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**ARDS AND NORTH DOWN
LOCAL BIODIVERSITY ACTION PLAN**

ARDS AND NORTH DOWN BOROUGH COUNCIL

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ARDS AND NORTH DOWN

LOCAL BIODIVERSITY ACTION PLAN

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Foreword

<INSERT PHOTO>

The Right Worshipful the Mayor,

Councillor

Councillor

Chair of Environment Committee

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Councillor

Chair of Planning Committee

<INSERT MAP OF THE ARDS AND NORTH DOWN BOROUGH COUNCIL AREA>

Ards and North Down

Local Biodiversity Action Plan 2022-2032

1.0 Introduction

Ards and North Down Borough Council area stretches from the shores of Belfast Lough to the north and the southern tip of the Ards Peninsula to the south.

The Borough covers almost 330 km² with nearly 350 km of coastline, which combines attractive coastline with many pleasant open spaces.

The largest population centres are Bangor and Newtownards together with the small towns of Holywood, and Donaghadee and other small settlements. There are many groups of residential dwellings scattered along rural roads throughout the area. Settlements are also often clustered at intersections to roads. There are also numerous scattered occupied and abandoned stone dwellings and farms, often prominent on upper slopes and connected by a network of winding, hedged roads.

Figure 1 illustrates the extent of the Borough Council Area.

INSERT MAP

Figure 1: Map of Council Area

The Ards and North Down Borough Council area has a rich diversity of scenic countryside ranging from the Strangford Shores in the west to the Outer Ards Peninsula to the east, reflecting local patterns of geology, landform, land use, cultural and ecological features. It is the interactions between geology, vegetation, and soils as well as topography in combination with a long history of settlement and land use which have formed the visually attractive landscapes that are part of our shared cultural heritage.

The Borough is notably rich in historic heritage supporting a number of large iconic land estates, most of which are included on the Register of Parks Gardens and Demesnes of Special Historic Interest. One of the largest estates is Mount Stewart, owned and managed by the National Trust which is open to the public for recreation. Many of these estates are known to support important wildlife habitats including mature broadleaved, conifer and mixed woodland, parkland and lakes with fringing wetlands such as wet woodland and reedbeds as well as veteran or ancient trees of important for invertebrates of the deadwood habitat and fungi. These sites reflect planned and managed landscape enhancement carried out since the 17th century.

The unique geological landscapes of the Borough have been shaped over millions of years as a direct result of the erosional and depositional effects of the impacts of water, wind and ice. Some of these unique geodiverse sites have been designated as ASSIs on account of their important geological features.

Scrabo Hill is the highest peak (540 feet (160 m) in the Council area and is a prominent local landmark of significant amenity and geological value making it of national importance. The Hill also has areas of nature conservation interest which are designated as Sites of Local Nature Conservation Importance (SLNCIs) which support important heath and grassland communities.

The east coast of the Borough is gently sloping, with an exposed rocky coastline that extends into the sea to form small off-shore rocky islands. The intertidal foreshores supply a wide range of habitats and support a high diversity of wildlife. This coastal strip alternates between open, exposed pastures and wooded areas including stands of pine and beech, usually associated with country estates.

The Borough area also includes the Copeland Islands with their rocky shores, cliffs and internationally important breeding sites for gulls and terns.

Strangford Lough, which is of global environmental importance, forms the central geographical and landscape feature of the area. This island studded Lough, part of the Strangford and Lecale Area of Outstanding Natural Beauty, is a key feature with downed drumlin swarms in the lowlands.

The Craigantlet escarpment, Hollywood Hills and Scrabo Hill make up the higher ground. The Bangor coastline consists of a rocky shore with gorse scrub, stands of Scots pine and steep, narrow glens. The fields and uplands of the Craigantlet Hills are mostly farmed with livestock with lands grazed from April to October. This extensive type of farming and local ground conditions give rise to a wide variety of bog and fen, species rich grassland and rush pasture.

Within the District agriculture is the basis of the rural economy, farms being mainly owner-occupied family units. In total there are 696 farms in Ards and North Down which is 3% of the total number of NI farms. Of those, most farm businesses in Ards and North Down are classified as very small (64%).

Arable land, which includes land under grass re-seeding, is scattered through the Council area with some concentration in areas that are relatively well drained, as for example the Ards Peninsula. Arable land is often of low biodiversity interest but can be significant for farmland birds; priority species such as tree sparrow *Passer montanus* and yellowhammer *Emberiza citrinella* have been recorded in areas classed as arable.

Cairn Wood in North Down covers an area of 40 hectares (98.84 acres) supporting a semi-natural woodland of oak *Quercus* sp., beech *Fagus sylvatica*, ash *Fraxinus excelsior*, hazel *Corylus avellana*, willows *Salix* sp, and alder *Alnus glutinosa*. There are fine views from the top of the hill over the County Down countryside. Cairn Wood supports the threatened and legally protected red squirrel *Sciurus vulgaris* and pine marten *Martes martes* which appears to be spreading in Northern Ireland.

The Council has made significant investment in their open spaces and parks. Five locations in Ards and North Down have achieved a Green Flag Award, an internationally recognised certification for environmental quality management.. Hollywood's Ballymenoch Park, Newtownards' Kiltonga Nature Reserve and Londonderry Park, as well as Bangor's Castle Park and Linear Park, have each received the prestigious award supplying excellent open space and recreation opportunities.

These parks also support a diverse range of grassland, woodland and wetland habitats. In the summer, the swift *Apus apus*, a bird in serious decline, can be seen and heard flying over these public parks. Threatened and legally protected bats also forage over the grasslands and woodlands of the public parks.

Fishing rivers such as the Comber, Enlar and Ballystockart within the Borough supply coarse, game and trout fishing. These rivers support kingfisher *Alcedo atthis*, grey wagtail *Motacilla cinerea* and Irish dipper *Cinclus cinclus hibernicus* as well as the elusive otter *Lutra lutra*.

The Walled Garden at Castle Park in Bangor is managed by the Council. It has a diverse range of trees, shrubs and perennials that sustain declining pollinating insects.

2.0 What is Biodiversity and Why is it Important?

Biodiversity is the variety of plant and animal life in the world, or in a particular place or habitat, and includes all species of plants and animals, and the habitats in which they live.

Humans are also a part of biodiversity, and the way we make use of the land and manage various habitats can have a knock-on effect for many other species. All living things are dependent upon each other and the environment around them for survival; this is called an ecosystem. Each species within an ecosystem has an important role to play – for example most plants have a special link with fungi living in the soil, without which they could not grow and reproduce.

The biodiversity of Northern Ireland is of international importance and around 20,000 species are found here in a wide variety of habitats. It is the duty of us all to protect this biodiversity for current and future generations, to ensure the continued survival of other species.

A vast range of habitats can be found throughout the Ards and North Down Borough Council area including saltmarsh, rivers & lakes, fens, sand dunes, woodland, and grassland. Urban habitats within parks, cemeteries and gardens are also important

for biodiversity. Some notable habitats and the species they support are outlined in this plan.

The challenge is to encourage everyone to enjoy and access the natural environment without degrading biodiversity. Some habitats are more fragile than others but generally most problems can be avoided with some planning and forethought.

Many habitats managed for the benefit of biodiversity also provide us with relaxing and picturesque places to relax or exercise; research shows that such places are also beneficial for both our physical and mental health and well-being.

Reference has been made to recreation and health as two important reasons for improving biodiversity. Equally important are the cultural aspects of our Biodiversity. Many of the habitats and species that we wish to conserve and enhance are valued because people can remember them and related to them in days past.

Our wild places are embedded in our culture and our wish to enhance them is because they existed and were important to earlier generations and because we wish to pass these values and treasures onto our children and future generations.

Many of these habitats are also 'outdoor classrooms' for us all to learn about the natural world. Conserving biodiversity is part of living in a sustainable way, something we must all learn to do. This is essential as otherwise many resources we need to thrive will become scarce and more costly to acquire; an example would be the importance of pollinating insects in the apple-growing industry. Insects pollinate our crops and can supply natural pest control. If we did not have insects such as bumblebees to pollinate our food crops, growers in the UK would have to find an extra £220 million - £400 million every year to fund this service themselves.

Grasslands provide habitats for insects which in turn provide natural pollination and pest control services to our agriculture industry. The decline in bumblebees, a vital economic pollinator, is linked to a decrease in traditionally managed grassland habitats.

A natural, appealing landscape with a range of habitats also attracts tourists, which provides a direct benefit to the local economy.

The natural environment also helps regulate the climate and buffers against high water flows and weather extremes. Wetlands provide flood defence services worth £1,279 per hectare per year and storm defence services worth £722 per hectare per year. Without them we would have to pay for these services. Over-development of wetland habitats leads to the loss of natural flood defences which then must be replaced by inadequate, and extremely costly, engineered solutions.

Marine environments are important for providing food (fish, shellfish), reduction of climate stress (carbon and other biogas regulation), genetic resources (for aquaculture), bio-technology (medicines), fertiliser (seaweed), coastal protection, waste detoxification as well as disease and pest control. The waste processing and purification services provided by marine habitats ensure that food from the sea is safe to eat and the water is clean enough to use for recreation.

3.0 What Threatens Biodiversity?

Many of the habitats present in Ards and North Down, such as unimproved grasslands, species rich hedgerows and inter-drumlin wetlands are under severe risk of severe damage or loss. When damaged or destroyed many of our habitats are impossible to restore or re-create. Most significant risks to our biodiversity are often caused by human activity. Fortunately, this means that we can change our behaviour to stop the damage we are doing to these habitats and the biodiversity they support. Nature recovery networks aim to address these treats through creating, enhancing and linking habitats.

Habitat Loss and Fragmentation

The biggest threat to biodiversity at a global, regional and local scale is the loss of natural habitats and fragmentation of existing habitat into smaller pockets. Much habitat loss and fragmentation has occurred because of our increasing human

population which has required us to replace natural habitats with land that is used for agriculture, housing, leisure activities, commercial units and industrial complexes. Many species require habitats of a certain size to thrive and when this habitat is lost or becomes too small to sustain such species, local extinction of that species can result.

Building and development can lead to habitat destruction, fragmentation and loss. Even on a smaller scale, building single dwellings in inappropriate places can have a negative impact on the biodiversity of an area. When a number of these dwellings are added together, they have a significant impact. The removal of hedgerows for development or sightlines also has a significant impact on the local wildlife. Hedgerows act as wildlife corridors and allow many species to travel from one habitat to another.

Invasive Species

The arrival and spread of invasive non-native species is also a major threat to biodiversity. This includes pest species, which often arrive with no natural diseases or predators and so spread without any natural methods of control, often to the detriment of our native biodiversity. As global travel and trade continues to increase, the risk of greater numbers of invasive species arriving and harming our natural and built environments will also increase.

Invasive Non-native Plant and Animal Species

Non-native invasive plant and animal species are one of the greatest threats to Ireland's native biodiversity, second only to the threat posed by habitat destruction. Invasive species have negative impacts on human health, the economy and biodiversity. These impacts include altering local food webs by making food resources for native flora and fauna scarce, preying on native species thereby reducing or eradicating populations of native species, out-competing native flora and fauna, possessing toxic substances that impact on human health, acting as a reservoir for new parasites or a vector for pathogens. They are spread from one

continent to another via the global agricultural, horticultural, aquaria and pet trades - or by transportation in ballast water and on the hulls of ships.

Many invasive non-native species have been introduced into our environment intentionally in the past; others have escaped from private gardens or estates. These species were imported without their natural pests, diseases or predators which would usually help to control their numbers. The result is that they often spread rapidly through the countryside, to the detriment of native species.

Council has begun to map the distribution of invasive species on Council-owned land as a first step to their effective control. Those posing the greatest threat to local biodiversity include Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* and giant hogweed *Heracleum mantegazzianum*.

In addition to damaging our natural habitats and species, invasive non-native species can often also have a significant impact on the local economy.:-

Ash dieback *Hymenoscyphus fraxineus* and Larch Tree Disease *Phytophthora ramorum*, both of which are fungal diseases have been recently introduced on imported trees. Japanese Larch disease (*Phytophthora ramorum*) is a major problem which has affected larch stands at Cairn Wood. These diseases often arrive with no natural diseases or predators and so spread without any natural methods of control, often to the detriment of our native biodiversity.

Pollution

Pollution is the introduction of contaminants into the natural environment and can take a variety of forms. Water bodies can become polluted through the introduction of sewage, industrial waste, agricultural run-off and litter.

Pollution is a further threat to biodiversity and includes acts such as chemical pollution of our waterways, illegal dumping of rubbish, illegal poisoning of wildlife, agricultural intensification, increasing industrialisation, and air pollution caused by our continued reliance on fossil fuels. The inappropriate use of rodenticides, for example, can poison non-target animals such as birds of prey and owls.

Litter is a problem particularly in our marine and coastal environment. Sea based sources include fishing vessels, pleasure craft and commercial shipping. Marine litter can be consumed by marine animals when they mistake it for food and can cause entanglement and smothering of seabed communities.

Climate Change

Climate change also threatens our biodiversity. This has happened many times in the Earth's history, however research shows that this is currently occurring at a faster rate than ever before. As a result, many species do not have time to adjust to these changes and are at significant risk of extinction. Our continued reliance on fossil fuels is contributing to climate change.

Although climate change is largely accepted, the specific impact it is having, and will have in the future, is difficult to predict. The distribution of species and valued habitats may contract or expand or be wiped out completely. Non-native species may expand their range and provide a threat to native biodiversity.

Increased storm surges are predicted to be one of the impacts of climate change. Fully functioning coastal and wetland ecosystems will help to absorb some of the impact, such as flooding, but the storms themselves may cause damage to habitats making it difficult for them to perform other functions such as regulating water quality.

Insects are very sensitive to climate change: our changing climate results in plants flowering at slightly different times of the year and insects are slow to adapt to these changes, perhaps emerging from hibernation too early or too late to find flowers to pollinate.

Northern Ireland faces changes to its climate with the prospect of hotter, drier summers, warmer winters, and more frequent extreme weather events.

Nature-based solutions to climate change are urgently required. Nature-based solutions to climate change, involve conserving, restoring, or better managing land to remove carbon dioxide (CO₂) from the atmosphere. Examples include allowing forests to regrow, restoring wetlands, and switching to agricultural practices that

support healthy soils. They also provide a wide range of other important benefits, such as cleaner air and water, and increased biodiversity.

Land Management

In the past changes in agricultural practices leading to farm intensification have resulted in the loss of important habitats and species, in particular hedgerows and species rich hay meadows. An important challenge is to implement measures improving biodiversity on agricultural land and to remove native invasive species such as gorse *Ulex europaeus* and bracken *Pteridium aquilinum* from semi-natural grassland sites and non-native species such as balsam *Impatiens glandulifera* from river corridors. Countryside Management Schemes are helping to improve these issues and landowners are key to halting biodiversity loss in the area.

Most woodland in North Down and Ards need to be actively managed by either planting new trees or managing natural regeneration of existing woodland to maintain biodiversity. Diseases such as Ash dieback disease pose an added threat to our woodlands and the species which inhabit them.

4.0 Developing Our Local Biodiversity Action Plan (LBAP)

The LBAP seeks to address the biodiversity and closely related Climate Change crisis through targeted actions over a 10-year period. The LBAP development timeline is presented in **Figure 2**.

Figure 2: LBAP Development Timeline

1992

UK signed up to the Convention on
Biological Diversity at the Rio de
Janeiro Earth Summit

1995

UK Biodiversity Strategy

2002

Northern Ireland Biodiversity Strategy

2011

The Wildlife and Natural Environment Act (NI) 2011

2013

Publication of the first
Biodiversity Action Plan 2013-2017 for the
North Down and Ards Borough Council area

2022

Publication of the second Biodiversity Action Plan 2022-2032
for the North Down and Ards Borough Council Area

5.0 What is a Local Biodiversity Action Plan?

A Local Biodiversity Action Plan (LBAP) sets out how the Council can work alongside a number of governmental and non-governmental partner organisations to develop and complete actions and fulfil targets which promote and enhance biodiversity within the Council area.

With time these partnerships will grow, and the Action Plan will naturally evolve; the Action Plan is designed to create real changes that benefit local biodiversity.

6.0 The Need for a Local Biodiversity Action Plan within Ards and North Down Borough Council

Biodiversity can be used to improve relationships between staff, local stakeholders, and the community. Biodiversity can be used as a driver for stakeholder involvement and engagement.

Although the Local Biodiversity Action Plan is led by Ards and North Down, it is a Plan which everyone can become involved with; everyone can do something to contribute to the Plan and make a difference for local biodiversity.

The Council has produced this Local Biodiversity Action Plan which aims to ensure that international, national, regional and local biodiversity objectives are achieved through a range of partnerships that will benefit both current and future generations.

Ards and North Down Borough Council is committed to the protection of the natural environment. Under the WANE Act, the Council is responsible for considering five key aspects of biodiversity. These are:

- **Protecting Biodiversity:** ensuring that biodiversity is protected from removal, damage, and disturbance on Council-managed lands
- **Managing Biodiversity:** ensuring that existing biodiversity is maintained using appropriate management techniques such as removing invasive species
- **Enhancing Biodiversity:** where possible, biodiversity is enhanced by actions such as the planting of native trees, creating wildflower meadows, creating wetland habitats, or erecting bat roosting and bird nesting boxes
- **Restoring Biodiversity:** actions are taken where and when possible, to restore former biodiversity where it has been lost from a site by e.g., restoring an area of wetland or woodland, or extending the habitat available for priority species
- **Raising Awareness of Biodiversity and its Importance:** Council engages in several internal and external events which raise awareness of biodiversity issues such as littering, habitat loss, invasive species, and climate change,

often in partnership with other public, private, community and charitable organisations

The development of a LBAP is an important first step in recognising the importance of local biodiversity.

The LBAP has enabled us to identify the habitats and species that are important to our area; either because they appear on the Northern Ireland priority habitats and species list or because they are local iconic species that have a strong association with the Ards and North Down area.

Community Planning is a new function for councils which came into effect in April 2015-The Council must initiate; and having done so, maintain, facilitate and participate in, Community Planning alongside a number of named partners. Sustainable development is one of the guiding principles underpinning the Community Plan. The plan recognises that wild better places to live and while our environment is vital to our wellbeing, the wellbeing of our environment relies on our sense of stewardship. Therefore, the Plan stated that the Council will produce a comprehensive and achievable Local Biodiversity Action Plan (LBAP) to protect, maintain, enhance, restore and educate on biodiversity issues.

The LBAP aims to conserve biodiversity through local partnerships, considering both national and local priorities by involving local people and local community and conservation organisations through practical delivery of biodiversity conservation.

Local people know and appreciate their own resource and for this reason alone a local plan is necessary. The plan provides the opportunity for local people to decide on the priorities in their area and to have a full say in the development and implementation of the plan. It provides the opportunity for everyone to be involved and contribute to the actions that we are all agreed upon. The LBAP helps to ensure that national and Northern Ireland targets for species and habitat conservation in the Northern Ireland Action Plans are translated into effective action at the local level on

the ground. It includes species and habitats that are not included on the national or regional plans but are of local importance.

This Biodiversity Action Plan is an integral part of the Local Development Plan. The Local Development Plan (LDP) for Ards and North Down Borough Council is the Council's first statutory spatial Plan which will provide a framework for the future development of the area.

7.0 International, National and Regional Legislative and Policy Framework

The Ards and North Down Local Biodiversity Action Plan (LBAP) derives from a number of international, national and local processes.

7.1 International Commitments

International obligations which are adopted in Northern Ireland legislation and policies require the protection of biodiversity including flora, fauna, and habitats as well as protection of green and blue infrastructure to enhance the services that natural resources provide.

As international concern grew over loss of Biodiversity, 178 countries, including the UK and Ireland, signed the Convention on Biodiversity at the Earth Summit in Rio de Janeiro in 1992. The aim of the Convention was to obtain formal commitment from all governments to act to conserve the world's biodiversity, considered to be under threat as never before. It was agreed to work towards the sustainable use of the earth's resources and the fair and equitable sharing of benefits arising from the use of the range and variety of animals and plants.

In the same year, the European Union adopted the Habitats Directive which requires member states to designate Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) to protect some of the most seriously threatened habitats

and species across Europe. Although Brexit has resulted in the UK leaving the EU, environmental legislation to date still applies in Northern Ireland.

