

Executive Summary

Fingal Biodiversity Action Plan 2022-2030



**Draft for Consultation
May 2022**

Fingal County Council

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Biodiversity in Fingal

Biodiversity or 'Biological Diversity' is the variety of all life. Biodiversity includes all living things from the smallest of creatures such as Ants to the mighty Basking Shark and from the tiniest algae to the giant Oak trees. Biodiversity is not restricted to rare or threatened species, but includes the whole of the natural world from the commonplace to the critically endangered. Biodiversity also includes the range of places where plants and animals live, from the local park just around the corner to the world's deepest seas and oceans.

Our coastline, countryside and urban centres harbour a surprising variety of habitats, plants and animals. The natural environment provides the basis of our daily lives and livelihoods and makes up the resources which our families, communities and future generations depend upon. The coastline is our most important wildlife resource, because most of the protected sites and protected wildlife species in the county are found there.

Biodiversity loss in Fingal

Despite the important role biodiversity plays in everyday life, there is a serious concern for biodiversity in Ireland and throughout the world. The pattern of biodiversity loss in Fingal mirrors the global pattern as our local habitats are lost and subject to degradation and species numbers have declined. The loss of biodiversity is considered a threat of equal size to the climate emergency. The main drivers of biodiversity loss in Fingal are habitat loss and fragmentation due to development, recreational disturbance, climate change, water pollution, lack of habitat management and alien invasive species.

The challenge for Fingal is to develop and grow in such a way which protects and enhances biodiversity for future generations. The Fingal Biodiversity Action Plan will provide a framework for biodiversity action for the next 8 years with the aim of halting the loss of biodiversity in Fingal. The primary purpose of the FBAP is to focus the efforts and resources of Fingal County Council and other nature conservation groups to respond to the escalating ecological crisis and climate emergency.

International and national policy to halt the loss of biodiversity

The UN and the EU have developed strategies to halt the loss of biodiversity by 2030. The UN Decade on Ecosystem Restoration aims to prevent, halt and reverse the degradation of ecosystems on every continent and in every ocean by 2030. The EU Biodiversity Strategy 2030 provides targets for all member states and has "*We need nature in our lives*" as its central message. It links the recovery of biodiversity to the recovery from economic recession, health threats and climate disasters. The Irish National Biodiversity Plan includes many nature conservation actions relevant for local authorities. Ireland's Biodiversity Sectoral Climate Change Adaptation Plan and the

Fingal Climate Action Plan call for nature-based solutions to tackle the drivers and impacts of climate change.

The Fingal Biodiversity Plan translates these national and international nature conservation and climate change policies into action on the ground. *Ecosystem Restoration* and *Bringing Nature back into our Lives* are important themes in the Fingal Biodiversity plan. The restoration of our terrestrial, freshwater and marine ecosystems in Fingal, as well as working with local communities to enhance our urban environment for biodiversity, will be key priorities for the next 8 years.

Vision for nature by 2030

It is 2030, and Fingal is teeming with life. Nature in the city, the countryside and the coast has clearly recovered. You can see it, hear it and smell it. We have a rich biodiversity of plants, insects, mammals, birds, amphibians, fish and soil life. The natural surroundings provide an attractive environment where people like to live, work and be outdoors. We need nature in our lives. We consider biodiversity conservation essential for our wellbeing and most importantly, we act accordingly. Central government, politicians and Council management are committed to halt the loss of biodiversity and have made the necessary staff and funding available to implement the Biodiversity Plan as we realized that nature-based solutions to some of society's key issues can provide multiple benefits and are therefore more cost effective. That we all managed to make a step-change is the result of new ideas, collective action and more innovative nature conservation models. The County Council, local residents, farmers, fishermen, NGO's, businesses, scientists and universities have all been working collectively to restore the species diversity in Fingal.

It was realised early on that Fingal can develop and grow while still protecting and enhancing biodiversity for future generations. This was achieved by developing an ecological network throughout the county, to create an interconnected landscape through which wildlife can move freely and habitats and species are protected. The Council prepared management plans for all the designated sites in the county together with landowners, NGO's and the local community to protect and restore these sites. Hundreds of acres have been acquired by the Council near the estuaries and in the Liffey Valley to create new saltmarsh, wetlands and woodland. These habitats will act as carbon sinks to mitigate climate change, while also attenuating floodwaters and provide for recreational space. New carbon offsetting schemes have also been developed to facilitate the restoration of freshwater wetlands and woodland on private property.

Developers, Architects, Engineers and Planners got up to speed quickly with the new *Building for Biodiversity* guidelines for new developments. As a result, many new housing estates, business parks, industrial estates and infrastructure projects include green roofs, green walls, nesting facilities for birds and bats, green car parking, wetlands and wildflower meadows. This helped us achieve an overall net biodiversity gain in most developments instead of just no net loss of biodiversity. Open space management has

become less intensive and pesticides are no longer used. People got used to the less manicured appearance of our open spaces and road verges and many residents made their gardens more wildlife friendly too. Schools, businesses and golf courses pride themselves on having hay meadows, ponds and woodland and a lot more wildlife on their grounds.

Our countryside remains an important food production area for the greater Dublin area with profitable farms where wildlife can thrive. Many farmers have broad field margins and use less intensive farming methods. Technical innovations and financial supports have allowed farmers to restore soil health and nutrient cycles and make their farms much more biodiversity friendly. Better quality and sustainability instead of higher productivity are the guiding principle for many farms. This has created more space on the farm for wildlife and has led to a major improvement of the quality of the water, soil and air, without affecting the income and viability of the farm.



