

treasuring our wildlife

dún laoghaire-
rathdown
biodiversity plan

2009-2013







Barnaslingan Wood

dún laoghaire -rathdown

biodiversity plan

2009-2013

**DÚN LAOGHAIRE-RATHDOWN
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An Chomhairle Oidhreachta
The Heritage Council



county plans and policy actions

The Biodiversity Plan for Dún Laoghaire-Rathdown has been produced in accordance with the following county plans and policy actions:

- County Development Plan
Policy action H7
- Corporate Plan
Policy action 4.11.18
- Heritage Plan
Policy action 2.3.1
- County Development Board Strategy
Policy action B17.1.1

The production of the Biodiversity Plan and the role of the Biodiversity Officer are in accordance with, and in fulfillment of, Actions 10 and 11 of the National Biodiversity Plan.

Right: Common Tern feeding its young

Below: Red-tailed Bumblebee foraging on Common Knapweed in the wild-flower meadow in Cabinteely Park



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address from An Cathaoirleach



I am delighted to welcome the publication of this Biodiversity Plan for Dún Laoghaire-Rathdown. We believe that this plan – one of the first in the country – and its implementation over the next few years, will be seen as testimony to this Council's commitment to conserve and enhance our natural environment.

We live in a natural world that is being increasingly changed, modified and, indeed, damaged by the human population. However, the plan recognises that sustainable development and nature conservation are intrinsically linked. The benefits of a high quality natural environment to those who live and work in the county is immeasurable. Nature is not just something we enjoy on a day out; it is an essential component of our daily lives.

Dún Laoghaire-Rathdown is a partly-urban and partly-rural environment. Planning for biodiversity in what is an increasingly urbanised county presents its own challenges. Biodiversity cannot be regarded as something that is 'out there' in the rural part of the county and, indeed, the country as a whole. These rural areas are important but so too are urban environments, not only for biodiversity but also in terms of the benefits to the people who live, work in and visit the county. Dún Laoghaire-Rathdown is framed by two of the greatest assets of natural heritage on the island – Dublin Bay and the Wicklow Mountains.

The actions within the plan will achieve tangible benefits for the natural heritage and biodiversity of the county. The success of the actions identified in this plan will, to a large degree, depend on the level of engagement of all sectors of the community including the Council, local groups, businesses and educational institutions as well as those who live in the county.

I wish to thank everyone who took part in the public consultation process. In particular, I would like to thank all the members of the Biodiversity Forum Group for the wealth of knowledge, guidance, support and, indeed, time that they contributed in the preparation of this plan: Cllr Ciarán Fallon; Maurice Byran; Oscar Merne; Terry Doherty, Wildlife Ranger for the National Parks and Wildlife Service; Michael Ryan, BirdWatch Ireland; Kathy Purcell, Director of Airfield Trust; Coilin MacLochlainn, Friends of Fitzsimons Wood; Rhona Naughton, Senior Executive Planner, Dún Laoghaire-Rathdown County Council (DLRCC); Les Moore, Senior Parks Superintendent, DLRCC; Tim Carey, Heritage Officer, DLRCC; and Roslaeen Dwyer, Former Biodiversity Officer, and Mary Toomey, Biodiversity Officer, DLRCC. Two other people who contributed a wealth of local knowledge and expertise are Declan Doogue, Dublin Naturalists' Field Club and Stephen Newton, BirdWatch Ireland. Their support is greatly appreciated.

I would like to take this opportunity to thank The Heritage Council for supporting the production of the Biodiversity Plan and for its support funding of the Biodiversity Officer post, as well as additional financial contributions toward the implementation of specific actions within the plan.

Councillor Joyce
An Cathaoirleach

1 understanding biodiversity

The word biodiversity, while widely used, is often not well understood. The term has its origins in the concept of 'biological diversity', in other words the variety of life on earth. It includes the full range of plants and animals found on the planet and their relationships with one another, which together form habitats and ecosystems. Biodiversity has been described as 'the variability among living organisms from all sources including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems'.

Too often, the value of this diversity is underestimated and is seen simply as an aesthetically pleasing aspect of our surroundings. In reality, however, biological diversity offers a range of essential and very valuable benefits to the human race. These include the provision of a wide variety of food, pharmaceutical products and raw materials that humans require for survival. Such bene-

fits support employment across diverse sectors including farming, fishing, forestry, tourism, recreation and industry. Biological variation also offers a sturdy buffer against undesirable change, providing species, habitats and ecosystems with a greater ability to adapt to challenging circumstances such as disease or climate change.

While some of the high profile plant, bird and animal species (such as orchids, otters, bats, kingfishers and terns) are recognised for their intrinsic value, and are deemed to require particular protection and conservation measures, the value of a large number of 'common or garden' species tends to be underestimated. So-called ordinary species, such as common invertebrates, are frequently overlooked as targets for conservation management. Invertebrates are species which lack a backbone, and include most 'creepy crawlies' including bees, butterflies, flies, beetles, spiders, snails, woodlice, centipedes and worms.

Peacock Butterfly foraging on Common Knapweed



understanding biodiversity

A reduction or a loss in the biodiversity of these ordinary species would have a significant effect on our lives. Insects pollinate most of our fruit and vegetable crops, for free! Worms, and other decomposers such as woodlice and fungi, recycle tonnes of material every year, again for free! A fall in the numbers and variety of all these useful, though not always attractive, species would have frightening financial costs. Just imagine how industries such as fruit juice or cider producers would have to adapt in the absence of bees and other pollinators – people would have to pollinate each individual flower by hand. This would be incredibly time consuming, inefficient and costly.

Sadly, many Irish bee species are in decline. In the regional Red List of Irish bees, three species are listed as regionally extinct, six species are considered critically endangered, ten are listed as endangered and a further fourteen are considered vulnerable. Such declines are not unique to bees and have been observed in many other animal and plant groups. Protection and enhancement of biodiversity at all levels is essential, but not only for financial reasons. The earth is an ecosystem of which humans are the dominant species. We, therefore, have a moral duty to safeguard biodiversity for our own health and wellbeing, for that of our children, and for the future of the planet as a properly functioning ecosystem.

South Dublin Bay SAC – designated for the extensive sand and mudflats which support a diverse and abundant assemblage of marine invertebrates and bird species



2 biodiversity in dún laoghaire-rathdown

Although Dún Laoghaire-Rathdown is a relatively small county in size, it has a wealth of natural beauty and biological diversity within its county boundaries. Extending from the shoreline of Dublin Bay to the uplands that form the borders with County Wicklow and South Dublin, there is a wide range of natural and semi-natural habitats.

EU-designated sites for nature conservation

Dún Laoghaire-Rathdown has a number of nationally and internationally important areas of natural heritage. The most important of these sites have been designated under EU legislation. These include Special Areas of Conservation (SACs) that are designated for the protection of particular habitats and/or species, and Special Protection Areas (SPAs) that are designated for the protection of birds. There are 423 SACs and 147 SPAs

in Ireland and these form part of a European network of protected sites called Natura 2000. There are four SACs and one SPA in Dún Laoghaire-Rathdown.

- **SOUTH DUBLIN BAY SAC** extends from the South Bull Wall to the West Pier at Dún Laoghaire. It is an important intertidal site with extensive mudflats and sandflats. The flats include the largest bed of eelgrass on the east coast, which is located in the vicinity of Merrion Gates. Eelgrass supports a diversity of animal species such as snails, crabs, sea anemones, other invertebrates and fish. A range of algae, including several seaweed species, is distributed across the SAC. The mudflats are particularly important for the abundance and diversity of marine invertebrates they support. Species such as lugworms and cockles, which are common across the site, provide an important food resource for wading birds.

The Glencullen River and Glendoo Mountains – part of the Wicklow Mountains SAC and one of the more rural areas in the county



biodiversity in dún laoghaire-rathdown

- **SANDYMOUNT STRAND AND TOLKA ESTUARY SPA** ranges from the Tolka Estuary to the end of the West Pier and includes Booterstown Marsh. A large area of this site overlaps with South Dublin Bay SAC. The site is designated for the large number of wading birds it supports including the Light-bellied Brent Goose, Oystercatcher, Knot, Sanderling, Dunlin, Redshank, three species of Plover and three species of Tern. The eelgrass around Merrion Gates provides an important feeding habitat for Brent Geese when they return from their summer nesting grounds in Canada each autumn. The boundaries of this site have recently been amended to include the full length of the seaward side of the West Pier, as it provides an important roosting habitat for a number of small waders at high tide.
 - **BALLYMAN GLEN SAC** occurs along the county boundary between Dún Laoghaire-Rathdown and Wicklow. Broad-leaved woodlands grow on the steeply sloping sides of the glen, while wet Alder woodland occurs on the floor of the valley, along the edges of the County Brook Stream. Fen and tufa-forming springs, two habitats which are very rare in Dublin and Wicklow, also occur. Tufa is a calcium carbonate deposit which often supports interesting moss and liverwort communities. The site is also important for a large number of sedge species and orchids, including the very rare Narrow-leaved Marsh Orchid.
 - **KNOCKSINK WOOD SAC** is also located at the Dublin-Wicklow border. Situated in the Glencullen River Valley, the steep sides of the valley are covered by a range of woodland habitats that support rare and threatened plants. The site also has one of the most diverse woodland invertebrate faunas in Ireland.
 - **THE WICKLOW MOUNTAINS SAC** consists of upland areas spreading across Dublin and Wicklow. A small portion of the site extends into Dún Laoghaire-Rathdown, incorporating Glendoo and Glencullen mountains. This adds the important habitats of heath, blanket bog, rocky outcrops and upland acid grasslands to the wide range of lowland habitats occurring within the county.
- More detailed information on each of the SACs and SPAs is available in the National Parks and Wildlife Service site synopses for designated areas. These can be downloaded from their website www.npws.ie.

B O O T E R S T O

One of the best known natural heritage sites in the county is Booterstown Marsh. This is the only remaining area of saltmarsh in Dún-Laoghaire-Rathdown, although this habitat would have fringed a large section of south Dublin Bay in the past. The construction of the railway, and other coastal development, has contributed to the decline of this habitat over time.

Booterstown Marsh is brackish in nature – meaning that it contains both saltwater and freshwater. The salinity of the marsh fluctuates on a regular basis due to the combination of freshwater inputs from two streams and daily changes in saltwater levels in response to the tidal

cycle of the sea. The marsh is connected to the sea by Williamstown Creek. The marsh provides important habitat for a range of species including birds, fish, invertebrates and rare plants. Its importance as a roosting and feeding area for waders and wildfowl is well known. Bird species – including Snipe, Redshank, Oystercatcher, Dunlin, Knot, Bar-tailed Godwit, Ringed Plover, Turnstone, Sanderling and Heron – and gull species can all be seen using the marsh.

