide greater benefits for wildlife than exotic species. Further information can be obtained from the Irish Tree Council[18]. The planting of ash trees is not currently appropriate due to ash dieback disease. The planting of cherry laurel and other invasive non-native species should be avoided.

Action W8 - Complete protected species surveys in advance of woodland management

9.4.9 Any proposed removal or modification of mature or semi-mature trees should be preceded by a Bat Roost Potential (BRP) survey and further survey work if required. Any proposed removal of woodland, scrub or hedgerows should be preceded by a protected species survey to establish the presence of badgers and other protected species, including nesting birds.

Action W9 – Continue current management of boundary hedges

9.4.10 The current management regime for the boundary hedgerows involves light trimming every three to five years. This is good practice for hedgerows as it allows the plants to flower and produce fruit which benefits a wide range of wildlife.

9.5 Enhancement for species

Action SP1 – Increase pollinator-friendly planting around the clubhouse and course

9.5.1 Beds of flowering plants have been established around the club house and car park and these can provide excellent foraging opportunies for pollinators. Opportunities for increasing the extent of pollinator-friendly planting should be identified. Many non-native species can be excellent sources of nectar and perennial species such as wallflower, comfrey and lavender which grow back each year, are ideal. Detailed recommedations for a pollinator-friendly planting list are available at www.pollinators.ie/resources.

Action SP2 – Instal bee, bat and bird boxes in suitable areas and monitor their use

9.5.2 Bat, bird and bee boxes should be erected on suitable trees or posts throughout the site, to enhance roosting and nesting opportunities. Bat and bird boxes would be particularly useful in the

[18] https://www.treecouncil.ie/native-irish-trees

southern part of the course where there are fewer large trees with natural cavities. All boxes erected should be monitored to assess their use and effectiveness.

Action SP3 – Create and maintain earth banks for bees and other invertebrates

9.5.3 Unvegetated banks and slopes are very important for invertebrates, including mining bees which burrow into the soft earth to breed. Unshaded, south facing slopes are particularly valuable. There are a number of good examples throughout the golf course (Fig. 31) and these should be retained where possible. The earth mound located within the meadow creation area (TN1) should be retained (Fig. 31).

Action SP4 – Manage Habitat Management Area 6 area for pollinators

9.5.4 The area to the south of the maintenance yard has been disturbed due to recent building works and is currently recolonising with charlock *Brassica arvensis* and other flowering plants. These plants, along with the presence of bare earth are attractive to pollinators such as bees, hoverflies and other invertebrates. It is recommended that this area should be managed for invertebrates through a combination of:

i. Encouraging retention of existing nectar-rich species;
ii. Introducing native wild flower seeds or plugs including clover, knapweed and ox-eye daisy;
iii. Creation of bare areas and south facing earth banks;

Action SP5 – Enhance wildlife potential of ponds & watercourses

9.5.5 Wetland habitats, including standing water, are largely absent from the golf course which restricts the potential for aquatic species to be present. The remnant swamp area (TN9) should be retained and if possible a new pond should be created in this area.

9.5.6 The growth of vegetation around wet ditches should be encouraged where possible (see Action G3). For example with the agreement of Members, a small number of ditches could be identified for reduced treatment with herbicides and mowing.

9.5.7 The potential of the concealed wetland area at the south-west corner of the course (TN11) should be investigated. Access should be enabled (e.g through strimming of a pathway) and a survey of the habitats and fauna in the area undertaken. This would inform any future management options, including the potential to extend the area of open water.

9.5.8 Additional surveys are required to confirm the status of key species within the site. This will inform potential enhancement work or future management or development proposals. Where possible this monitoring should be undertaken by club Members or by local volunteers, perhaps through the Sustainable Skerries initiative. Suggestions for survey work could include:

- Bird / bat / bee box monitoring
- Roosting bats in key buildings and trees
- Monitoring of the rookeries
- Fungal survey of the site
- Pollinators / invertebrates

Figure 31 Exposed earth banks along hedgerow & meadow creation area (TN1)

Action SP6 – Obtain more data on key species

9.5.9 Sightings of the species discussed in this document should be reported, so that they can be recorded within the appropriate database. This will help the golf club to meet its biodiversity objectives and will contribute to wider biodiversity iniaitives (e.g. through the Fingal Biodiversity Action Plan). The National Biodiversity Data Centre[19] is a one-stop shop for biodiversity records.

9.6 Invasive Species

Action INV3 – Avoid any new planting of invasive species such as cherry laurel.