The Fingal Ecological Network. Artwork by Jeroen Helmer / ARK Nature – Rewilding Netherlands

Biodiversity actions

The Biodiversity Action Plan puts forward an ambitious programme of a hundred actions to reverse the decline in biodiversity by 2030. The actions are based upon recommendations made in ecological studies and on proposals put forward by nature conservation NGO's, members of the public, the Public Participation Network, Strategic Policy Committee members and various Council Departments. The actions in this plan are centred around six topics;

Delivery of the Ecological Network across Fingal

About half of the actions relate to the development and management of an Ecological Network across Fingal. It is a network of habitats that are in good ecological condition, linking protected sites and other biodiversity hotspots, across a wider nature-friendly farmed and urban landscape. This will create an interconnected landscape through which wildlife can move freely, and healthy populations of both rare and common species can be maintained. The Ecological Network comprises of four elements:

1. Core nature conservation sites
2. Bufferzones around the core sites
3. Nature Development Areas
4. Ecological Corridors and stepping stones

A resilient ecological network is vital for the recovery of biodiversity. The network shall make provisions for recreational use, flood protection, climate change measures, farming and contribute to the quality of the living and working environment. The ecological network will thereby assist with the sustainable development of the countryside and towns in Fingal. By incorporating the Fingal Ecological Network in the County Development Plan, the network is fully integrated with spatial and land use planning.

Building for Biodiversity

Although urban developments can lead to further habitat loss and fragmentation, there are also opportunities to undertake development in a way that will help to enhance biodiversity. Several technical and design guidance notes are to be prepared to inform developers, architects and engineers how nature can be incorporated in buildings, stormwater management and open spaces within a development. The Council will also undertake pilot projects in its own developments to gain more experience with building for biodiversity and share this experience with developers and other local authorities. Existing open space is also to be designed and managed in a more biodiversity friendly way.

Climate change adaption and mitigation

Nature is a vital ally in the fight against climate change. Without healthy and resilient ecosystems, it will not be possible to stabilise the climate or to adapt to the unavoidable impacts of climate change. Protecting and restoring ecosystems can help to reduce the impacts of climate change. This can be done by developing projects which address biodiversity loss and climate change adaption and/or mitigation in an integrated manner. The restoration of carbon rich habitats such as saltmarsh, wetland and woodland will benefit many wildlife species, while these habitats can also sequester carbon, absorb floodwater and improve water quality.

Agri environment schemes and rewilding

There are many options for farmers to support biodiversity on their farms to halt the loss of typical farmland species. The Council is keen to work with farmers to develop supportive measures along headlands of field to enhance their farms for wildlife, improve water quality and soil health through demonstration projects and agri-environment schemes. The Council is also keen to research the benefits of rewilding farmland for typical farmland species by means of undertaking a rewilding project and monitoring the results.

Research & monitoring

The challenge of halting biodiversity loss must be underpinned by sound science. The Council has a legal responsibility to protect habitats and species listed in European and national legislation. It is therefore important to have a good understanding of the whereabouts and status of these habitats and species and to have this information incorporated into a GIS database to inform the planning process. A State of the Natural Environment Report for Fingal is to be prepared based on historical survey data and new studies. This will provide an overview of how our habitats and species are faring and what changes have occurred over the last 20 years. Monitoring the impacts of projects undertaken is also important to determine the success of the measures implemented to inform future projects.

Raising awareness

Educating people of all ages about biodiversity and the essential role it plays in our society and economy is fundamental to the success of the Biodiversity Plan. The best way to learn about the natural environment is to be out in nature and through direct involvement in nature conservation projects. It is envisaged that a program of outdoor and online events, the development of a nature education centre, a wildlife gardening campaign and the revamping of Fingal biodiversity website as an online resource, will encourage people to take action and get involved.

Implementation of the plan

The Biodiversity Plan sets out a hundred actions to achieve halting the loss of biodiversity by 2030 in Fingal. The delivery of the Biodiversity Plan and the associated Ecological Network are ambitious targets that will require significant resources to be fully implemented. The funding needed to implement all the actions in the Biodiversity Plan is estimated at 4 million euros annually and would require about 6 full time staff to coordinate the actions for the period 2022-2030. Neither the funding or the extra staff resources can be made available by the Council due to demands from other competing priorities such as the provision of housing, roads, sports and community facilities. Accordingly, the Council will not be able to halt the loss of biodiversity in Fingal by 2030 as envisaged by the EU. Instead the Council will focus its efforts on priority issues, sites and species. Out of the 100 actions, 32 actions have been selected as priority actions for implementation in the 2022-2030 period. The selection of these priority actions was determined by existing project commitments, most of which require significant staff inputs over many years

Monitoring progress

Annual reports will be prepared by the Biodiversity Officer reporting on progress in relation to implementing the Biodiversity Action Plan and achieving the targets set out in the plan. In 2027 a review will be carried out to assess the overall progress to date, and to make any amendments to the plan deemed necessary, taking into account any new developments in the county in terms of changes in legislation, policies or priorities

Priority actions highlighted in green. Lead partner in bold

DEVELOPING THE ECOLOGICAL NETWORK:

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
1	Implement Masterplan for Rogerstown Inner Estuary and prepare & implement masterplan for Rogerstown Outer Estuary	To develop and implement a masterplan for the Rogerstown Estuary and surrounding lands with the aim of protecting and enhancing the qualifying habitats and species.	<ul style="list-style-type: none"> • Acreage of land acquired or leased at the inner and outer estuary • Length of flood embankment removed, and acreage of new saltmarsh and brackish meadows created. • Populations of qualifying interest species are stable or increasing • No loss of feeding and roosting sites on lands surrounding the estuary as a result of human disturbance • Populations of Green winged Orchid, Hairy Violet, Rough Poppy are stable or increasing 	FCC , landowners, local community groups, Birdwatch, NPWS & DNFC
2	Develop and implement detailed management plan for the Howth Head SAC & SPA	To develop and implement a management plan for Howth Head to restore this SAC to good ecological status.	<ul style="list-style-type: none"> • Management Plan for Howth Head SAC prepared • Vegetated sea cliffs and European dry heaths habitats restored to good ecological status 	FCC , Howth SAAO committee, NPWS
3	Implement SAAO Operational Plan for Howth Head SAAO	To carry out studies and practical conservation work on heathland and wetland restoration and wildfire management	<ul style="list-style-type: none"> • Number of prioritized actions implemented 	FCC , Howth SAAO committee, NPWS
4	Support implementation of Dublin Bay Biosphere Nature Conservation Strategy, Education & Awareness strategy	To carry out studies and practical conservation work outlined in the Biosphere strategy documents	<ul style="list-style-type: none"> • Number of FCC and joint actions implemented 	FCC , DCC , DLR, NPWS, DP, FI
5	Develop management plans for key winter bird sites identified in satellite tagging programs	To ensure the protection of the most important feeding and roosting sites of qualifying interest species outside designated sites	<ul style="list-style-type: none"> • Management plans prepared for key winter bird sites • Percentage of key sites actively managed for qualifying interest species 	FCC , NPWS, Birdwatch Ireland, Brent Research Group

DEVELOPING THE ECOLOGICAL NETWORK

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
6	Prepare biodiversity plans for golf courses in conjunction with golf course owners to enhance their grounds for Biodiversity	To protect and enhance the nature conservation value of the golf courses,	<ul style="list-style-type: none"> Number of Biodiversity Plans prepared, and number of actions implemented for golf courses in Fingal Populations stable or increasing of Hairy violet, Lesser Centaury, Green winged orchid, Bee orchid, Green flowered helleborine, Spring vetch, Sea bindweed, Skylark, Shelduck, Small Blue, Dark Green Fritillary and Grayling, Colletes floralis, Colletes similis, Osmia aurulenta, Andrena barbilabris, Bombus lapidarius, B. muscorum 	FCC and golf course owners
7	Continue to support Little Tern and Ringed Plover conservation project at tip of Portrane	To protect Little Tern Colony at the Burrow, Portrane	<ul style="list-style-type: none"> Population of Little tern and Ringed Plover increasing 	FCC, Birdwatch,
8	Continue managing lands at the Burrow Portrane for Green winged orchid and Hairy Violet	To protect the existing populations of Green-winged orchid and Hairy violet	<ul style="list-style-type: none"> Lease on lands renewed Population of Green winged Orchid and Hairy Violet stable or increasing 	FCC & Landowner
9	Restore and enhance the Meadow Barley sites at the Rogerstown Estuary	Restore population of Meadow Barley at Rogerstown Inner Estuary	<ul style="list-style-type: none"> Number of Meadow Barley sites subject to active restoration measures and enhanced measures Meadow Barley numbers 	FCC
10	Maintain the verge along the coast Road between Portmarnock & Malahide as a wildflower meadow	To continue the wildflower management project along the coast road	<ul style="list-style-type: none"> Number of Pyramidal and bee orchids in verge 	FCC, TT
11	Organise clean-up of mudflats in Malahide Estuary once a year	To remove rubbish from the mudflats	<ul style="list-style-type: none"> Clean up of mudflat organised 	FCC, local volunteers

DEVELOPING THE ECOLOGICAL NETWORK

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
12	Control invasive species in Fingal	To eradicate and control invasive flora and fauna species	<ul style="list-style-type: none"> Giant Hogweed, Japanese Knotweed & Himalayan Balsam eradicated throughout Fingal Rhododendron Ponticum eradicated from Howth Head SAC on Howth Cherry laurel, Snowberry and Bamboo eradicated from private pNHA woodlands and Council woodlands Acreage of Seabuckthorn in dunes reduced by 75% Hottentot fig and garden invasives eradicated from sea cliffs at Howth and Balbriggan Control program undertaken every two years for Mink on all rivers in Fingal 	FCC and landowners
13	Prepare and implement masterplan for Malahide Estuary SAC & SPA, including Cave's Marsh	To develop and implement a masterplan for the Malahide Estuary and surrounding lands with the aim of protecting and enhancing the nature conservation and recreational values of this area.	<ul style="list-style-type: none"> Acreage of land acquired or leased at the Malahide estuary for nature restoration projects Populations of migratory birds such as Brent Goose, Black-tailed Godwit, Curlew, Lapwing, Redshank are stable or increasing No loss of feeding and roosting sites on lands surrounding the estuary as a result of human disturbance 	FCC, landowners, local community groups, Birdwatch, NPWS & DNFC
14	Prepare and implement masterplan for Baldoyle bay SAC & SPA	To develop and implement the masterplan for the Baldoyle Bay and surrounding lands with the aim of protecting and enhancing the nature conservation and recreational values of this area.	<ul style="list-style-type: none"> Acreage of land acquired or leased at the Baldoyle estuary for nature restoration projects Populations of migratory birds such as Brent Goose, Black-tailed Godwit, Curlew, Lapwing, Redshank are stable or increasing No loss of feeding and roosting sites on lands surrounding the estuary as a result of human disturbance Racecourse Park Plan implemented 	FCC, landowners, local community groups, Birdwatch, NPWS & DNFC