The marsh contains a diverse flora. Of particular note is the protected plant, Borrer's Saltmarsh-grass. This is a rare species that is locally abundant within the marsh. Other

biodiversity in dún laoghaire-rathdown

national designated sites for nature conservation

In addition to these EU conservation designations, South Dublin Bay, Knocksink Wood and Ballyman Glen are also designated as proposed Natural Heritage Areas (pNHA) under Irish legislation. Seven other distinct areas in the county are designated as pNHAs. Five of these are designated for their ecological importance.

- **DALKEY COASTAL ZONE AND KILLINEY HILL pNHA** stretches from Scotsman's Bay to south of White Rock at Killiney Beach. It includes the Dalkey Island group and Dalkey Sound, before extending inland to encompass Killiney Hill. The site is valuable for its marine and coastal elements, as well as the terrestrial habitats of heath, grasslands, mixed woodlands and exposed rocks that occur on Killiney Hill and the islands. The site contains a number of rare plant species including clovers, Bloody Crane's-bill and Wild Madder.

- **FITZSIMONS WOOD pNHA** is a semi-natural woodland located west of Sandyford Village. Birch dominates the woodland with Alder and Holly distributed throughout. Some Oak, Beech and Sycamore also occur. Woodland birds are abundant, with Long-eared Owls, newts, foxes, badgers and deer also present. The woodland is a valuable wildlife reserve at the edge of the suburban landscape. In recent years, there has been a lot of community involvement in the management of this site which has resulted in the establishment of a local action group called 'Friends of Fitzsimons Wood'.

- **DINGLE GLEN pNHA** is a linear dry valley, formed as a glacial lake overflow channel. It is located 2km east of Kiltiernan and is important for the variety of habitats contained within a relatively small site. These habitats consist mainly of regenerating woodlands with associated ground flora, scrub and heath.

W N M A R S H

plant species found in the marsh include Sea Clubrush, Grey Clubrush, Celery-leaved Buttercup, Wild Celery, Sea Milkwort, Sea Spurrey and Sea Aster.

The marsh also provides a refuge for young fish to mature. Herons are regularly spotted taking advantage of this food source. Molluscs and worms inhabit the soft mud bottom of the marsh and are an integral part of the food web. Fish and a variety of bird species eat these invertebrates, along with an abundance of other insects that can be found sheltering amongst the vegetation.



biodiversity in dún laoghaire-rathdown

- **LOUGHLINSTOWN WOOD pNHA** occurs on the eastern side of the N11. The Loughlinstown River flows through the site, supporting a good example of wet Alder woodland along the valley floor. Regenerating woodland occurs on the sloping ground overlooking the river, with Beech, Sycamore, Elm, Holly and Laurel predominating.
- **BALLYBETAGH BOG pNHA** consists of three separate areas of marshland situated in an old glacial spillway approximately 0.5km east of Glencullen Village. Although Ballybetagh Bog contains small examples of fen and marsh vegetation, its main interest lies in the fact that it is renowned for the number of skeletons of the extinct Giant Irish Deer that have been excavated from the site.

An additional two sites have been designated for their geological value:

- The Shanganagh coastline stretches from the end of Killiney Beach to Bray in Wicklow. The area is particularly important for its sedimentary cliffs, displaying clear geological time sequences through the Quaternary Period. The soft glacial sediments deposited here have eroded over the centuries: the land used to extend nearly 2km out into the sea! At very low tides it is still possible to see the remains of a drowned forest.
- The distinctive v-shaped valley of the 'Scalp' is located along the Dublin to Enniskerry road, at the Dublin–Wicklow boundary. This site is the best and the most accessible example of a glacial outwash channel in the Dublin area. The steep slopes support patches of heath and woodland vegetation.

The Shanganagh Cliffs. Soft sedimentary cliffs such as these are particularly valuable as habitat for invertebrates



biodiversity in dún laoghaire-rathdown

non-designated areas of biodiversity interest

While protected areas of Dún Laoghaire-Rathdown play a major role in the protection of nationally and internationally important habitats and species, the richness of our environment in the county does not stop there. Dún Laoghaire-Rathdown also has a wide variety of locally important biodiversity-rich areas that occur outside of protected areas.

The wonderful public parks are an important resource for biodiversity in the urban and suburban setting. In Dún Laoghaire-Rathdown, large parks such as Marlay Park in Rathfarnham, Deerpark in Mount Merrion, Cabinteely Park, and Shanganagh Park in Shankill, all offer significant refuges for birds, insects, mammals and plants. Wildlife-friendly areas such as wild-flower meadows, native woodlands and low-management zones are now a more common sight in our parks, and occur alongside the more traditional amenity parkland setting. Smaller local parks and open spaces can also be

important, offering corridors and links for wildlife through the built-up environment. The presence of small streams or old hedgerows in these areas adds to their biodiversity interest.

While Dún Laoghaire-Rathdown does not feature any major rivers or large wetland areas, a significant number of streams and minor rivers drain the county. The Loughlinstown River, with its tributaries such as the Shanganagh River and the Cabinteely, Ballyogan, and Glenamuck streams, form the largest catchment in the county. The southernmost branch of the river, also known as the Bride's Glen Stream, is particularly rich in biodiversity. Trout, otters and bats still occur in this portion of the river while kingfisher may still be present along some sections of the stream. Other rivers supporting good areas of biodiversity include the Little Dargle. This rises on Three Rock Mountain and flows through Marlay Park and the Glencullen River, which drains the uplands around Glendoo and Glencullen mountains before crossing the county boundary into Wicklow.

Rathmichael supports a diversity of habitats including grassland, mixed woodland and scrub



biodiversity in dún laoghaire-rathdown

The upland areas around Three Rock and Two Rock mountains are valuable for their heath habitats and their exposed rocky outcrops. Red Grouse, an upland bird species thought to be in decline across the country, still occurs in this area.

In areas of lower altitude, on the slopes below Three Rock and Two Rock mountains, and also below Glendoo and Glencullen mountains, pockets of upland acid grassland occur. This is a habitat recognised as being of great significance under EU conservation legislation.

Other, smaller areas of local biodiversity importance also occur scattered throughout the county, for example:

- Close to Kiltarnan, a highly diverse area of dry calcareous grassland occurs which has a range of orchid and meadow species that are considered to be unusual for Dún Laoghaire-Rathdown. The diversity of this site is enhanced greatly by the presence of wet grassland and marsh habitat, where springs emerging from the ground have resulted in a very interesting wetland environment.

- Patches of remnant woodland occur throughout the urban environment in Dún Laoghaire-Rathdown. Containing a mix of mature and young tree and shrub species, these woodlands offer important refuges for bird and bat species. Good examples occur in Killiney and in Shankill, e.g. along Corbawn Lane and in Dorney Court.

A proportion of the upland area of the county is planted with commercial coniferous forestry, owned by Coillte. While plantation forestry generally would not be seen to have a high biodiversity interest, coniferous woodland in Dún Laoghaire-Rathdown is important in that it offers a habitat for the Red Squirrel. This native species is currently threatened by the spread of the invasive Grey Squirrel, both in this county and in the country as a whole. In addition, many properties owned by Coillte also contain areas of semi-natural woodland, hedgerow, and open grassland, all of which offer biodiversity interest.

A network of hedgerows links habitats across the rural and more urban parts of the county. These hedgerows act as wildlife conduits, or ecological corridors, providing a means by which animal, bird and mammal species move from one area of semi-natural habitat to another.

the red squirrel

The Red Squirrel is Ireland's native squirrel and still occurs in Dún Laoghaire-Rathdown, although it has declined significantly across the county. Increased urbanisation and loss or fragmentation of woodland habitat is seen as the primary reason for the decline of the species. Competition from the Grey Squirrel, an introduced alien species, is also believed to have impacted on Red Squirrel numbers.

The appearance of the Grey Squirrel in an area is usually followed by the disappearance of the Red Squirrel. The larger size of the Grey Squirrel, combined with its less specialised habitat and dietary requirements, including its ability to consume unripe acorns that are toxic to the

Red, give it a competitive advantage.

In Dún Laoghaire-Rathdown, the current distribution of the Red Squirrel is not fully known. It is now believed to occur mainly in the southern and eastern parts of the county and has been sighted in Killiney Hill Park, in the Shankill and Loughlinstown areas and in the upland area around Carrickgollogan Hill. It is very likely that it also occurs in the coniferous forestry plantations at Ticknock, Glencullen and Glendoo.



biodiversity in dún laoghaire-rathdown

While golf courses often represent a loss in semi-natural environments, a sensitive management approach can foster a degree of biodiversity interest which can be particularly important in the urban setting. The incorporation or development of water features and rough areas, in addition to the retention of lines of mature trees and hedgerows, greatly enhances this interest.

Collectively, urban and suburban gardens make up a significant proportion of the total land area in Dún Laoghaire-Rathdown, and they have excellent potential for providing high-quality habitat for biodiversity. Gardens offer a significant opportunity for many of the 'ordinary' insect and bird species to survive and thrive. Whether gardens are highly landscaped, lightly managed, or neglected, they all offer a habitat for wildlife in areas where semi-natural habitats are rare. If you are interested in wildlife and conserving biodiversity, one of the best places to start is in your own garden!

Planting trees and plants that will provide food and shelter for birds, insects and other 'creepy crawlies' will greatly improve the value of your local area for wildlife.

Biodiversity, therefore, is all around us in Dún Laoghaire-Rathdown. The enhancement and the protection of this resource, from the ordinary garden insects and birds to the full range of other protected species and habitats that occur in the county, is at the heart of the Biodiversity Plan for Dún Laoghaire-Rathdown.

Species and habitats identified as important in Dún Laoghaire-Rathdown, which require specific conservation action and/or consideration during the planning process, are listed as priority Local Biodiversity Plan Species in the appendices. A list of invasive and alien species, which are threatening native flora and fauna, is also included in the appendices.

the value of wild-flower meadows

A meadow, in its true sense, is an area of grassland where livestock is excluded between late spring and early summer to allow a hay crop to develop. Meadows support a diverse assemblage of plant species and create excellent habitats for wildlife, as well as adding a splash of colour to a local area.

In recent years, the creation of wild-flower 'meadows' in amenity areas such as parks and open spaces has become a simple and effective method of enhancing local biodiversity over a relatively short period of time. In contrast to frequently mown amenity grassland, meadows provide food and shelter for insects. Insects, and the seeds from wild flowers, provide food for a variety of birds and mammals. Long-established and well-managed meadows generally support a greater diversity of species, or are more likely to support rare species.

Many 'new' meadows are sown with wild-flower seeds. However, it is not usually necessary to source wild-flower

seed to create a meadow. They can develop naturally over time in areas of amenity grassland if the management is simply relaxed and the grassland is mowed only once or twice a year. Grass cuttings should be removed to prevent nutrient enrichment. Natural colonisation by wild flowers will ensure that species typical of the local area become established, making each meadow distinct and unique.

The biodiversity value of a meadow can be maximised by locating it adjacent, or linking it via a green corridor, to existing features of ecological value such as hedgerows, woodlands or wetlands. Creating connectivity between new meadows and existing habitats allows local species to take advantage of the additional resources.