Post-2020 Global Biodiversity Framework (GBF)

The Post-2020 Global Biodiversity Framework (GBF) is a United Nations-led initiative to tackle the root causes of biodiversity loss. Set to be completed in early 2022, the GBF's draft sets out targets for protecting marine and land habitats, reducing pesticides and plastic waste, and increasing investments.

7.2 National Commitments

Biodiversity Net Gain

Biodiversity net gain (BNG) is an approach to development, and/or land management, which aims to leave the natural environment in a measurably better state than it was beforehand through habitat creation or enhancement after avoiding or mitigating harm.

The provisions for BNG only apply to England at present and won't kick in until after a two-year transition period, i.e., from late 2023 at the earliest. However, the principles are fast gaining momentum amongst developers and landowners, and certain local authorities already have policies in place for BNG requirements. It is widely expected that Wales, Scotland and Northern Ireland will follow suit.

Natural capital is the world's stock of natural resources, which includes geology, soils, air, water and all living organisms. Some natural capital assets provide people with free goods and services, often called ecosystem services. All of these underpin our economy and society, and thus make human life possible. It is expected that biodiversity gain will result in the creation and the avoidance of loss of several thousands of hectares of habitat for wildlife each year, which represents annual natural capital benefits of around £1.4 billion.

UK Biodiversity Action Plan (UKBAP)

To meet the UK's obligations under the Convention to "develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity", the UK Biodiversity Action Plan (UKBAP) was launched in 1994. Its overall goal is "to conserve and enhance biological diversity within the UK, and to contribute to the conservation of global biodiversity through all appropriate mechanisms". Through a steering group, it identified a list of species and habitats which were priorities for action. Targets set nationally for species and habitats of conservation concern will be translated into actions which are achievable in a local context. In addition, BAPs will provide a focus for the conservation of locally-valued species and habitats.

Nature Positive 2030

In response to the crisis of biodiversity loss, many Heads of State around the World have recently made hugely significant commitments for nature, notably through the Leaders' Pledge for Nature launched at the United Nations General Assembly in 2020, and the 30by30 commitment to protect 30% of our land and seas for nature by 2030. These commitments are far reaching, requiring transformational change across sectors in the way we protect, value, use and engage with nature.

The UK has committed to become Nature Positive by 2030 which means reversing the current declines in biodiversity, so that species and ecosystems begin to recover. This is an essential first step on the path to full nature recovery. If species populations are to begin recovering by 2030, wildlife habitats need to be restored and created now. Nature recovery is within our grasp: we know what to do and how to do it.

In combination with more sustainable management across Northern Ireland, 30x30 could create the foundation for recovery of habitats and species, provide the backbone of a country wide Nature Recovery Network, and foster a nature-positive economy for everyone.

Existing protected sites alone will not achieve wildlife's recovery or help us in our fight against climate change. A network of wild places that are bigger, better, more

and joined up is needed. Recent research has shown that NI ranks as the 12th-worst performing country for biodiversity loss out of 240 countries. We have lost more wildlife than anywhere in the UK, with 97% wildflower meadows gone, 11% species at risk from extinction from the island of Ireland, and just 1 of 21 lakes in good quality. 74% of people across Northern Ireland are demanding a nature rich Northern Ireland. Scientific evidence proves that protecting at least 30% of land can have a significant impact on extinction risk and climate change.

Nature-based Solutions

'Nature-based solutions' look to protect or enhance nature in a way that helps tackle climate change and other challenges, while benefitting biodiversity and improving human wellbeing. A wide variety of nature-based solutions, such as tree planting, peatland restoration and coastal salt marshes, have the potential to help.

Green/blue Infrastructure

Green/Blue infrastructure allows the essential benefits of nature to be provided to people. These essential benefits are known as ecosystems services and include the provision of food, clean air and water, regulating the effects of climate change, and cultural benefits such as providing opportunities for recreation and exercise.

7.3 Regional Commitments

An important product of the 1992 Earth Summit was 'Agenda 21' - a comprehensive programme of action needed throughout the world to achieve more sustainable development into the next century. Local Agenda 21 is the local community element of a national and international initiative of the United Nations to protect and preserve planet Earth and the way of life of its people.

The Wildlife (Northern Ireland) Order 1985 introduced a number of offences relating to killing, injuring or removing wild birds or wild animals listed in Schedule 5, and prohibits interference with places used for shelter or protection. Additionally, the Order makes it an offence to uproot or trade in any wild plant listed in Schedule 8.

The Order aims to prevent the spread of non-native species (i.e., Japanese Knotweed) which may be detrimental to native wildlife.

The Wildlife and Natural Environment Act (NI) 2011, sometimes known as the WANE Act, is the main piece of legislation in Northern Ireland concerned with protecting our biodiversity. It has also tightened control on invasive non-native species and has increased the penalties for wildlife crime. This legislation places a statutory duty (called the Biodiversity Duty) on public bodies such as local councils to further the conservation of biodiversity in ways that are consistent with carrying out their main functions.

Under the WANE Act, the Council is responsible for considering five key aspects of biodiversity. These are:

- **Protecting biodiversity**
- **Managing biodiversity**
- **Enhancing biodiversity**
- **Restoring biodiversity**
- **Raising awareness of biodiversity and its importance**

The Northern Ireland Biodiversity Strategy 2020

The Northern Ireland Biodiversity Strategy 2020 includes national targets and actions for a range of important habitats and species. To achieve these targets local biodiversity action must also be taken.

This report approaches the conservation of biodiversity from an ecosystem services approach, meaning that it recognises the need to conserve biodiversity in a way that provides us with the materials and services we depend upon for our own survival.

It includes recommendations on how to best sustain biodiversity within an international and national context. Priorities in terms of habitats and species were identified and set out in the strategy.

Many sites in the Council area support habitats which are of particular importance for declining, rare and protected priority species.

This strategy has become the reference point in the development of LBAPs and identifying priority habitats and species within local areas.

The strategy sets out the role of the work that businesses, local government, and the voluntary sector do to achieve the overarching aim of halting biodiversity loss. Halting such loss will allow us to continue to benefit from all that nature has to offer, particularly at a time when the planet's climate is changing, with all the challenges that such change brings. It sets out the role of the LDP in this process and the principle of taking forward biodiversity issues in the LDP preparation. The LDP must consider its impact on the integrity of Natura 2000 sites (these comprise SACs and SPAs as well as Ramsar Sites).

All-Ireland Pollinator Plan 2021-2025

One third of our bee species is threatened with extinction from Ireland. This is because we have drastically reduced the amount of food (flowers) and safe nesting sites in our landscapes. The All-Ireland Pollinator Plan is about all of us, from farmers to local authorities, to schools, gardeners and businesses, coming together to try to create an Ireland where pollinators can survive and thrive. The first Plan covered the period 2015-2020 and a new version has been developed for 2021-2025.

Northern Ireland Peatland Strategy 2021-2040

The Northern Ireland Peatland Strategy identifies the ecosystem services provided by healthy peatlands, including climate regulation and adaptation, specialised biodiversity, good water quality, flood alleviation and a historical archive. Peatlands also provide a unique landscape for recreation and education.

A cross-sectoral group, the Northern Ireland Peatland Partnership will provide oversight and ensure delivery of the Strategic Objectives and Actions contained within the Strategy.

Draft NI Environment Strategy

The Environment Strategy is intended to be an overarching document setting out Northern Ireland's environmental priorities for the coming decades and will form part of the Green Growth agenda (the Green Growth Strategy will provide more detail on actions in respect of climate change & greenhouse gas emissions).

Draft Green Growth Strategy for Northern Ireland

The Green Growth Strategy is the Northern Ireland Executive's multi-decade strategy, balancing climate, environment and the economy in Northern Ireland. It sets out the long-term vision and a solid framework for tackling the climate crisis in the right way.

Nature Recovery Networks

The previous Local Biodiversity Action Plan (LBAP) for Ards and North Down Borough Council (ANDBC) (2013-2017) was the first ever biodiversity plan for the Borough. It involved a comprehensive desk-based biodiversity audit of the local area and extensive stakeholder consultations which allowed the steering group to develop specific local habitat and species action plans. The previous LBAP can be found on the councils website:

https://www.ardsandnorthdown.gov.uk/images/assets/Local_Biodiversity_Action_Plan_2013-2017.pdf.

This revised plan covering the period 2022-2032 will reflect changes in the national and international approach to conservation by moving towards a Nature Recovery Approach of protecting and enhancing our local biodiversity.

To reverse the declines in biodiversity and realise nature's recovery at scale, we need to work together and on the landscape-scale to embed the principles of Bigger, Better, More and Joined Up into our policies and strategies. This means protecting and enhancing our existing natural habitats, but also making them bigger, creating new areas of species-rich habitat, and, critically, ensuring they join up to create functional and resilient ecological networks that enable nature and people to thrive.

A Nature Recovery approach will provide ANDBC with a comprehensive picture of the habitats and species within our Borough and allow us to work closely with partners and stakeholders to produce actions on a larger and connected scale than within the previous LBAP. Ulster Wildlife Trust (UWT) and their partners were awarded Heritage Lottery Funding in 2020 to carry out a Northern Ireland wide Nature Recovery Network Study. As a part of the project, they completed a large mapping exercise to understand what current land cover looks like in Northern Ireland, how connected it is, and how this could be improved, at a landscape-scale. Many biodiversity corridors have been identified and through this LBAP, such networks can be protected, enhanced and managed to assist in conserving our biodiversity (**Figure 3**).

Figure 3: An example of Nature recovery networks

This includes the protection and enhancement of green spaces within urban areas which provide 'green oases' for residents, businesses and visitors.

There are great opportunities for a local nature recovery network in the ANDBC area where governmental, local authority, landowner, non-governmental partners and community groups could come together and achieve more, bigger, better and more joined up spaces for nature.

The Marine Plan for Northern Ireland

The Marine and Coastal Access Act 2009 (MCAA) and the Marine Act (Northern Ireland) 2013 (The Marine Act), require the Department of Agriculture, Environment and Rural Affairs (DAERA) as the Marine Plan Authority (MPA), to prepare marine plans. The Marine Plan for Northern Ireland will inform and guide the regulation, management, use and protection of Northern Ireland's marine area. It is a single document made up of two plans, one for the inshore region and one for the offshore region. The marine area comprises all marine waters including seabed, subsoil, sea loughs and tidal rivers, so far as the tide flows at Mean High Water Spring Tide.

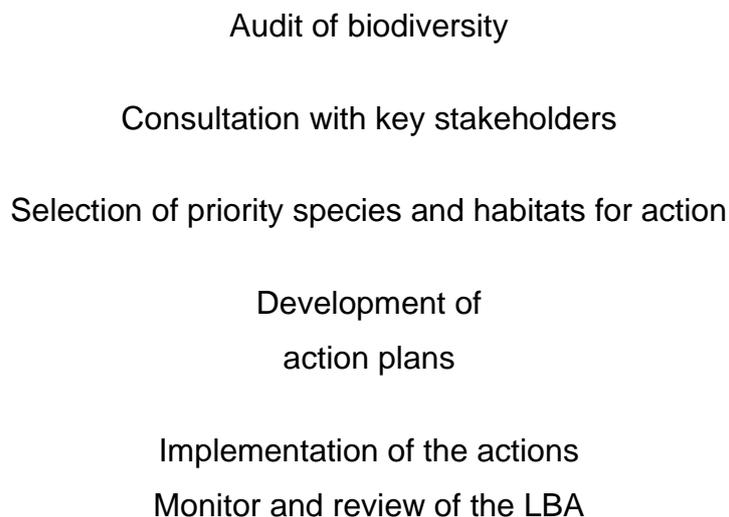
The draft Marine Plan takes account of the economic, social, and environmental needs of the marine area, and provides guidance and operational policies.

A Marine Mapviewer (<https://apps.d.aera-ni.gov.uk/marinemapviewer/>) which shows the uses and activities and protected designated sites that occur in the Northern Ireland Marine Area is available.

8.0 Development of the LBAP

The key stages in the development of our LBAP are presented in **Figure 4**.

Figure 4: Key Stages in the Development of our LBAP



8.1 Biodiversity Audit

An essential part of the BAP process was to establish, via a biodiversity audit, which of the internationally important and UK and Northern Ireland priority habitats and species occur in the Council area, and where available, include information on population size or habitat extent, trends, threats, and information sources. This audit forms a record of 'best current knowledge'. It is not a definitive statement of biodiversity in the Council area. However, over time it will be amended and added to as our knowledge is increased. Nonetheless, the audit highlights the remarkable biodiversity that occurs

in the Council area from the common and widespread, to nationally rare species and habitats.

The audit provided the information about the species and habitats that are under threat. The information was then used to decide what habitats and species should be prioritised for conservation action in the Ards and North Down area. These are our priority habitats and priority species. In addition to priority habitats and species, locally important species and habitats are also highlighted.

The audit also highlights where there are gaps in information, which through the LBAP process can stimulate new data collection and research.

The Ards and North Down LBAP will be based largely on the targets set out in the Northern Ireland Biodiversity Strategy. The Northern Ireland Biodiversity Strategy is the blueprint for conserving and improving biodiversity in Northern Ireland. This strategy identifies a distinct role for local councils in conserving biodiversity through the production of LBAPs.

8.1.1 Internationally, Nationally and Locally Designated Sites

Designated sites are wildlife-rich sites that have been selected for their nature conservation value. They vary in shape and size and can have important, distinctive and threatened habitats and species. Designating sites helps to ensure that the species present are properly protected. Sites that are designated tend to be the best examples of natural and semi-natural ecosystems and are managed to conserve their unique features. In Ards and North Down sites have been designated to preserve a wide range of Northern Ireland priority habitats and species. Many of these designated areas are in private ownership which is why partnership work is so important to the success of this LBAP.

Habitats are designated as important when a specific area of land has an important ecosystem which helps to support a particular species, or a group of species.

There are over 60 designated sites of regional, national and international importance in the Ards and North Down area. These sites are listed in **Appendix 1**.

Special Protection Areas (SPAs)

In 1979 UN member states including the United Kingdom, adopted The Birds Directive which aimed to protect all European bird species. These sites deemed important for breeding, over wintering and migrating birds are designated as Special Protection Areas (SPAs). There are three SPAs designated in the Borough.

Special Areas of Conservation (SAC)

In 1992 the European Union also adopted a directive on the conservation of natural habitats and of wild flora and fauna, often called The Habitats Directive. This required all member states, including the UK, to designate a series of Special Areas of Conservation (SACs) to protect some of the rarest or seriously threatened habitats and species in a European context. There are currently only two SACs within the Borough.

Sites designated under both directives for their conservation interest are often known as 'Natura 2000' sites. In 1995 the EU Habitats Directive was transposed into

Northern Ireland legislation as the Conservation (Natural Habitats etc.) Regulations (Northern Ireland) 1995 (as amended). This legislation provides protection for our most vulnerable habitats and species.

Despite the UK exiting the EU, the level of protection to our habitats and species in the wider countryside and in our protected areas will remain unchanged. The Conservation (Natural Habitats, etc.) (Amendment) (NI) (EU Exit) Regulations 2019 limits changes, only to those needed, to ensure our legislation continues to operate effectively from 1 January 2021. Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) will become part of the UK national site network. There is no practical difference to these designated sites, and the requirements of those that manage them or make decisions related to them, remains the same. They will continue to be referred to as European sites.

Ramsar Sites

Wetlands listed under the Ramsar Convention to protect those of international importance. Ramsar sites are wetlands of international importance, listed under the Ramsar convention, where signatories are required to conserve such areas through the highest form of protection. A wetland is defined as an area of marsh, fen, peatland, or water, whether natural, or artificial, permanent, or temporary, with water that is static or flowing, fresh, brackish, or salt and including areas of intertidal marine water. There are two Ramsar sites in the Borough.

Areas of Special Scientific Interest (ASSIs)

ASSIs are sites of special interest by reason of their flora, fauna, geological and/or physiographical features and are designated under the Environment (Northern Ireland) Order 2002 (as amended). ASSIs are areas of land that have been identified through a scientific survey as being of the highest degree of conservation value, based on their flora, fauna and geological or physiographical features. They have a well-defined boundary and by and large remain in private ownership. There are nine ASSIs within the Borough, either in whole or part.

National Nature Reserves/Nature Reserves

These are designated under the Nature Conservation and Amenity Lands (NI) Order 1985 and are managed by the Department of Agriculture, Environment and Rural Affairs or by agreement with another Department, a District Council, or a voluntary conservation body. Nature reserves are chosen from among the very best examples of our wildlife, habitats, and geology. They contain a wide range of species, communities and geology and their designation is a public recognition by Government of their importance. These sites are reserved and managed for conservation as well as providing special opportunities for study and/or research.

Sites of Local Nature Conservation Importance

Sites of Local Nature Conservation Importance (SLNCIs) were designated in accordance with Planning Policy Statement 2 Planning and Nature Conservation. Sites were identified based on their flora, fauna, or earth science interest. Policies for the protection and/or enhancement of SLNCIs were included in the Local Development Plan. As the Council's new Ards and North Down LDP process progresses, the Local Policies Plan will identify SLNCIs. Where such sites are confirmed in adopted plans, specific planning policies will be applied to development proposals on those sites.

Local Nature Reserves (LNRs)

LNRs can be designated by local Councils under the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985. Local Nature Reserves protect sites of local importance for nature conservation, education, and amenity. There are two Local Nature Reserves designated within the Borough Balloo Wetland and Balloo Woodland both managed by Ulster Wildlife in partnership with Ards and North Down Borough Council.

Ulster Wildlife manages a network of nature reserves throughout Northern Ireland. Ulster Wildlife also carries out conservation management of notable habitats including lowland meadow as well as conservation actions for notable species such as red squirrel and barn owl.

8.1.2 Habitats within Ards and North Down Borough Council Area

The Northern Ireland Biodiversity Group has developed lists of Priority Habitats and Priority Species which detail the habitats and species most at risk in Northern Ireland..

The Borough contains a variety of habitats including saltmarsh, semi natural grasslands, woodlands, wetlands, peatlands including bogs and fens, agricultural grassland and areas of geological interest.

Coastal, Island and Marine Habitats

The Borough contains a 350 km stretch of coast from Belfast Lough to the tip of the Ards Peninsula.-With such a significant length of coastline-it is not surprising that coastal habitats have been identified as integral elements of the Local Biodiversity Action Plan.

Marine Habitat

The marine environment supports a significant percentage of Northern Ireland's biodiversity. Many birds are associated with the coast, including the instantly recognisable oystercatcher *Haematopus ostralegus*, that walks the shores, feeding on cockles and mussels. Other common seabirds include both the Cormorant *Phalacrocorax carbo* and shag *Gulosus aristotelis* which are often spotted standing on offshore rocks.

Strangford Lough, with its at least 70 islands, is the only marine nature reserve in Northern Ireland and one of only three in the UK. The Lough supports over 2000 marine species which is more than 70% of the known marine species off the coast of Northern Ireland. Strangford Lough and the Outer Ards Area support internationally important breeding populations of sandwich tern *Sterna sandvicensis* and Arctic tern *Sternus paradisaea*. A wide range of habitats are also found including rocky shores, sand and shingle beaches, mud flats, seagrass beds and horse mussel beds supporting a diverse flora and fauna.

Copeland Islands SPA/ASSI viewable from Donaghadee, is located off the North Down coastline and comprises Big Copeland, Light House Island and Mew Island. The site is most importantly known for its breeding seabirds and waders, these include significant populations of razorbill *Alca torda*, kittiwake *Rissa tridactyla* and common guillemot *Uria aalge*. Other species of significance include the fulmar *Fulmarus glacialis*, and black guillemot *Cepphus grylle*. *It is important to note the islands also* contain some particularly unique coastal plant communities and geological features.

The shoreline of Belfast Lough comprises a series of mudflats and lagoons while the outer Lough is restricted to mainly rocky shores with some small sandy bays. The Lough has been designated as a Special Protection Area (SPA) and a Ramsar Site as it regularly supports internationally important numbers of migrating waterfowl and wildfowl. Belfast Lough has also been declared an Area of Special Scientific Interest (ASSI).

Sightings of harbour porpoise *Phocoena phocoena* and bottle nosed dolphin *Tursiops truncatus* are quite common at all times of the year. Strangford Lough and the Outer Ards Peninsula are home to colonies of grey seal *Halichoerus grypus* and common seal *Phoca vitulina*. The waters of Strangford Lough include reef and sandbank habitats that support and are vital for a variety of rare marine life.