DEVELOPING THE ECOLOGICAL NETWORK

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
15	Prepare and implement masterplan for Tolka Valley Park	To develop a masterplan that will combine recreational and nature conservation requirements in such a way, that allows both functions to be developed to their full potential	<ul style="list-style-type: none"> • Masterplan for Tolka Valley Park prepared • Water quality status restored to good quality • Acreage of Orchid rich dry calcareous grassland protected and restored • Acreage of alluvial woodland created • Length of river habitat restored • Populations of Otter, Kingfisher, Dipper, Bats, Brown Trout and Badger are stable or increasing 	FCC & Local Community groups
16	Prepare and implement masterplan for Ward River Valley Park	To prepare a masterplan that will combine recreational and nature conservation requirements in such a way, that allows both functions to be developed to their full potential	<ul style="list-style-type: none"> • Masterplan for Ward River Valley Park prepared • Water quality status restored to good quality • Salmon spawning beds protected • Acreage of Orchid rich dry calcareous grassland protected and restored • Acreage of alluvial woodland created • Length of river habitat restored and number of artificial structures such as weir removed • Populations of Otter, Kingfisher, Dipper, Bats, Brown Trout and Badger are stable or increasing 	FCC & Local Community groups
17	Prepare and implement masterplan for the linear park along the Mayne River together with Dublin City Council	To prepare a masterplan that will combine recreational and nature conservation requirements in such a way, that allows both functions to be developed to their full potential	<ul style="list-style-type: none"> • Masterplan prepared for Mayne River Green Corridor • Length of river habitat restored • Water quality status restored to good quality • Acreage of Alluvial woodland created • Populations of typical river species such as Otter, Kingfisher, Dipper, Bats, Lamprey, Brown Trout are stable or increasing 	FCC, DCC & Local Community groups
18	Incorporate measures for biodiversity conservation in the management plans for a Regional Parks in Fingal	To enhance the biodiversity potential of regional parks	<ul style="list-style-type: none"> • Number of management plans developed for Fingal parks with specific recommendations for biodiversity conservation 	FCC

DEVELOPING THE ECOLOGICAL NETWORK

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
19	Seek to establish an ecological corridor to link the Royal Canal, the Tolka River and the Liffey Valley	To develop a network of wetland habitats linking the Liffey Valley with the Royal Canal and the Tolka Valley for Otter, Common Frog, Kingfisher, Bats, Green Figwort,	<ul style="list-style-type: none"> • Ecological corridor established • Number of target species using the corridor 	FCC, Waterways Ireland, OPW
20	Seek to establish two wetland corridors between the river Liffey and the Royal Canal at Westmanstown	To develop a corridor of wetland habitats linking the Liffey Valley with the Royal Canal for Otter, Common Frog, Kingfisher, Dipper, all Bats	<ul style="list-style-type: none"> • Wetland corridors established • Number of target species using the corridor 	FCC & Landowners
21	Establish a woodland corridor between St. Catherines park and Luttrellstown Demesne	To expand and link the old woodlands in the Liffey Valley by planting new woodland for Common Pipistrelle, Soprano Pipistrelle, Leislars Bat, Natterer's bat, Whiskered bat, Brown Long-eared bat, Red Squirrel, Badger, Pine marten, Spotted flycatcher	<ul style="list-style-type: none"> • Woodland corridor established • Number of target species using the corridor 	FCC
22	Seek to establish an ecological corridor between the Tolka and Ward rivers via the Pinkeen stream.	To develop an ecological corridor of wetland and terrestrial habitats linking the Tolka River Valley and the Ward River Valley for Otter, Common Frog, Kingfisher, Dipper, Bats and Badger	<ul style="list-style-type: none"> • Acreage of ecological corridor acquired • Acreage of ecological developed and managed • Number of target species using the corridor 	FCC
23	Manage linear calcareous grassland strip along the Canal at Clonsilla	To restore calcareous grassland at this site	<ul style="list-style-type: none"> • Acreage of Calcareous grassland with orchid species that is restored • Numbers of Pyramidal and Common spotted orchid on site 	FCC & Landowner

DEVELOPING THE ECOLOGICAL NETWORK

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
24	Liaise with landowners to explore possibilities of introducing grazing management in Liffey floodplain at Strawberry beds	To establish low-intensity grazing regime on Liffey Valley floodplain	<ul style="list-style-type: none"> Number of floodplain sites along the Liffey in Fingal subject to a lease or conservation grazing agreement with a local farmer Acreage of new Alluvial woodland, Wet grassland, Freshwater marsh and Ponds Numbers of Otter, Common Frog, Common Newt, Kingfisher, Green Figwort, various bat species found on newly managed sites 	FCC & Landowners
25	Manage lands at the tip of the Burrow, Portrane for Skylark, wildfowl & waders	Develop and enhance roosting site for Brent Goose and other wildfowl and waders and breeding habitat for Skylark	<ul style="list-style-type: none"> Acreage of Land purchased or leased Number of days site is used by Pale-bellied Brent Goose. Breeding Skylark numbers stable or increasing 	FCC, Birdwatch & Landowner
26	Acquire lands at Portrane with landowner for Papaver hybridum	Re-establish a population of Papaver hybridum at the Burrow, Portrane	<ul style="list-style-type: none"> Acreage of land purchased Population of Rough Poppy and other rare arable weeds stable or increasing 	FCC & Landowner
27	Lease or acquire the Sluice River Marsh for wildlife	To protect and enhance the Sluice River Marsh NHA and its surrounding lands for protected plant species and migratory birds	<ul style="list-style-type: none"> Lands acquired or leased Number of recommendations implemented from latest ecological study report Breeding Stock Dove, Skylark, Grasshopper warbler, water rail numbers stable or increasing Migratory birds number using the sites stable or increasing 	FCC and landowner
28	Develop artificial nesting platforms Malahide estuary	To develop small floating platforms in the estuaries that will serve as secure nesting sites for seabirds	<ul style="list-style-type: none"> Number of floating devices installed Number of Little Tern, Common Tern or Arctic tern using the platforms 	FCC, Birdwatch, NPWS
29	Restore Wintering bird roosting site at Cave's Marsh in Malahide	To restore the conservation status of the Malahide Estuary SPA	<ul style="list-style-type: none"> Number of measures installed to prevent access by people and dogs to key roosting site Duration of stay and number of Brent Goose, Oystercatcher, Redshank, Bar Tailed godwit increasing 	FCC, NPWS, Birdwatch

