Wildwork

HELPING PEOPLE HELP NATURE HELP PEOPLE

Wild Work Public Lands – West Cork Site (Ballinspittle)

Biodiversity Action Plan

2022-2027

SECAD PARTNERSHIP

LCDC
Coistí um Fhorbairt Pobail Áitiúil Chontae Chorcaí
Cork County Local Community Development Committees

Department of Rural and Community Development
An Roinn Forbartha Tuaithe agus Pobail

An Roinn Forbartha Tuaithe agus Pobail
Department of Rural and Community Development

Comhairle Contae Chorcaí
Cork County Council

The European Agricultural Fund for Rural Development:
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1. Introduction

In 2022 Wild Work rolled out an innovative new biodiversity training programme combining outdoor classrooms, online learning and virtual reality experiences to help people, help nature, help people. The Wild Work Biodiversity Training Project was coordinated by three Local Development Companies – SECAD Partnership in Cork who first designed and piloted Wild Work in 2017, West Limerick Resources and Cavan County Local Development as part of a LEADER funded (EU Co-financed Rural Development Programme) Inter-territorial Co-operation project. As part of the suite of biodiversity training a unique training course was undertaken within the four geographic areas (South Cork, West Cork, West Limerick & Cavan). The Wild Work Biodiversity on Public lands training course was aimed at the managers of public lands, local authorities, community groups and other key stakeholders. The purpose of the course was to bring these groups together to see how they can share learning regarding land management, and to learn about each other's capacity. In each area a suitable publicly owned site such as a local park or public green space was identified that could be developed from a biodiversity perspective.

Once a suitable location had been identified in all four areas, a bespoke biodiversity themed training programme was designed which sought to teach participants about the following:

- Biodiversity in the context of the site
- What potential actions could be taken and why
- Resources needed to help biodiversity on the site
- How to undertake the actions

The Biodiversity on Public Lands was a four-module course that had a blended learning approach, two of the modules were held on site and the other two were hosted online. During the in-person sessions the participants had an opportunity to explore the habitats/species present on site with an ecologist and discuss potential actions to be undertaken to improve it for biodiversity. The online sessions explored online tools and resources to allow the participants to better understand the biodiversity on their site and beyond and equip them with the relevant knowledge to undertake actions. There was also an opportunity to explore funding opportunities and engage with guest speakers from local organisations working to protect and improve biodiversity.

The course outline for West Cork was as follows:

Module 1 - 6th July 11am-1pm - On site Ballinspittle

Module 2 - 3rd August 11am-1pm - Online

Module 3 - 24th August 11am-1pm - Online

Module 4 – 18th September 11am- 1pm - On site Ballinspittle

By bringing managers of public lands, key stakeholders and active community members together as part of this course meaningful connections were made in the locality and real discussions were facilitated around supporting and improving biodiversity across the sites.

To further supplement the learning as part of the course the participants were given access to an online toolkit through https://wildwork.ie/. The online toolkit was created and designed by a team of ecologists and contains educational items covering topics such as Citizen Science Schemes in Ireland to how to successfully Plant a Native Tree.

A Biodiversity Action Plan for each site was developed and forms part of a toolkit on the approach needed to develop public land sites for biodiversity. The biodiversity actions from these plans will have broad applicability to other public land sites in the four territories and beyond.

1.1. About Ballinspittle

Ballinspittle (Irish: Béal Átha an Spidéil) is a village in County Cork, Ireland. It is in the barony of Courceys and lies about 8 km southwest of Kinsale, on the R600 road. The village is a community with new housing estates, businesses, a post office, a national school and a Gaelic Athletic Association facility known as the Jim O' Regan Memorial Park. Ancient historical sites include Ballycatten Fort, which dates from the sixth century, and Curtapurteen, which, according to legend, Saint Patrick once visited. The most southerly tip the Old Head of Kinsale is a site of ancient and present-day lighthouses, as well as a golf links. Templetrine Church is located nearby (**Wikipedia, 2022**).