Wild-flower meadows are now a common sight in many of the parks of Dún Laoghaire-Rathdown County Council including Marlay Park, Cabinteely Park and Shanganagh Park.

3 threats to biodiversity

In today's world, biological diversity is under considerable threat. There are currently over 15,500 species on the Red List published by the IUCN (the World Conservation Union). These species are identified as being threatened with extinction. The number of threatened plant and animal species is growing year by year, and it is now accepted that impending rates of extinction are many times greater than in the past.

In general, the main threats to biological diversity are habitat loss, fragmentation and degradation. Pollution and the over-exploitation of resources are also significant features. Poorly planned expansion of human populations, with the infrastructure and commercial activities required to sustain new communities, has taken its toll. An additional factor is the introduction of non-native species which, in the absence of natural predators or control mechanisms, can become invasive and result in the loss of naturally occurring biodiversity.

All of these factors currently operate in Dún Laoghaire-Rathdown. The problem has been exacerbated by the rapid pace of development in recent years. While large residential and commercial complexes have been constructed in greenfield sites, infill construction has been widespread in private gardens, institutional lands and sporting and recreational areas resulting in the loss of habitats

such as mature tree lines, hedgerows and rough grassland. Measures to control problems arising from anti-social behaviour in public open spaces have also resulted in the loss of biodiversity.

The need for modern transport routes has also impacted on our environment, resulting in the fragmentation of habitats. Streams have been culverted or made impassible for fish and otters, while the absence of animal underpasses on some sections of motorways and other major road networks has cut off wildlife corridors and access routes for species such as badger and deer.

A major threat to biodiversity, which has received considerable media coverage in recent times, is climate change. Potential impacts of climate change including sea level rises, higher temperatures, more frequent periods of extreme weather (such as drought and storms) and flooding, could all have serious impacts on native habitats and species. For example, the increased frequency of severe storms may contribute to a faster rate of coastal erosion, particularly in areas with soft sedimentary cliffs such as the Shanganagh coastline.

Sensitive approaches to planning for biodiversity in future domestic and commercial development can significantly help to reduce these impacts.

A culvert along the Deansgrange Stream. Culverting can lead to habitat loss and adverse changes to the structure and flow of watercourses



Giant Hogweed

Giant Hogweed is a tall, invasive, herbaceous species with white flowers and large green leaves. It was introduced to Ireland in the 19th century. It is problematic for both people and wildlife. Giant Hogweed can reach a height of up to 4m, much taller than the native Common Hogweed.

The sap inside the stems of the plant reacts with sunlight and can cause burning, itching and blistering to the skin. Its large leaves shade out vegetation growing underneath, which results in the loss of native plants and associated invertebrates. Giant Hogweed dies back in the winter exposing the bare ground. Without a covering of native species, this bare ground is extremely susceptible to erosion, particularly in areas adjacent to rivers and streams. The plant can also form dense stands during summer months that can restrict public access and lower the amenity value of an area.

The seeds of Giant Hogweed are penny-sized but very light. They can survive in the soil for between two and seven years. They are dispersed locally by wind, or over much greater distances by rivers and streams. This allows Giant Hogweed to spread rapidly along watercourses, railways and across waste ground. Effective control of the species along watercourses requires a 'catchment' approach. Neighbouring landowners must work together to remove this species, as cleared areas will quickly be recolonised by populations upstream.

Giant Hogweed has recently invaded sections of the banks along Loughlinstown Stream. It is also on the banks of the County Brook Stream, close to where the stream meets the River Dargle. Dún Laoghaire-Rathdown County Council is currently working to control this species.



4 a plan for biodiversity

Throughout the country as a whole, the increased pace of development in recent years has placed enormous pressure on biodiversity, causing habitat loss, fragmentation and degradation. As a signatory to the International Convention on Biodiversity, the Irish government launched the National Biodiversity Plan in 2002. This plan sets out the framework through which Ireland will provide for the conservation and sustainable use of biodiversity over a five-year period.

One of the principal objectives of the National Biodiversity Plan is to fully integrate measures across a broad range of sectors, which will allow for the incorporation of biodiversity concerns at every level in the country. The Dún Laoghaire-Rathdown Biodiversity Plan fulfils the Council's requirement to produce such a framework for this county.

The plan will operate over a period of five years, and will be integrated across a wide range of different sectors, both within and outside the framework of the Council. As responsibility for biodiversity protection and enhancement falls to us all, the plan will draw upon a variety of different project partners and sources of funding, promoting cooperation between and input from a wide range of stakeholders. It is imperative that the objectives, targets and actions included in the plan are fully integrated into Council plans and policies. Progress on each action will be reviewed periodically over the five-year period, at the end of which a new plan will be drawn up for the next five years.

Working closely with the successfully operating Heritage Plan for Dún Laoghaire-Rathdown, the target of the Biodiversity Plan is to create a vibrant and progressive environment in which to live and work, where the county's natural and built environment is valued, promoted and protected, both for people and wildlife.

Smooth Newt – this species spends much of the year on land, with adults returning to ponds each spring to breed



5 targets and specific actions

The Biodiversity Plan identifies four main categories of action:

- objective 1: gathering information on the biodiversity resource
- objective 2: managing the resource
- objective 3: education and awareness
- objective 4: cooperation to achieve objectives

Each of these categories lists a series of targets and associated actions by which Dún Laoghaire-Rathdown County Council, and other stakeholders, can fulfil their requirements regarding the conservation and

enhancement of biological diversity within the county. The plan will be overseen by the Biodiversity Forum Group.

Red Fox – foxes are frequently sighted throughout the County. Urban areas can often support higher fox densities than rural areas



objective 1: gathering information

gathering information on the biodiversity resource

Although Dún Laoghaire-Rathdown only occupies an area of approximately 125km², the county contains a very rich and varied range of natural habitats and areas of outstanding natural beauty. These landscape features include 17km of seashore and the associated marine habitats; islands (e.g., Dalkey Island); scattered areas of semi-natural woodlands and plantation woodlands; species-rich semi-natural grasslands; hedgerows; and important areas of upland heath and bog. In addition, although the county does not have large areas of open water, there are approximately 80km of small streams and medium-sized rivers draining eleven primary catchment areas. Public parks and green spaces managed by Dún Laoghaire-Rathdown County Council also offer additional habitats, from open space and amenity grass-

land to areas of formal and informal garden planting, as well as areas of biodiversity interest. Urban gardens and institutional properties throughout the county also offer biodiversity potential in more built-up areas.

This ecological and geological richness has resulted in the establishment of fifteen protected areas in the county. Four SACs, one SPA and ten pNHAs (three of which are also SACs) have been proposed by the National Parks and Wildlife Service. Outside of these specially designated areas however, the full range, distribution, and current status of all habitats occurring in the county are not fully established. The full variety and distribution of plants, birds, mammals, insects and other invertebrate species is also not known.

Stephen Newton from BirdWatch Ireland monitoring tern chicks on Dalkey Island



objective 1: gathering information

A considerable volume of data has accumulated over the years. This includes numerous scientific studies and data collected by Council agents, universities, NGOs, as well as assessments required by the planning process. In the absence of a central repository of ecological data in the country as a whole however, much of this data is not readily accessible either at national or local level.

Central to the production and the development of an effective Biodiversity Plan for Dún Laoghaire-Rathdown is the ongoing sourcing and collation of information on the biological resource in the county. A major objective is to identify and establish baseline data for all habitats and species of biodiversity interest in the county. This data will be added to existing collated data, and will be made more accessible through the establishment of a

county database and a biodiversity website. The county database will be developed in association with the recently established National Biodiversity Data Centre in Waterford.

Everybody can contribute to this objective. Sightings of animals and plants in your local area can be submitted directly to the National Biodiversity Data Centre. For more information visit www.biodiversityireland.ie. BirdWatch Ireland accept information on bird sightings via their website (www.birdwatchireland.ie), by email (info@birdwatchireland.net) and by telephone (01 2819878). The organisation runs a number of recording schemes for birds including Garden Bird Survey, Bird Track, Bird Atlas and Spring Alive.



Above, left-right: Red Admiral;
Song Thrush;
Mountain Hare

Right: Daubenton's Bat



proposed partner abbreviation list

AT	An Taisce
ATr	Airfield Trust
BC	Butterfly Conservation
BCI	Bat Conservation Ireland
BFG	Biodiversity Forum Group for Dún Laoghaire-Rathdown
BWI	BirdWatch Ireland
BUDC	Bray Urban District Council
Co	Coillte
CW	Coastwatch Ireland
DCC	Dublin City Council
DoES	Department of Education and Science
DLRCC	Dún Laoghaire-Rathdown County Council
DMP	Dublin Mountains Partnership
DNFC	Dublin Naturalists' Field Club
EPA	Environmental Protection Agency
ERFB	Eastern Regional Fisheries Board
FS	Forestry Service
HC	Heritage Council
IPCC	Irish Peatland Conservation Council
ISS	Irish Seal Sanctuary
IWDG	Irish Whale and Dolphin Group
IWT	Irish Wildlife Trust
LCG	Local Community Groups
NBDC	National Biodiversity Data Centre
NBG	National Botanic Gardens
NPWS	National Parks and Wildlife Service
SDCC	South Dublin County Council
WCC	Wicklow County Council
3rdLI	Third level institutions

objective 1: gathering information on the biodiversity resource

target

1

identify the full range of habitats in dún laoghaire–rathdown

proposed partners

BFG, BWI, Co, CW, DLRCC, DNFC, EPA, ERFB , FS, HC, IPCC, ISS, IWDG, IWT, NBDC, NPWS, 3rdLI

action no. action description

- 1.1 Complete a County Habitat Survey, identifying priority habitats and areas of biodiversity interest. Important areas will be targeted for more detailed survey. Information gathered during all habitat and species survey work will be made available to all council departments in GIS format.
- 1.2 Collate and review all available biodiversity data on the coastal zone, and identify any additional areas for further survey.
- 1.3 Survey inland waterways in the county, including streams, rivers, ponds and reservoirs.
- 1.4 Undertake a survey of woodlands and woodland remnants in the county.
- 1.5 Undertake a county survey of hedgerows, identifying important hedgerows which can act as corridors for wildlife.
- 1.6 Should additional areas of biodiversity importance be identified, these will be forwarded to the National Parks and Wildlife Service for consideration of their conservation status.

objective 1: gathering information on the biodiversity resource

target

2

identify 'key species' for the county and establish baseline data

proposed partners

BC, BCI, BFG, BWI, Co, CW, DCC, DLRCC, DNFC, ERFB, FS, IPCC, ISS, IWDG, IWT, HC, NBDC, NBG, NPWS, SDCC, 3rdLI

action no. action description

- 2.1** Identify species of special significance to Dún Laoghaire-Rathdown, and initiate surveys to establish their range and conservation status.
- 2.2** Undertake a countywide survey of Red Squirrels, and determine the impact of increasing numbers of Grey Squirrels.
- 2.3** Establish the current status and distribution of Annex 2 species occurring in the county (specifically bats, lampreys, Otter, Atlantic Salmon, Grey Seal, Harbour Porpoise, Bottlenose Dolphin and Marsh Fritillary Butterfly).
- 2.4** Collate all available data on the status and distribution of important bird species in the county.
- 2.5** Assess the current conservation status and precise locations of rare and threatened plant species in the county.
- 2.6** Participate in national surveys of mammals, birds, reptiles, amphibians, fish and insects, establishing local, baseline data for these species.

objective 1: gathering information on the biodiversity resource

target

3

establish a database of biodiversity information

proposed partners

BC, BCI, BWI, Co, CW, DNFC, DLRCC, EPA, ERFB, FS, IPCC, ISS, IWDG, IWT, HC, NBDC, NPWS, 3rdLI

action no. action description

- 3.1** Determine the most appropriate database structure and establish a County Biodiversity Database to record all sites and species.
- 3.2** Engage with interest groups (NGOs) to collate biodiversity records.
- 3.3** Establish an interactive website to facilitate collection of data from members of the public.