DEVELOPING THE ECOLOGICAL NETWORK:

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
30	Work together with quarry owners to develop biodiversity plans for quarries to enhance these sites for Biodiversity	To protect and enhance the nature conservation value of the quarries with a focus on orchid rich calcareous grassland, Peregrine Falcon, Sand martin and amphibians	<ul style="list-style-type: none"> • Number of Biodiversity Plans prepared for Quarry • Number of actions implemented 	FCC & Quarry owners

BUILDING FOR BIODIVERSITY

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
31	Prepare planning & design guidance for incorporating nesting facilities in building facades	To maximise nesting opportunities arising from new developments for Swift, House Sparrow, House Martin, Swallow, Bats & insects	<ul style="list-style-type: none"> Guidance document produced Number of sites where nesting facilities have been incorporated 	FCC, DCC, DLR, Birdwatch, BCI, NPWS
32	Prepare guidance document and training on quality rating and management prescription of hedgerows in open space for FCC Operations and developers	To provide guidance on the protection and management hedgerows during planning process and in open space management	<ul style="list-style-type: none"> Guidance document produced Number of training events organized and numbers of attendees at training events Length of hedgerow managed appropriately on FCC owned open space 	FCC, DCC, DLR, HA, TTs
33	Prepare promotional guidance on how to incorporate biodiversity in development and infrastructure projects	To promote biodiversity conservation in residential, industrial, commercial and infrastructure developments	<ul style="list-style-type: none"> Guidance document produced 	FCC, DCC, DLR, Birdwatch, BCI
34	Prepare planning and design guidance for ecological corridors	To provide technical specification for ecological corridors along rivers and terrestrial sites	<ul style="list-style-type: none"> Guidance document produced 	FCC, DCC, DLR, BCI, Birdwatch, IFI, NPWS
35	Prepare planning and design guidance on net biodiversity gain	To inform the Council on how to incorporate net biodiversity gain in the planning process.	<ul style="list-style-type: none"> Guidance document produced Number of sites where net biodiversity gain has been applied and achieved 	FCC, DCC, DLR
36	Organise a conference on Building for Biodiversity/Nature inclusive design	To organize at least 1 conference promoting best practice examples of nature inclusive design	<ul style="list-style-type: none"> Conference organised 	FCC
37	Pilot a biodiversity inclusive design for a social housing estate with green roofs, green walls, wetland & pond SUDS, green carparking, nest boxes in facades, wildflower meadows and wildlife friendly shrubs and trees in open space.	To gain practical experience within the County Council with Building for Biodiversity and to allow for the monitoring of the impact of these measures on the flora and fauna in the new development	<ul style="list-style-type: none"> Demonstration site developed of a social housing site where biodiversity inclusive design has been applied 	FCC
38	All Council housing, parks and infrastructure projects to include biodiversity enhancement proposals	To ensure that Council projects achieve at least no net loss and ideally a net biodiversity gain	<ul style="list-style-type: none"> Number of Council projects where no biodiversity net loss has been achieved 	FCC

MANAGING OPEN SPACE FOR BIODIVERSITY

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
39	Develop pesticide use policy for Fingal County Council	Eliminate pesticide use in the Council where possible	<ul style="list-style-type: none"> Policy document prepared 	FCC
40	Support and promote All Ireland Pollinator Plan Actions for Councils and monitor resulting changes	Increase by 20% the area of Council owned land that is managed with the objective of improving biodiversity	<ul style="list-style-type: none"> Acreage of FCC owned open space subject to wildflower management Annual monitoring program for invertebrates established for key sites 	FCC & TTs
41	Implement Tidy Towns Biodiversity Action Plans	To guide 23 TT group efforts for nature conservation	<ul style="list-style-type: none"> Annual number of actions implemented from Tidy towns Biodiversity plans 	FCC & TT's
42	Organise and monitor the effects of a biodiversity make-over of 3 housing estates in Fingal in conjunction with local residents and FCC Operations Department	To gain practical experience with managing open space and gardens for Biodiversity and to monitor of the impact of particular measures on flora and fauna	<ul style="list-style-type: none"> 3 demonstration estates established Annual monitoring program implemented 	FCC
43	Develop Urban greening Plans for Dublin 15, Swords and Balbriggan	To prepare 3 Urban greening plans that outline biodiversity & green infrastructure enhancement opportunities in these towns	<ul style="list-style-type: none"> 3 Urban Greening Plans prepared Number of actions implemented from Urban Greening Plans 	FCC