The plant perhaps most commonly associated with our coastline is thrift *Armeria maritima*, exhibiting an abundance of pink or sometimes red, purple or white flowerheads on stalks. Other species with colourful flowers to look out for include red valerian, sea mayweed *Tripleurospermum maritimum*, sea campion *Silene uniflora*, common scurvygrass *Cochlearia officinalis* and rock-sea spurrey. The fern sea spleenwort *Asplenium marinum* occurs on coastal rocks.

Sea-kale *Crambe maritima*, a plant of shingle beaches, is generally said to be extremely rare in Northern Ireland.

Other rarities of the upper beach include oysterplant *Mertensia maritima* found at Kearney NT, Ards Peninsula. This is a scarce attractive plant found on shingle and sand sea-shores in the east and south of the county.

Sand Dune Habitat

Sand dunes are diverse habitats that support a range of common and rare plants, mosses, insects, birds and mammals. They support a substantial proportion of our butterfly, moth, ant, bee and wasp species. Sand dunes also provide nesting habitat for breeding birds such as stonechat *Saxicola rubicola* and meadow pipit *Anthus pratensis*. Most of the habitat in the area can be found in the Outer Ards and around Cloughey Bay. Vegetation includes dune scrub/slacks, together with saltmarsh, strandline vegetation, and dry grassland. Cloughey Dunes comprises a complex habitat mosaic of sand dunes, scrub and dense bracken. Sand dune plants include lyme-grass *Leymus arenarius*, sand couch *Elymus junceiformis*, sea sandwort *Honckenya peploides*, mayweed *Tripleurospermum maritimum*, sea rocket *Cakile maritima*, sea radish *Raphanus raphanistrum* ssp *maritimus*, perennial sow-thistle *Sonchus arvensis* and several species of orache *Atriplex* spp.

Mudflat Habitat

Extensive areas of mudflat occur around Strangford Lough. Mudflats contain a great abundance of species, including invertebrates such as the Lugworm, which in turn support large numbers of predatory birds and fish. Mudflats provide valuable feeding and resting areas for significant numbers of passage/wintering waders and wildfowl such as light-bellied brent geese *Branta bernicla hrota*, shelduck *Tadorna tadorna*, red-breasted merganser *Mergus serrator*, shoveler *Anas clypeata*, wigeon *Anas penelope*, turnstone *Arenaria interpres*, oystercatcher *Haematopus ostralegus*, ringed plover *Charadrius hiaticula*, golden plover *Pluvialis apricaria*, lapwing *Vanellus vanellus*, redshank *Tringa totanus*, greenshank *Tringa nebularia*, knot *Calidris canutus* and bar-tailed godwit *Limosa lapponica*.

There was an over 60 per cent decline in breeding numbers of curlew, lapwing and redshank in Northern Ireland between 1987 and 1999. The decline of these waders

has been largely caused by the loss of mixed farming and spring cropping, and the intensification of grassland management through drainage.

The road from Newtownards to Portaferry provides a good vantage point to view the extensive intertidal mudflats notably at Mount Stewart. The upper parts of the mudflats are fringed with saltmarsh vegetation. Saltmarsh is one of the rarest coastal habitats in Northern Ireland as most of the original habitat has been reclaimed and improved for agriculture. Strangford Lough supports one of the most extensive saltmarsh areas in Northern Ireland with the Comber estuary harbouring one of the most valuable saltmarsh areas. The saltmarsh located at Ballymacormick Point ASSI contains several plant species with a restricted distribution in Northern Ireland, including salt-marsh flat Sedge *Blysmus rufus* and sea purslane *Atriplex portulacoides*.

The best time to view this habitat is in August when, from the road, an abundance of the colourful yellow and purple flowers of sea aster can be seen, mingling with innumerable tiny purple-pink flowers of lax-flowered sea-lavender *Limonium humile*. Saltmarsh is rare in the British Isles and in Northern Ireland the total area amounts to only c. 250 ha.

Saline Lagoon Habitat

Saline lagoons are bodies of water that have a restricted connection to the sea which creates an environment where the salinity of the water body is neither marine nor fresh. Saline lagoons provide important habitats for large numbers of wildfowl and waders. They often provide important locations for high tide roosts as well as offering habitats for migrating birds. In the North Down and Ards area saline lagoons are present at The Dorn in Strangford Lough and at Castle Espie.

Brackish Water Habitat

Brackish water habitats are uncommon and can be associated with rare species. These include rare molluscs and plants e.g. spiral tasselweed *Ruppia cirrhosa* noted at Strangford Lough, Comber and Newtownards. This species has declined, in some

cases due to development, and there are only two recent known locations. The county population of this species may be endangered due to continued development.

Shingle Beach Habitat

Shingle beach associated with raised beaches occur at Ballyquintin Point ASSI/ NNR, a site that is notable for its extensive vegetated shingle banks. Coastal vegetated shingle also occurs at the National Trust property at Kearney, Templecowey and at Horse Island in Strangford Lough. These habitats also support breeding birds such as ringed plover *Charadrius hiaticula* and oystercatcher *Haematopus ostralegus* and support specialised plant and invertebrate communities.

Maritime Cliff and Slope

Maritime cliffs are often significant for their populations of breeding seabirds. They provide nesting sites for breeding birds such as the black guillemot *Cephus grylle*, six species of gulls and the fulmar *Fulmarus glacialis*.

Maritime Grassland

The flora of maritime grassland varies depending on exposure to salt spray and soil type but includes red fescue *Festuca rubra*, sea plantain *Plantago maritima*, buck's-horn plantain *Plantago coronopus*, thrift *Armeria maritima*, wild thyme *Thymus polytrichus*, biting stonecrop *Sedum acre*, English stonecrop *Sedum anglicum*, and spring squill *Scilla verna*. Maritime grassland occurs locally over exposed rocky headlands and outcrops at Ballyquintin Point and at Templecowey.

Horse mussel *Modiolus modiolus*

The horse mussel *Modiolus modiolus* in Strangford Lough is hugely important to the Lough's biodiversity as clumps of their shells form a living reef over large tracts of seabed. Over 270 other species have been recorded living on or in the horse mussel beds. Horse mussels are a long-lived species and individuals within beds are frequently 25 years old or more. However, they and their associated community of animal species are in serious decline.

Seagrass *Zostera* spp.

Seagrass *Zostera* spp. (often referred to as eelgrass) are marine flowering plants which often grow in dense, extensive beds in shallow coastal areas. The northern mudflats of Strangford Lough support luxuriant beds of the seagrass. Such extensive beds are rare in the British Isles. Seagrass beds provide nursery and foraging areas for commercially important fish, improve water quality by removing dissolved nutrients, stabilise sediment and are a valuable food resource for wildfowl. Over 30,000 pale-bellied brent geese *Branta bernicla hrota* make the 3,000-kilometre journey from northeast Canada each autumn to feed on the Lough's succulent seagrass.

Smelt *Osmerus eperlanus*, a small, shoaling fish that lives in estuarine and coastal waters and spawns in the lower reaches of rivers, has been noted in sea loughs including Belfast Lough. Grey mullet *Chelon labrosus* and flounder *Platichthys flesus*, which are also commonly found in estuaries, have also been recorded from Belfast Lough and some of the lagoons.

Belfast Lough regularly supports nationally important numbers of overwintering birds including goldeneye *Bucephala clangula*, great crested grebe *Podiceps cristatus*, red-breasted merganser *Mergus serrator*, oystercatcher *Haematopus ostralegus*, purple sandpiper *Calidris maritima*, dunlin *Calidris alpina*, black-tailed godwit *Limosa limosa*, bar-tailed godwit *Limosa lapponica*, curlew *Numenius arquata*, turnstone *Arenaria interpres*, shelduck *Tadorna tadorna*, greenshank *Tringa nebularia*, redshank *Tringa totanus* and common gull *Larus canus*. Internationally significant numbers of light-bellied brent geese *Branta bernicla hrota* have been recorded at the southern end of the lough, overwintering after migrating from northern Canada.

Little egret *Egretta garzetta*, a distinctive medium-sized white heron, has in recent years extended its range northwards in Europe and is now breeding in Ireland and is regularly spotted at Belfast Lough, feeding on the mudflats.

Twite *Linaria flavirostris*, the rarest of our breeding finches, has been spotted wintering by the coast in this area, feeding on seeds around the saltmarshes in

Strangford Lough. Strangford Lough supports an internationally important population of light-bellied brent geese in winter.

The otter *Lutra lutra* can be spotted along the coast and if you take a stroll along the attractive coastal footpath from Bangor to Helen's Bay you might also be lucky enough to see a common lizard *Zootoca vivipara*, our only native reptile, sunning itself on rocks or on one of the picnic tables. Lizards are frequently reported from this area and, in addition to coastal habitats, are particularly associated with sites that have coniferous woodland, heath or bog. However, it is thought that in lowland areas populations may be small and isolated due to habitat loss.

Invertebrate species to look out for near the Ards and North Down coast include the moth rosy rustic *Hydraecia micacea* at Ballyquintin Point NNR/ASSI and the grayling butterfly *Hipparchia semele* at Helen's Bay.

A walk at low tide along a rocky shore reveals a richness of marine life. This includes seaweeds, sponges and shelled creatures such as the common mussel, barnacle, limpet, whelk and periwinkle. However, there is concern about a growing number of non-native invasive species that have been accidentally introduced and are spreading in the local marine environment. These can take over habitat and displace native species and cause other problems including fouling the hulls of ships and impacting aquaculture industries. Once established, marine invasive aliens are almost impossible to eradicate. The slipper limpet *Crepidula fornicata*, a North American species, first appeared in Belfast Lough around 2005. In 2012, the carpet sea squirt *Didemnum vexillum*, which is thought to be a native of the waters around Japan, was found at Strangford Lough, and it may spread to other sites. Wireweed *Sargassum muticum*, an alga native to the shores around Japan and Korea, has been present in Europe for several decades, growing up to 16m in length and quickly forming dense mats. It now occurs at several sites along the coast in County Down.

Coastal, Island and Marine Habitats to Visit

- Ballymacormick Point

- Ballyquintin Point
- Copeland Islands
- Crawfordsburn Country Park
- Orlock Point
- Island Hill
- Ardmillan Bay
- Barr Hall Bay
- North Down Coastal Area
- Strangford Lough

Threats to Coastal, Island and Marine Habitats

- Water pollution
- Habitat loss to development
- Marine litter
- Recreational pressure

Farmland Habitats (Grassland, Arableland and Hedgerow)

Intensification of agricultural practices has had a dramatic impact upon grassland habitats. The application of fertilisers, herbicides and pesticides as well as frequent re-seeding of agricultural grassland on lowland farmland has favoured only a small number of nutrient-loving plant species with field boundaries of maintained hedgerows or barbed wire fencing. Most grasslands in the Borough are of the species-poor, improved and generally of low conservation value. In some locations however they do provide grazing for NI priority wildfowl species, e.g., whooper swan *Cygnus* and Bewick's swan *Cygnus columbianus bewickii*.

The result is that very few semi-natural grasslands now exist and many of our once-abundant wildflowers, as well as their pollinators, are now much more localised. It is estimated that Northern Ireland has lost around 97% of its species-rich hay meadows within the last 50 years.

The priority habitat lowland meadow, includes many unimproved and semi-improved grasslands which are used for hay or grazing rather than for silage. Lowland meadows have all but disappeared in Northern Ireland, but some examples of this habitat type can be found in Crawfordsburn Country Park. They are important habitats for many wildflowers and diversity of grasses which in turn support a wide range of pollinating insects including butterflies, moths and bumblebees. Damp and dry lowland meadow is a rare habitat in the Council area sites being small and rather isolated. The Council has recently begun to manage Council-owned sites (e.g. Ballyphilip Playing Fields) to improve species diversity under its Rewilding Initiative.

Many roadside verges inadvertently act as valuable corridors for the dispersal of plant and animal species across the landscape. In many areas of countryside they provide the only resources for wildlife such as sources of nectar for pollinating insects, seeds for farmland finches and buntings, cover for small mammals and a wide range of invertebrates and also foraging habitat for bats and raptors.

Rough grassland is common in the uplands. Areas of both wet and dry rough grasslands are associated with heath in upland areas, sometimes of gorse *Ulex europaeus*, but also of heather *Calluna vulgaris* in a complex mosaic with rocky outcrops. Rough grasslands are also important for the NI priority species Irish hare *Lepus timidus hibernicus*, whose range has been limited by the extension of improved, intensively managed grassland.

Lowland dry acid grassland is scattered across rocky knolls and can form minor components within other habitats. It can also be found as lawns associated with old gardens, church yards and other amenity areas.. Heaths occur as a mosaic within this habitat and are characterised by nutrient poor, mineral soils and thin peat. These have a high value for biodiversity and provide shelter for nesting birds.

Patches of wet grassland occur in inter-drumlin hollows and alongside small streams. Some of these wet grassland parcels can be species-rich and are important breeding sites for NI priority wetland birds, e.g., redshank *Tringa totanus*, curlew *Numenius arquata*, lapwing *Vanellus vanellus*, and snipe *Gallinago gallinago*. These

wet grasslands may be associated with wetland habitats for example marsh, fen, fen carr and reedbeds.

Arable land is scattered throughout the Council area often on the drier better drained broad upper slopes and ridge tops of drumlins. Arable crops with their associated elevated levels of fertiliser herbicides and pesticides can have low conservation interest, though it can provide a food resource for Northern Ireland priority farmland bird species including yellowhammer *Emberiza citronella*, tree sparrow *Passer montanus* and linnet *Linaria cannabina* if winter stubble is left in place after harvesting and spring-sown cereals grown instead.-

Arable field margins are strips of land between cereal crops and the boundary of the field and are key areas for seed-eating birds. They are deliberately managed under agri-environment agreements to benefit wildlife. Arable field margins provide nesting and feeding sites for many birds as well as a vast variety of insects. Many species of wildflower can be found in these margins.

Calcareous grassland is associated with thin basic soil. Plants on calcareous grassland are typically short and hardy and include a variety of grasses and herbs. It is an important habitat for insects, particularly butterflies and is localised in its distribution across North Down and Ards area but occurs notably as fragmented patches in Whitespots Country Park.

Hedgerows are linear strips of shrubs often interspersed with trees that form land or property boundaries. These have largely been deliberately planted in the past with the most frequent hedgerow species present being hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, gorse *Ulex europaeus* and holly *Ilex aquifolium* with ash *Fraxinus excelsior*, sycamore *Acer pseudoplatanus*, beech *Fagus sylvatica*, oak *Quercus* sp. and hazel *Corylus avellana*. They also support climbers and may provide conditions for a diverse ground flora.

To qualify as a priority habitat, a 30m section of hedgerow needs to have six species of native trees or woody shrubs present, excluding climbers. A hedgerow that

possesses less tree and shrub species than this but has a rich ground flora, may also be included in this category.

Hedgerows in Northern Ireland are in decline often due to lack of management. Adequate management and replanting of hedgerows would help to avoid this besides retaining the wooded character and ecological value of the landscape.

There is an estimated 250,000km of field boundaries in Northern Ireland, which comprises 13% of the resource of linear broad habitats in the UK. Some parts of the Council area have a low density of woodland, but this is partly made up by a high density of hedges.

Hedgerows are important within the landscape as they represent the dominant form of tree cover in an otherwise open and agricultural landscape. Their linear and often inter-connected nature as well as their structure (which is like that of woodland) allows them to act as a network of corridors across the landscape, which can be vital for plant and animal species dispersing across the countryside.

Associated farmland priority species that rely on hedgerows include common pipistrelle *Pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, linnet *Carduelis cannabina*, reed bunting *Emberiza schoeniclus*, tree sparrow *Passer montanus*, bullfinch *Pyrrhula*, song thrush *Turdus philomelos* and Irish hare *Lepus timidus hibernicus*. As many as 170 plant species of plants have been recorded in hedgerows throughout Northern Ireland.

Hedgerows act as buffers and offer wildlife protection in the landscape and fundamentally assist biodiversity through protecting and nurturing soil systems.

Grassland Sites to Visit

- Ballyquintin Farm (National Trust)
- Creighton's Green Reservoir
- Redburn Country Park
- Ballyphilip Playing Fields

Threats to Farmland Habitats

- Over-grazing
- Cessation of annual management e.g., no longer mown or grazed resulting in invasion of scrub and tall ruderal vegetation
- Use of inorganic fertiliser, supplementary addition of organic fertiliser and herbicides thereby reducing species diversity
- Drainage of wet grasslands
- Ploughing and re-seeding of old species-rich permanent grasslands
- Loss of hedgerows to development
- Lack of management of hedgerows resulting in the creation of gaps reducing their value as bird nesting habitats
-

Woodland, and Parkland Habitats

Most of Northern Ireland would have been cloaked in woodland in prehistoric times. Clearance of this vast woodland began around 6,000 years ago to provide land for agriculture and settlements, and to provide timber for building and for use as fuel.

Northern Ireland is one of the least wooded areas of Europe with only 8% of the land covered by woodland, compared with the European average which is 44%. Even by these standards woodland cover is generally low in the Ards and North Down Borough Council with little planted or mature woodland.

Well established semi-natural woodland is vital for wildlife- In Northern Ireland woodland can be divided into two types: coniferous woodland or broadleaved and mixed woodland. Broadleaved semi-natural woodland accounts for only 1.2% of land cover in Northern Ireland while the rest is conifer plantation.

Most of the broadleaved or mixed woodlands in the Borough is associated with present or former estates. Many of these estate woodlands are 'long-established', Notable wooded estates in the Council area include Clandeboye, Mount Stewart and Carrowdore as well as several smaller demesnes.

The Borough's estate woodlands are known to support a diverse range of native and non-native trees including oak *Quercus* sp., ash *Fraxinus excelsior*, elm *Ulmus* sp., lime *Tilia* sp., beech *Fagus sylvatica*, sycamore *Acer pseudoplatanus* and horse chestnut *Aesculus hippocastanum* and conifers including Scots pine *Pinus sylvestris*, Monterey cypress *Cupressus macrocarpa*, Wellingtonia *Sequoiadendron giganteum* and fir *Abies* sp. However, many of the demesne woodlands are infested with non-native invasive shrub species such as rhododendron sp. and cherry laurel *Prunus laurocerasus* in the understorey which shade out the native woodland herbs and prevent native tree regeneration.

Often carpets of spring-flowering ground flora such as bluebell *Hyacinthoides non-scripta*, wood anemone *nemorosa*, ramsons *Allium ursinum* and lesser celandine *Ranunculus ficaria* are present. Such woodland can also be an important habitat for woodland fungi, lichens, and mosses, and for bird species .

The non-priority habitat coniferous woodland consists of areas planted with non-native species such as sitka spruce *Picea sitchensis*, Norway spruce *Picea abies* and larch *Larix* spp. While such woodlands harbour relatively few plant and animal species when compared to native woodlands, they can be important for priority Species such as pine marten *Martes martes* and red squirrel *Sciurus vulgaris*.

Wet woodland priority habitat occurs on poorly-drained land or an area that is waterlogged seasonally. It is found on the margins of water bodies and streams throughout the Borough, on nutrient-enriched hill-side flushes and appear on fens and cutover acid bogs (e.g., on Council owned land, known as the Carrogs, east of Killinchy Road Comber and in small patches along the banks of the Comber (Enler) and Ballystockart rivers.)–The species present and its structure will vary but will largely contain components of willows *Salix* spp., alder *Alnus glutinosa* and downy birch *Betula pubescens* with ash *Fraxinus excelsior* and oak *Quercus* sp. occurring where soils are drier. There is normally a varied herb layer consistent with this habitat. The high humidity present beneath the tree canopy also favors the growth of a variety of mosses and liverworts. Priority species associated with wet woodland include song thrush *Turdus philomelos*, spotted flycatcher *Muscicapa striata*, and common pipistrelle bat *Pipistrellus pipistrellus*.

Mixed ash woodland priority habitat occurs in small isolated stands throughout the Borough while ash *Fraxinus excelsior* is the dominant tree species, oak *Quercus* sp., downy birch *Betula pubescens*, wild cherry *Prunus avium*, rowan *Sorbus aucuparia*, holly *Ilex aquifolium*, hazel *Corylus avellana* and hawthorn *Crataegus monogyna* can all be present. Such woodland often has a rich diversity of plants in the ground layer including scattered ferns as well as carpets of bluebell *Hyacinthoides non-scripta*, wood anemone *nemorosa*, opposite-leaved golden saxifrage *Chrysosplenium oppositifolium* and wood sorrel *Oxalis acetosella*.