Harbour Porpoise – this species is frequently sighted along the Dún Laoghaire-Rathdown coastal zone



objective 2: managing the resource

In conjunction with the collation and gathering of data on the county's biodiversity resource, agreed delivery mechanisms for the implementation of the Biodiversity Plan will be put in place. In the National Biodiversity Plan, local authorities are identified as being the main vehicle to offer an effective structural framework for the incorporation of biodiversity concerns.

Council policies and guidelines on the protection and enhancement of biodiversity in Dún Laoghaire-Rathdown will be agreed and promoted. Guidelines for a broad range of stakeholders such as home owners, schools, businesses, and developers will also be prepared and promoted. Already established planning and legislative structures will be examined to identify ways in which biodiversity issues can be more fully integrated into both current and future development proposals for the county.

Management plans for public parks and other sites of biodiversity concern will be prepared, ensuring the continued protection of important habitats and species in the county. Management plans for areas designated as SACs, SPAs and/or pNHAs will be prepared in collaboration with the National Parks and Wildlife Service.

Effective management protocols for invasive non-native plant and animal species will also be agreed and promoted.

To ensure the success of the Biodiversity Plan, a mechanism for monitoring and reviewing targeted actions will be established. Additional sources of potential funding will also be investigated.

Blackrock Park



objective 2: managing the resource

target
4 establish and promote agreed policies, guidelines and administrative mechanisms for the effective incorporation of biodiversity issues

proposed partners

AT, ATr, BC, BCI, BFG, BWI, Co, CW, DLRCC, DMP, EPA, ERFB, FS, HC, IPCC, ISS, IWDG, IWT, LCG, NBG, NPWS, 3rdLI

action no. action description

- 4.1 Audit current Council policies to identify areas where biodiversity issues need to be highlighted and where additional policies need to be prepared.
- 4.2 The Parks Department will produce a biodiversity policy document.
- 4.3 Identify other major stakeholders in the county who potentially impact on biodiversity and offer advice and assistance in the development of their own biodiversity guidelines.
- 4.4 Promote already established best practice guidelines e.g., hedgerow maintenance guidelines, to Council staff and contractors working on behalf of the Council.
- 4.5 Produce guidelines for members of the public in relation to increasing and enhancing biodiversity in urban and suburban gardens.
- 4.6 Offer suggestions on biodiversity enhancement measures which can be undertaken in new developments.
- 4.7 Identify those species posing a threat to biodiversity as a result of their invasive nature, and agree policies and actions to control their spread.
- 4.8 Identify additional resources to implement actions listed in the Biodiversity Plan.

objective 2: managing the resource

target **5** provide the means by which biodiversity issues are fully integrated into the future development of Dún Laoghaire–Rathdown

proposed partners

BFG, Co, DLRCC, EPA, ERFB, FS, HC, NPWS, LCG

action no. action description

- 5.1** Propose a network of biodiversity-rich areas in the county, where all important areas of ecological value are identified. Where possible, identify green spaces that may act as links or 'wildlife corridors'.
- 5.2** Input into the County Development Plan, Local Area Plans, Special Amenity Area Orders, and Historic Landscape Character Assessments, all of which offer potential in terms of addressing biodiversity concerns at local levels.
- 5.3** Recognise the biodiversity resource offered by mature properties in the urban landscape and promote this in redevelopment projects.
- 5.4** Support the production of an Indicative Forest Strategy as indicated in the County Development Plan.
- 5.5** Establish a monitoring programme to determine the effectiveness of implementation of targeted actions.

Bluebells in the woodland understory in Marlay Park



objective 2: managing the resource

target

6

establish effective management plans for selected key sites and species

proposed partners

AT, BC, BCI, BFG, BUDC, BWI, Co, CW, DCC, DLRCC, DNFC, DMP, EPA, ERFB, FS, HC, IPCC, ISS, IWDG, IWT, NPWS, SDCC, WCC, 3rdLI

action no. action description

- 6.1** Implement the draft Heritage Management Plan for the Dalkey islands.
- 6.2** Continue to produce management plans for Council parks (including Killiney Hill), highlighting the biodiversity resource within the parks.
- 6.3** Dublin Bay is an important resource in the Dublin area. Dún Laoghaire-Rathdown County Council will work with other relevant stakeholders in any integrated management programme for Dublin Bay.
- 6.4** Dún Laoghaire-Rathdown County Council is a partner in the Dublin Mountains Partnership. The Biodiversity Officer will liaise with this forum to promote the integration of biodiversity issues into the final product.
- 6.5** Identify key species and habitats and agree species and habitat action plans.

objective 3: education and awareness

education / awareness raising / promotion

The term 'biodiversity' does not readily convey the full wealth and value of the natural environment in Dún Laoghaire-Rathdown. For the Biodiversity Plan to succeed, the engagement and support of the public is an absolute requirement. A key feature of this support is the promotion and dissemination of biodiversity-related information across the sectors.

In order to fulfil both ethical and legislative obligations to protect and enhance biodiversity, key mechanisms to inform and engage people will be identified and employed. The variety and importance of the native habitats and species in the county will be highlighted and promoted, to residents and to visitors alike. The promotion of Dún Laoghaire-Rathdown as a

'biodiversity haven' has enormous potential for the tourist industry, where walking and cycling routes that link areas of biodiversity interest can also offer health benefits to local residents.

Where 'best practice guidelines' are promoted, training programmes will be developed to empower both Council staff and members of the public to enhance biodiversity in their own localities. More focused educational programmes will also be developed in conjunction with schools and other educational institutes to provide biodiversity training to interested parties.

Local residents on a nature walk in Fitzsimons Wood



objective 3: education and awareness

target

7 raise awareness of the value and importance of biodiversity in our daily lives

proposed partners

AT, Atr, BCI, BFG, BWI, Co, CW, DLRCC, DoES, DMP, DNFC, EPA, ERFB, FS, HC, IPCC, ISS, IWDG, IWT, LCG, NBDC, NBG, NPWS

action no. action description

- 7.1** Implement a major PR campaign to explain the concept of biodiversity and the benefits it offers to our health and quality of life. This might include producing information, publications and exhibitions and organising events for Biodiversity Week.
- 7.2** Publish and distribute information on statutory requirements to protect biodiversity and promote the Council's biodiversity guidelines.
- 7.3** Provide information on biodiversity issues and related organised events on a biodiversity website linked to the Dún Laoghaire-Rathdown County Council website.
- 7.4** Promote Dún Laoghaire-Rathdown as a 'biodiversity haven' for tourist interests e.g., 'Flora and Fauna from the Hills to the Sea', following walking trails throughout the network of biodiversity areas identified in county surveys.
- 7.5** In the urban setting, gardens and school grounds can provide a valuable biodiversity resource. Promote the biodiversity potential of these areas through specially targeted awareness programmes.
- 7.6** Consider incentives for developers who undertake successful biodiversity enhancement measures in development projects.
- 7.7** Provide interpretative signage at sites of interest to raise awareness among the general public of the variety and the value of natural heritage in the county.
- 7.8** Establish and promote positive examples of cooperative local community biodiversity projects or demonstration models.
- 7.9** Examine opportunities to set up a dedicated awareness centre in Dún Laoghaire-Rathdown to promote biodiversity specific to the county.

objective 3: education and awareness

target

8

provide training to assist in the understanding and promotion of the county's biodiversity resource

proposed partners

AT, ATr, BCI, BWI, BUDC, Co, DCC, DLRCC, DoES, EPA, ERFB, FS, HC, IPCC, IWT, LCG, NBG, NPWS, SDCC, WCC, 3rdLI

action no. action description

- 8.1** Offer training programmes to Council staff, highlighting the Council's own environmental policies as well as national and international obligations. Offer 'best practice' guidelines to maximise beneficial effects on biodiversity.
- 8.2** Consider a community scheme to empower members of the community to become voluntary park rangers who would be active in providing environmental information/guided walks in public parks.
- 8.3** Establish a range of education courses and programmes with Airfield Trust to disseminate biodiversity information e.g., evening/weekend courses, community volunteer programmes, etc.
- 8.4** Support educational initiatives in schools and third level institutions to raise the profile and understanding of biodiversity issues.
- 8.5** As golf courses account for a significant percentage of open space in the county setting, biodiversity-friendly management regimes will be promoted to golf course managers.

objective 4: cooperation

cooperation to effect the implementation of targeted actions

In conjunction with the general dissemination of information on biodiversity issues, more focused and cooperative local projects, involving a range of different stakeholders, will help to guarantee the success of the Biodiversity Plan.

Through engagement with local community groups, residents associations, NGOs and business and enterprise groups, the various projects and actions

proposed in the Biodiversity Plan have a greater chance of long-term success. Dún Laoghaire-Rathdown County Council will engage with adjacent county councils on cross-county biodiversity issues such as the River Dodder, and NHAs and SACs. The Council will also engage with all relevant state agencies to ensure implementation of the National Biodiversity Plan.

A leafy suburban lane in Glenageary. Gardens and local opens spaces can provide valuable habitat for wildlife



objective 4: cooperation

target

9 engage with communities and groups

proposed partners

AT, Atr, BC, BCI, BFG, BWI, Co, CW, DLRCC, DMP, DNFC, DoES, FS, HC, IPCC, IFF, IWDG, IWT, LCG, NPWS

action no. action description

- 9.1** Engage with local communities and NGOs to develop local biodiversity projects either by enhancing existing remnant habitats or by creating new areas of wildlife interest.
- 9.2** Establish a local scheme to promote and manage community biodiversity projects e.g., 'Friends of ...' groups, in association with the Biodiversity Officer.
- 9.3** Public parks provide space for a range of different activities, from active amenity (playing pitches), casual amenity activities, biodiversity requirements, and the need for open space in the urban setting. Opportunities to lessen the negative effects from anti-social behaviour on the biodiversity of parks and green spaces will be investigated.
- 9.4** Continue to promote and participate in community-based 'neighbourhood schemes'.