WOODLAND AND WETLAND PROJECTS – CLIMATE CHANGE ADAPTION & MITIGATION

No.	ACTION	OBJECTIVE	TARGET(S)	PARTNERS
44	Prepare wetland and river restoration project for the Bog of the Ring and the Matt river corridor	To restore wetland river habitat and improve water quality to good status and capture carbon	<ul style="list-style-type: none"> Restoration plan prepared % of actions from restoration plan implemented Acreage of land acquired for wetland and river restoration Water Quality status of Matt river improved Length of river corridor restored Populations of target species stable or increasing: Otter, Kingfisher, Dipper, Bats, Amphibians, Snipe, Grasshopper warbler & Water rail 	FCC and local community
45	Restore St. Ita's wetland local nature reserve	Maximise water attenuation capacity and nature conservation benefits	<ul style="list-style-type: none"> Two roads removed from wetland Number of new open water features added Install interpretative signage Populations of target species stable or increasing 	FCC
46	Develop SUDS demonstration sites in the Tolka Valley, Ward River Valley, Balbriggan town Park and Rogerstown estuary	To gain experience with using wetlands to treat surface water effluent to improve water quality	<ul style="list-style-type: none"> The number of demonstration sites developed The water quality status of the adjoining river and the outflow of the SUDS features. 	FCC
47	Prepare and implement woodland management plans in Fingal Demesnes and parks	To enhance the nature conservation value of the woodlands in Fingal	<ul style="list-style-type: none"> Number of woodland management plans prepared Number of actions implemented at each site Populations of target species are stable or increasing: Hairy St. John's-wort, Yellow archangel, Common Pipistrelle, Soprano Pipistrelle, Leislars Bat, Natterer's bat, Whiskered bat, Brown Long-eared bat, Spotted flycatcher 	FCC

WOODLAND AND WETLAND PROJECTS – CLIMATE CHANGE ADAPTION & MITIGATION

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
48	Acquire sites for woodland planting at St Catherine’s park and Ardgillan Demesne and prepare masterplans for the design of these woodlands.	To expand existing woodland cover and regional parks	<ul style="list-style-type: none"> • Acreage of land acquired for new woodland planting • Two masterplans prepared for new woodland sites • Acreage of new woodland planted 	FCC
49	Identify and acquire where possible, Climate buffer sites where flood defence features can be removed or relocated to increase flood capacity of rivers and estuaries	To increase flood capacity of rivers and estuaries, restore natural dynamics, restore floodplain habitat & capture carbon	<ul style="list-style-type: none"> • High potential climate buffer sites identified • Acreage of land acquired for increasing the floodplain capacity of rivers and estuaries • Number of projects implemented to develop the climate buffer sites 	FCC
50	Prepare river restoration project for the Ballyboughal river and implement on FCC lands and acquire lands where necessary	To restore river habitat and improve water quality to good status and capture carbon	<ul style="list-style-type: none"> • River Restoration plan prepared • % of actions from restoration plan implemented • Acreage of land acquired for river restoration • Water Quality status of river improved • Length of river corridor restored • Populations of target species are stable or increasing: Otter, Kingfisher, Dipper, Bats & Salmon 	FCC and local community
51	Carry out feasibility study to restore Garristown Bog and acquire lands where opportunities arise	To establish if the former 300ha wetland can be restored	<ul style="list-style-type: none"> • Feasibility study undertaken • Acreage of lands acquired for wetland restoration purposes 	FCC and local community

WILDING

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
52	Acquire and/or lease lands at Rogerstown, Broadmeadow and Baldoyle estuaries	To create more robust core sites, restore natural processes and allow for wilding opportunities	<ul style="list-style-type: none"> • Acreage of land acquired or leased for wilding purposes at estuaries • Number of wilding projects implemented on newly acquired lands 	FCC and landowners
53	Support reintroduction of Osprey in Fingal and install artificial nest platforms near estuaries	To establish a sustainable breeding population of Osprey along the Fingal coast	<ul style="list-style-type: none"> • Osprey reintroduced in Fingal • Number of artificial nesting platforms installed • Numbers of breeding pairs of Osprey in Fingal 	FCC, Golden Eagle Trust & Birdwatch
54	Wild FCC owned Corballis golf club lands to create natural Grey dunes (bad status in Ireland)	To restore at least 75% of the dune habitat at Corballis	<ul style="list-style-type: none"> • Wilding project implemented • Acreage of good quality Grey dunes at Corballis 	FCC
55	Acquire large area of farmland or work with farmer(s) for wilding project to create alternative natural habitat for declining typical farmland species	To organize a demonstration project to showcase and assess the effectiveness of wilding farmland in enhancing the populations of declining farmland species	<ul style="list-style-type: none"> • Acreage of farmland acquired or under cooperative agreement with local farmer for wilding demonstration project • Annual monitoring program implemented to establish effects on Yellowhammer, Tree Sparrow, Stock dove, Birds of Prey, Invertebrates and Bats 	FCC and local farmer(s)
56	Organise and/or support a national conference on wilding	To organize at least 1 conference promoting the use of wilding as a nature conservation tool	<ul style="list-style-type: none"> • Conference organised 	FCC
57	Carry out feasibility studies of developing a Marine Protection Area along the Fingal Coast and on the restoration of Oyster beds, Shellfish beds, Seagrass beds and Kelp stands	The feasibility studies will determine to what extent these marine habitats can be restored and what practical actions and steps are required to make such projects a success	<ul style="list-style-type: none"> • Feasibility study undertaken for Marine Protected Area between Howth and Rush • Feasibility studies undertaken of restoration potential for Oyster beds, Shellfish beds, Seagrass beds and Kelp stands 	FCC, Marine Institute, UCD and fishing industry
58	Restore marine ecosystem along Fingal coast by supporting restoration projects of Oyster beds, Shellfish beds, Seagrass beds and Kelp stands	To support or organize at least 2 projects to restore the marine ecosystem	<ul style="list-style-type: none"> • Number of sites and acreage of restored Oyster beds, Shellfish beds, Seagrass beds and Kelp stands 	FCC, Marine Institute, UCD and fishing industry