The oakwood priority habitat is characterised by the predominance of either sessile oak *Quercus petraea* or pendunculate oak *Quercus robur* and downy birch *Betula pubescens* in the canopy layer. The understory species consist of holly *Ilex aquifolium*, hazel *Corylus avellana* and rowan *Sorbus aucuparia*. Priority species associated with oakwood include red squirrel *Sciurus vulgaris*, common pipistrelle bat *Pipistrellus*, song thrush *Turdus philomelos*, spotted fly-catcher *Muscicapa striata*, and starling *Sturnus vulgaris*.

Lowland wood-pasture and parkland priority habitat is not commonly found in Northern Ireland. It is an historic land management creation, associated with country houses and estates of the 19th century. Some demesne woodlands in the Borough e.g., Castle Park, Bangor are classified as priority lowland wood-pasture and parkland habitat.

Parkland includes old or veteran trees where the land has often been converted to other uses such as arable farming and amenity land and where the surviving trees are of nature conservation interest. It generally contains some of the oldest and largest trees in Northern Ireland. This is strongly linked to parkland continuity over time and the presence of old and dead wood.

Old or veteran trees are a key feature in some local parklands. They are an indicator and an essential element of a healthy ecosystem. Diversity in tree age structure in Parklands has greatly reduced over the last century this is linked not only to loss of trees but also to lack of regeneration.

Characteristically veteran trees will have a wide trunk which is hollowing in many instances as well as having rot holes, they can support a wide range of specialised invertebrates, lichens and fungi. Those with hollows may support cavity-nesting birds such as great tit *Parus major*, blue tit *Cyanistes caeruleus*, spotted fly-catcher *Muscicapa striata*, starling *Sturnus vulgaris*, Coal Tit *Periparus ater* and barn owl *Tyto alba* as well as roosting common pipistrelle bat *Pipistrellus pipisrellus* and brown long-eared bat *Plecotus auratus*.

Overall Parkland in Northern Ireland is threatened or in declining condition.

Woodland and Parkland Sites to Visit

Woodlands to Visit

- Balloo Wood
- Cairn Wood
- Crawfordsburn Country Park
- Killynether Forest Park
- Mount Stewart

Parklands to Visit

- Castle Park
- Mount Stewart House
- The Ulster Folk and Transport Museum
- Cultra Manor

Threats to our Woodlands, and Parkland

- Tree diseases such as ash dieback
- Woodland felling and fragmentation
- Hedgerow removal (wire fences are easier to maintain)

- Invasive non-native species such as rhododendron *ponticum*, cherry laurel *Prunus laurocerasus*, salmonberry *Rubus spectabilis* and grey squirrel *Sciurus carolinensis*.
- Inappropriate management such as cutting hedgerows too frequently
- Planting of non-native tree species such as beech and field maple
- Application of herbicides and fertilisers to field edges which causes a decline in hedgerow and woodland species diversity

Peatland Habitats (Bog and Heath)

There are no sizable areas of peatlands left in the Council area. Most peatlands are small, and fragmented. They have been cut-over and converted into fen or have been drained for farmland. Cut-over peatland can retain a diversity of habitats, not only those that are relatively dry but also water-logged sites or small pools that provide a habitat for invertebrates (e.g., dragonflies). One of the largest areas of degraded old cutover bog is Inishargy Bog, an Ulster Wildlife Reserve.

Nestled in an otherwise intensively managed landscape, the undisturbed position of Inishargy attracts a range of birds of conservation concern including linnet *Linaria cannabina*, reed bunting *Emberiza schoeniclus* and meadow pipit *Anthus pratensis*. The buzzard *Buteo buteo* can also be seen or heard circling overhead, and sparrowhawk *Accipiter nisus* and kestrel *Falco Falco tinnunculus* regularly hunt here. Butterflies spotted on the wing in spring and summer include orange-tip *Anthocharis cardamines*, speckled wood *Pararge aegeria*, small heath *Coenonympha pamphilus* and small copper *Lycaena phlaeas*. Day-flying moths include common heath *Ematurga atomaria* and silver hook *Lithacodia uncula*. One of the most impressive and interesting plants found at Inishargy is the royal fern, in decline elsewhere because of wetland drainage. The colony here is the largest in the east of Northern Ireland.

Most of our larger mammals seek refuge at Inishargy including fox *Vulpes vulpes*, Irish stoat *Mustela erminea hibernica*, badger *Meles meles* and Irish hare *Lepus*

timidus hibernica. The otter *Lutra lutra* have been reported nearby and likely use the reserve to move between habitats.

At Inishargy, invasive scrub and bracken is controlled to provide the right conditions for wildlife to thrive.

Lowland Raised Bog Habitat

Raised bogs have a fascinating history. They are generally located in shallow basins and in the flood plains of rivers, places that would have been poorly drained. With the growth of vegetation these sites develop into marsh and fen, and, over a long period of time, the continued accumulation of organic material creates conditions that encourage the growth of peat-forming mosses. Lowland bogs typically have a raised, domed, profile. They are rainwater-fed and associated with a distinctive range of plants that can survive the waterlogged, nutrient-poor and acidic environment. Most of the lowland raised bogs have been affected by cutting.

Lowland raised bog is a rare habitat in the UK, and Northern Ireland has a large proportion of the UK's lowland raised bogs and they are therefore of national and European importance.

Areas of lowland raised bog have largely been destroyed due to commercial peat extraction and much has been colonised by downy birch *Betula pubescens* woodland as a result of drainage. Several have been converted to fen, wet woodland or damp grassland. There can also be patches of lowland heathland; this may be found where the peat left after cutting or reclaimed from pasture is shallow. In the best examples there is a diversity of structural features including hummocks and hollows and pools that give rise to micro-habitats related especially to the height of the water table.

Lowland raised bogs, together with blanket bog, are significant stores of carbon helping to mitigate the effects of climate change.

Cutover bogs can retain an impressive complex mosaic of habitats. This diversity of habitats can support a range of plant and animal communities associated with acid bog, rich fen and swamp.

The drains, pools and old peat cuttings are important for wetland invertebrates especially aquatic beetles, aquatic bugs and dragonflies. The Irish damselfly *Coenagrion lunulatum* is found on some sites (e.g. Aughnadarragh Lough ASSI). It is in decline with the UK population restricted to Northern Ireland, and stronghold of the Irish population being Northern Ireland. Cutover bog also supports a rich terrestrial insect fauna, especially moths and butterflies, including the threatened marsh fritillary butterfly *Euphydryas aurinia*.

Blaeberry Island Bog, located approximately 6km NE of Newtownards, is of special scientific interest because of its physiographical features, peatland flora and associated fauna. The area occurs in low-lying hollows between a series of drumlins. Blaeberry Island Bog represents one of the last remaining and largest examples of active, regenerating, lowland raised bog in the south-east of Northern Ireland.

Blaeberry Island Bog is a remnant of the much larger Cottown Bog, which was extensively cut for turf in the past and much of it converted to agricultural land. The remaining bog, although extensively cutover, still contains some areas of deep peat and consists of a mosaic of bog, acid grassland, fen, bog woodland, pools and drains that have developed on the old peat cuttings. Recovery of the bog is evident in places, with hummocks, hollows and shallow pools supporting a diverse cover of vegetation, including bog-mosses *Sphagnum* spp. and ericoid dwarf-shrubs.

Most of the bog vegetation is characterised by heather *Calluna vulgaris*, cross-leaved heath *Erica tetralix*. In early summer, the surface of the bog is transformed by the appearance of innumerable fluffy, white heads of common cottongrass *Eriophorum angustifolium* and hare's-tail cottongrass *Eriophorum vaginatum*. By mid-July these have almost all vanished and vast numbers of spikes of bog asphodel *Narthecium ossifragum* with ochre-yellow flowers appear. By the beginning of autumn, the pink flowers of cross-leaved heath and purple flowers of heather dominate, and the bog asphodel spikes change in colour to brown. As winter

approaches, and the vegetation dies back, russet, silver and grey colours predominate on the bog surface. Shrubby species include bilberry *Vaccinium myrtillus* has berries that by end July have changed in colour from red to blue-grey and bog myrtle *Myrica gale*, which grows in wetter areas and has an attractive eucalyptus-like fragrance.

The insectivorous round-leaved sundew *Drosera rotundifolia* also occurs on the bog-moss hummocks. A wide variety of bog-mosses are frequent over the surface of the bog, in wetter cuttings and at the edges of pools the nationally rare golden bog-moss *Sphagnum pulchrum* can be found growing.

Royal fern *Osmunda regalis* and narrow buckler-fern *Dryopteris carthusiana* are frequent throughout but these two species have declined considerably in the east of Northern Ireland as a result of habitat loss.

Other habitats associated with the bog include wet woodland, scrub, acid grassland, heath, fen and wet ditches.

Peatland Sites to Visit

- Blaeberry Island Bog

Threats to Peatland Habitats

- Overgrazing
- Drainage
- Dumping

Wetland Habitats (Fen, Reedbed, Lakes and Rivers)

Wetlands are extremely important habitats as they support a variety of plants and animals such as invertebrates, fish, amphibians, mammals and birds. The North Down and Ards area has many good quality examples of wetland habitat including lowland fens, reedbeds, rivers, streams, ponds, and lakes. The largest wetlands are found around the shores of Strangford Lough.

In general wetlands are threatened by draining (for pastures), landfill, dumping, nutrient enrichment (which can change species composition) from surrounding land and conversion to wet woodland by natural succession.

Lakes located in the Borough with important wetland communities include Ballyalolly Lake, Heron and Carrigullion Lough and Glastry Clay Pits.

Reedbeds often occur as discrete stands but can also occur in a complex mosaic with other habitat types such as lakes, fen, wet woodland, coastal and floodplain grazing marsh and in modified examples of lowland raised bog. Reedbeds are dominated by stands of the common reed *Phragmites australis* our tallest native species of grass and are of particular value for a range of specialist bird species including reed bunting *Emberiza schoeniclus* and sedge warbler *Acrocephalus schoenobaenus*. Reedbeds also provide nesting cover for a number of species of waterfowl such as great-crested grebe *Podiceps cristatus*.

The main watercourses/rivers in the Borough are the Comber (Enlar) and Ballystockart rivers. The non-priority canal habitat Newtownards Canal also traverses the Council area. The bankside and channel of this canal supports a diverse range of habitats (e.g., reedbeds, scrub), flora and fauna including several NI priority species such as the otter *Lutra lutra*.

The meandering Comber (Enlar) River flows across the Council area, through rolling drumlins, farmland, woodland, parkland and Newtownards Town itself. The Enlar supports the NI Priority Species the brown trout *Salmo trutta* as well as the eel *Anguilla anguilla*, the latter declining in Northern Ireland. Otter *Lutra lutra* have made a significant return along with Irish dipper *Cinclus hibernicus*, kingfisher *Alcedo atthis*, several species of bats, and brook lamprey *Lampetra planeri*.

Although the Comber (Enlar) River supports a wide range of biodiversity, its various tributaries and even the smallest stream are equally of great importance to wildlife within the Council area. They are especially important as wildlife corridors linking other semi natural habitats.

Many of the rivers in the Borough drain into Belfast and Strangford Loughs. Sections of these rivers have experienced some previous modification but still attract grey wagtail *Motacilla cinerea*, Irish dipper *Cinclus cinclus hibernicus* and heron *Ardea cinerea*.

Ponds are scattered throughout the landscape and represent areas where the water table rises above the surrounding land, or areas which become waterlogged due to impermeable poorly drained soils. Many ponds have been lost as a result of agricultural-intensification, pollution, lack of management and invasive species and with them we have lost many local populations of amphibians, fish, wetland invertebrates and wetland plants. Ponds are often home to a rich diversity of wetland plants which in turn support a wide range of aquatic invertebrates, dragonflies and damselflies, smooth newt *Lissotriton vulgaris*, birds such as kingfisher *Alcedo atthis*, and occasionally a visiting otter *Lutra lutra*.

There are a variety of ponds scattered across and include the Mill Pond at Comber, as well as at Kiltonga Nature Reserve, Mount Stewart, Balloo Woodland, Balloo Wetlands and Stricklands Glen.

Strangford Lough, covering a huge 150 km² (58 sq mi) is almost fully enclosed by the Ards Peninsula and linked to the Irish Sea by a long narrow channel at its southeastern edge. The main body of the lough has at least seventy islands along with many islets (pladdies), bays, coves, headlands and mudflats. It is part of the 'Strangford and Lecale' Area of Outstanding Natural Beauty and was designated as Northern Ireland's first Marine Conservation Zone in 2013, it is also designated a Special Area of Conservation for its important wildlife.—Strangford Lough ASSI, is also a SPA and part of a Ramsar listed site due to the internationally important numbers of wildfowl which spend the winter in these areas. It has a wide variety of habitats including submerged and floating aquatic vegetation swamp, fen and fragmented wet woodland.

Fens are wetlands with permanently high-water levels at or just below the surface. They receive most of their water and nutrients from soil, rock and ground water and are of national and international significance, not only for their plant life, but as part

of a complex of open water, reedbeds, wet meadows and carr woodland that provides a diversity of habitats for mammals, insects (e.g., dragonflies, damselflies, and aquatic beetles), aquatic plants and birds. This type of habitat receives water and nutrients from rainfall and groundwater and are rich in minerals..

Lowland fens such as those located at Heron and Carrigullion Lough and Whitespots, have a range of vegetation types making them a diverse habitat with particular importance for invertebrates. Inishargy Bog near Kircubbin is notable as having one of the longest established colonies of the marsh fritillary butterfly *Euphydryas aurinia* in Northern Ireland. A local site under Council ownership, known as the Corrogs located on lands east of Killinchy Road Comber was recently surveyed and found to comprise a central area of rank fen surrounded by wet alder-willow woodland with broadleaved plantation woodland in drier areas.

The fen habitat classification for Northern Ireland includes swamp which is considered species poor with the dominant species being bulrush *Scirpus* spp., reed-mace *Typha latifolia*, reed canary grass *Phalaris arundinacea*, branched bur-reed *Sparganium erectum*, flowering-rush *Butomus umbellatus* and sedges. Associated priority fauna species include curlew *Numenius arquata*, redshank *Tringa tetanus*, lapwing *Vanellus vanellus*, Irish hare *Lepus timidus hibernicus*. There can also be a rich invertebrate fauna in fens including butterflies such as marsh fritillary *Euphydryas aurinia* and green hairstreak *Callophrys rubi*, and dragonflies and damselflies, including Irish damselfly *Coenagrion lunulatum*.

Wetland Habitats to Visit

- Strangford Lough (Ramsar, SPA, ASSI)
- Aughnadarragh Lough
- Balloo Wetland
- Castle Espie
- Heron and Carrigullion Lough
- Lough Cowey
- Mount Stewart
- Whitespots

Threats to Wetland Habitats

- Nutrient enrichment of water from pollution incidents such as agricultural run-off
- Alteration of water levels
- Invasive non-native species e.g., Himalayan balsam *Impatiens glandulifera*, giant hogweed *Heracleum mantegazzianum*.
- Loss to development

Urban Habitats (Industrial Land, Cemeteries, Parks and Gardens)

These include man-made habitats such as quarries, road verges, cemeteries, old mill sites, golf courses, and waste ground on industrial sites and are widely distributed around the Council area especially near to the larger urban centres providing feeding stations and breeding sites for birds, butterflies etc.

A brownfield site is an area that has previously been developed and has since ceased to have been used and natural processes have been left to take their course. The most important brownfield sites for wildlife are characterised by a nutrient-poor soil such as gravel or sand that create microclimates a situation that suits many opportunistic species such as ephemera/short perennials and invertebrate species (bees, beetles, butterflies and moths)..

Brownfield sites have been recognised in the UK Biodiversity Action Plan process and have been identified as a priority open mosaic habitat. Its combination of bare ground, flower-rich grassland, patches of scrub, and sometimes shallow ponds, is vitally important for a diverse range of invertebrates.

Open mosaic habitat is threatened prone to misuse such as fly-tipping or antisocial behaviour. Many sites are in private ownership and therefore at risk of development. These areas tend not to fall under any management and therefore are prone to being lost by scrub encroachment.

Quarries can support remnant areas of species-rich grassland, heath, scrub, woodland and ponds as well as rare flora (e.g., orchids) and fauna (e.g., nesting peregrine falcon *Falco peregrinus*). The biodiversity value of these sites can be

enhanced further through best habitat restoration practices after extraction of the rock, sand or gravel.

Occupied and derelict buildings can support bat roosts as well as nesting birds such as swallow *Hirundo rustica*, house martin *Delichon urbicum* and the threatened swift *Apus apus*.

Green spaces within built-up areas provide an oasis where people can relax and unwind. Parks, golf courses, gardens and school grounds provide sanctuaries for at least some of the more common species of flora and fauna and are important nature conservation education resources.

Cemeteries in both rural and urban areas are also havens for wildlife. Gravestones in some of the older cemeteries can harbour a diverse range of lichens including rare species. They are often enclosed by hedgerows and incorporate scattered tree and shrub planting, all of which provide suitable nesting sites for birds as well as foraging habitat for bats and a range of bird species. Flowering and fruiting trees (e.g., Irish yew *Taxus baccata* 'Fastigiata'), shrubs and bedding plants will also attract pollinators such as bumblebees and butterflies. The quiet nature of cemeteries means that for the most part, they are undisturbed areas where wildlife can flourish;

Gardens can harbour a wide range of plant and animal species depending on how manicured or 'wild' they are. Urban gardens can provide important nesting, roosting and foraging habitats for birds and bats in the form of trees, hedges and shrubs. Flower beds provide bare soil where mammals and ground-dwelling birds can forage. Flowering plants provide a source of nectar for pollinators such as bees and butterflies.

Less manicured gardens or gardens which have a 'wild' corner are of greater benefit to biodiversity as often log piles and branch piles can shelter hedgehogs, nesting birds and a range of invertebrates. A garden pond can attract animals to drink and bathe as well as aquatic plant and animal species who may take up residence. The biodiversity value of our gardens can also be enhanced by installing bird tables and hanging feeders to attract seed-eating birds.

Green spaces within schools which are not used for sports activities can often be developed into wildlife 'gardens' which would function as an outdoor classroom.

Allotments are also a refuge for both people and wildlife supporting grasslands, hedgerows, as well as annual plants that favour cultivated ground. Many of the plants and animals that struggle to survive on intensively managed farmland find a refuge on allotment sites.

Urban Sites to Visit

- Public parks, allotments and gardens
- Cemeteries

Threats to Biodiversity in Urban Habitats

- Development of species-rich brownfield sites
- Invasive non-native species such as Japanese Knotweed *Fallopia japonica* and Himalayan balsam *Impatiens glandulifera*; some are planted in gardens including Himalayan honeysuckle *Leycesteria formosa* and Russian vine *Fallopia baldschuanica*
- Excessive grass cutting
- Excessive use of herbicides and pesticides
- Lack of cavities suitable for roosting bats and nesting birds such as swift *Apus*
- Tree diseases such as Ash Dieback
- Air pollution from industrial activity and motor vehicles
- Inappropriate street lighting affecting bat foraging activity and roosts
- Fragmented nature of green spaces

8.1.3 Local Species Selected for Action

In Northern Ireland several species have been identified as being the most threatened and requiring conservation action; these are referred to as priority species. The Northern Ireland priority species list now stands at 481 species, an increase of 271 on the 'old' list when the Northern Ireland Biodiversity Strategy

was being prepared. These include species of bees, beetles, birds, butterflies, crustaceans, fish, fungi, lichens, liverworts, mammals, molluscs, mosses, moths, reptiles, and vascular plants.

Priority species are those which require conservation action due to the degree of their decline, rarity and importance in an all-Ireland and UK context.

These Priority Species lists formed the basis for selecting species requiring Northern Ireland Species Action Plans (SAPs).

NI priority species that occur in the Council area are presented in **Appendix 2**.

ANDBC is conscious that they can make a significant impact to the quality and quantity of habitats and species through its management and project practices and recognise that further improvements can be gained through formally including biodiversity within its project and maintenance programs. This is particularly important where Council holdings infringe upon designated conservation areas.

The LBAP for the North Down and Ards area has drawn on this list of priority species and used it to identify which species we want to take action to conserve. Many of the species listed below and over the following pages are of specific importance in a Northern Ireland context . Others, while not necessarily of regional importance, have a local interest value and in our LBAP have been classed as being Local Priority Species.