Beach clean up by a local school group in Killiney Bay



objective 4: cooperation

target

10 foster good communication between all relevant stakeholders

proposed partners

all partners

action no. action description

- | | |
|------|---|
| 10.1 | Engage and cooperate with other Council departments e.g., Economic Development and Community; Waste and Water; and Planning, who work to foster a sense of civic and community pride. |
| 10.2 | Liaise with the County Development Board to promote biodiversity across a broad spectrum of stakeholders. |
| 10.3 | Engage with National Parks and Wildlife Service of the Department of Environment, Heritage, and Local Government to promote the value of designated sites in the county such as Special Areas of Conservation (SACs), Special Protection Areas (SPAs), and Natural Heritage Areas (NHAs). |
| 10.4 | Foster cooperation between adjacent county councils on biodiversity issues e.g., the Dodder Framework Plan should be progressed in a cohesive way between the three local authorities, with biodiversity concerns having equal status with engineering requirements. A joint approach to the management of the Dublin/Wicklow Uplands, Dublin Bay, and cross-county NHAs and SACs could also be beneficial. |
| 10.5 | Liaise with the Heritage Council regarding the promotion of best practice guidelines. |
| 10.6 | Integrate actions of the biodiversity plan with the Heritage Plan for Dún Laoghaire-Rathdown. |

appendix i: Biodiversity Plan Forum Group composition and timetable of meetings

Biodiversity Plan Forum Group

Ciarán Fallon	Councillor, DLRCC
Coilin MacLochlainn	Friends of Fitzsimons Wood
Kathy Purcell	Airfield Trust
Les Moore	Senior Parks Superintendent, DLRCC
Mary Toomey	Biodiversity Officer, DLRCC
Maurice Bryan	Independent
Michael Ryan	South Dublin Branch of BirdWatch Ireland
Oscar Merne	Independent
Rhona Naughton	Senior Executive Planner, DLRCC
Rosaleen Dwyer	Former Biodiversity Officer, DLRCC
Terry Doherty	Conservation Ranger, National Parks and Wildlife Service
Tim Carey	Heritage Officer, DLRCC

Chronology of Events

2007

5 March	Appointment of Biodiversity Officer
28 May	Advertisements placed in national and local newspapers, advertising two public consultation meetings and inviting written submissions from members of the public to the county Biodiversity Plan
13 June	Evening Public Consultation Meeting, Assembly Room, Town Hall
14 June	Evening Public Consultation Meeting, Dundrum Office DLRCC
20 June	Closing date for receipt of written submissions
4 July	First meeting of Biodiversity Plan Forum Group
8 August	Second meeting of Biodiversity Plan Forum Group
31 August	Third meeting of the Biodiversity Plan Forum Group
5 September	Presentation to Special Policy Committee of Culture, Community Development and Amenities
23 October	Presentation to Managers' Estimates
2 November	Presentation to the Community Forum
10 December	Presentation to the Council management

2008

25 February	Area Committee Meeting, Dun Laoghaire
3 March	Area Committee Meeting, Dundrum
March	Biodiversity Plan adopted by the Council

2009

26 January	Appointment of new Biodiversity Officer
21 May	Publication and launch of the Biodiversity Plan

appendix ii: list of consultees

Groups

Airfield Trust (Kathy Purcell)
An Taisce (Joe O'Loughlin)
Athgoe Residents Association (Paul O'Dwyer)
Badger Watch (Bernie Barrett)
Biodiversity Research Website
Biology and Environment College, UCD
BirdWatch Ireland (Siobhán Egan, Coilin MacLochlainn, Michael Ryan)
Botany Department, TCD (Gerry Doyle)
Dublin Naturalists' Field Club (Declan Doogue, Sylvia Reynolds)
Coastwatch Ireland (Karen Dubsy)
Coillte (Pat Neville)
Community and Enterprise, DLRCC (Wessel Badenshorst, Willie Morton, Kathryn O'Rourke, Torry Schellhorn)
CRANN
Dalkey Community Council (Ann Perry)
DLRCC Parks Department
Ecological Environmental Non-Governmental Organisations (EENGO)
ENFO (Coilin MacLochlainn)
Environmental Protection Agency
Friends of Fitzsimons Wood (Dolan, Dudley)
Friends of Booterstown Group
Friends of the Irish Environment
Heritage Council
Irish Peatland Conservation Council
Irish Seed Savers
Irish Whale and Dolphin Group
Irish Wildlife Trust (Tim Clabbon)
Landscape Institute of Ireland (Aidan Ffrench)
National Biological Records Centre (Una Fitzpatrick)
National Botanic Gardens (Mathew Jebb)
National Parks and Wildlife Service (Terry Doherty)
PH McCarthy Consulting Engineers (Grace Dalton)
Shankill Tidy Towns (Susan Barr)
White Young Green Consultants
Woodlands of Ireland (Declan Little)
Zoology Department, UCD (Tom Hayden, Mary Kelly-Quinn)

Individuals

Agnew, Peter	Glynn, Kevin	O'Herlihy, Gabrielle
Caldicott, Rick	Hurley, Padraic	Walsh, Neil
Conway, Barry	Murray, Eilis	
Doyle, Michael	Ni Lamhna, Eanna	

appendix iii – list of relevant EU and national legislation

European legislation

Council Directive on the conservation of wild birds 79/409/EEC (The Birds Directive)

Council Directive on the assessment of the effects of certain public and private projects on the environment 85/337/EEC (The EIA Directive)

Council Directive on the conservation of natural habitats and wild fauna and flora 92/43/EEC (The Habitats Directive)

Council Directive on establishing a framework for community action in the field of water policy 2000/60/EC (The Water Framework Directive)

Council Directive on the assessment of the effects of certain plans and programmes on the environment, insofar as the Directive relates to land-use planning 2001/42/EC

Council Directive on the assessment of the effects of certain plans and programmes, with the exception of land-use planning, on the environment 2001/42/EC (Strategic Environmental Assessment Directive)

Council Directive on establishing a framework for community action in the field of marine environmental policy 2008/56/EC (The Marine Strategy Framework Directive)

National legislation

The Wildlife Act 1976

The Protection of Wild Animals Regulations 1980

The Wildlife (Amendment) Act 2000

The European Communities (Natural Habitats) Regulations 1997

The Flora Protection Order 1999

The European Communities (Environmental Impact Assessment) Regulations 1989-1999

The Planning and Development Acts 2000-2002

The Planning and Development (Strategic Environmental Assessment) Regulations 2004

International conventions

The Whaling Convention 1946

The Ramsar convention on wetlands of international importance especially as waterfowl habitats 1971 (The Ramsar Convention)

The convention on conservation of European wildlife and natural habitats 1979 (The Bern Convention)

The convention on migratory species 1979 (The Bonn Convention)

The convention on biological diversity 1992

The African-Eurasian migratory waterbird agreement 1999

Other relevant plans

The National Heritage Plan

The National Biodiversity Plan

The National Development Plan

appendix iv – priority habitats and species

Priority habitats and species abbreviation list

EU BD	EU Birds Directive 1979 (I, II and IV indicates the appendix in which the species is listed)
EU HD	EU Habitats Directive 1992 (I indicates that the species is listed in Appendix I)
WA	The Wildlife Acts 1976 and 2000 (P indicates species protected under these Acts)
RDB	Red Data Book (Plant species listed on the RDB are indicated as 'V' = Vulnerable or 'R' = Rare)
LBPS	Local Biodiversity Plan Species (This is a species that is listed as a priority species in the Biodiversity Plan)
LBPH	Local Biodiversity Plan Habitat (This is a habitat that is listed as a priority habitat in the Biodiversity Plan)
Bern	The Bern Convention (II and III indicates the appendix in which the species is listed)
Bonn	The Bonn Convention (II indicates that the species is listed in Appendix II)
BoCCI	Birds of Conservation Concern in Ireland (Species may be listed on the red, amber or green list)
FPO	The Flora Protection Order 1999 (P indicates species protected under this Act)
Fossitt Code	Refers to habitat codes listed in the Heritage Council's <i>A Guide to Habitats in Ireland</i> (Fossitt, J. 2000).

appendix iv – priority habitats and species

habitats

The following habitats have been selected as local biodiversity plan habitats. These include habitats present in the county that are protected under Annex I of the EU Habitats Directive, as well as semi-natural habitats which are important for local biodiversity. These habitats should be valued and protected within the county, which will require support and collaboration from a range of stakeholders.

Habitat	EU HD	Fossitt code	LBPH	Examples
Mudflats and sandflats	I	LS2, LS3	LBPH	South Dublin Bay SAC.
Saltmarshes	I	CM1, CM2	LBPH	Boosterstown Marsh SPA/ pNHA.
Embryonic shifting dunes	I	CD1	LBPH	Between Merrion Gates and Monkstown.
Wet heath	I	HH3	LBPH	Wicklow Mountains SAC.
Dry heath	I	HH1	LBPH	Wicklow Mountains SAC.
Species-rich <i>Nardus</i> grassland	I	GS3	LBPH	Wicklow Mountains SAC and Ticknock.
<i>Molinia</i> meadows	I	GS4	LBPH	Ballybetagh Bog pNHA.
Lowland hay meadows	I	GS2	LBPH	Between Ballycorus Road and Barnashlingan Lane.
Blanket bogs	I	PB2	LBPH	Wicklow Mountains SAC.
Petrifying springs	I	FP1	LBPH	Ballyman Glen SAC/ pNHA.
Alkaline fens	I	PF1	LBPH	Ballyman Glen SAC/ pNHA.
Semi-natural woodland		WD1, WN1 - WN6	LBPH	Knocksink Wood SAC, Dingle Glen pNHA, Fitzsimmons Wood pNHA, Loughlinstown. Wood pNHA.
Mixed broadleaved/ coniferous woodland		WD2	LBPH	Killiney Hill.
Semi-natural grasslands		GS1 - GS4	LBPH	Scattered throughout the county.
Scrub		WS1	LBPH	Scattered throughout the county.
Hedgerows		WL1	LBPH	Scattered throughout the county.
Lakes and ponds		FL4, FL5	LBPH	Scattered throughout the county.
Reedbeds and swamps		FS1	LBPH	Small stands scattered throughout the county.
Marshes		GM1	LBPH	Ballybetagh Bog.
Watercourses		FW1, FW2	LBPH	Rivers and streams throughout the county.
Coastal zone (including littoral and sub-littoral habitats)		LR, LS, SR, SS	LBPH	Dalkey coastal zone.
Exposed rocky shores		LR1, LR2	LBPH	Dalkey Island, Dalkey coastal zone.
Sea cliffs		CS1, CS3	LBPH	Dalkey coastal zone, Shanganagh.

appendix iv – priority habitats and species

higher plants

The following plant species have been selected as local biodiversity plan species. The list includes species present in the county that are rare and/or protected under the Flora Protection Order (1999). Existing populations present in the county should be protected. The current conservation status of many of the species on this list is uncertain. Further research, to assess their current conservation status in the county, and to assist with their conservation management will be supported. This will require support and collaboration from a range of stakeholders.