AGRI-ENVIRONMENT SCHEMES AND IRISH RARE FARM BREED CONSERVATION

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
59	Develop Newbridge Farm as a national hub for the promotion of Irish rare farm breeds	To support and promote the conservation of Irish rare farm breed	<ul style="list-style-type: none"> % of actions from Newbridge Rare Breed Study implemented Number of breeding females of cattle, horses and goats at Newbridge 	FCC, DAFM, rare breed societies
60	Use native Irish farm breeds for conservation grazing schemes	To support and promote the conservation of Irish rare farm breed	<ul style="list-style-type: none"> Number of sites where native livestock breeds are used for conservation grazing 	FCC
61	Develop a 400ha demonstration Agri-Environment EIP Scheme with local farmers in Fingal targeting farmland birds and habitats and water quality improvement measures	To implement conservation measures for farmland species & habitats and water quality improvement at landscape level	<ul style="list-style-type: none"> EIP project proposal submitted and approved Number of farmers participating in scheme Populations of target species stable or increasing: Grey Partridge, Yellowhammer, Tree Sparrow, Stock Dove, Bird of Prey, pollinators 	FCC & Local farmers
62	Develop Bird of Prey Conservation project with local farmers including raising awareness of the impacts of Rodenticide use and its proper application	To increase the Bird of Prey population of 4 species	<ul style="list-style-type: none"> Number of farmers participating in Bird of Prey project. Populations of target species stable or increasing: Red Kite, Buzzard, Barn owl, Kestrel and Long eared owl 	FCC, Birdwatch & Local farmers
63	Develop demonstration farm(s) for biodiversity conservation e.g. hedgerow management, field margins, river management, soil improvement, Integrated pest management, nest boxes etc.	To set up a demonstration farm with a local farmer showcasing best practice for biodiversity conservation and monitoring effectiveness of measures	<ul style="list-style-type: none"> Demonstration farm set up Number of visits by interested farmers Populations of target species stable or increasing: Yellowhammer, Linnet, Tree Sparrow, Grey Partridge, Bats, Badger, Birds of Prey Andrena and Nomada ground nesting bee species, 	FCC, Local Farmer, Birdwatch, DNFC, BCI & Hedgelaying Association,
64	Carry out feasibility study on local marketing of the produce from lands included in the ecological network	To develop a regional market between farmers and consumers for local wood, fruit, veg and meat etc.	<ul style="list-style-type: none"> Feasibility study undertaken Number of participating landowners 	FCC
65	Support the development of a national conservation strategy for rare farmland breeds	To support and promote the conservation of Irish rare farm breed	<ul style="list-style-type: none"> Level of funding support provided towards national conservation strategy 	FCC, DAFM, rare breed societies

RESEARCH & MONITORING

No.	ACTION	OBJECTIVE	TARGET(S)	PARTNERS
66	Fund satellite tracking studies of winter birds listed as qualifying features in SPA's	To identify key roosting and feeding sites of qualifying species outside the estuaries	<ul style="list-style-type: none"> Key feeding and roosting sites identified outside designated sites for Brent Goose, Golden Plover, Oystercatcher, Redshank, Black-tailed Godwit and Curlew 	FCC, Exeter University
67	Carry out population assessments of wintering birds in estuaries	To determine population trends of qualifying species	<ul style="list-style-type: none"> All qualifying bird species associated with estuarine SPAs 	FCC, Birdwatch
68	Repeat rare and protected flora study along the Fingal coast	To provide new flora data for state of environment report	<ul style="list-style-type: none"> Coastal rare and protected flora study repeated and report(s) produced 	FCC
69	Carry out Otter survey all of rivers in Fingal	To determine if Otters are still present along all Fingal rivers	<ul style="list-style-type: none"> Otter survey of all Fingal rivers undertaken and report produced 	FCC, LAWPRO
70	Carry out urban bird and bat survey	To determine the presence of breeding birds in urban areas	<ul style="list-style-type: none"> Number of towns that are included in the urban bird and bat studies Number of records submitted by the public 	FCC, Birdwatch, BCI, TT's
71	Undertake study to identify the habitats and species at risk of climate change	To determine which species and habitats are most at risk from climate change and where they are located	<ul style="list-style-type: none"> Study undertaken and report with map of habitats at risk produced 	FCC, Universities
72	Explore funding models for carbon offsetting to fund wetland and woodland development	To find alternative funding sources to fund wetland and woodland creation	<ul style="list-style-type: none"> Funding models identified Number of projects implemented using new funding models 	FCC, CARO
73	Map petrifying springs on the green infrastructure maps	To help protect petrifying springs from adverse developments	<ul style="list-style-type: none"> Petrifying springs mapped and incorporated on green infrastructure maps 	FCC
74	Re assess Annex I habitats outside designated sites	To determine the conservation status of the Annex I habitats	<ul style="list-style-type: none"> All sites revisited and assessed Green Infrastructure maps updated in County Development Plan 	FCC
75	Map townland boundary hedgerows on green infrastructure maps	To help protect the most important hedgerows from adverse developments	<ul style="list-style-type: none"> All townland boundaries mapped and incorporated on Green Infrastructure maps 	FCC