Ballinspittle was made famous in the mid-1980s by the Moving Statue when some locals claimed to have witnessed the statue of the Blessed Virgin Mary moving spontaneously at the Ballinspittle Grotto. As news of the phenomenon spread, thousands of pilgrims and spectators flocked to the site of the statue. Many of the visitors claimed they had observed similar movements. The phenomenon remains a rich topic for debate in the local community. Since that time, the village and surrounding area has seen great development while maintaining a strong sense of identity, offering the cream of traditional and modern, homegrown and diverse, in an area renowned for its exceptional natural beauty. Close by are the Blue Flag beaches of Garrylucas and Garrettstown (**Explore West Cork, 2022**).

The appreciation of nature is evident within the village of Ballinspittle with planted flowerbeds found along the main street. Domestic gardens which were visible from the roadside were brimming with a variety of pollinator friendly flowering plants. Within close proximity to the village there is the Ballinspittle/Garretstown woodland which covers 200 hectares and affords stunning views over the Atlantic ocean.

1.2. Site Location

Two sites were selected to be included as part of the Biodiversity Action Plan for Ballinspittle. Both sites are within the village of Ballinspittle and are connected to each other by the Ballinspittle stream which flows alongside both sites.

Site A: This site is located on the western side of Ballinspittle village just off of Main Street (R600). Its roughly rectangular in shape and is approximately 45 meters long and 23 meters wide. It is currently being managed as a “mini biodiversity garden” and has a bench present which allows visitors to sit and observe the site. The Ballinspittle stream divides the site in two with the western section consisting of a strip of managed grassland whilst the eastern section is less intensively managed. The site is bound to the North by mature trees and a domestic garden whilst the south is bound by the R600. The east and west are bound by domestic dwellings/housing estate.

Site B: Is known as the Ballinspittle Playground and lies on the southern end of the village. The site is comprised of a busy children’s playground, a small car park and a short walkway through some managed grassland that is bound to the west by the Ballinspittle stream and to the east by agricultural land. There is a public bench, and some planted trees present along the section of managed grassland. A tarmac path runs from the carpark to the end of the site where there is a bridge over the stream that leads onto the grounds of Courcey Rovers GAA Club. The pathway is narrow towards the GAA grounds but opens up slightly along the playground end. There is a line of mature trees present on the GAA club side of the stream and along the boundary of the carpark. Fencing separates the site from the agricultural land and the river. Some pollinator friendly management has already been undertaken on site and there is beautiful signage on display informing the public of the species of Bumblebees and Butterflies present in Ireland.

1.3. Biodiversity and Biodiversity Action Plans (BAPs)

The term biodiversity began to be used widely in the 1980s. It is a shorthand way of saying ***biological diversity***. The Convention on Biological Diversity includes the places living things inhabit in its definition of biodiversity - '*the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems*' (United Nations, 1992). Based on that, a simpler way to describe 'biodiversity' might be 'living things and the places they naturally live', or just 'nature'.

The convention has three main objectives which are to make sure that:

- Biodiversity is protected,
- The benefits of Biodiversity are shared equally,
- Biodiversity is kept safe for future generations.

In 1992 Ireland was one of 168 countries that became signatories to the convention. Ireland ratified the convention in 1996. Article 6 of the convention states that each contracting party shall '*Develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programmes…*'.

Ireland published its first National Biodiversity Action Plan in 2002. Action 10 of this plan was:

'*Each Local Authority to prepare a Local Biodiversity Plan in consultation with relevant stakeholders*'.

In general Biodiversity Action Plans look at what species and habitats are in an area and what issues there might be for species and habitats in that area. A good plan will then identify what actions are needed to address any issues, who is going to carry out the actions, in what timeframe as well as what resources are needed to carry out the plan and who can help.

A good local Biodiversity Action Plan also makes sure that we don't harm nature when we want to help nature. Making a plan means we have to think about nature in our area, how we would like to help nature in our area and helps us keep track of the actions we take to help nature.