Common name	Latin name	FPO	RDB	LBPS	Summary of species records in the county
Basil Thyme	<i>Clinopodium acinos</i> (<i>Acinos arvensis</i>)	P	V	LBPS	A few plants recorded close to the graveyard around Tully Church (1961).
Sea Spleenwort	<i>Asplenium marinum</i>	-	-	LBPS	Recorded on the seaward-facing slopes below Killiney Hill (1987) and Dalkey Island (1954).
Climbing Corydalis	<i>Ceratocarpus claviculata</i> (<i>Corydalis claviculata</i>)	-	-	LPBS	Recorded on Killiney Hill (1985), Roches Hill (1989), Dalkey Hill (1991) and The Scalp (1967).
Blue Fleabane	<i>Erigeron acer</i>	-	V	LBPS	Recorded around Blackrock, Rathfarnham, Loughlinstown and between Sandymount and Merrion (1903).
Narrow-leaved Hemp Nettle	<i>Galeopsis angustifolia</i>	P	V	LBPS	Recorded around Dundrum and Cabinteely (1856), on the roadside around Ballycorus (1943) and on a forestry road around Three Rock Road and Two Rock Mountain (1967).
Bloody Crane's-bill	<i>Geranium sanguineum</i>	-	-	LBPS	Recorded on the seaward-facing slopes below Killiney Hill (1983 and 1985).
Bog Orchid	<i>Hammarbya paludosa</i>	P	RV	LBPS	Recorded around Ticknock (1837), on Two Rock Mountain (1899) and south-west of Glencullen Bridge (1963). The latter site was afforested in 1992.
Hen-bane	<i>Hyoscyamus niger</i>	-	R	LBPS	Recorded in Loughlinstown (1874) and in an old walled garden at Rocklands House, east of Sandyford (1978 and 1979).
Golden-samphire	<i>Inula crithmoides</i>	-	-	LBPS	Recorded on seaward-facing slopes below Killiney Hill (1879 and 1983) and west of Sorrento Point (1985).
Fluellen	<i>Kickxia elatine</i>	P	V	LBPS	Recorded on the edge of a field, east of Shanganagh Cemetery (1984 and 1991).
Slender Cudweed	<i>Filago minima</i> (<i>Logfia minima</i>)	P	R	LBPS	Recorded around Three Rock Mountain (1988 and 1993).
Green-winged Orchid	<i>Orchis morio</i>	-	V	LBPS	Recorded around Loughlinstown and Ticknock (1895) and Killiney (1932).
Pale Butterwort	<i>Pinguicula lusitanica</i>	-	-	LBPS	Recorded around Three Rock Mountain (1899 and 1992) and Glencullen Valley (1884–87). This species is indicative of flushed habitats that support other species of botanical interest.

appendix iv – priority habitats and species

higher plants

Common name	Latin name	FPO	RDB	LBPS	Summary of species records in the county
Common Butterwort	<i>Pinguicula vulgaris</i>	-	-	LBPS	Recorded around Glencullen Valley, Glendoo, Two Rock and Three Rock mountains in recent times (year unknown). This species is indicative of flushed habitats that support other species of botanical interest.
Small White Orchid	<i>Pseudorchis albida</i> (<i>Leucorchis albida</i>)	P	V	LBPS	Recorded around Three Rock Mountain in the past (year unknown). No recent records.
Borrer's Saltmarsh-grass	<i>Puccinellia fasciculata</i>	P	R	LBPS	Recorded in Booterstown Marsh (1988-90 and 2008).
Wild Madder	<i>Rubia peregrina</i>	-	-	LBPS	Recorded on seaward-facing slopes below Killiney Hill (1902, 1983, 1985 and 2009).
Sand Spurry	<i>Spergularia rubra</i>	-	-	LBPS	Recorded on north-east facing slopes of Three Rock Mountain (1976, 1981 and 1991).
Strawberry Clover	<i>Trifolium fragiferum</i>	-	-	LBPS	Recorded in Shanganagh, Loughlinstown and Ballybrack (1901).
Zigzag Clover	<i>Trifolium medium</i>	-	-	LBPS	Recorded by the railway between Killiney Hill and Bray and around Ballycorus (1894).
Western Clover	<i>Trifolium occidentale</i>	-	-	LBPS	Recorded on Dalkey Island (1978, 1980, 1983 and 1991).
Bird's-foot Clover	<i>Trifolium ornithopodioides</i>	-	-	LBPS	Recorded on Killiney Hill and Dalkey Island (1919 and 1993).
Rough Clover	<i>Trifolium scabrum</i>	-	-	LBPS	Recorded on Dalkey Island (1919, 1983 and 1991).
Knotted Clover	<i>Trifolium striatum</i>	-	-	LBPS	Recorded near Dalkey Church (1889-1902) and Killiney Hill (1983).
Ivy-leaved Bellflower	<i>Wahlenbergia hederacea</i>	-	-	LBPS	Recorded in Glencullen Valley (1901 and 1986). The site of the 1986 record has since been drained for forestry.

* Latin names in parentheses refer to old names for a particular species which have since been changed. The summary of plant records includes records from the *The Flora of County Dublin* (Dublin Naturalists' Field Club 1999) as well as some recent DNFC records.

lower plants

Group	Conservation status and proposed actions
Mosses Liverworts Lichens Stoneworts	Insufficient information is available to assess the current conservation status of these species within the county. Further research on these groups, to assist with developing lists of priority species for the county, will be supported.

appendix iv – priority habitats and species

mammals

The following mammals have been selected as local biodiversity plan species. With the exception of the Red Fox, all species are protected under Annex IV or V of the EU Habitats Directive and/or Schedule 5 of The Wildlife Acts (1976 and 2000), as amended by The Protection of Wild Animals Regulations (1980). These species and their habitats are frequently threatened by development and changes in land use practices. Further research, to assess their current conservation status in the county and to assist with their conservation management, will be supported which will require support and collaboration from a range of stakeholders.

Common name	Latin name	EU HD	WA	RDB	LBPS	Bern	Bonn
Hedgehog	<i>Erinaceus europaeus</i>	-	P	II	Y	III	-
Pygmy Shrew	<i>Sorex minutus</i>	-	P	-	Y	III	-
Whiskered Bat	<i>Myotis mystacinus</i>	IV	P	I	Y	II	II
Natterer's Bat	<i>Myotis nattereri</i>	IV	P	I	Y	II	II
Daubenton's Bat	<i>Myotis daubentoni</i>	IV	P	II	Y	II	II
Leisler's Bat	<i>Nyctalus leisleri</i>	IV	P	II	Y	II	II
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	IV	P	II	Y	III	II
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	IV	P	II	Y	II	II
Nathusius' Pipistrelle	<i>Pipistrellus nathusii</i>	IV	P	II	Y	II	II
Brown Long-eared Bat	<i>Plecotus auritus</i>	IV	P	II	Y	II	II
Mountain Hare	<i>Lepus timidus hibernicus</i>	V	P	II	Y	III	-
Red Squirrel	<i>Sciurus vulgaris</i>	-	P	-	Y	III	-
Red Fox	<i>Vulpes vulpes</i>	-	-	-	Y	-	-
Pine Martin	<i>Martes martes</i>	V	P	II	Y	III	-
Irish Stoat	<i>Mustela erminea hibernica</i>	-	P	-	Y	III	-
Badger	<i>Meles meles</i>	-	P	II	Y	III	-
Eurasian Otter	<i>Lutra lutra</i>	II, IV	P	II	Y	II	-
Common Seal	<i>Phoca vitulina</i>	II, IV	P	-	Y	III	-
Grey Seal	<i>Halichoerus grypus</i>	II, IV	P	-	Y	III	-
Bottle-nosed Dolphin	<i>Tursiops truncatus</i>	II, IV	P	-	Y	II	-
Common Harbour Porpoise	<i>Phocaena phocaena</i>	II, IV	P	-	Y	II	-
Minke Whale	<i>Balaenoptera acutorstrata</i>	IV	P	-	Y	II	-
Risso's Dolphin	<i>Grampus griseus</i>	IV	P	-	Y	II	-

appendix iv – priority habitats and species

birds

The following list includes bird species that have been chosen as local biodiversity plan species. These species require further survey work to assess their current conservation status and/or direct conservation action. Proposed priority actions for each species are also included in the list. The implementation of these actions will require support and collaboration from a range of stakeholders.

Common name	Latin name	EU BD	BoCCI	LBPS	Bern	Bonn	BS	NBS	Proposed actions
Little Egret	<i>Egretta garzetta</i>	Y	Green	Y	II	-	?	Y	Support/undertake survey work to determine if heronries for this species are present in the county.
Grey Heron	<i>Ardea cinerea</i>	-	Green	Y	II	-	Y	Y	Support/undertake survey work to prepare an inventory of heronries for the county.
Light-bellied Brent Goose	<i>Branta bernicla hrota</i>	-	Amber	Y	III	II	-	Y	Ensure that this species and its habitat are protected. This will also ensure that important habitat is protected for other species of wildfowl.
Buzzard	<i>Buteo buteo</i>	-	Green	Y	II	II	Y	Y	Support/undertake survey work to assess the current status of this species and to determine the location of nesting sites in the county.
Kestrel	<i>Falco tinnunculus</i>	-	Amber	Y	II	II	Y	Y	Support/undertake survey work to assess the current status of this species.
Peregrine Falcon	<i>Falco peregrinus</i>	Y	Green	Y	II	II	Y	Y	Support/undertake survey work survey to assess the current status of this species and to determine the location of nesting sites in the county.
Red Grouse	<i>Lagopus lagopus scoticus</i>	-	Red	Y	III	-	Y	Y	Support/undertake survey work to assess the current status of this species and ensure that its habitat is adequately protected.