9.6.1 There should be no planting of species listed as medium or high impact invasive species within the golf course, including cherry laurel and rhododendron. If the former pond is restored, great care should be taken to avoid colonisation of alien invasive species such as American skunk cabbage or other species such as Parrot's feather *Myriophyllum aquaticum,* particularly if stocking the ponds with native aquatic species.

9.7 Community partnership

Action COMM1 – Involve club membership in biodiversity actions and initiatives

9.7.1 The golf club Members should be fully involved in biodiversity planning and initiatives. Measures for developing member participation include:

- Guided walks or talks by local experts;
- Provide signage and interpretation around the course;
- Use the website to promote intiaitives and post wildlife news in the clubhouse;
- Form a conservation committee of members who will consider biodiversity initiatives or undertake tasks such as erection and monitoring of bird boxes, citizen science projects or habitat management work.

[19] https://biodiversityireland.ie/

Action COMM2 – Seek partnerships with the local Council, neighbours and community groups

9.7.2 Joint initiatives should be established with local environmental and community groups and adjacent landowners. Potential initiatives could be as follows:

- Form linkages with Sustainable Skerries to tap into local initiatives and expertise;
- Implement the All-Ireland Pollinator Plan;
- Collaborate with Fingal Council to maximise the potential of the Nature Development Area ;
- Involve the community in survey and monitoring work.

APPENDICES

Appendix 1 Fossit Habitat Map & Target Notes (see Table)

TARGET NOTE (TN) NUMBER	DESCRIPTION
1	Southern Wildlife Corridor – meadow management
2	Neutral grassland – meadow management
3	Neutral grassland – meadow management
4	Broad-leaved woodland – minimal intervention management
5	Conifer woodland – minimal intervention management
6	Ornamental planting
7	New hawthorn hedge
8	Hedge bank with primroses
9	Former pond
10	Bank with ruderal vegetation
11	Dense vegetation with concealed pond

Appendix 2 Linear habitat features

Appendix 3 Habitat Management Areas

1. Southern Wildlife Corridor (TN1)
2. Meadow management area (TN2)
3. Meadow management area (TN3)
4. Old estate woodland (TN4) – minimal intervention
5. Conifer plantation (TN5) – minimal intervention
6. Management for pollinators

Appendix 4 Bird species recorded in Golf Course (30th April 2024)

Species (common name)	Species (Scientific name)	Status (Red/Amber/Green List)[20]
Blackbird	*Turdus merula*	Green
Blackcap	*Sylvia atricapilla*	Green
Blue tit	*Cyanistes caeruleus*	Green
Bullfinch	*Pyrrhula pyrrhula*	Green
Chaffinch	*Fringilla coelebs*	Green
Coal tit	*Periparus ater*	Green
Dunnock	*Prunella modularis*	Green
Goldcrest	***Regulus regulus***	**Amber**
Goldfinch	*Carduelis carduelis*	Green
Great tit	*Parus major*	Green
Greenfinch	***Carduelis chloris***	**Amber**
Grey heron	*Ardea cinerea*	Green
Herring gull	***Larus argentatus***	**Amber**
Hooded crow	*Corvus cornix*	Green
House martin	***Delichon urbica***	**Amber**
Jackdaw	*Corvus monedula*	Green
Long-tailed tit	*Aegithalos caudatus*	Green
Magpie	*Pica pica*	Green
Mistle thrush	*Turdus viscivorus*	Green
Pheasant	*Phasianus colchicus*	Green
Pied wagtail	*Motacilla alba*	Green
Robin	*Erithacus rubecula*	Green
Rook	*Corvus frugilegus*	Green
Song thrush	*Turdus philomelos*	Green
Starling	***Sturnus vulgaris***	**Amber**
Swallow	***Hirundo rustica***	**Amber**
Treecreeper	*Certhis familiaris*	Green
Woodpigeon	*Columba palumbus*	Green
Wren	*Troglogytes troglodytes*	Green

Additional bird of prey species recorded by Members & Staff[21]

Species (common name)	Species (Scientific name)	Status (Red/Amber/Green List)
Barn owl	***Tyto alba***	**Red**
Buzzard	*Buteo buteo*	Green
Kestrel	***Falco tinnunculus***	**Red**
Long-eared owl	*Asio otus*	Green
Red kite	***Milvus milvus***	**Red**
Sparrowhawk	*Accipiter nisus*	Green