Ideally making a local Biodiversity Action Plan means we learn more about nature in our area, value nature in our area more and conserve and enhance nature in our area more.

Biodiversity Action Plans such as this should be reviewed every 5 years as that provides an opportunity to look at what has been achieved, what still needs to be worked on and how future actions might be resourced.

1.4. Why is Biodiversity Important?

It could be said that biodiversity has a value in and of itself, outside of its importance to humans. But it is also very important to humans. It is possible to figure out the economic value of ecosystems and biodiversity to us, but some wonder if this is a good idea from a conservation point of view (Schröter, et al., 2014). The concept of Ecosystem Services places a value on '*the direct and indirect contributions of ecosystems to human wellbeing*' (The Economics of Ecosystems and Biodiversity (TEEB), 2020). This idea has been around since at least the 1970s, becoming more popular since the United Nations led Millennium Assessment (MA) which began in 2001.

Ecosystem Services

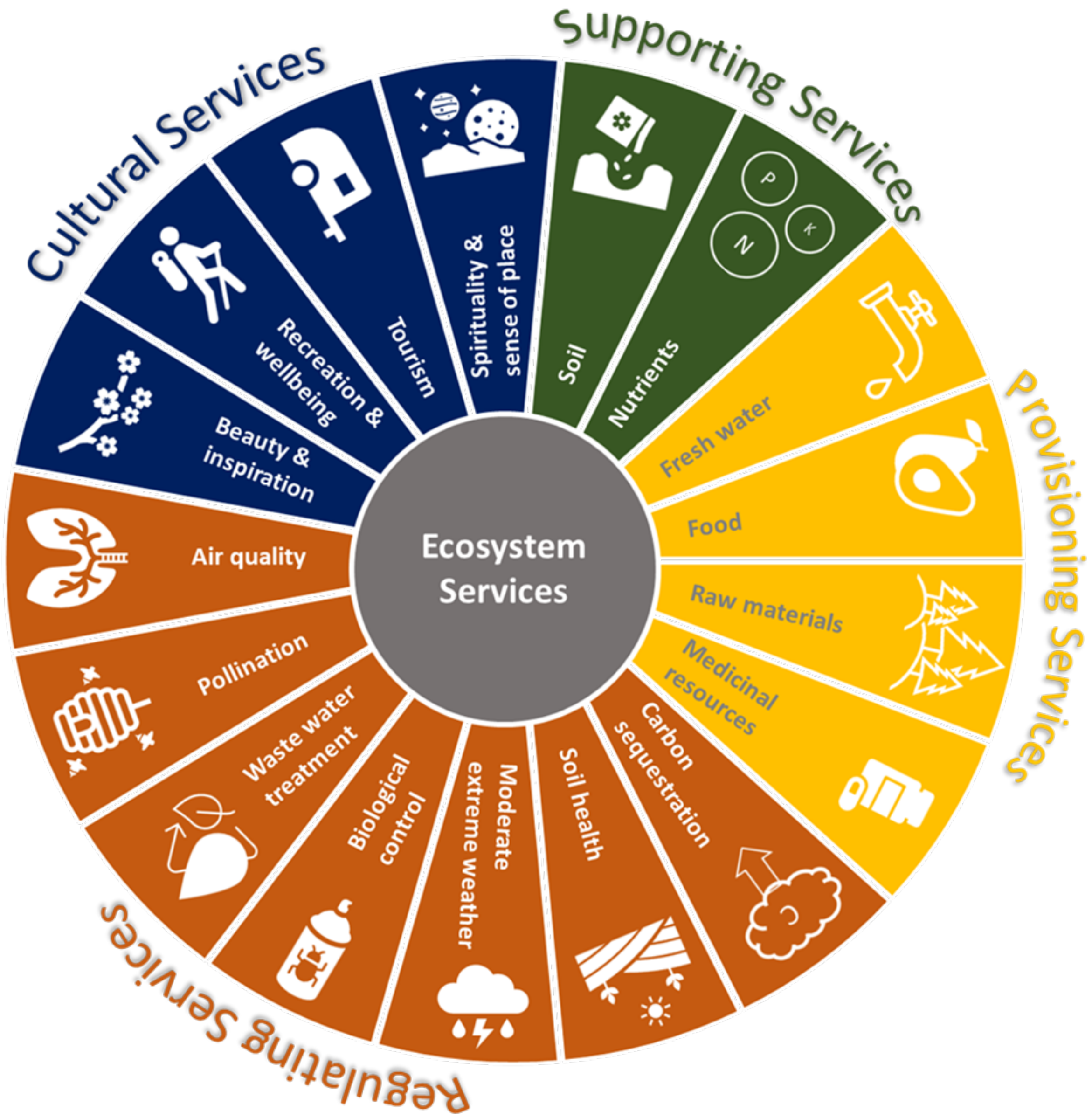
"...the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfil human life" (Daily, 1997)