The benefits of undertaking a local biodiversity project are that locally important non-priority species can be identified that are specific to the Council area. While these species may not be of concern in an international context, paying attention to their requirements will contribute to the overall health of biodiversity.

Appendix 3 presents a list of locally important species relevant to the Council area. Some species represent old records and may no longer be extant in the Council area.

The following species have been selected for Action within the Local Biodiversity Action Plan as they are a Northern Ireland Priority Species, are of local significance, easily visible, iconic, and or would encourage people to act by engaging in environmental activities which benefit biodiversity.

Many of the species and species groups selected for action will also benefit from Actions listed previously under each habitat category.

Mammals

Bats (Chiroptera)

An all-Ireland species action plan for bats has been produced. There are currently eight species of bats known to live and breed in Northern Ireland. The most recent bat (and our newest mammal), Nathusius' pipistrelle *Pipistrellus nathusii*, was only discovered as recently as 1996.

The Leisler's bat *Nyctalis leisleri*, is our biggest species weighing in at around 15 grams, less than a packet of crisps. Our smallest bat, the pipistrelle *Pipistrellus* sp., can eat around 3,500 small insects, such as midges, in one night.

Habitat change in the wider countryside and roost loss, or disturbance are the two major threats to bats on the island of Ireland.

Habitat change has two major effects: it can result in a loss of roosts and a loss of adequate foraging. Habitat fragmentation is also a major concern as bats rely on commuting routes such as treelines and mature well-managed hedgerows to link their varied seasonal habitat requirements. Gaps in hedgerows can cut bats off from a foraging site.

On the island of Ireland all bats predate insects.—Habitats especially used by bats include woodland edges and wetlands. However, bats also forage over pastoral grassland and in some cases around white street lighting.

Loss of foraging habitat and prey can arise from a change in land use or land management measures resulting in the loss of adequate invertebrate habitat and therefore the number of invertebrates present.

The place that a bat lives is called a roost. Bats can have a number of different roosts which they occupy at different parts of the year namely summer maternity roosts, spring gathering roosts, mating roosts, night roosts and pre-hibernation roosts. Bats do not construct roosts but use structures that are already available such as tree hollows, caves, bridges and a variety of buildings and built structures. Bats and their roosts face a number of threats and pressures including development, trimming and felling of trees and closure of caves and mines for health & safety reasons, bridge improvements, climate change and potentially wind turbines.

Other Threats to Bats

- Exclusion from or entombment of bats in their roosts both unintentionally and intentionally due to loft conversions and other building work (e.g., bridge repairs).
- Bats can become entangled by the use of breathable roof membranes at bat roosts.
- Lighting (e.g., the illumination of the underside of bridges) can adversely affect bat roost emergence, commuting routes and foraging areas.

Irish Hare *Lepus timidus hibernicus*

Found only in Ireland, the declining Irish hare *Lepus timidus hibernicus* is a subspecies of the mountain hare. Hares are much larger than rabbits and have long back legs with big feet. In summer, the upper fur is reddish-brown while the belly fur is a much lighter cream colour but greyer in winter. The ears are long with black tips and the tail is usually white and easily seen when the hare is running away. They prefer undisturbed areas where there is plenty of ground cover and a variety of cover height, grasses and other food plants. They have been seen at Ballymorran and Ballyquintin Point, Strangford Lough and Crawfordsburn County Park.

Threats to Irish Hare

- Changes in farming practice – the increased use of farm machinery, high livestock (cows and sheep) densities and the decrease in the variety of grasses grown on farmland have all contributed to the decline in the Irish hare population.
- Loss of daytime resting sites particularly rushes and good quality hedgerows
- Introduction and spread of non-native brown hare species to mid-Ulster
- Illegal hare coursing in urban fringe areas.

Harbour Porpoise *Phocoena phocoena*

The Harbour Porpoise *Phocoena phocoena* is one of the smallest marine mammals found in the coastal waters of Northern Ireland and are protected by various pieces of legislation.

These mammals are under threat and have declined by 50% in the last 50 years. Due to their small size, they often end up accidentally caught by fishing boats. Conservation efforts that focus on reducing the impact of fisheries by-catch and underwater noise, coupled with wider surveillance, are most likely to achieve effective conservation of the Harbour Porpoise.

They are present all year round in many areas. Porpoises are usually seen in small groups of two or three, but where feeding is good, 20 to 30 animals may be seen together. They feed mainly on small shoaling fish such as herring, mackerel and sand eels but will also take squid and octopus. Harbour porpoises are capable of diving to depths of 200m and can stay underwater for up to six minutes.

Threats to Harbour Porpoise

- By-catch – the accidental killing associated with commercial fishing equipment – trawls, seines, cod traps and bottom-set gill nets are the biggest threat to harbour porpoise populations.
- Disturbance and injury by speedboats and jet skis
- Climate change

- Ocean pollution (chemical and noise). Whales and dolphins communicate mainly by sound; they also use sound to navigate and find food. Many man-made sounds are introduced into the oceans, some of these, such as noise due to seismic exploration for oil and gas and disturbance from marine traffic, may pose a threat to whales and dolphin populations.
- Many species of fish eaten by porpoises are also fished commercially (herring, mackerel, sprat, pilchard, whiting, cod). Reduction in fish numbers due to commercial fishing may threaten porpoise populations.

Common Seal *Phoca vitulina*

The common seal *Phoca vitulina* and the grey seal *Halichoerus grypus* are both found around the Northern Ireland coast. The common seal is the smaller of the two species and has a more rounded head with a short muzzle and large eyes.

Strangford Lough is the most important breeding site in Ireland for the common seal *Phoca vitulina* (also known as the Harbour Seal). Over half of the breeding population of Strangford Lough is found in 'The Narrows'. Other areas where these species are often present are the Copeland Islands and along the North Down Coast. They are seen regularly hauled out on rocky shores and sandbanks. In 1988 the European common seal population was decimated by a viral disease, phocine distemper virus (PDV) – it is estimated that around 18,000 seals died, about 50% of the total population. Eventually the population recovered, and numbers increased but an outbreak of the disease in 2002-2003 killed a further 22,500 seals. In Northern Ireland around 350 seals died during the two disease outbreaks.

Common seals eat a wide variety of different fish such as plaice *Pleuronectes platessa*, flounder *Platichthys flesus*, herring *Clupea harengus*, mackerel *Scomber scomber*, whiting *Merlangius merlangus*, etc and may swim long distances (up to 50km) from their haul out sites to find food. Much of their time is spent alone in the sea, feeding, and they are only found in groups at haul out sites (places where they rest, mate, give birth and moult). Seals can live for up to 30 years; females usually live longer than males.

Threats to Common Seal

- Chemical pollution
- Organochlorines that may interfere with seal reproduction
- Oil pollution
- Disease – phocine distemper virus

Red Squirrel *Sciurus vulgaris*

Squirrels are easily recognised by their distinctive body shape and bushy tail. The red squirrel is smaller than the invasive grey squirrel and is generally more brown in colour. In the winter the red squirrel's long dark ear tufts are very noticeable, ear tufts are absent on grey squirrels. Both species are active during the day; red squirrels are more likely to be seen high up in the tree canopy, while grey squirrels are often seen feeding on the ground.

Red squirrels usually give birth twice a year, once in spring and again in summer. Litter size varies but the average number of young (kittens) produced per litter is three. They eat a variety of seeds, nuts, fungi, bark, buds and berries. In late summer and autumn when food is plentiful, they hide stashes of seeds and nuts on the ground – much of which is probably eaten by grey squirrels who spend more time foraging on the ground, especially in winter. Squirrels do not hibernate; in very cold weather they will stay in their nests for a day or two, but they cannot survive for longer periods without food.

Coniferous woodland is found scattered throughout Northern Ireland, usually in upland areas and provide a refuge for the red squirrel, it is critical habitat to the species' survival.

Red squirrels are protected in Northern Ireland by Schedule 5 and 6 of the Wildlife (N. Ireland) Order 1985. It is also listed in Annex III of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention).

Introduced into County Longford in 1911, the grey squirrel has since successfully colonised most central and eastern counties of southern Ireland and much of

Northern Ireland. As the grey squirrel expanded its range across the province it largely replaced red squirrel populations especially in deciduous woodland. Grey squirrels seem to be better adapted to live in deciduous woodland. Red squirrels appear to be able to compete more successfully with grey squirrels in coniferous woodland and are less likely to be displaced .

Red squirrels are susceptible to a potentially fatal viral disease – Parapox virus. Grey squirrels can carry and spread the disease but appear to be unaffected by it.

The UK Strategy for Red Squirrel Conservation – Action Plan for Northern Ireland was produced in 2000, and there is a UK Species Action Plan which was published in 1995.

A Northern Ireland Squirrel Forum (NISF) has been established to bring together statutory and non-statutory organisations as well as representatives of country parks and local volunteer organisations dedicated to protecting the red squirrel in Northern Ireland

Implementation of the Northern Ireland habitat action plans for Oakwoods, Mixed Ashwoods and Parkland will also help red squirrel populations to recover.

The Ards peninsula has an established population of Red Squirrels notably in the estate woodlands of Mount Stewart and Ballywalter but also in Carrowdore, Greyabbey, Portaferry and Clandeboye. Red squirrels can also be seen in Cairn Wood North Down.

Threats to Red Squirrel

- Competition with grey squirrels
- Loss of woodland habitat;
- Disease (Squirrel poxvirus)

Pine Marten *Martes martes*

The mustelid the pine marten *Martes martes* with chocolate brown fur and a creamy yellow bib is about the size of a domestic cat and just as adept at climbing trees. The

beautiful pine marten is one of our most elusive mammals due to its habit of being most active at night and frequenting woodland habitats, particularly older areas of woodland.

A true omnivore and skilled hunter the pine marten is native to Ireland and is one of our rarest mammals. Once common throughout the country, by the 20th century this species had become extinct from most of the island. This decline was the result of hunting of martens for their fur, loss of habitat, and both direct and or indirect poisoning and general persecution.

The numbers and range of the pine marten has expanded at a brisk pace over the last decade, until recently they were largely restricted to remote forests of counties Fermanagh and Tyrone. They have now spread out across all six counties traversing a variety of habitats. There are recent records of this species from Cairn Wood, Craigtantlet. The pine marten *Martes martes* is found primarily in woodland but have adapted to scrubland and urban fringes, with inner city sightings not unheard of.

Being an omnivore, the pine marten *Martes martes* has a wide and varied diet that includes meat, carrion, nuts and berries. The breadth of its diet clearly benefits its survival, being able to switch between food resources should one dry up. Pine marten *Martes martes* will raid the bird feeders, pet food trays, bins and vegetable patches. They also will hunt domestic fowl and game birds particularly when the latter are accessible in the release pen.

Threats to Pine Marten

- Habitat Fragmentation

European Hedgehog *Erinaceus europaeus*

Hedgehogs are found on farmland as well as in parks, cemeteries and gardens. Hedgehogs are 20–25cm long and typically weigh up to 1.2kg. They have a distinctive waddling gait and are covered in characteristic brown spines. They have long snouts and no spines on their underbellies, faces or limbs. Invertebrates are a

hedgehog's favoured food, with beetles, slugs, earthworms and caterpillars high on the menu. Occasionally, they also eat carrion and the eggs of ground-nesting birds. They're very partial to food left out by humans too, with cat food and leftovers being an urban hedgehog staple.

Hedgehogs have been known to live for seven years, but a lifespan of two to three is more typical. Hedgehogs spend much of their life asleep, hibernating through the winter months in a nest made from fallen leaves in a sheltered spot. They emerge in spring but will spend the day sleeping, becoming active after the sun has gone down. Your best chance of seeing a hedgehog is by putting out some suitable food in your garden, such as wet cat food or our hedgehog food, and hope you are visited in the night. Hedgehogs are also surprisingly noisy, so listen out for their distinctive huffing and puffing sounds.

Hedgehogs are found across the UK and can live in a variety of habitats including woodland, farmland, parks and gardens. They are however in serious decline. While it is difficult to accurately monitor hedgehog numbers, it is believed they could be down by over half in rural areas and a third in urban areas since 2000.

Threats to Hedgehogs

- Loss and damage of suitable habitat, such as hedgerows and woodland, may be a major factor in hedgehog decline, depriving the species of both food and shelter from badger predation. That's why we stand up for woods and trees, and the biodiversity they bring.
- The use of pesticides on farmland and in gardens may also have reduced the hedgehog's food supply.
- In urban areas, the use of impermeable fencing, loss of greenery in gardens and increasing development is thought to be negatively impacting hedgehog populations too.
- Many thousands of hedgehogs killed by cars each year.

Birds

Black-headed Gull *Chroicocephalus ridibundus*

The black-headed gull is the smallest gull likely to be encountered commonly in Northern Ireland. It nests colonially, sometimes in large colonies of over 1,000 pairs. The nests are an untidy pile of readily available material such as seaweed or straw, a slight depression in the top of the structure hosts the four or five eggs. Pairs raise only one brood annually but will often re-lay if the first clutch is lost. In winter large numbers of immigrants arrive from northern Europe to augment our resident population. Wintering birds are also extremely gregarious and will move considerable distances in search of easily available food.

As a breeding bird the largest colonies are found in various Loughs across Northern Ireland including Strangford Lough. Seabird Census 2000 estimated a Northern Ireland population of a little over 10,000 pairs, of which just over 4,000 were coastal. This represents a significant decline from the previous survey in 1985-88 when over 38,000 pairs were counted. Most of the losses relate to Lough Neagh, but there was also decline at sites in County Down.

The species is listed as amber in both Irish and UK Birds of Conservation Concern as its breeding population has undergone a moderate decline in the past 25 years and more than 50 per cent is concentrated in ten or fewer sites. The reason for the decline at some Northern Ireland breeding sites is unclear.

Threats to Black-headed Gull

- Predation of eggs by mammals, crows and other gulls is a known problem.
- Habitat changes, egg collection and destruction could be an issue on some sites.

Herring Gull *Larus argentatus*

The herring gull is a large, classically coloured gull, found commonly around the coast but also inland on freshwater lakes and at refuse tips..

Although traditionally a breeding bird of offshore islands and rocky coastline in vegetation or shingle, it increasingly chooses to nest on flat rooftops and chimneys in urban environments. The nest is a large accumulation of available vegetation with a cup lined with finer material.

Easily seen throughout the year but numbers greatly increase in winter. Following a period of population growth between the 1950s and 1970s there has been a subsequent period of rapid decline. During the period 1985-88 Seabird Colony Register and the Seabird Census 2000 the colony on Copeland Island declined from 7000 to 355.

Threats to Herring Gull

- Disease associated with feeding on rubbish dumps
- Competition with lesser black-backed gull at some breeding sites
- Culling for public health and safety as well as conservation measures for terns
- outbreaks of disease including botulism and salmonella, possibly increased as a result of the introduction of plastic refuse sacs
- Reduction of food availability through better refuse management

Light-bellied Brent Goose *Branta bernicla hrota*

The best place to see Light-bellied Brent Geese in Ireland is Strangford Lough where from October onwards upwards of 30,000 congregate before moving on to other estuarine sites. Smaller numbers can also be seen along the Irish Sea coastline, most often on the beach at Crawfordsburn. During the winter they feed on seagrass, which grows in muddy estuaries, and on grasslands, when the eelgrass has been depleted at estuarine sites.

Threats

- Increase in water levels due to climate change affecting feeding areas.

Little Tern *Sternula albifrons*

The little tern is the smallest of the five species of terns which regularly breed in the British Isles. It is on the edge of its most suitable range here and may never have been particularly common. Small numbers of pairs have bred in Northern Ireland in the past, but at best it should be considered an erratic breeder. Indeed, only a handful of sightings are recorded here in most years.

Summer visiting tern species breed erratically in Northern Ireland. Poor tern breeding success is directly related to disturbance by man of breeding beaches, predation by rat populations, feral cats, avian predators, and crows and foxes. Some nesting sites are vulnerable to very high tides. The unseasonably cold and wet summer in 2012 resulted in a lot of young dying in their nest as they were not able to be kept warm. Little tern sightings are now a matter of chance in Northern Ireland. Rare terns often turn up at breeding colonies of other terns, so any coastal tern colony would be worth a look in spring and summer. Little terns have been seen at Crawfordsburn Bay and Brigg's Rocks, Belfast Lough, and Strangford narrows.

Threats

- Disturbance of nesting sites by dogs

Black Guillemot *Cepphus grylle*

The black guillemot is a small auk that breeds among rocks at the base of cliffs, on lower slopes, or on rocky islands; they tend to be seen in small numbers. Black guillemots eat fish and crustaceans. They dive down from the surface of the water, and swim to catch their prey. Many thousands of black guillemots breed in the UK, scattered along the coast in pairs or small groups. Not moving far between seasons, in winter, you are likely to spot them in their breeding places.

It is a very distinctive bird that spends most of its life at sea, only coming near to land to breed. They nest in nooks in cliffs and on harbour walls which can make them vulnerable to predators.

The Black Guillemot often is seen in harbours such as at Bangor, Groomsport and Donaghadee.

Threats

- Disturbance by recreational users

Manx Shearwater *Puffinus puffinus*

These brilliant fliers are also excellent swimmers, but dreadful walkers, only coming on land to breed. They have a distinctive cackle which can make breeding sites exceptionally noisy. The Copeland Islands provide an important habitat due to their rocky cliffs and other suitable habitats.

Threats

- Invasive non-native predators at breeding sites
- Artificial light pollution
- Risk of accidental bycatch by fishermen

Curlew *Numenius arquata*

The curlew (*Numenius arquata*) is a large ground nesting wader. It is a characteristic breeding bird of upland areas, where it nests on moorlands and lowland wet grasslands. It occurs in winter in coastal areas with Belfast Lough and Strangford Lough holding numbers of national importance.

There has been an overall UK decline of curlew of 42 per cent between 1995 and 2008. In Northern Ireland, there has been a 60 per cent decline in breeding numbers in Northern Ireland between 1987 and 1999.

The curlew is included on the red list of Birds of Conservation Concern in Ireland. DAERA's agri-environment programme under the Higher Environmental Farming Scheme contains habitat prescriptions of benefit to curlew.

Threats to Curlew

- Low productivity levels because of predation of eggs and chicks are currently the major factor limiting breeding success. This is believed to result from increased populations of predators (foxes, crows and gulls), possibly brought about by reduced levels of control and increased feeding opportunities arising from higher stocking densities and other agricultural improvements.
- Past and current loss, fragmentation and reduced quality of breeding habitat as a result of agricultural improvement, afforestation and peat extraction have reduced the area in which breeding can occur and, by concentrating breeding birds into smaller areas, also may have increased vulnerability to predators.

Lapwing *Vanellus vanellus*

This familiar farmland bird has suffered significant declines recently and is now a Red List species. A Northern Ireland wide survey of breeding waders in 1986/7 estimated that the lapwing *Vanellus vanellus* population was between 4,000-6,000 pairs. By 1999 a survey of breeding waders in the wider countryside recorded a decline of 66% in lapwing, and the population was estimated at just over 1,770 pairs. Further declines at most of the key sites were also recorded in 2000. Strangford Lough is an important site for lapwing in Northern Ireland.

The lapwing is a red-listed species in Birds of Conservation Concern in Ireland. In Northern Ireland a Species Action Plan for lapwing has been produced that details conservation actions to reverse a decline in breeding lapwing populations.

Threats to Lapwing

- Lapwing are threatened by agricultural improvement - the wet grasslands which are so important for breeding lapwing in Northern Ireland, have incurred severe losses over the last 50 years. Drainage, land improvement, and changes in grazing patterns have all greatly reduced and fragmented the area of suitable breeding habitat. Other habitats suitable for breeding lapwing, such as cut-over bogs and marginal upland grasslands, have also been affected by agricultural improvement.

The loss of mixed farming systems has also been a factor in the decline of lapwing populations. The area of arable land in Northern Ireland has been reduced to under 3% and this is mostly concentrated in the cereal growing areas of eastern Co. Down. As a result, nesting sites in arable crops are now rarely found next to extensively managed damp grasslands, which are important for chick rearing.

The replacement of spring sown cereals with winter wheat or barley has also affected lapwing populations. This is due to winter-sown crops becoming too dense early in spring, more frequent agricultural operations and heavy applications of chemicals, all of which lead to reduced nesting success and productivity.

- Breeding lapwing suffers high rates of nest failure because of predation by crows and foxes. It is thought that this may be due in part to habitat loss and fragmentation, which concentrates breeding birds into smaller areas.