RESEARCH & MONITORING

No.	ACTION	OBJECTIVE	KPIs	PARTNERS
76	Carry out or support Harbour Porpoise satellite tagging program along Fingal Coast	To identify the key feeding and breeding areas within the Rockabill to Dalkey Island SAC	<ul style="list-style-type: none"> Tagging program carried out and report published 	FCC, NPWS, UCC
77	Review beach management practices of FCC in context of management of SAC's and SPA's	To assess the impact of beach cleaning operations on the ecology of the beach and dunes habitats and associated flora & fauna species	<ul style="list-style-type: none"> Beach cleaning operations reviewed and amended where necessary 	FCC
78	Prepare a <i>State of the natural environment in Fingal</i> report	To provide an overview of the state of the natural environment in Fingal based on a comparison of historical and new survey work	<ul style="list-style-type: none"> <i>State of the natural environment in Fingal</i> report prepared 	FCC
79	Repeat coastal breeding bird study	To provide new bird data for state of environment report	<ul style="list-style-type: none"> Breeding bird study repeated and report(s) produced 	FCC, Birdwatch
80	Repeat Intertidal study of the Fingal Coast	To provide new intertidal data for state of environment report	<ul style="list-style-type: none"> Intertidal study repeated and report(s) produced 	FCC
81	Repeat woodland bird, mammal and rare plant survey	To provide new woodland data for state of environment report	<ul style="list-style-type: none"> Woodland studies repeated and report(s) produced 	FCC
82	Carry out Countryside Breeding bird survey	To provide new countryside bird data for state of environment report	<ul style="list-style-type: none"> Countryside Breeding Bird survey completed and report produced 	FCC, Birdwatch
83	Carry out Countryside Mammal Survey	To provide new mammal data for state of environment report	<ul style="list-style-type: none"> Countryside Mammal survey completed and report produced 	FCC, BCI

RESEARCH & MONITORING

No.	ACTION	OBJECTIVE	TARGET(S)	PARTNERS
84	Carry out Fungi Surveys in Turvey, Luttrellstown, Knockmaroon, Santry and Malahide Demesne	To locate the most important locations for fungi in these woodlands and provide new data for state of environment report	<ul style="list-style-type: none"> Fungi surveys completed and report(s) produced 	FCC, DNFC,
85	Carry out an ecological study and habitat assessment of the Ballyboughal, Mayne, Sluice and Matt rivers	To find out what flora & fauna species can be found along our rivers, what the conservation status is of our rivers and what works are required to restore the rivers to their full health.	<ul style="list-style-type: none"> Number of rivers surveyed Report produced 	FCC, LAWPRO
86	Carry out flora study and breeding bird study of the Skerries Islands	To find out what flora species can be found on the islands and how the breeding seabirds are faring	<ul style="list-style-type: none"> Flora and breeding bird survey undertaken and report produced 	FCC, Birdwatch Ireland
87	Carry out breeding bird, flora and invertebrate studies in Turvey Nature Reserve, Donabate	To determine the effects of land management changes in the park	<ul style="list-style-type: none"> Breeding bird, flora and invertebrate studies undertaken and reports produced 	FCC
88	Carry out feasibility study for bird conservation projects at the tips of the Donabate & Portmarnock peninsulas	To assess the potential for the re-instatement of a Little Tern and Ringed Plover colony at Donabate and Portmarnock	<ul style="list-style-type: none"> Feasibility study undertaken Number of proposed actions in study implemented 	FCC, Birdwatch
89	Assess lands adjacent to estuaries for breeding potential for Redshank, Snipe and Lapwing	Identify and protect potential breeding sites for Redshank, Snipe and Lapwing	<ul style="list-style-type: none"> Field studies undertaken and report produced 	FCC, Birdwatch
90	Support Eco-toxicology studies on farmland	To research the impacts of the use of pesticides on farmland species	<ul style="list-style-type: none"> Number of research projects funded by the Council 	FCC, universities
91	Carry out ecological study of the large open water bodies and reservoirs in Fingal	To find out what flora & fauna species can be found in the large standing water bodies	<ul style="list-style-type: none"> Field studies undertaken and report produced 	FCC
92	Establish a monitoring programme on coastal dynamics along the Fingal Coast	To gain a better understanding of the natural sedimentation and erosion processes that occur along the Fingal coastline	<ul style="list-style-type: none"> Coastal monitoring program established Results published every two years 	FCC, local community groups and specialists

RAISING AWARENESS

No.	ACTION	OBJECTIVE	TARGET(S)	PARTNERS
93	Redevelop Fingal Biodiversity website and social media channels	Re-develop website to promote latest research, projects volunteering work and events	<ul style="list-style-type: none"> Fingal Biodiversity Website re-developed 	FCC
94	Organise a monthly program of events e.g. walks, talks and practical conservation outings	Organise at least 20 outings per year	<ul style="list-style-type: none"> Number of outings organized per year Number of attendees to events 	FCC
95	Develop a Nature Education Centre for Dublin in Turvey Nature Park	To provide a dedicated nature education centre for Dublin	<ul style="list-style-type: none"> Nature Education Centre developed at Turvey Number of annual visitors 	FCC
96	Develop a promotional program on what people can do for wildlife in their garden.	To encourage the public to make their gardens more biodiversity friendly	<ul style="list-style-type: none"> Promotional program developed Online tutorials included in Fingal Biodiversity website 	FCC, local garden centres
97	Run a nature education program for primary and secondary schools	Provide multi-annual nature education program to at least 20 schools	<ul style="list-style-type: none"> Number of schools participating in program Number of students participating in program 	FCC
98	Include biodiversity corner at Flavours of Fingal festival	to promote conservation work by FCC and other groups	<ul style="list-style-type: none"> Biodiversity corner included in event 	FCC, NGO's, Tidy towns
99	Organise training days for County Council staff and politicians regarding biodiversity	To educate staff and politicians about biodiversity e.g. building for biodiversity, rewilding, & appropriate assessment	<ul style="list-style-type: none"> Number of training days organized Number of attendees at training events 	FCC
100	Develop operational procedures with respect to Council work that may impact on SAC's and SPA's and protected species	To avoid damaging SAC's and SPAs and protected species as a result of Council activities	<ul style="list-style-type: none"> Operational procedures developed for Operations and Water Services Departments 	FCC