Supporting Services	These are services, such as nutrient cycling and soil formation, which are needed for the production of all other services.
Provisioning Services	Products obtained from ecosystems, such as food or timber.
Regulating Services	The benefits obtained from the regulation of ecosystems, including services such as purification of water, flood control, regulation of the climate etc.
Cultural Services	The benefits people obtain from ecosystems through spiritual enrichment, reflection, recreation, and aesthetic experiences.

Ecosystem Services can be organised into 4 broad categories

Source: (Science Communication Unit, University of the West of England, 2015) See also infographic overleaf.

EXAMPLES OF ECOSYSTEM SERVICES



1.5. Threats to biodiversity

Every 6 years, EU member states must produce a report on how they have put in place measures to protect habitats and species listed in the EU Habitats Directive and how these habitats and species are doing. This means threats and pressures on these habitats and species need to be looked at. Figure 2 below shows the percentage of Habitats Directive habitats that are affected by the top 10 combined Medium and High importance threats taken from the 2019 report for Ireland. For more information on the Habitats Directive see Biodiversity and the Law.

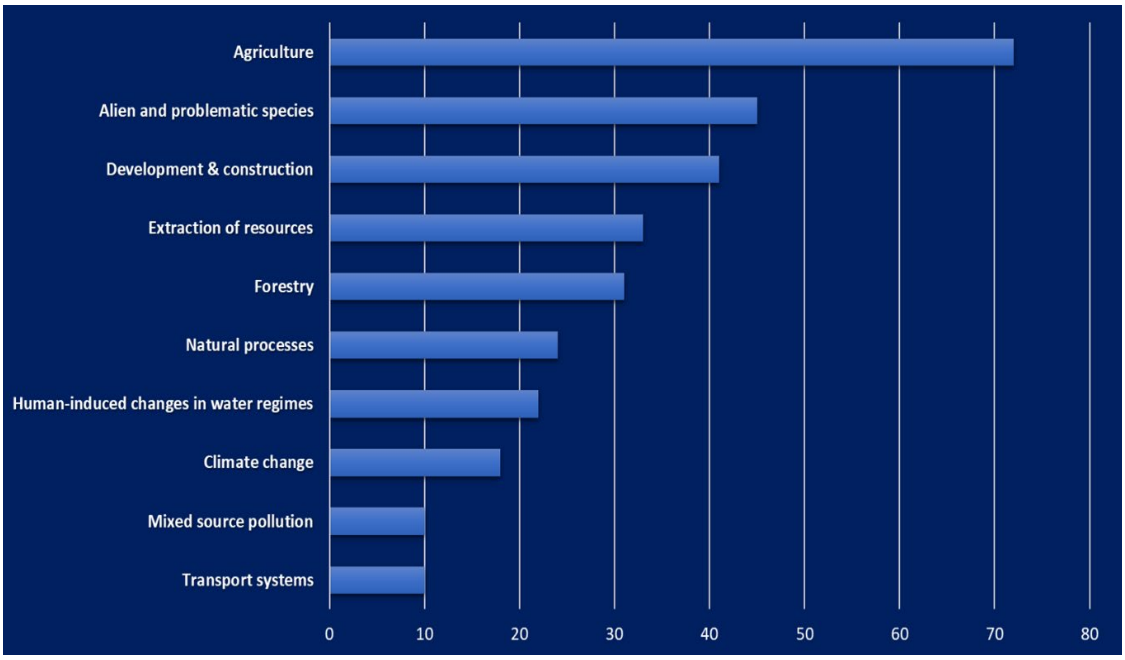


Figure 1 % of Habitats Directive Habitats affected by High and Medium Impact Threats. Adapted from (NPWS, 2019a).

In Figure 2. above agriculture and forestry appear to be the greatest threats to Habitats Directive habitats and species. However, agriculture covers approximately 65% of land use in Ireland and commercial forestry approximately 10.5%, while approximately 2% of Ireland is under built land. Agriculture and forestry then might be expected to have a bigger impact because they cover so much more of our land area.

Habitats and species are listed in the Habitats Directive because they are threatened at a European level, and the Directive aims to restore these to favourable condition or maintain them at favourable condition. There is legislation to protect some of the sites where these habitats and species are found. Many species, habitats and sites that do not have this kind of protection. See Section Biodiversity and the Law below.