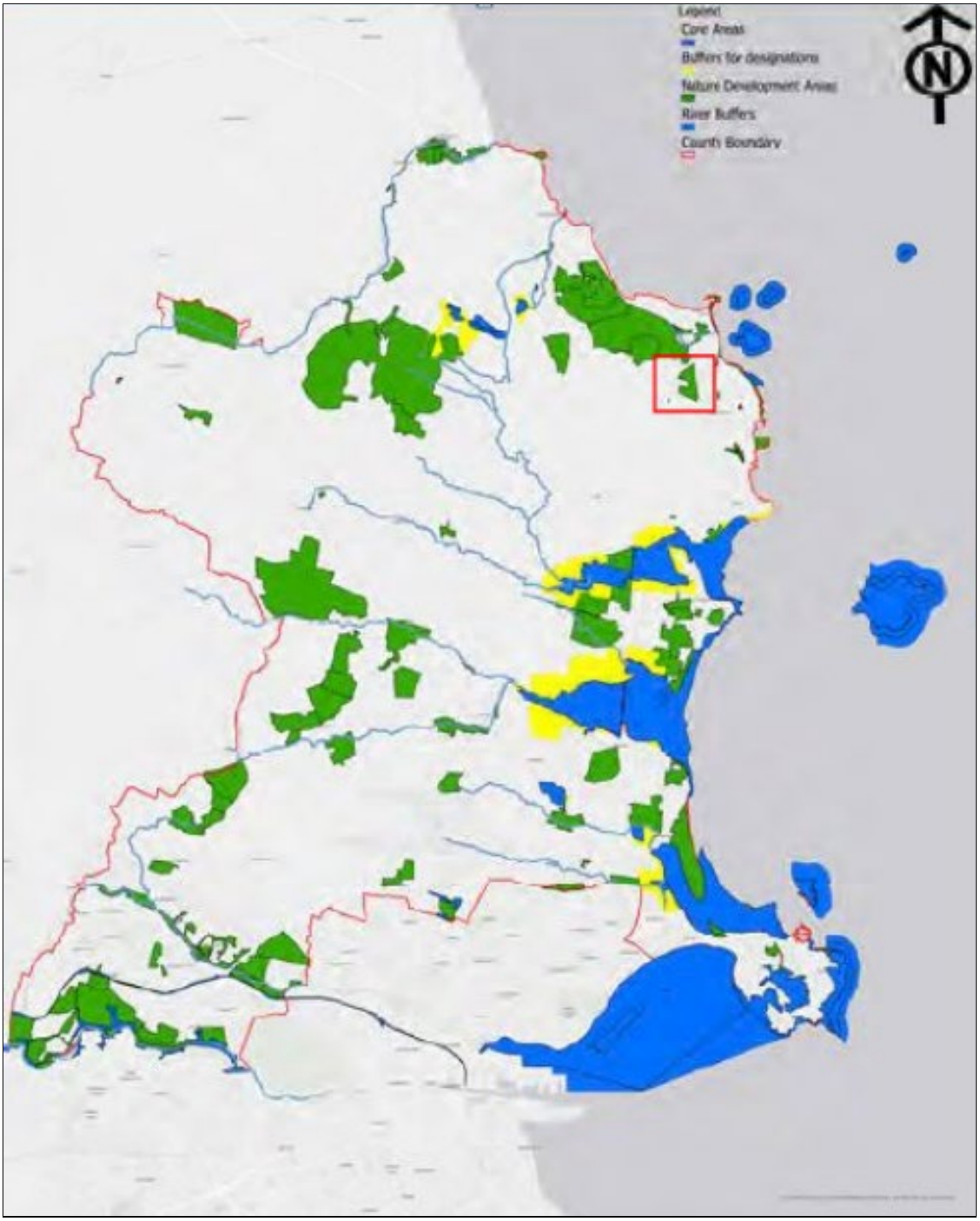
[20] Gilbert, Gillian & Stanbury, Andrew & Lewis, Lesley. (2021). Birds of Conservation Concern in Ireland 4:2020-2026. 43. 1-22.
[21] Skerries Golf Club Integrated Environmental Management Plan 2023 -2028

Appendix 5 Trees with moderate / high bat roost potential

Appendix 6 Invertebrate species recorded in Golf Course (30th April 2024)