Redshank *Tringa totanus*

The Irish breeding population of redshank (*Tringa totanus*) was estimated at between 4-5,000 pairs in the late 1980s, a decline of 15% from the early 1970s. In Northern Ireland, the population was estimated at 550 pairs in 1987. Non-breeding wintering populations of Redshank occurs in nationally important numbers on Belfast Lough and Strangford Lough.

The Northern Ireland Countryside Survey 2000 indicated a decline in habitat potentially used by redshank between 1987 and 1998 including a 20% decline in fen marsh and swamp. The redshank is a red-listed Bird of Conservation Concern in Ireland.

DAERA has developed a series of agri-environment schemes. Their objective is to protect and enhance semi-natural habitats and species by encouraging more sensitive management practices. These schemes include a range of prescriptions

which have potential to be of benefit to redshank such as creating wader scrapes and raising water levels.

Threats to Redshank

- Given that redshank is almost exclusively a wet grassland species in Northern Ireland, the loss and fragmentation of this habitat is a key factor in its decline.
- More frequent agricultural operations such as increased livestock numbers, rolling and fertilizer application inevitably lead to increased nest losses. A shift from cattle to sheep grazing in some areas has also had an impact, as intensive sheep grazing creates a more uniform sward with few tussocks which are important for redshank.

Kingfisher *Alcedo atthis*

Kingfishers are small unmistakable bright blue and orange birds of slow moving or still water. They are found by still or slow flowing water such as lakes, canals and rivers in lowland areas which are clean enough to support abundant small fish. Fast-moving streams and polluted waters do not contain enough available fish, and hence do not contain kingfishers. In winter, some individuals move to estuaries and the coast. Occasionally they may visit garden ponds if of a suitable size.

They fly rapidly, low over water, and hunt fish from riverside perches, occasionally hovering above the water's surface. Kingfishers are amber listed birds of conservation concern because of their unfavourable conservation status in Europe.

Kingfishers eat mainly fish, chiefly minnows and sticklebacks, but they also take aquatic insects, freshwater shrimps and tadpoles etc to top up their diet. Each bird must eat at least its own bodyweight of fish each day. An ideal fishing spot is a firm perch overlooking a clear, shallow pool of water.-

Territory is extremely important for kingfishers all year round. Any bird that is unable to secure a territory with an adequate food supply is likely to perish. This is particularly important before the onset of winter. The birds start to contest territories by mid-September. Freezing weather can sometimes force the birds out of their

territories, which often takes them to less suitable habitats or into conflict with other resident kingfishers.

Threats to Kingfisher

- They are vulnerable to hard winters and habitat degradation through pollution or unsympathetic management of watercourses.

Barn Owl *Tyto alba*

Widely distributed across the UK, and indeed the world, this bird has suffered declines through the 20th century and is thought to have been adversely affected by organochlorine pesticides such as DDT in the 1950s and '60s. Although well-known, the Barn Owl is one of our most endangered species which has been in decline for many decades; today it has an estimated population of fewer than 30 breeding pairs remaining in Northern Ireland. This species is extremely hard to see on account of its rarity but there have been sightings at Scrabo Hill, Mount Stewart and Portavo (Kearney's Hill) Reservoir.

This species requires tree cavities, outbuildings and other suitable sheltered places for roosting and nesting; it forages over rough grassland (including field margins and roadside verges) hunting for small mammals such as wood mouse *Apodemus sylvaticus*, house mouse *Mus musculus*, brown rat *Rattus norvegicus* and pygmy shrew *Sorex minutus*.

Threats to Barn Owl

It is threatened by lack of suitable nesting and roosting sites, and sufficient hunting habitat, accidental rodenticide poisoning, collisions with cars and crashes in small mammal populations. In addition, wet spring and summer weather (due to climate change) can prevent birds breeding successfully

Farmland Seed-eating Birds

Yellowhammer *Emberiza citrinella*, tree sparrow *Passer montanus*, reed bunting *Emberiza schoeniclus*, and linnet *Linaria cannabina* have been grouped together

here as they form a group of four Northern Ireland Priority Species which are seed-eating farmland birds.

All four species can be found in flocks within farmland during the winter months, when they rely heavily on grain split in stubble fields and weed seeds as a source of food. Such seed-rich fields are sometimes referred to as 'giant bird tables'.

Tree Sparrow *Passer montanus*

The tree sparrow in the British Isles is often considered the 'country cousin' of the far more familiar house sparrow. In 1959-61 it was extinct as an Irish breeding bird. Immigration of birds in 1962 is considered to have re-established breeding stock.

The tree sparrow has undergone the largest population crash of all our commoner bird species. The UK tree sparrow population has suffered a severe decline, estimated at 93 per cent between 1970 and 2008. Records in Northern Ireland 1995-97 show a 65 per cent increase in number, although this is based on a very low population level of several hundred birds.

There are some unusual facets to this species, in Ireland it breeds almost exclusively in holes in old farm buildings, old trees and cliffs or even old sand martin burrows. They will readily use nest boxes and are small enough to fit into holes used by great tit *Parus major* and blue tit *Cyanistes caeruleus*. Tree sparrows largely shun higher ground in the British Isles.

Arable and mixed farmland areas hold a large proportion of the tree sparrow (*Passer montanus*) population. It is perhaps most easily encountered when it flocks in winter and frequents stubble fields. They are also common close to waterbodies and along waterways.

The tree sparrow is listed as a priority species under the UK Biodiversity Action Plan. It is amber listed in the Birds of Conservation Concern in Ireland. It is also a Northern Ireland Priority Species under the Northern Ireland Biodiversity Strategy.

It is listed as a Species of European Conservation Concern (SPEC 3) – a species of unfavourable conservation status in Europe although its global population is not concentrated in Europe. This is due to its declines across much of north-western Europe.

Yellowhammer *Emberiza citrinella*

The yellowhammer is one of the larger buntings, which is a family of plump sparrow-sized birds with triangular bills, which are perfectly designed for eating both seeds and insect food.

The yellowhammer builds its nest on or close to the ground in dense vegetation, often at the base of a thick hedge, bank or gorse bush. The nest is made of grasses, leaves, moss and straw and lined with fine grasses. The young are fed on insect food such as caterpillars, but throughout the rest of the year, yellowhammers feed extensively on grass and weed seeds or spilt grains from stubble fields. In winter, birds tend to gather in flocks, often with other seed-eating birds, scouring the countryside for suitable sources of food.

It was once a widespread and familiar farmland bird, but is now scarce and localised in Northern Ireland, where its remaining stronghold is mixed arable and livestock farming areas of eastern County Down. In Northern Ireland, Yellowhammers declined by 65% in the 1990s.

Some work with landowners has already been taking place, mainly in agri-environment schemes, to raise awareness of the species. These initiatives are having a positive impact on population numbers.

Reed bunting *Emberiza schoeniclus*

Reed bunting *Emberiza schoeniclus* nest on the edge of wetland habitats such as wet grassland, reedbeds, ditches and fens, as well as farmland; they rely on farmland during the autumn and winter to forage for seeds.

Linnet *Linaria cannabina*

The linnet is a small member of the finch family. Found on open farmland with gorse and scrub, linnets are widespread in Northern Ireland, though they have undergone a decline in recent years. The UK population is estimated to have declined by 57% between 1970 and 2008. As seed eaters, it is likely that the loss of mixed farming and the increased use of herbicides have been instrumental in causing declines.

Linnets frequent open habitats with dense hedgerows and areas of scrub, particularly where gorse is present. Nests are built within hedges and scrub..

Linnets feed on a wide variety of seeds, and unlike other finches, feed their chicks on seeds as opposed to insects. They are therefore highly dependent on the availability of seeds as a food source.

The Linnet is an amber listed bird of conservation concern in Ireland.

The main cause of the decline in linnet, and other seed-eating farmland birds, is thought to be agricultural intensification and specialisation, which has led to the loss of suitable nesting and feeding sites. This decline can also be attributed to increasing use of herbicides, fertilisers, aggressive scrub removal and excessive hedge trimming.

There is a UK Species Action Plan which was published in 1998. The population in Northern Ireland is monitored under the Breeding Bird Survey, a joint BTO/NIEA/RSPB initiative, which has monitored common breeding bird populations since 1994.

Threats to Farmland Birds

- The threats to farmland birds are changes from arable or mixed farming to livestock farming, the change from traditional spring sowing of crops to autumn sowing of crops which clears winter stubble feeding sites, loss of scrub and excessive trimming of hedgerow nesting habitats, loss of rough grassland and meadows which are a source of weed seeds, increased use of

herbicides and pesticides, and inappropriate hedge management e.g. trimming during the nesting season.

- In all areas, management of hedgerows is important for yellowhammers, since hedges which are cut too frequently, or which are full of gaps are not suitable for nesting.
- The intensification of grassland has also meant the loss of species-rich grasslands, with intensive pasture and silage again providing little in the way of seeds and invertebrates.
- More efficient harvesting methods and intensification of existing arable land means that there is less spilt grain, and fewer weeds to provide seeds and associated invertebrates.
- A lack of traditional nesting sites such as holes in mature trees and buildings, and the loss of ruins and inappropriate management of old buildings could be limiting nesting opportunities for tree sparrows.

Swift *Apus apus*

A summer visitor from Africa, the swift arrives in Northern Ireland during May to begin its breeding cycle and leaves again in August, so is with us for a relatively brief period of time. This species spends most of its year flying, only perching when it returns to the nesting site during its short breeding season! During its stay it requires suitable cavities for nesting; these are often found in old buildings. It feeds on flying insects in open air and so can forage anywhere these are plentiful.

During the period between 1994 – 2016 we have lost between 69,000 and 138,000 pairs of swifts and the downward trend has continued since 2016 with a decline both in their breeding grounds and over-wintering grounds. There was a loss of 28,000 pairs of swifts between 2009 and 2016. That's a drop of 32% in just 7 years with an average annual decline of 5.4%. As a result, they are a red listed bird of conservation concern in Ireland.

Most new modern buildings give little or no opportunities for swifts to nest. They are habitual nesters, returning to the same site each summer after migrating from Africa. If their site is removed, they do not nest that year. This lowers the overall

reproduction rate of swifts. They are slow to move to a new nest site, usually needing to be attracted there by a caller system.

Translink and Ulster Wildlife working together have provided advice and guidance to staff and contractors and members of the public on reducing the decline of the common swift *Apus apus* by erecting swift boxes on buildings.

Threats to Swift

- One of the factors causing the decline in swift numbers is the loss of nest sites in the local area. Buildings are a favoured nest site. Building renovation and demolition remove potential nesting sites for swifts.
- Swifts are also threatened by wet summers that reduce the availability of flying insects, resulting in fewer young being produced or failed breeding attempts.
- A gradual loss of natural habitats such as woodland, wetland, meadow and bog results in fewer aerial insects upon which swifts feed.

Invertebrates

Marsh Fritillary Butterfly *Euphydryas aurinia*

The wings of this beautiful butterfly are more brightly patterned than those of other fritillaries. Its habitat is open damp or heathy grassland dominated by tussock-forming grasses.

The marsh fritillary *Euphydryas aurinia* was once widespread in Britain and Ireland but has declined severely over the last century, a decline mirrored throughout Europe. Its populations are highly volatile, and the species probably requires extensive habitats or habitat networks for its long-term survival.

The food plant of the marsh fritillary caterpillar is devil's-bit scabious *Succisa pratensis*.

The butterfly forms close-knit colonies on discrete patches of habitat (typically 5 - 20 ha). Adults rarely fly more than 50-100m, but a small proportion seem to disperse

further. The butterfly is renowned for its large fluctuations in population size that make it highly prone to local extinction-

The butterfly requires extensive habitat networks to survive (probably comprising many tens of hectares) and all potentially suitable habitat in a region needs to be targeted for management.

This species is vulnerable to adverse weather conditions. Unfortunately, this charming butterfly is one of our most threatened species and has suffered severe declines in recent decades. Marsh fritillary can still be seen at Inishargy Bog.

Pollinators

Pollinating insects include the familiar butterflies, moths, bees and bumblebees – but did you know that many flies, particularly hoverflies, are also important pollinators? Ireland has 21 native bumblebee species.

Of these, 6 species are cuckoo bumblebees. These cuckoo species don't make their own nests, but instead lay their eggs in the nest of a true bumblebee who will inadvertently bring up their young.

As with all bees, only the females can sting! Bumblebees are not at all aggressive and are interested only in collecting pollen and nectar. Bumblebees can travel up to 5km to feed but commonly forage within 1km of their nest

Four of Ireland's bumblebees are endangered and 2 are vulnerable. The great yellow bumblebee is on the verge of extinction from Ireland.

Bumblebees are more primitive and don't make honey like honeybees. Like the honeybee, bumblebees are social bees. They live in colonies with a queen, many female workers, and some males. Instead, they store a little bit of nectar in wax nectar pots in their nests for emergencies. This means that a bumblebee colony is never more than a few days away from starvation, making Ireland and its climate a challenging place to live!

Solitary bees, a little-known group of insects, are another important group of pollinators. While we have only 18 species of bumblebee in Northern Ireland, there are 77 species of solitary bee.

When pollinators visit a flower, they are dusted with pollen grains, and are in return rewarded with food in the form of sugar-rich nectar. On visiting other flowers to gather more nectar, pollen is deposited onto the flowers and results in fruit and/or seeds being produced which are essential for the continued existence of the plant as well as the animals it supports. When numbers of our pollinators decline, this therefore has a drastic knock-on effect for many plant species.

A loss of pollinators is not just disastrous for biodiversity and our local landscape, it can also be detrimental to our economy. For example, the annual value of pollinators for human food crops has been estimated at €153 billion world-wide. The value of the apple-growing industry in Northern Ireland is estimated at £7 million per year and is dependent on pollinators for apple production. Other pollinator-dependent crops in Ireland include apples, strawberries, raspberries, currents, tomatoes, peas and courgettes. A decline in pollinators translates into a decline in fruit production, which leads to higher prices in the supermarket. It is a problem which affects us all!

The All-Ireland Pollinator Plan 2015-2020 aimed to address pollinator decline and protect pollination services across Northern Ireland and the Republic of Ireland. The Pollinator Plan recognised that Councils, working locally in partnership, can play a leading role in providing habitat where pollinators can survive and thrive. A new All-Ireland Pollinator Plan has been developed to cover the 2021-2025 period.

Threats to Pollinators

- Pollinators are losing their homes: habitats such as woodland, hedgerows and species-rich grassland are lost every year because of increasing agricultural intensification and urban sprawl.
- There are relatively few places where wildflowers can thrive due to the frequent cutting of roadside verges, a change from hay production to silage production,

and the tendency to keep recreational areas such as gardens and parks 'well-maintained'. Pollinators therefore find it difficult to find adequate sources of food.

- Insects are sensitive to climate change: our changing climate results in plants flowering at slightly different times of the year and insects are slow to adapt to these changes, emerging from hibernation too early or too late to find flowers to pollinate.
- The use of certain pesticides to improve crop yield may pose a risk to pollinating insects if used inappropriately
- Introduced diseases and pests such as the Varroa mite can devastate populations of honeybees.

Reptiles

Common Lizard *Zootoca vivipara*

The Northern Ireland priority species common lizard *Zootoca vivipara* is Ireland's only native reptile. Lizard distribution was likely to have declined during the 19th and 20th centuries due to conversion of suitable lowland habitats to agriculture.

The common lizard occurs throughout Northern Ireland, in a variety of habitats, including heathland, bogland, coniferous forest, disused railway tracks, gardens, sand dunes and coastal cliffs but population numbers are not known. Common lizards are only active during the day and hibernate from October to March. They can be hard to spot since they run and hide as soon as they are disturbed.

There is a lack of understanding as regards good lizard habitat, as they require a mix of bare ground plus tall vegetation for shelter and insect food.

Threats to Common or Viviparous Lizard

The conversion of lowland habitat to farmland has probably had the most impact on this species. The loss of upland heath and coastal dunes also pose a continuing threat.

Amphibians

Smooth Newt *Lissotriton vulgaris*

Our only native amphibian and protected at all times by law is the Smooth Newt . Like frogs, this species makes its way to ponds in early spring where it lays its eggs. These will similarly develop into tadpoles and slowly emerge as miniature versions of the adults. Although newts are widespread across Northern Ireland, suitable habitat for the species is in decline. Newts have aquatic young and require ponds and areas of standing water with aquatic vegetation for breeding, including garden ponds and field ditches. After breeding has completed, they disperse into nearby rough grassland and woodlands. Newts hibernate over winter under rocks, logs and other sheltered areas that can sometime be a distance from their breeding waterbody.

Threats to Smooth Newt

- Newt breeding ponds are exceptionally vulnerable to drainage, infill and pollution.

Fish

Sea Trout *Salmo trutta trutta*

The Ardmillan River, Crawfordsburn stream and the Comber/Enler River are productive rivers for sea trout *Salmo trutta trutta*, and have been shown to have self-sustaining populations of brown trout *Salmo trutta*. These rivers also have the potential to support Atlantic salmon *Salmo salar*.

Threats to Sea Trout

- Pollution
- General habitat degradation
- Reduction in the availability of prey
- Introduction of non-native aquatic animals
- Diseases and parasites
- Creation of artificial barriers to upstream migration

- Predation by birds and mammals.
- Interbreeding with non-native farm-reared brown trout results in the loss of the genetic integrity of unique trout populations.

Flora

Great Burnet *Sanguisorba officinalis*

A member of the rose family, great burnet *Sanguisorba officinalis* can survive for decades due to its extensive root system. This flower is extremely rare in Northern Ireland but is recorded on the old railway embankment at Donaghadee. A rare native perennial of open pasture. It was first recorded before 1863 and only from Donaghadee, where it grew in pastures until after 1878. It seems that after the species was lost from the pastureland, it persisted along the railway line, where it was recorded from 1893. A small number of plants now grow on a short stretch of bank beside a footpath, previously the railway line, close to a housing development.

Threats to Great Burnet

- Trampling by recreational users
- Overshading by trees and shrubs

Lower Plants (Bryophyte and Lichens)

Using a hand lens, mosses, liverworts and lichens are seen to consist of a diverse range of growth forms and colours a world of beauty in miniature.

Bryophytes play a huge role in the establishment of plant communities because they can colonise almost bare rock faces, existing in the minutest of crevices and turning what was barren rock into productive material. They along with a few other plants considered 'primitive' like algae and lichens prove themselves to be incredibly valuable building blocks in plant communities ever reaching their full potential.

They are also important in recycling nutrients and changing the chemistry of an area to be able to support higher plants because they can withstand and tolerate conditions which would normally be unsuitable for larger plants.

So, the greening of many places is started not by your magnificent ferns and trees but by the ever-so humble, yet massively important bryophytes.

Lichens are a group of terrestrial organisms, which are abundantly found growing in various places, including on rocks, gravestones, walls, tree barks, on roofs, soil, etc. They require a clean atmosphere with sufficient air for their growth. Some species of lichens are also found in many environmental conditions as they can grow on almost any surface from sea level to high alpine elevations. According to fossil records, these organisms were found about 400 million years ago.

These organisms are found in different colours, shapes, sizes and forms. Based on their physical features, they are further classified into diverse types.

Lichens hold a great economic importance and are essential for the environment in several ways.

- Some species of lichens help with the conversion of rocks into soil.
- Lichens also plays a key role in the nitrogen cycle by fixing nitrogen from the atmosphere.
- Lichens serve as an important source of food for humans across the world..
- Based on the size of these lichens, we can study and find out the age of rocks.
- Since ancient times, these species are well known for their various colouring agents and dyes. They are a good source of natural dyes.
- Lichens can degrade polyester, lead, copper, radionuclides and other pollutants, polluting the planet earth.
- Apart from the pharmaceutical industries, lichens are widely used by various cosmetic industries and are also a natural medicine for various types of skin diseases and rashes.
- Lichens are also a great source of food for many aquatic organisms and are widely used as anti-infective agents in pharmaceutical industries to produce antibiotics, anti-mycobacterial, antiviral, anti-inflammatory products.

These beautiful plants have been sorely neglected in previous LBAPS in Northern Ireland hence they have been included for conservation actions in this LBAP.

Threats to Lower Plants

- Habitat loss
- Modification of habitats through drainage
- Water and air pollution

Sea Grass *Zostera* spp.

Sea Grass is a grass like flowering plant with dark green, long, narrow leaves with rounded tips. Leaves shoot from a creeping rhizome that binds the sediment. Sea grass forms dense swards in the subtidal zone, supporting a diverse fauna and flora. It acts as a nursery for fish and shellfish, as well as being a source of food for wildfowl (e.g., brent geese).