On our planet the top five factors damaging biodiversity over the past 50 years have been:

- Changes in land and sea use
- Direct exploitation of organisms
- Climate change
- Pollution
- Invasion of alien species (Díaz, et al., 2019).

Overall, for the 2019 assessment in Ireland, 85% of Habitats Directive habitats are categorised as being in 'Unfavourable' condition.

For species, 30% were assessed as 'Unfavourable' and for 13% of species, the assessment was recorded as 'Unknown'.

Birdwatch Ireland has produced a list of 'Birds of Conservation Concern in Ireland 4: 2020–2026' (Gilbert, et al., 2021). This assessed the conservation status of 211 Irish bird species recorded in Ireland. Birds of Conservation Concern Ireland 4 (BOCCI 4) ranks bird species as Red, Amber, or Green.

Red listed species are those of highest conservation priority, being globally threatened, declining rapidly in abundance or range, or having undergone historic declines from which they have not recently recovered.

Amber listed species have an unfavourable status in Europe, have moderately declined in abundance or range, a very small population size, a localised distribution, or occur in internationally important numbers.

Green listed species do not meet any of these criteria and therefore require little direct conservation action.

In the Birds of Conservation Concern in Ireland 4: 2020–2026 report:

- 54 bird species were **RED** listed
- 79 species were **AMBER** listed
- 78 species were **GREEN** listed.

There has been an increase of 17 species 'red' listed since an assessment from 2013. 'Birds of Conservation Concern in Ireland 4: 2020–2026' mentions issues such as drainage, afforestation on peat bogs, and changes in farmland management as threats to populations of Irish species.

Another way of looking at threats to Irish Biodiversity is to look at Red Lists. This is a method devised by the International Union for the Conservation of Nature (IUCN) to assess the conservation status of species. This was originally intended to look at species at a global level, but they adapted it to be used also at a regional level. A number of assessments for different groups have been done in Ireland. Some of these are presented in Table 1 below.

Table 1 Irish Red List Assessments for selected groups with numbers of species in each category.