* BS = Breeding species NBS = Non-breeding species

'?' indicates that breeding or non-breeding status in county is uncertain at present.

appendix iv – priority habitats and species

birds

Common name	Latin name	EU BD	BoCCI	LBPS	Bern	Bonn	BS	NBS	Proposed actions
Redshank	<i>Tringa totanus</i>	-	Red	Y	III	II	-	Y	Ensure that this species and its habitat are protected. This will also ensure that important habitat is protected for other wading birds.
Herring Gull	<i>Larus argentatus</i>	-	Red	Y	-	-	Y	Y	Ensure that this species and its habitat are adequately protected.
Mediterranean Gull	<i>Larus melanocephalus</i>	Y	Amber	Y	II	II	-	Y	The county supports important non-breeding populations of this species. Ensure that the habitat it relies on is adequately protected.
Roseate Tern	<i>Sterna dougallii</i>	Y	Amber	Y	II	II	Y	-	A small number of terns nest on Maiden Rock. This is the third colony location in Ireland. Continue to assess the potential value of Maiden Rock for nesting, and provide practical support if suitable.
Black Guillemot	<i>Cephus grylle</i>	-	Amber	Y	III	-	Y	Y	The county contains small but important numbers of this species. Ensure that this species and the habitat it relies on are adequately protected.
Stock Dove	<i>Columba oenas</i>	-	Amber	Y	III	-	Y	Y	Support/undertake survey work to assess the current status of this species in the county.
Cuckoo	<i>Cuculus canorus</i>	-	Green	Y	III	-	?	Y	Support/undertake survey work to assess the current status of this species in the county.
Short-eared Owl	<i>Asio flammeus</i>	Y	Amber	Y	II	-	-	Y	This species is frequently observed around Dalkey Island. Support/undertake survey work to assess the current status of this species in the county.

appendix iv – priority habitats and species

birds

Common name	Latin name	EU BD	BoCCI	LBPS	Bern	Bonn	BS	NBS	Proposed actions
Barn Owl	<i>Tyto alba</i>	-	Red	Y	II	-	Y	Y	Support/undertake survey work to assess the current status of this species in the county.
Swift	<i>Apus apus</i>	-	Amber	Y	III	-	Y	-	Support/undertake survey work to assess the current status of this species in the county and to map the colonies recorded.
Skylark	<i>Alauda arvensis</i>	-	Amber	Y	III	-	Y	Y	Support/undertake survey work to assess the current status of this species in the county.
Sand Martin	<i>Riparia riparia</i>	-	Amber	Y	II	-	Y	-	Support/undertake survey work to assess the current status of this species in the county. Protect existing colonies and seek to create new nesting opportunities as many existing colony locations are subject to coastal erosion.
Meadow Pipit	<i>Anthus pratensis</i>	-	Green	Y	II	-	Y	Y	This species is numerous in the Dublin hills. Ensure that the habitat it relies on is adequately protected.
Waxwing	<i>Bombycilla garrulus</i>	-	Green	Y	II	-	-	Y	The county supports an important population of this species. Ensure that the habitat it relies on is adequately protected.
Whinchat	<i>Saxicola rubetra</i>	-	Amber	Y	II	-	?	-	This species is declining. Support/undertake survey work survey to assess its current status in the county.
Ring Ouzel	<i>Turdus torquatus</i>	-	Red	Y	III	-	?	-	Support/undertake survey work survey to assess the current status of this species in the county. Isolated pairs may still occur in the Dublin hills.

appendix iv – priority habitats and species

birds

Common name	Latin name	EU BD	BoCCI	LBPS	Bern	Bonn	BS	NBS	Proposed actions
Grasshopper Warbler	<i>Locustella naevia</i>	-	Amber	Y	III	-	Y	-	This species is declining. Support/undertake survey work to assess its current status in the county.
Spotted Flycatcher	<i>Muscicapa striata</i>	-	Amber	Y	II	II	Y	-	This species is declining. Support/undertake survey work to assess its current status in the county.
Tree Sparrow	<i>Passer montanus</i>	-	Amber	Y	III	-	Y	Y	This species is declining. Support/undertake survey work to assess its current status in the county.
Linnet	<i>Carduelis cannabina</i>	-	Amber	Y	III	-	Y	Y	Support/undertake survey work to assess the current status of this species in the county.
Reed Bunting	<i>Emberiza schoeniclus</i>	-	Green	Y	II	-	Y	Y	Support/undertake survey work to assess the current status of this species in the county.
Yellowhammer	<i>Emberiza citrinella</i>	Y	Red	Y	II	-	Y	Y	This species is declining. Support/undertake survey work to assess its current status in the county.

The following list of birds includes species present in the county that are protected under Annex I of the EU Birds Directive and species that are listed as red/amber list birds of conservation concern. Red and amber list species include birds that are declining nationally and/or species that are threatened internationally and for which Ireland supports important numbers. Some species that are declining internationally are stable or increasing in Ireland.

Common name	Latin name	EU BD	BoCCI	LBPS	Bern	Bonn	BS	NBS	
Divers, grebes, shearwaters and petrels									
Black-throated Diver	<i>Gavia arctica</i>	Y	Amber	-	II	II	-	Y	
Red-throated Diver	<i>Gavia stellata</i>	Y	Amber	-	II	II	-	Y	
Great Crested Grebe	<i>Podiceps cristatus</i>	-	Amber	-	III	-	?	Y	
Little Grebe	<i>Tachybaptus ruficollis</i>	-	Amber	-	III	-	Y	Y	
Manx Shearwater	<i>Puffinus puffinus</i>	-	Amber	-	II	-	-	Y	
European Storm-petrel	<i>Hydrobates pelagicus</i>	Y	Amber	-	II	-	-	Y	
Gannet	<i>Morus bassanus</i>	-	Amber	-	III	-	-	Y	
Shag	<i>Phalacrocorax aristotelis</i>	-	Amber	-	II	-	-	Y	
Cormorant	<i>Phalacrocorax carbo</i>	-	Amber	-	III	-	-	Y	

appendix iv – priority habitats and species

birds

Common name	Latin name	EU BD	BoCCI	LBPS	Bern	Bonn	BS	NBS
Herons, swans, geese and ducks								
Little Egret	<i>Egretta garzetta</i>	Y	Green	Y	II	-	?	Y
Mute Swan	<i>Cygnus olor</i>	-	Amber	-	III	II	Y	Y
Greylag Goose	<i>Anser anser</i>	-	Amber	-	III	II	-	Y
Light-bellied Brent Goose	<i>Branta bernicla hrota</i>	-	Amber	Y	III	II	-	Y
Shelduck	<i>Tadorna tadorna</i>	-	Amber	-	II	II	Y	Y
Gadwall	<i>Anas strepera</i>	-	Amber	-	III	II	-	Y
Wigeon	<i>Anas penelope</i>	-	Amber	-	III	II	-	Y
Teal	<i>Anas crecca</i>	-	Amber	-	III	II	-	Y
Pochard	<i>Aythya ferina</i>	-	Amber	-	III	II	-	Y
Tufted Duck	<i>Aythya fuligula</i>	-	Amber	-	III	II	Y	Y
Common Scoter	<i>Melanitta nigra</i>	-	Red*	-	III	II	-	Y
Goldeneye	<i>Bucephala clangula</i>	-	Amber	-	III	II	-	Y
Birds of prey and grouse								
Red Kite	<i>Milvus milvus</i>	Y	Amber	-	II	II	-	Y
Hen Harrier	<i>Circus cyaneus</i>	Y	Amber	-	II	II	-	Y
Kestrel	<i>Falco tinnunculus</i>	-	Amber	Y	II	II	Y	Y
Merlin	<i>Falco columbarius</i>	Y	Amber	-	II	II	?	Y
Red Grouse	<i>Lagopus lagopus scoticus</i>	-	Red	Y	III	-	Y	Y
Rails and waders								
Water Rail	<i>Rallus aquaticus</i>	-	Amber	-	III	-	Y	Y
Coot	<i>Fulica atra</i>	-	Amber	-	III	-	Y	Y
Oystercatcher	<i>Haematopus ostralegus</i>	-	Amber	-	III	II	Y	Y
Ringed Plover	<i>Charadrius hiaticula</i>	-	Amber	-	II	II	?	Y
Golden Plover	<i>Pluvialis apricaria</i>	Y	Red	-	III	II	-	Y
Grey Plover	<i>Pluvialis squatarola</i>	-	Amber	-	III	II	-	Y
Lapwing	<i>Vanellus vanellus</i>	-	Red*	-	III	II	?	Y
Knot	<i>Calidris canutus</i>	-	Red	-	III	II	-	Y
Dunlin	<i>Calidris alpina</i>	-	Amber	-	III	II	-	Y
Greenshank	<i>Tringa nebularia</i>	-	Amber	-	III	II	-	Y
Redshank	<i>Tringa totanus</i>	-	Red	Y	III	II	-	Y
Curlew	<i>Numenius arquata</i>	-	Red*	-	III	II	-	Y
Bar-tailed Godwit	<i>Limosa lapponica</i>	Y	Amber	-	III	-	-	Y
Black-tailed Godwit	<i>Limosa limosa</i>	-	Amber	-	III	II	-	Y
Woodcock	<i>Scolopax rusticola</i>	-	Amber	-	III	-	Y	Y
Snipe	<i>Gallinago gallinago</i>	-	Amber	-	III	II	Y	Y
Gulls and terns								
Herring Gull	<i>Larus argentatus</i>	-	Red	Y	-	-	Y	Y
Common Gull	<i>Larus canus</i>	-	Amber	-	III	-	-	Y
Lesser Black-backed Gull	<i>Larus fuscus</i>	-	Amber	-	-	-	Y	Y
Great Black-backed Gull	<i>Larus marinus</i>	-	Amber	-	-	-	Y	Y
Mediterranean Gull	<i>Larus melanocephalus</i>	Y	Amber	Y	II	II	-	Y
Little Gull	<i>Larus minutus</i>	Y	Amber	-	II	-	-	Y
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	-	Red*	-	III	-	-	Y

appendix iv – priority habitats and species

birds

Common name	Latin name	EU BD	BoCCI	LBPS	Bern	Bonn	BS	NBS
Gulls and terns (cont'd)								
Kittiwake	<i>Rissa tridactyla</i>	-	Amber	-	III	-	-	Y
Little Tern	<i>Sternula albifrons</i>	Y	Amber	-	II	II	-	Y
Sandwich Tern	<i>Sterna sandvicensis</i>	Y	Amber	-	II	II	-	Y
Roseate Tern	<i>Sterna dougallii</i>	Y	Amber	Y	II	II	Y	-
Common Tern	<i>Sterna hirundo</i>	Y	Amber	-	II	II	Y	-
Arctic Tern	<i>Sterna paradisaea</i>	Y	Amber	-	II	II	Y	-
Black Tern	<i>Chlidonias niger</i>	Y	-	-	II	II	-	Y
Auks and doves								
Black Guillemot	<i>Cepphus grylle</i>	-	Amber	Y	III	-	Y	Y
Guillemot	<i>Uria aalge</i>	-	Amber	-	III	-	-	Y
Razorbill	<i>Alca torda</i>	-	Amber	-	III	-	-	Y
Puffin	<i>Fratercula arctica</i>	-	Amber	-	III	-	-	Y
Stock Dove	<i>Columba oenas</i>	-	Amber	Y	III	-	Y	Y
Short-eared Owl	<i>Asio flammeus</i>	Y	Amber	Y	II	-	-	Y
Barn Owl	<i>Tyto alba</i>	-	Red	Y	II	-	Y	Y
Nightjar	<i>Caprimulgus europaeus</i>	Y	Red	-	II	-	?	-
Swift	<i>Apus apus</i>	-	Amber	Y	III	-	Y	-
Kingfishers, swallows, larks and martins								
Kingfisher	<i>Alcedo atthis</i>	Y	Amber	-	II	-	?	Y
Skylark	<i>Alauda arvensis</i>	-	Amber	Y	III	-	Y	Y
Sand Martin	<i>Riparia riparia</i>	-	Amber	Y	II	-	Y	-
Swallow	<i>Hirundo rustica</i>	-	Amber	-	II	-	Y	-
House Martin	<i>Delichon urbica</i>	-	Amber	-	II	-	Y	-
Wagtails, thrushes, warblers and flycatchers								
Yellow Wagtail	<i>Motacilla flava</i>	-	Amber	-	II	-	-	?
Redstart	<i>Phoenicurus phoenicurus</i>	-	Amber	-	II	II	-	?
Wheatear	<i>Oenanthe oenanthe</i>	-	Amber	-	II	II	Y	Y
Whinchat	<i>Saxicola rubetra</i>	-	Amber	Y	II	-	?	-
Ring Ouzel	<i>Turdus torquatus</i>	-	Red	Y	III	-	?	-
Grasshopper Warbler	<i>Locustella naevia</i>	-	Amber	Y	III	-	Y	-
Spotted Flycatcher	<i>Muscicapa striata</i>	-	Amber	Y	II	II	Y	-
Crows, sparrows, buntings and finches								
Starling	<i>Sturnus vulgaris</i>	-	Amber	-	III	-	Y	Y
House Sparrow	<i>Passer domesticus</i>	-	Amber	-	-	-	Y	Y
Tree Sparrow	<i>Passer montanus</i>	-	Amber	Y	III	-	Y	Y
Linnet	<i>Carduelis cannabina</i>	-	Amber	Y	III	-	Y	Y
Twite	<i>Carduelis flavirostris</i>	-	Red	-	II	-	-	?
Yellowhammer	<i>Emberiza citrinella</i>	-	Red	Y	II	-	Y	Y