The distribution of *Zostera* in Strangford Lough and its exploitation by wildfowl have been well investigated and documented. Records show in October 1991 there was an estimated 1100 tonnes (fresh weight) of *Zostera* in the Lough covering some 6.3 km² of the northern mudflats and representing some 12% of the total intertidal area of the Lough.

Threats to Sea Grass

- Industrial and agricultural run-off
- Coastal infrastructure development, and dredging increasing water turbidity and physically damaging seagrass

8.2 Partnership and Community Involvement

The habitat and species actions plans that are being developed as part of the LBAP process would not be possible without the expert knowledge and experience of government agencies, local authority staff, non-governmental conservation organisations, landowners and local community groups and individuals. Community involvement in the management of the biodiversity in our area will be key to the

success. It is local communities who benefit most from protection of local habitats and their species.

The LBAP has been drawn up after consultation with a wide group of people. The LBAP requires the Council to work alongside several governmental and non-governmental partner organisations to develop and complete actions and fulfil targets which promote and enhance biodiversity within the Council area.

The LBAP has committed a partnership of statutory and non-statutory organisations, and local communities that is keen to realise the biodiversity goals enshrined in the plan. The implantation of actions outlined in this LBAP will also include other local community groups, the farming community, schools and businesses and individuals who will become or are already actively involved in biodiversity actions.

'The most recent State of Nature Report for NI (2019) showed an overall decline in the average abundance of wildlife in Northern Ireland with some species facing extinction. This is despite legislation and policy to protect biodiversity and wildlife. It is critical to understand it is not only our protected sites that are important for biodiversity but all areas in between including farmland, hedgerows, rivers, gardens, recreational and amenity sites, canals even our built environment. As a community we can all make space for nature. With the continued effort of our wonderful local groups, organisations, inspiring volunteers, and the overall support of the ANDBC community I have no doubt together we can help local biodiversity recover.'

ANDBC Biodiversity Officer

'We are convinced that we are to preserve this rich biodiversity it is vital to involve the local community in the stewardship of areas. This can be done by informing people and giving them a role in preserving it, for example identifying important habitats and encourage everyone to be proud of them and help with monitoring and custodianship'.

Donaghadee Community Association

Research by the Natural History Museum and RSPB also shows that Northern Ireland ranks 12th worst out of 240 regions for biodiversity loss. There must, therefore, be a step change in action by all public authorities to halt and reverse declines in biodiversity to make Northern Ireland Nature Positive by 2030.

RSPB Northern Ireland

Insert Quote from Ulster Wildlife Trust

Only by this partnership working together and by inspiring and encouraging others to become involved will the action plan be successful. All of us have a part to play in conserving our wildlife.

With time these partnerships will grow, and the LBAP will naturally evolve.

The partner organisations are:

- Bat Conservation Ireland (BCI)
- British Trust for Ornithology (BTO)
- Buglife
- Butterfly Conservation (Northern Ireland Branch)
- Northern Ireland Environment Agency (NIEA)
- Department of Agriculture, Environment and Rural Affairs (DAERA)
- Grass Roots Conservation Group
- Groundwork Northern Ireland
- Local Businesses
- Local Community Groups
- Local Schools
- National Trust (Northern Ireland)
- NI Raptor Study Group (NIRSG)
- Northern Ireland Bat Group (NIBG)
- Northern Ireland Swift Group
- Royal Society for the Protection of Birds (RSPB)
- The Conservation Volunteers (TCV)

- The Farming Community
- The Woodland Trust (Northern Ireland)
- Translink
- Ulster Wildlife
- Mineral Products Association Northern Ireland
- Department for Infrastructure

It is anticipated that as the LBAP continues to evolve, more partners will be invited to participate.

8.3 Selection of Priority Species and Habitats for Action

Ards and North Down Borough Council are responsible for and manage extensive landholdings which make a considerable contribution to the local landscape and provide habitats for wildlife. The Council acknowledges the wider environmental and conservation value of much of its infrastructure and property portfolio, incorporating an objective “to protect and enhance the biodiversity value of our land, properties and associated infrastructure” within its corporate and development plans.

The Council land resource comprises three types of land all of which support their own complement of flora and fauna: green space, grey space and brown space.

Green Space

Green space or ‘green infrastructure’ is land that is currently vegetated. It can clearly have a value for biodiversity. However, it can also play a key role in flood protection, air quality regulation and pollution control as well as having an amenity value. Green space includes modified and artificial habitats e.g., formal gardens around residential properties to those in institutional lands such as hospitals to much larger areas under different management regimes such as designated sites.

Grey Space

Grey Space is the built environment including buildings, roads and pavements. Grey space can be enhanced for biodiversity particularly at the design stage of development to include green roofs and walls and bird and bat boxes. Built heritage and man-made structures have been adopted by many of our native plants and animals as a refuge, nesting or feeding sites. For example, bridges, tunnels and buildings provide opportunities for wildlife which will vary according to building materials, location or aspect. Grey space provides habitat for over-wintering butterflies and moths, bat roosts or nesting opportunities for swallows and swifts.

Brown Space

Brown Spaces are vacant or unused sites that have the potential for redevelopment. They have been used in the past but are not currently managed. The biodiversity of such sites can vary. They can be diverse in pioneer and tall herb species that thrive in disturbed ground or in nutrient poor conditions and support associated diverse invertebrate communities. These communities may develop into scrub and grassland due to natural ecological succession if left alone and not tidied up.

Council makes a significant impact to the quality and quantity of habitats and species through its management and project practices. Further improvements can be gained through formally including biodiversity within its project and maintenance programs. This is particularly important where Council's land holdings infringe upon designated conservation areas.

The plan will naturally allow for the identification of actions that the Council can undertake to conserve biodiversity under its influence. The Ards and North Down Borough Council (LBAP) will contribute to the targets set out in the Northern Ireland Biodiversity Strategy.

8.4 Objectives and Actions

Ards and North Down Borough Council Local Biodiversity Action Plan (LBAP) has been created to initiate a series of actions designed to conserve and enhance habitats and species that are of international, national, and regional importance, but also crucially habitats and species that are of local significance within the Council area. Many of these habitats and species are important to local communities.

The objectives of the LBAP are:

Objective 1: Help and conserve habitats and species

Objective 2: Raise awareness of the ecosystem services provided by key species in Ards and North Down Borough Council area.

Objective 3: Involve people in biodiversity projects and develop partnerships

Actions fall into one of four themes

Theme 1: Education and Awareness

These actions build support for biodiversity through education and awareness events for local communities for example participation in recording schemes to monitor the flora and fauna in the Borough or participation in practical conservation activities (e.g. tree planting, native seed harvesting or removal of invasive species).

Theme 2: Research and Monitoring

Research and monitoring actions are fundamentally important to determine the distribution, extent and condition of all key habitats, flora and fauna in the Council area so that actions can be instigated as early as possible to reverse declines in the most threatened.

Theme 3: Land Management

Lack of or inappropriate land management is a key threat to the key habitats, flora and fauna in the Council area. Hedgerows can develop gaps if not cut, wetlands can be polluted by the runoff of fertilisers from farmland or species-rich grassland can be overshadowed by scrub encroachment. Land management actions for example implementation of appropriate mowing or grazing regimes on sand dune or grassland sites or creation of buffer zones around wetlands will be implemented to address this threat.

Theme 4: Building Partnerships

Actions under this theme seek to form partnerships between the Council, conservation NGOs and local communities. It is only through joint actions between all stakeholders that reverses in the decline of our most threatened habitat, flora and fauna can be achieved.

Actions will be focused on Council owned land (parks, sports fields, cemeteries, , leisure centres, allotments, and other open spaces).

Actions will be tied into priorities and policies of the different Council sections or where appropriate on private land where a partnership between the landowner and Council is feasible.

Several local habitats and species have been selected for inclusion in the LBAP using several selection criteria:

- National and regional priority – whether they are contained on the EU, UK or NI's priority habitats and species list by virtue of extent.
- National and regional priority – whether they are contained on the EU, UK or NI's priority species list by virtue of population size.
 - Rapidly declining in Northern Ireland (2% per year over the last 25 years).
 - Declining (1% year) with Northern Ireland being a stronghold consisting either: -
 - >50% Irish population or

- >20% UK population/range.
- Rare (e.g., a small population and/or confined to one or two sites in Northern Ireland) with Northern Ireland being a stronghold consisting of either: -
 - >50% Irish population or
 - >20% UK population/range.
- Significant proportion (>20%) of the international population of a species (or well-recognised subspecies) occurring in Northern Ireland.
- Published or proposed Irish Red Data Book species classed as either critically endangered, endangered, or vulnerable.
- Red-listed species in either the Ireland or UK Birds of Conservation Concern (BoCC) lists.
- Habitats and species which are of local significance.
- Species which are easily visible or iconic that encourage people to act by engaging in environmental activities which benefit biodiversity.
- Importance to local people – the cultural significance of the habitat or species.

8.4.1 Habitat Actions

Six broad habitat types have been identified for conservation actions in the Council area.

- Coastal, island and marine habitats
- Farmland habitats (grassland, arableland and hedgerow)
- Woodland, and parkland habitats
- Peatland habitats (bog and heath)
- Wetland habitats (fens, reedbeds, lakes and rivers)
- Urban habitats industrial land, cemeteries, parks & gardens

8.4.2 Species Actions

The following species have been selected for action within the Local Biodiversity Action Plan. Many of the species and species groups selected for action will also benefit from actions listed previously under each broad habitat type category.

Lower plants (bryophytes and lichens)

Trees

Invasive flora and fauna

Pollinators (bees, butterflies, wasps, flies, beetles)

Smooth Newt *Lissotriton vulgaris*

Common Lizard *Zootoca vivipara*

Farmland birds

Swift *Apus apus*

Sand martin *Riparia riparia*

Dipper *Cinclus cinclus hibernicus*

Wintering and breeding waders and wildfowl

Barn owl *Tyto alba*

Kingfisher *Alcedo atthis*

Red Squirrel *Sciurus vulgaris*

Pine Marten *Martes martes*

Bats (Chiroptera)

Irish Hare *Lepus timidus hibernicus*

European Hedgehog *Erinaceus europaeus*

9.0 Implementation, Monitoring and Review of the Actions

The habitats and species listed in this document represent a selection of what is present in the North Down and Ards area. These are the ones that will be prioritised by the LBAP. It is likely that other habitats and species may be added to this list as priorities may change over the life span of this plan.

The Council at a practical level will continue to engage with the LBAP process and allocate specific responsibilities regarding the implementation stage. In fully acknowledging the Council's natural heritage, the Council will continue to seek innovative ways to manage and/or mitigate for biodiversity and encourage and reward a conservation ethos in its staff. The Council will continue to develop partnerships to deliver Northern Ireland's targets for biodiversity and will look to the future allocation of resources to support implementation of action for biodiversity.

It is intended that the Biodiversity Action Plan is a dynamic document which is subject to constant review. Progress towards the targets will be assessed annually and it is anticipated the LBAP will be reviewed after 5 years by the Partnership. Reporting on progress will be undertaken by the Council on behalf of the LBAP partnership. In particular, the actions undertaken will increase as more stakeholders join the process and agree work which can be implemented on the ground.

10.0 What You Can Do to Help Biodiversity

At a time when our biodiversity is under immense pressure, there is something everyone can do to help our local wildlife. The success of the Local Biodiversity Action Plan depends not just on the work of Ards and North Down Borough Council and the partner organisations, but also the work that individuals and communities can carry out to enhance our environment for biodiversity.

Regardless of our age, job, or experience, we can all take positive action for local biodiversity. This may take the form of volunteering with an environmental organisation, taking part in a beach clean or simply putting on your walking shoes, getting into the fresh air and taking notice of the wildlife that surrounds you.

What can One Person Do?

- Your own garden can be a haven for wildlife, no matter how large or small; bird feeders and tables help to feed many birds during times of unfavourable weather.
- Install bird boxes and inspect and maintain annually
- Creating a garden pond provides drinking and bathing water for birds and mammals such as hedgehogs, as well as possibly also attracting other wetland inhabitants like frogs and dragonflies/damselflies
- Create log and branch piles providing valuable habitats for many insects as well as frogs, newts, and hedgehogs
- Create your own garden compost heap for use in the garden
- Leave areas of your garden to 'go wild' will encourage native plants to flower and attract a wide range of insects and birds
- Plant your own wildlife garden by selecting flowering plants which attract pollinators.
- Recording the species, you find in your garden and anywhere else you visit will allow us to keep an eye on how well or poorly each species is faring over time. Records can be submitted to the Council Biodiversity Officer or to the Centre for Environmental Data and Recording
- Encourage friends and family to engage with nature, especially children - they will have to solve many environmental problems that we have helped to create.
- Keep an eye on local wildlife and report anything which might be a wildlife crime. Water pollution, disturbance of protected species and habitats, littering and dumping of rubbish are things which will have a negative impact the whole community as well as local wildlife.

- Within the North Down and Ards area, there are many organisations actively looking for extra hands to help in local conservation projects why not join them?
- Attend biodiversity events to meet like-minded people and show your support for our local biodiversity.
- Do you enjoy being out and about spotting wildlife? If so, please take a notebook and pencil with you the next time and become a wildlife recorder. We need wildlife records in the North Down and Ards area, whether rare or common. This will help us to monitor how well our local wildlife is doing. You can submit your records to the Centre for Environmental Data and Recording (CEDaR).
- Explore Your Natural Environment as this LBAP has highlighted, the North Down and Ards area is rich in biodiversity. The best way to see wildlife is to put on your walking shoes and go exploring. You don't need professional equipment to spot wildlife – just keep your eyes and ears open. For further information on walking routes in the district visit www.walkni.com.

What Can Farmers Do?

Most of the land in the Council area is privately owned and the majority of this is farmland.

Fortunately, farmers and other landowners are often keen to incorporate management for wildlife on their land and grants through agri-environment schemes has provided a useful impetus to improve nature conservation on farmland.

We must continue to build on this by providing an incentive for farmers to make it worthwhile to manage their land in sympathy with nature and for them to do so profitably. Equally important is practical guidance on best practice and habitat management and how to integrate this into their farming system while maintaining income levels.

- Manage your land in a way that benefits local wildlife, particularly farmland birds.
- Install bird boxes and inspect and maintain annually.
- Cut hedges outside of the growing season to ensure that nesting birds are not disturbed, and that fruit and seeds are available as a winter food source for wildlife.
- Retain hedgerows as important wildlife corridors rather than replacing with wire fencing.
- Apply herbicides and pesticides in a way that does not affect field margin and hedgerow habitats or even better go organic!
- Leave a strip of uncut grass around the field margin as a refuge for native plants and animals. Cut field margins outside the growing season to allow native plants to set seed and insects to complete the summer part of their lifecycle.
- Find out if you are eligible to take part in an agri-environment scheme such as the Environmental Farming Scheme.
- Plant an area of woodland – forestry grant schemes are available (see <https://www.daera-ni.gov.uk/articles/daera-forestry-grants>)
- Install a constructed wetland to treat farmyard dirty water.

What Can a School or Community Group Do?

The Eco-Schools programme was developed in 1994 on the basis of the need for involving young people in finding solutions to environmental and sustainable development challenges at the local level.

Most young people care deeply about environmental issues and wish to make a positive change in the environment around them. The Eco-Schools programme provides an ideal way for fostering environmental awareness in the entire school in a way that links to many curriculum subjects. The primary aim of the Eco-Schools programme is to educate and empower young people to make positive decisions and become change makers for an environmentally sustainable world.

It aims to make environmental awareness and action an intrinsic part of the life and ethos of a school. This should include the students, teachers, non-teaching staff and parents, as well as the local authority, the media and local businesses. Eco-Schools endeavours to extend learning beyond the classroom and develop responsible attitudes and commitment, both at home and in the wider community.

- Install bird boxes and inspect and maintain annually.
- Create an area for wildlife within the school grounds or within a community garden. These areas are not just important for wildlife, they are often also great places to relax.
- Visit local woodlands, meadows, wetlands, and urban green spaces – they are the perfect outdoor classroom.
- Establish a tree and wildflower nursery.
- Engage with local environmental organisations – many can help you to plant native trees, sow a wildflower meadow, create a garden pond, and survey what plants and animals live in your area.
- Start a school or community project that will help us to complete actions listed in the Biodiversity Action Plan. Contact the Council's Biodiversity Officer or one of the local environmental organisations to find out how you can make a difference.

What Can a Business Do?

Although there has been much achieved for biodiversity conservation and awareness in the transportation (Translink), and quarrying (Minerals Products Association) sectors, there has been very limited engagement by and with industry to date to the levels required. There are many ways in which businesses can contribute, including ensuring that they understand and manage their impact on biodiversity through developing biodiversity policies, getting involved in wider initiatives such as conservation projects with the Council's biodiversity officer or conservation NGOs, communicating the biodiversity message to employees and customers and mitigating their overall impact on biodiversity through site action.

There are many opportunities to improve partnership with local business either through their sponsorship of projects or incorporating sustainability and biodiversity

enhancement measures into their future development and way of operating. Many firms are keen to improve their image and show off their “green” credentials and we must take the opportunity that this provides to fully engage with them and have them aboard the partnership.

- Install bird boxes and inspect and maintain annually.
- Create a wildlife area. Wildlife areas can also be great places to spend your lunchtime.
- Visit local green spaces during work breaks; this helps to lower blood pressure and reduce stress levels.
- Liaise with the Council’s Biodiversity Officer or one of our local environmental organisations and use staff training days to help with tasks such as tree planting or helping to control invasive species.
- You could sponsor a local wildlife project such as creation of a wildflower meadow or pond, or the planting of a woodland or native species-rich hedgerow.
- Small and large businesses can sign up to a Prosperity Agreement. These are voluntary agreements through which NIEA, and an organisation can explore opportunities for reducing environmental impacts in ways that create prosperity and wellbeing.

Community Action

A major challenge is to raise awareness and help people to become involved. It is encouraging to see the number of local groups who want to engage at some level and particularly the number of young people who are active and involved in nature. We are fortunate in the Council area in having a diverse range of committed conservation NGOs. Links must be built on and schools encouraged and assisted to undertake projects in biodiversity. This practical introduction to biodiversity is the best way to educate the next generation in the problems that we face. It is very reassuring to know that biodiversity is included in the new school curriculum.

Some of the side benefits of this biodiversity work should be mentioned. It has already provided an opportunity to bring cross community groups together in joint projects which reflect both communities’ natural and cultural heritage. There is still

considerable social need and exclusion in Northern Ireland and interacting with nature provides a stimulus to remove some of these barriers.

There is also an opportunity to bring together groups with a common interest. Most people want to see an enhancement of their local environment and where this involves nature conservation efforts will be made to form partnerships to achieve the biodiversity objectives.

11.0 Useful Contacts

- Northern Ireland Bat Group <https://www.bats-ni.org.uk/>. For advice on injured bats, bats on the ground or in a building, or bats discovered during building or tree works, contact Northern Ireland Bat Group. Interfering with protected species and/or damaging the habitats on which they depend, damaging protected habitats, poaching, badger baiting and infringements on the Animal Welfare Act are all types of Wildlife Crime. If you suspect a wildlife crime, contact your nearest Police station or call 101 from a landline; state they you believe a wildlife crime has occurred and be sure to ask for a Crime Reference Number.
- Action for Biodiversity www.actionforbiodiversity.eu
- Biodiversityni www.biodiversityni.com
- British Trust for Ornithology www.bto.org
- Butterfly Conservation www.butterfly-conservation.org
- Centre for Environmental Data and Recording (CEDaR) www.nmni.com/cedar
- Copeland Island Bird Observatory www.copelandbirdobservatory.org.uk
- Department of Agriculture and Rural Development (DARD) www.dardni.gov.uk
- Exploris www.exploris.org.uk
- Forest Service www.dardni.gov.uk/forests-service
- National Museums Northern Ireland (NMNI) www.habitas.org.uk
- National Trust www.nationaltrust.org.uk
- Northern Ireland Bat Group www.bats-ni.org.uk
- Northern Ireland Environment Agency (NIEA) www.doeni.gov.uk/niea
- Partnership for Action Against Wildlife Crime
<https://www.gov.uk/government/groups/partnership-for-action-against-wildlife-crime>.
The Partnership for Action Against Wildlife Crime UK (PAW UK) helps statutory and

non-government organisations to work together to reduce wildlife crime (e.g. badger raptor and bat persecution, illegal trade in CITES species, illegal harvesting of freshwater pearl mussels, and poaching (deer, fish & hare coursing) through raising awareness of wildlife legislation and the impacts of wildlife crime, helping and advising on wildlife crime and regulatory issues and making sure wildlife crime is tackled effectively.