Group	**CR**	**EN**	**VU**	**NT**	**LC**	**DD**	**NE**	**RE**
Vascular Plants	20	25	61	98	887	n/a	105	15
Bees	6	10	14	12	38	16	3	3
Butterflies	0	3	3	5	21	0	0	1
Macro-moths	7	9	27	20	420	4	78	14
Freshwater Fish	1	0	5	1	7	1	1	0
Amphibians & Reptiles	0	1	0	0	4	0	5	0

CR Critically Endangered:	**In a particularly and extremely critical state.**
EN Endangered:	**Very high risk of extinction in the wild.**

<u>VU Vulnerable</u>:	**At high risk of unnatural (human-caused) extinction without further human intervention.**
NT Near Threatened:	Close to being at high risk of extinction in the near future.
LC Least Concern:	Unlikely to become extinct in the near future.
DD:	Data Deficient
NE:	Not Evaluated
RE:	Regionally Extinct

More Red Lists for Ireland can be found on the website of the National Parks and Wildlife Service (NPWS)[1]

1.6. Biodiversity and the Law

EU Directives

Two very important and powerful pieces of legislation that are designed to protect wildlife, and as such biodiversity, have already been mentioned. These are:

- Council Directive 79/409/EEC (and as amended) 'on the conservation of wild birds' (commonly known as **'The Birds Directive'**).
- Council Directive 92/43/EEC (and as amended) 'on the conservation of natural habitats and of wild fauna and flora' (commonly known as **'The Habitats Directive'**).

The main instruments transposing these EU directives into Irish law is the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011, and as amended), and S.I. No. 293/2010 - European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010, but they are also incorporated under the Planning and Development Act 2000 (and as amended).

Other important EU directives concerned with environmental protection, including wildlife, are:

[1] https://www.npws.ie/

- Council Directive 85/337/EEC (and as amended) 'on the assessment of the effects of certain public and private projects on the environment' (commonly known as the **'Environmental Impact Assessment Directive'**).
- Council Directive 2001/42/EC 'on the assessment of the effects of certain plans and programmes on the environment' commonly known as the '**Strategic Environmental Assessment Directive**'.
- Directive 2000/60/EC 'establishing a framework for Community action in the field of water policy', commonly known as the '**Water Framework Directive'.**

National Legislation

National legislation protecting wildlife includes:

- Wildlife Acts, 1976
- Wildlife (Amendment) Act, 2000 and as amended
- Flora (Protection) Order, 2015 (S.I. No. 356 of 2015)
- Heritage Act 2018 (no. 15 of 2018), Part 3

Protected Areas

Arising from the legislation discussed above, certain sites around the country have been given legal protection.

- **Special Protection Areas** (SPAs) arise from the Birds Directive and are designated to protect all migratory birds and 194 species and subspecies of bird that are particularly threatened.
- **Special Areas of Conservation** (SACs) arise from the Habitats Directive are designated to protect:
    - Natural Habitat Types of Community Interest – listed under Annex I of the Directive.
    - Animal and Plant Species of Community Interest– listed under Annex II of the Directive.

SPAs and SACs across Europe form the Natura 2000 ecological network.

- **Natural Heritage Areas** (NHAs) have been designated under the Wildlife Acts, in order to protect habitats and / or species in them
- **Statutory Nature Reserves** under the Wildlife Acts
- **Wildfowl Sanctuaries** under the Wildlife Acts.

There is much crossover between designations so many Natural Heritage Areas are also Statutory Nature Reserves and/or SACs and/or SPAs. Many Wildfowl Sanctuaries are also SPAs.

At the time of writing there are 148 Natural Heritage Areas that have been given legal protection under the Wildlife Acts. However, there are 630 sites that were proposed as Natural Heritage Areas in 1995 that have never been given statutory legal protection. Some of these **proposed Natural Heritage Areas (pNHAs)** coincide entirely or partly with areas that do have protection under other legislation e.g., SPAs or SACs, however very many of them have no current legal protection.

2. How this Plan was made

2.1. Desktop Study

For background on biodiversity in and around Ballinspittle, several sources were consulted.

Species records from the National Biodiversity Data Centre (NBDC) were looked at for the 1-kilometre and 2-kilometre Irish Grid squares that intersected with the site boundary. The grid squares consulted for records are in Appendix III NBDC Grid Squar.

Most of the data held by the NBDC is free to anyone to look at. Information can be downloaded from the Maps section of the NBDC website[2] . There are tutorials on how to use it in the Help section.