Common name	Species name	Family
Hawthorn shieldbug	*Acanthosoma haemorrhoidale*	Acanthosomatidae
Green shieldbug	*Palomena prasina*	Pentatomidae
Hairy shieldbug	*Dolycoris baccarum*	Pentatomidae
Velvety pill woodlouse	*Eluma caelata*	Armadillidiidae
A weevil	*Rhopalomesites tardii*	Curculionidae
A ground beetle	*Leistus fulvibarbis*	Carabidae
A ground beetle	*Paradromius linearis*	Carabidae
A ground beetle	*Nebria brevicolis*	Carabidae
7-spot ladybird	*Coccinella septempunctata*	Coccinellidae
22-spot ladybird	*Psyllobora vigintiduopunctata*	Coccinellidae
Eyed ladybird	*Anatis ocellata*	Coccinellidae
Brown lipped snail	*Cepaea nemoralis*	Helicidae
Common garden snail	*Cornu aspersum*	Helicidae
Strawberry snail	*Trochulus striolatus*	Hygromiidae
Two-toothed door snail	*Clausilia bidentata*	Clausiliidae
Wandering snail	*Ampullaceana balthica*	Lymnaeidae
New Zealand flatworm	*Arthurdendyus triangulatus*	Geoplanidae
Marmalade hoverfly	*Episyrphus balteatus*	Syrphidae
Plain-faced dronefly	*Eristalis arbustorum*	Syrphidae
Common drone fly	*Eristalis tenax*	Syrphidae
Green-veined white	*Pieris napi*	Pieridae
Speckled wood	*Pararge aegeria*	Nymphalidae
Early Epistrophe	*Epistrophe elegans*	Syrphidae
Common footman	*Eilema lurideola*	Erebidae
White tailed bumblebee	*Bombus lucorum agg.*	Apidae
Common carder bee	*Bombus pascuorum*	Apidae
Buffish mining bee	*Andrena nigroaenea*	Andrenidae
Fork-jawed nomad bee	*Nomada ruficornis*	Apidae
Marsham's nomad bee	*Nomada marshamella*	Apidae
Brindled pug	*Eupithecia abbreviata*	Geometridae

Apendix 7 Fingal Ecological Network Map



Appendix 8 Table of Actions

Reference	Action	Key Prescriptions
G1	Manage the identified meadow areas for biodiversity	Relaxed mowing regime Remove cuttings Avoid fertilisers or herbicides
G2	Investigate potential to introduce rotational mowing of selected played rough areas	Relaxed mowing regime
G3	Reduce use of herbicides	Avoid in all Habitat Management Areas Reduce use along ditches – identify some where vegetation will be allowed to develop Reduce use under trees
W1	Manage at least two woodland areas for wildlife enhancement (TN4 & TN5)	Minimal intervention – avoid herbicide use, retain dead wood
W2	Retain dead wood within woodland areas	Allow standing dead wood where safe to do so Create habitat piles
W3	Replace dead ash trees with native species	Where gaps form due to ash die back, replace with native species such as oak or aspen
W4	Avoid cutting or removal of trees or scrub in the breeding bird season	Avoid works during March 1st – Aug 31st
W5	Avoid dumping soil, cuttings or other materials in woodland areas	Protect woodland floor
W6	Maintain vegetation at the base of trees and hedges and avoid removal of all leaf litter	Reduce use of herbicides and mowing to encourage basal vegetation
W7	All new planting should be with native species	Plant native species of hedge and trees to enhance biodiversity and avoid planting invasive species such as cherry laurel
W8	Complete protected species surveys in advance of woodland management	Protected mammal surveys (or birds between March-August) should be carried out in advance of woodland management
W9	Continue current management of boundary hedges	Trim boundary hedges lightly every 3 to 5 years
SP1	Increase pollinator-friendly planting around the clubhouse and course	Ideas for suitable flower species at www.pollinators.ie/resources
SP2	Instal bee, bat and bird boxes in suitable areas and monitor their use	Erect bat and bird boxes in southern section of course
SP3	Create and maintain earth banks for bees and other invertebrates	Identify suitable south-facing banks
SP4	Manage Habitat Management Area 6 area for pollinators	Retain existing flowering plants Plant nectar rich native species Create earth banks
SP5	Enhance wildlife potential of ponds & watercourses	Retain remnant swamp (TN9) and consier restoration of pond Identify ditches where herbicide application will be ceased

		or reduced Investigate potential of hidden wetland area TN11
SP6	Obtain more data on key species	Undertake surveys on key species e.g. bats and pollinators Involve Members or local groups where possible Record any sightings of interest e.g. through NBDC
INV1	Avoid any new planting of invasive species such as cherry laurel.	Select native species for planting where possible
COMM1	Involve club membership in biodiversity actions and initiatives	Establish a nature conservation committee, use signage or website to explain initiatives
COMM2	Seek partnerships with the local Council, neighbours and community groups	Form linkages with Sustainable Skerries to tap into local initiatives and expertise Implement the All-Ireland Pollinator Plan Collaborate with Fingal Council

Appendix 9 Bibliography

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