- Royal Society for the Protection of Birds (RSPB) www.rspb.org.uk
- Strangford Lough and Lecale Partnership www.strangfordlough.org
- The Conservation Volunteers www.tcv.org.uk/northernireland
- Ulster Wildlife www.ulsterwildlife.org
- Walkni www.walkni.com
- Wildfowl and Wetlands Trust www.wwt.org.uk/visit/castle-espie/
- Woodland Trust www.woodlandtrust.org.uk

Glossary

AONB – Area of Outstanding Natural Beauty

ASSI - Area of Special Scientific Interest; a nature conservation designation which protects areas that are the best samples of our natural heritage and / or geological history

Biodiversity - The diversity of all living things on Earth including plants, animals, fungi and bacteria

Biodiversity Duty - The duty placed on public bodies such as councils under the Wildlife and Natural Environment Act (NI) 2011 to further the conservation of biodiversity in ways that are consistent with carrying out their main functions

DAERA - The Department of Agriculture, Environment and Rural Affairs

Ecosystem – An area made up of plants, animals, micro-organisms, soil, rock, minerals, water sources and the local atmosphere interacting with one another

Ecosystem Services – Ecosystems supply us (humans) with a number of benefits e.g., pollination, drinking water and decomposition of waste, collectively these resources are referred to as Ecosystem Services

FNR – Forest Nature Reserve Habitat – This is an ecological or environmental area that is inhabited by a particular species of animal, plant or other type of organism

HAP - Habitat Action Plan; a plan to enhance a habitat for the benefit of biodiversity

INNS - Invasive Non-native Species; species which have been accidentally or deliberately introduced into our environment and result in damage to native habitats and/or species.

LBAP - Local Biodiversity Action Plan; a plan developed between partner organisations to develop and complete actions, and fulfil targets, which will promote and enhance biodiversity within the local area

LNR – Local Nature Reserve

MCZ – Marine Coastal Zone

MNR – Marine Nature Reserve

NNR – National Nature Reserve

NR – Nature Reserve

Priority Habitat - A habitat which requires conservation action because of its rarity, importance and/or decline in quality and/or spatial area

Priority Species - A species which requires conservation action because of its rarity, rapid population decline and/or international importance

RAMSAR - Ramsar sites are wetlands of international importance designated under the Ramsar Convention.

SAC - Special Area of Conservation; an area designated under the EU Habitats Directive for the protection and conservation of seriously threatened habitats and species

SAP - Species Action Plan; a plan to benefit a particular species

SLNCI - A Site of Local Nature Conservation Importance; sites are designated according to their flora, fauna and/or earth science interest

SPA - Special Protection Area; an area designated under the EU Habitats Directive for the protection and conservation of sites which are important for our most vulnerable species of birds

Ramsar site - A Ramsar site is a wetland site designated for its international importance to nature conservation. Named after the 1971 Convention on Wetlands which was held in Ramsar, Iran

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Records of flora and fauna mentioned in this publication are largely from Habitat Action Plans, Species Action Plans and ASSI citation documents that are available on the NIEA web site and from CEDaR.

Insert Credited Photos

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Appendix 1: Designated Sites in Ards and North Down Borough Council Area

| Site Name | Designated Site Category | Designated Site Area (ha) |
|-------------------------|--------------------------|---------------------------|
| Aughnadarragh Lough | SAC | 12.8 |
| Strangford Lough | SAC | 15398.54 |
| Outer Ards | Ramsar Site/SPA | 1154.16 |
| Strangford Lough | Ramsar Site/SPA | 15580.79 |
| Copeland Islands | SPA | 201.52 |
| Ballymacormick Point | ASSI | 39 |
| Strangford Lough Part 1 | ASSI | 1549 |
| Strangford Lough Part 2 | ASSI | 699 |
| Strangford Lough Part 3 | ASSI | 1859.5 |
| Whitespots | ASSI | 5.05 |
| Scrabo | ASSI | 25.5 |
| Blaeberry Island Bog | ASSI | 24.58 |

| | | |
|-------------------------------|-------|----------|
| Lough Cowey | ASSI | 30.11 |
| Aughnadarragh Lough | ASSI | 12.8 |
| Heron and Carrigullian Loughs | ASSI | 80.42 |
| Tievehilly | ASSI | 3.42 |
| Ballyquintin Point | ASSI | 74.10 |
| Copeland Islands | ASSI | 201.52 |
| Strangford Lough | MNR | 16500.00 |
| Granagh Bay | NR | 24.00 |
| Dorn | NR | 790.00 |
| Ballyquintin Point | NNR | 16.00 |
| North Strangford Lough | NNR | 1015.00 |
| Ballyrainey | SLNCI | 1.97 |
| Kiltonga | SLNCI | 7.84 |

| | | |
|----------------------------|-------|-------|
| Cairngaver | SLNCI | 5.08 |
| Cunningburn | SLNCI | 2.15 |
| Ballyalloly Lough | SLNCI | 38.98 |
| Whitespots, Newtownards | SLNCI | 40.59 |
| Inishargy Bog | SLNCI | 39.13 |
| Tullynagee | SLNCI | 17.15 |
| Rosemount | SLNCI | 5.97 |
| Ballymacashen Bog | SLNCI | 15.18 |
| Castle Espie | SLNCI | 2.42 |
| Golden Glen | SLNCI | 7.44 |
| Ballyharry | SLNCI | 1.38 |
| Killynether Wood | SLNCI | 13.72 |
| Willy's Wood Island | SLNCI | 78.34 |
| Lough Cowey | SLNCI | 30.21 |
| Glen Lyon, Holywood | SLNCI | 8.04 |
| Blackhill, Seahill | SLNCI | 2.44 |

| | | |
|---|-------|-------|
| Hollywood Reservoirs, North Down Countryside | SLNCI | 14.94 |
| Redburn, Hollywood | SLNCI | 67.56 |
| Strickland's Glen, Bangor | SLNCI | 5.72 |
| Edith of Lorne's Glen, North Down Countryside | SLNCI | 17.10 |
| Croft Burn, Hollywood | SLNCI | 0.26 |
| Creighton's Green Reservoir, North Down Countryside | SLNCI | 28.46 |
| Ballysallagh, North Down Countryside | SLNCI | 18.25 |
| Crawfordsburn | SLNCI | 85.00 |
| Ballymacormick Point, North Down Countryside | SLNCI | 0.46 |

| | | |
|--|--|-------|
| Ballygrainey Dismantled Railway, North Down Countryside | SLNCI | 16.71 |
| Rockport Coast and St Columbanus, Seahill | SLNCI | 13.91 |
| Clandeboye Avenue, North Down Countryside | SLNCI | 14.49 |
| Rathgael, Bangor | SLNCI | 6.30 |
| Ballymenoch Park, Holywood | SLNCI | 10.97 |
| Ulster Folk and Transport Museum and Cultra Glen, Holywood | SLNCI | 48.15 |
| Balloo Wetland/ Woodland | Ulster Wildlife/Ards and North Down Borough Council. | 6.00 |
| Light House Island | National Trust | 9.71 |
| Orlock Point | National Trust | 10.00 |

| | | |
|-------------------------|---------------------------------|--------|
| Ballymacormick Point | National Trust | 14 |
| Mount Stewart | National Trust | 167.14 |
| Strangford Lough | National Trust | |
| Kearney | National Trust | 143.4 |
| Glastry Ponds | National Trust | 16.46 |
| Killynether Wood | National Trust | 22.44 |
| Kilcooley Wood | Woodland Trust | |
| Corrog Wood, Portaferry | Woodland Trust | 5.49 |
| Ballysallagh Wood | Forest Service Northern Ireland | 18.25 |
| Clandeboy Forest | Forest Service Northern Ireland | 102 |
| Inishargy Bog | Ulster Wildlife | 8 |
| Kiltonga nature Reserve | ANDBC | 9.5 |

Appendix 2: List of NI Priority Species in Council Area

| Common Name | Scientific Name |
|-------------------------|-------------------------------|
| Goshawk | <i>Accipiter gentilis</i> |
| Grey dagger | <i>Acronicta psi</i> |
| Knotgrass | <i>Acronicta rumicis</i> |
| Beaded chestnut | <i>Agrochola lychnidis</i> |
| Skylark | <i>Alauda arvensis</i> |
| Green-brindled crescent | <i>Allophyes oxyacanthae</i> |
| Allis shad | <i>Alosa alosa</i> |
| Mouse moth | <i>Amphipyra tragopoginis</i> |
| Chaffweed | <i>Anagallis minima</i> |
| Pintail | <i>Anas acuta</i> |
| Shoveler | <i>Anas clypeata</i> |
| Garganey | <i>Anas querquedula</i> |
| a solitary bee | <i>Andrena coitana</i> |
| a solitary bee | <i>Andrena denticulata</i> |
| a solitary bee | <i>Andrena praecox</i> |
| Bog-rosemary | <i>Andromeda polifolia</i> |
| Whirlpool ramshorn | <i>Anisus vortex</i> |

| | |
|-------------------------------|-------------------------------------|
| Greenland white-fronted Goose | <i>Anser albifrons flavirostris</i> |
| Tree pipit | <i>Anthus trivialis</i> |
| Dusky brocade | <i>Apamea remissa</i> |
| Swift | <i>Apus apus</i> |
| Garden tiger | <i>Arctia caja</i> |
| Short-eared owl | <i>Asio flammeus</i> |
| Centre-barred sallow | <i>Atethmia centrargo</i> |
| Pochard | <i>Aythya ferina</i> |
| Tufted duck | <i>Aythya fuligula</i> |
| Scaup | <i>Aythya marila</i> |
| a door snail | <i>Balea perversa</i> |
| a moss | <i>Brachydontium trichodes</i> |
| Pale-bellied brent goose | <i>Branta bernicla hrota</i> |
| Goldeneye | <i>Bucephala clangula</i> |
| Dunlin | <i>Calidris alpina</i> |
| Knot | <i>Calidris canutus</i> |
| Mottled rustic | <i>Caradrina Morpheus</i> |

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|------------------------------|--|
| Linnet | <i>Carduelis cannabina</i> |
| Twite | <i>Carduelis flavirostris</i> |
| Haworth's minor | <i>Celaena haworthii</i> |
| Crescent | <i>Celaena leucostigma</i> |
| Broom moth | <i>Ceramica pisi</i> |
| Hen harrier | <i>Circus cyaneus</i> |
| a chantarelle | <i>Clavaria zollingeri</i> |
| a common scurvygrass | <i>Cochlearia officinalis ssp. scotica</i> |
| Frog orchid | <i>Coeloglossum viride</i> |
| Small heath | <i>Coenonympha pamphilus</i> |
| Sea-kale | <i>Crambe maritima</i> |
| Corncrake | <i>Crex</i> |
| Cuckoo | <i>Cuculus canorus</i> |
| Bewick's swan | <i>Cygnus columbianus</i> |
| Whooper swan | <i>Cygnus</i> |
| Dark-barred Twin-spot Carpet | <i>Xanthorhoe ferrugata</i> |
| Small square-spot | <i>Diarsia rubi</i> |

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|----------------------|-------------------------------|
| Small phoenix | <i>Ecliptopera silacea</i> |
| Yellowhammer | <i>Emberiza citrinella</i> |
| Reed bunting | <i>Emberiza schoeniclus</i> |
| August thorn | <i>Ennomos quercinaria</i> |
| Hedgehog | <i>Erinaceus europaeus</i> |
| Small eggar | <i>Eriogaster lanestris</i> |
| Marsh fritillary | <i>Eurodryas aurinia</i> |
| Garden dart | <i>Euxoa nigricans</i> |
| Alder buckthorn | <i>Frangula alnus</i> |
| Black-throated Diver | <i>Gavia arctica</i> |
| Field gentian | <i>Gentianella campestris</i> |
| Meadow crane's-bill | <i>Geranium pratense</i> |
| Wood crane's-bill | <i>Geranium sylvaticum</i> |
| Heath cudweed | <i>Gnaphalium sylvaticum</i> |
| Double dart | <i>Graphiphora augur</i> |

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|--------------------------|-----------------------------------|
| Smooth ramshorn | <i>Gyraulus (Torquis) laevis</i> |
| Narrow-bordered bee Hawk | <i>Hemaris tityus</i> |
| Ghost moth | <i>Hepialus humuli</i> |
| Grayling | <i>Hipparchia Semele</i> |
| Rustic | <i>Hoplodrina blanda</i> |
| Rosy rustic | <i>Hydraecia micacea</i> |
| Herring gull | <i>Larus argentatus</i> |
| Black-headed Gull | <i>Larus ridibundus</i> |
| Neat mining Bee | <i>Lasioglossum nitidiusculum</i> |
| Wall | <i>Lasiommata megera</i> |
| a moss snail | <i>Leiostylia anglica</i> |
| Wood white | <i>Leptidea reali</i> |
| Irish hare | <i>Lepus timidus hibernicus</i> |
| Scottish lovage | <i>Ligusticum scoticum</i> |
| Ash-grey slug | <i>Limax cameronite</i> |
| Black-tailed Godwit | <i>Limosa limosa</i> |

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|---------------------------|---------------------------|
| Grasshopper warbler | <i>Locustella naevia</i> |
| Otter | <i>Lutra lutra</i> |
| Pine marten | <i>Martes martes</i> |
| Common scoter | <i>Melanitta nigra</i> |
| Oysterplant | <i>Mertensia maritima</i> |
| Rosy minor | <i>Mesoligia literosa</i> |
| Yellow wagtail | <i>Motacilla flava</i> |
| Spotted flycatcher | <i>Muscicapa striata</i> |
| Shoulder-striped wainscot | <i>Mythimna comma</i> |
| Curlew | <i>Numenius arquata</i> |
| Whimbrel | <i>Numenius phaeopus</i> |
| Oblique carpet | <i>Orthonama vittata</i> |
| Powdered quaker | <i>Orthosia gracilis</i> |
| House sparrow | <i>Passer domesticus</i> |
| Tree sparrow | <i>Passer montanus</i> |
| Dark spinach | <i>Pelurga comitata</i> |
| Common seal | <i>Phoca vitulina</i> |

| | |
|---------------------------|--------------------------------|
| Common (Harbour) porpoise | <i>Phocoena phocoena</i> |
| Wood warbler | <i>Phylloscopus sibilatrix</i> |
| 55 kHz pipistrelle | <i>Pipistrellus pygmaeus</i> |
| Pipistrelle | <i>Pipistrellus species</i> |
| a pea mussel | <i>Pisidium pulchellum</i> |
| Lesser butterfly-orchid | <i>Platanthera bifolia</i> |
| Brown long-eared Bat | <i>Plecotus auratus</i> |
| Golden plover | <i>Pluvialis apricaria</i> |
| Dunnock | <i>Prunella modularis</i> |
| Small-white Orchid | <i>Pseudorchis albida</i> |
| Balearic shearwater | <i>Puffinus mauretanicus</i> |
| Intermediate wintergreen | <i>Pyrola media</i> |
| Chough | <i>Pyrrhocorax pyrrhocorax</i> |
| Bullfinch | <i>Pyrrhula</i> |

| | |
|-------------------|-------------------------------------|
| Spiral tasselweed | <i>Ruppia cirrhosa</i> |
| Sea trout | <i>Salmo trutta</i> |
| Prickly saltwort | <i>Salsola kali ssp. kali</i> |
| Red squirrel | <i>Sciurus vulgaris</i> |
| Annual knawel | <i>Scleranthus annuus</i> |
| Mullein wave | <i>Scopula marginepunctata</i> |
| Shaded broad-bar | <i>Scotopteryx chenopodiata</i> |
| Latticed heath | <i>Semiothisa clathrate</i> |
| a whitebeam | <i>Sorbus Hibernica</i> |
| a whitebeam | <i>Sorbus rupicola</i> |
| White ermine | <i>Spilosoma lubricipeda</i> |
| Buff ermine | <i>Spilosoma luteum</i> |
| Arctic skua | <i>Stercorarius parasiticus</i> |
| Little tern | <i>Sterna albifrons</i> |
| Turtle dove | <i>Streptopelia turtur</i> |
| Starling | <i>Sturnus vulgaris</i> |
| a moss | <i>Tortella inclinata</i> |

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|-------------------------|----------------------------|
| Redshank | <i>Tringa tetanus</i> |
| Redwing | <i>Turdus iliacus</i> |
| Song thrush | <i>Turdus philomelos</i> |
| Fieldfare | <i>Turdus pilaris</i> |
| Bottle-nosed Dolphin | <i>Tursiops truncatus</i> |
| Cinnabar | <i>Tyria jacobaeae</i> |
| Barn owl | <i>Tyto alba</i> |
| Lapwing | <i>Vanellus vanellus</i> |
| a whorl snail | <i>Vertigo antivertigo</i> |
| Spring vetch | <i>Vicia lathyroides</i> |
| Sallow | <i>Xanthia icteritia</i> |

Appendix 3: List of Locally Important Species Relevant to the Council Area

| Common Name | Scientific Name | Significance |
|------------------|---------------------------------|--|
| Great burnet | <i>Sanguisorba officinalis</i> | NI Rare & Scarce Plants, Wildlife (NI) Order Sch 8 |
| Bats | Chiroptera | Wildlife (NI) Order |
| Irish hare | <i>Lepus timidus hibernicus</i> | Wildlife (NI) Order |
| Harbour Porpoise | <i>Phocoena phocoena</i> | Wildlife (NI) Order |
| Common Seal | <i>Phoca vitulina</i> | Wildlife (NI) Order |
| Grey Seal | <i>Halichoerus grypus</i> | Wildlife (NI) Order |

| | | |
|-----------------------|-----------------------------------|--|
| | | |
| Red squirrel | <i>Sciurus vulgaris</i> | Wildlife (NI) Order |
| Pine marten | <i>Martes martes</i> | Wildlife (NI) Order |
| Smooth newt | <i>Lissotriton vulgaris</i> | Wildlife (NI) Order |
| Black-headed gull | <i>Chroicocephalus ridibundus</i> | Breeding populations on amber list of birds of conservation concern in Ireland |
| European herring gull | <i>Larus argentatus</i> | Breeding populations on amber list of birds of conservation concern in Ireland |
| Kingfisher | <i>Alcedo atthis</i> | Breeding populations on amber list of birds of conservation concern in Ireland |

| | | |
|-------------------------------|--|--|
| Black guillemot | <i>Cepphus grylle</i> | Amber listed bird of conservation concern |
| Manx Shearwater | <i>Puffinus puffinus</i> | Amber listed bird of conservation concern |
| Pale bellied brent goose | <i>Branta bernicla hrota</i> | Wintering population on amber list of birds of conservation concern in Ireland. |
| Barn owl | <i>Tyto alba</i> | Red listed bird of conservation concern in Ireland |
| Greenland white-fronted geese | <i>Anser albifrons</i> | Wintering population on amber list of birds of conservation concern in Ireland. |
| Farmland seed-eating birds | Yellowhammer <i>Emberiza citrinella</i> , tree sparrow <i>Passer montanus</i> , reed bunting <i>Emberiza schoeniclus</i> , linnet <i>Linaria cannabina</i> | Northern Ireland priority species. Yellowhammer is a red listed bird of conservation concern. Tree sparrow, and linnet are amber listed birds of conservation concern. |

| | | |
|--------|------------------------------|--|
| Twite | <i>Acanthis flavirostris</i> | Breeding population listed on red list of conservation concern in Ireland. |
| Badger | <i>Meles meles</i> | Badgers are protected, under Schedule 5, 6 and 7 of the Wildlife (NI) Order 1985 (as amended). |

| | | |
|-----------------------------|----------------------------|---|
| Hedgehog | <i>Erinaceus europaeus</i> | In Ireland the hedgehog is classed as Least Concern on the IUCN red list, but this is due to the fact that the species is data deficient, they are now classed as Vulnerable to Extinction in Britain. There have been huge declines in Britain and Europe, and it is estimated that there is a similar situation in Ireland. |
| Common or viviparous lizard | <i>Zootoca vivipara</i> | Listed in Schedule 5, 6 and 7 of the Wildlife (NI) Order 1985 Listed in Annex III of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) |