Recent and historical maps for the area available from the online Ordnance Survey Ireland (OSI) GeoHive[3] service were reviewed.

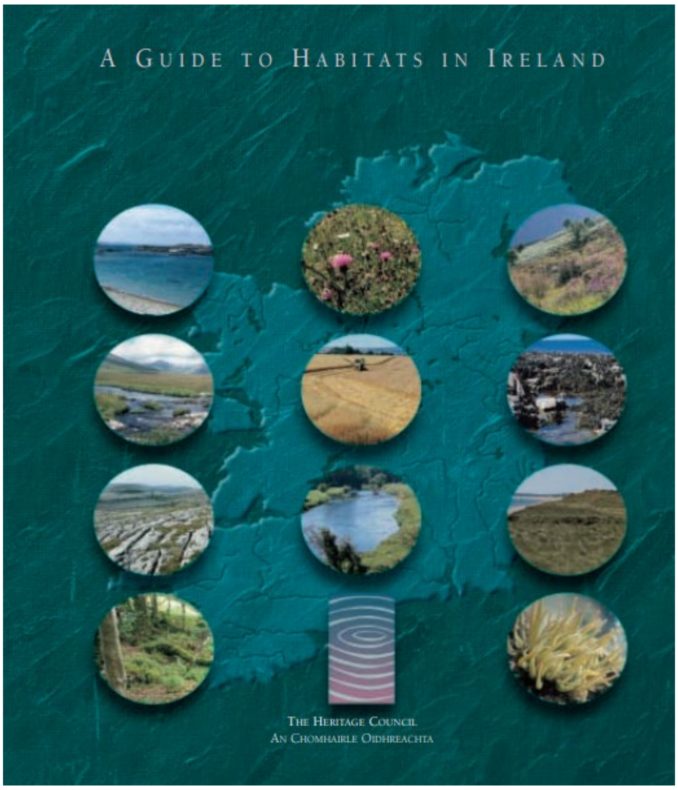
Unpublished information such as surveys commissioned in connection with planning applications etc., were also consulted. Where data from these is used in this Biodiversity Action Plan it is referred to in the text.

[2] https://maps.biodiversityireland.ie/
[3] https://www.geohive.ie/

2.2. Habitat Mapping and other fieldwork

Habitats are where living organisms live. A habitat is made up of living and non-living components. Living components include plants, animals, fungi and bacteria. Non-living components include soil, moisture, temperature, pH, bedrock and many others.

So that there is a common understanding of different habitat types to be found in Ireland a book called 'A Guide to Habitats in Ireland' was commissioned by the Heritage Council of Ireland and was released in 2000.



A number of experts from different fields contributed to the book, however the text was compiled by Julie A. Fossit. 'A Guide to Habitats in Ireland' is often referred to as 'The Fossit Guide' or simply 'Fossit'.

The names of many species are included throughout this BAP. Where this is the case, their scientific names are included also and will appear italicised after the common name eg. The European otter (*Lutra lutra*)

3. Biodiversity in Ballinspittle

3.1. Nature Conservation Sites in and around Ballinspittle

There are 3 notable areas of conservation within 6km of Ballinspittle; The Courtmacsherry Estuary SAC, Courtmacsherry Bay SPA and the Old Head of Kinsale SPA. These three protected areas are detailed below. The following text has been taken from the National Parks and Wildlife Services (NPWS) site synopsis documents which are linked below. These documents are available for all protected sites across the country and are freely accessible on the NPWS website.

3.2. Courtmacsherry Estuary SAC

SITE CODE: 001230

This site is located in west Cork, some 12 km south of Bandon and immediately east of the village of Timoleague. The estuary consists of the drowned valley of the Argideen River, which is now filled with sediments, resulting in an extensive area of mudflats. Courtmacsherry Estuary is an important site for the complex of coastal habitats found there, including ten listed on Annex I of the E.U. Habitats Directive, and for the large numbers of birds that use the area. The presence of rare and scarce plant species adds further interest and value to the site (**NPWS Site Synopsis, 2013**). Further details on the plants, animals and habitats found within this protected site are given below.