Red indicates that it is the breeding population, not the non-breeding population, which is included on the red list of the BoCCI.

appendix iv – priority habitats and species

amphibians, reptiles and fish

The following amphibians, reptiles and fish have been selected as local biodiversity plan species. The list includes species that are protected under Annex II and IV of the EU Habitats Directive and/or Schedule 5 of The Wildlife Acts (1976 and 2000), as amended by The Protection of Wild Animals Regulations (1980), as well as non-protected salmonid species that are considered important in the county. Further research to assess their current conservation status in the county and assist with their conservation management will be supported, which will require support and collaboration from a range of stakeholders.

Common name	Latin name	EU HD	WA	RDB	LBPS	Bern	Bonn
Viviparous Lizard	<i>Lacerta vivipara</i>	-	P	-	Y	III	-
Smooth Newt	<i>Triturus vulgaris</i>	-	P	-	Y	III	-
Common Frog	<i>Rana temporaria</i>	-	P	II	Y	III	-
Brook Lamprey	<i>Lampetra planeri</i>	II	-	I	Y	III	-
River Lamprey	<i>Lampetra fluviatilis</i>	II	-	I	Y	III	-
Atlantic Salmon	<i>Salmo salar</i>	II, IV	-	II	Y	III	-
Sea Trout	<i>Salmo trutta</i>	-	-	-	Y	-	-
Brown Trout	<i>Salmo trutta</i>	-	-	-	Y	-	-

selected invertebrate groups

Group	Conservation status and proposed actions
Marine invertebrates	Insufficient information is available to assess the current conservation status of most marine invertebrate groups within the county. Support further research to assess their current conservation status and assist with their conservation management.
Terrestrial invertebrates	Regional Red List bee species present in the county, that are rare or endangered, should be treated as priority species for the county. Support further research on this group to assist with developing a list of priority wasp and ant species for the county.
Bees, wasps and ants (Hymenoptera)	
Beetles (Coleoptera)	Regional Red List water beetle species present in the county should be treated as priority species for the county. Support further research on this group to assist with developing a list of terrestrial beetle species for the county.
Butterflies and moths (Lepidoptera)	Insufficient information is available to assess the current conservation status of these species within the county. Support further research on these groups to assist with developing lists of priority species for the county.
Crickets and grasshoppers (Orthoptera)	
Dragonflies and damselflies (Odonata)	
True bugs (Hemiptera)	
Flies (Diptera)	
Spiders and mites (Arachnida)	

appendix v – alien species of conservation concern

This list includes alien plant and animal species present in the county which adversely impact on native flora and fauna, or have the potential to do so in the future. Action will be taken to control these species, where practicable. This will require support and collaboration from a range of stakeholders.

Common name	Latin name	Habitats	Threats
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Alien plant species present in the county which adversely impact on native flora and fauna

Japanese Knotweed	<i>Fallopia japonica</i>	Streams, verges, wasteground	Out-competes local flora.
Rhododendron	<i>Rhododendron ponticum</i>	Woods, heaths and moors. Often found in parks and gardens	Invades protected habitats including oak woods, bogs and heaths. Forms dense thickets and secretes allelopathic toxins that reduce regeneration of native plants.
Himalayan Balsam	<i>Impatiens glandulifera</i>	Water corridors and wasteground	Out-competes local flora.
Giant Hogweed	<i>Heracleum mantegazzianum</i>	Water corridors and wasteground	Out-competes native species. Dies back in the winter exposing soil which increases susceptibility of the ground to erosion. The sap is dangerous to humans in sunlight.
Spanish Bluebell	<i>Hyacinthoides hispanica</i>	Planted in parks and gardens. Escapes into woodland	Out-competes and hybridises with the native bluebell.

Alien plant species which have the potential to adversely impact on native flora and fauna in the future, should they become widely established

New Zealand Pigmyweed	<i>Crassula helmsii</i>	Ponds and ditches	Out-competes local flora and depletes oxygen levels.
Parrot's Feather	<i>Myriophyllum aquaticum</i>	Ponds	Out-competes local flora.
Canadian Waterweed	<i>Elodea canadensis</i>	Ponds	Out-competes local flora.
Nuttall's Waterweed	<i>Elodea nuttallii</i>	Ponds	Out-competes local flora.
Curly Waterweed	<i>Lagarosiphon major</i>	Ponds	Out-competes local flora

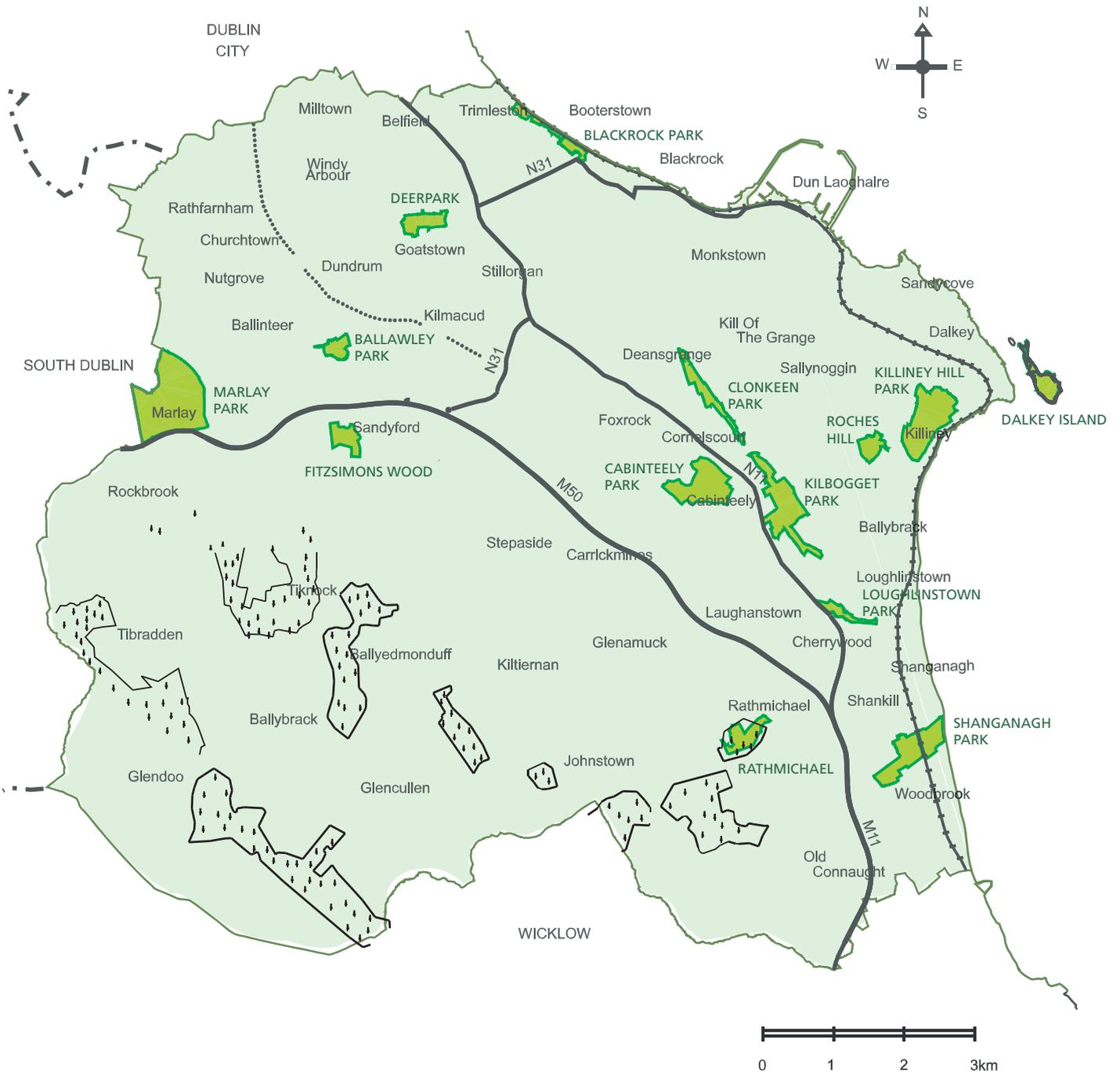
Alien fauna present in the county which adversely impact on native flora and fauna

Grey Squirrel	<i>Sciurus carolinensis</i>	Woodlands and parks	Out-competes the Red Squirrel and is a carrier of the parapox virus, which is deadly to Reds. It also adversely affects native woodland regeneration.
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map 2: rivers and streams in the county



map 3: selected parks in the county





Front cover: *Killiney Bay*

Back cover: *Two Rock Mountain*

Inside front cover: *Wild-flower meadow in Cabinteely Park*

Inside back cover: *Viewing platform overlooking the lake in Marlay Park*

Photographs: Rosaleen Dwyer: *pages 2, 10, 28*; BirdWatch Ireland: *page 3*; Tina Aughney, BCI: *Daubertson's Bat page 19*; Randall Counihan, IWDG: *page 23*; Margaret Stepenson: *inside back cover, page 24*; DoEHLG, NPWS: *pages 12, 16, 17, 19 (Mountain Hare)*. All other images Dún Laoghaire-Rathdown County Council.

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