3.3. Plants, Animals and Habitats within the Courtmacsherry Estuary SAC

The greater part of this estuary site is mudflat and tidal channels, but three rivers flow into the site and areas of fresh- and saltmarsh are found. Most of the mudflat at Courtmacsherry is unvegetated, although in places cord-grass (*Spartina sp*.) occurs.

Saltmarsh has developed in a number of areas, with the most abundant species being Sea Club-rush (*Scirpus maritimus*), Common Scurvygrass (*Cochlearia officinalis*), Sea Arrowgrass (*Triglochin maritima*), Sea Plantain (*Plantago maritima*), Thrift (*Armeria maritima*) and Saltmarsh Rush (*Juncus gerardi*). On the outer edges such species as Greater Sea-spurrey (*Spergularia media*), Lesser Sea-spurrey (*S. marina*) and Lax-flowered Sea-lavender (*Limonium humile*) occur, while on their landward edge the saltmarshes frequently support Creeping Bent (*Agrostis stolonifera*), Red Fescue (*Festuca rubra),* Silverweed (*Potentilla anserina*), Soft Rush (*Juncus effusus*), Common Sorrel (*Rumex acetosa*) and others. A particularly well-developed and intact saltmarsh occurs at Garranefeen Strand.

The site also supports small but interesting sand dune systems. Embryonic dunes occur in a number of places, including Garranefeen, Flaxford Strand and near Courtmacsherry, and the species Sand Couch (*Elymus farctus*) occurs. Marram dunes are well developed on the eastern spit at Garranefeen inlet. Species present include Sea Bindweed (*Calystegia soldanella*), Sea-spurge (*Euphorbia paralias*) and Sand Couch. Fixed dunes are not particularly well developed at this site, but where present, support species such as Red Fescue, Common Restharrow (*Ononis repens*), Kidney Vetch (*Anthyllis vulneraria),* Pyramidal Orchid (*Anacamptis pyramidalis*) and Lady's Bedstraw (*Galium verum*).

The presence of some rare and scarce plant species at the site is noteworthy. The rare Red Data Book species Sea-kale occurs on shingle and the scarce grass, Tor-grass (*Brachypodium pinnatum*), has been recorded on cliffs between Broadstrand and Wood Point **(NPWS Site Synopsis, 2013)**

3.4. Courtmacsherry Bay SPA

SITE CODE: 004219

Courtmacsherry Bay SPA is located approximately 12 km south of Bandon and immediately east of the village of Timoleague in west Co. Cork. The site, which is largely estuarine in nature, consists of the drowned valley of the Argideen River which is now filled with sediments, resulting in extensive mudflats and areas of saltmarsh. The estuary of the Kilbrittain River in the north-east of the site holds an area of well-developed saltmarsh. The seaward boundary for the site stretches from Coolmain Point to Barry Point, and includes Coolmain Bay and Broadstrand Bay.

Courtmacsherry Bay SPA is an important site for wintering birds. It holds internationally important numbers of Black-tailed Godwit and nationally important numbers of a further eleven species, including three that are listed on Annex I of the E.U. Birds Directive, i.e. Great Northern Diver, Golden Plover and Bar-tailed Godwit (**NPWS Site Synopsis, 2010**). Further details on the plants, animals and habitats found within this protected site are given below.

3.5. Plants, Animals and Habitats within the Courtmacsherry Bay SPA

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Great Northern Diver, Shelduck, Wigeon, Red-breasted Merganser, Golden Plover, Lapwing, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Black-headed Gull and Common Gull. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The site is of ornithological importance for the wintering waders and wildfowl that feed on the mudflats. It supports internationally important numbers of Black-tailed Godwit (506 - figures given here and below are mean peaks for the five winters in the period 1995/96 to

1999/00), as well as nationally important numbers of a further eleven species, i.e. Great Northern Diver (27), Shelduck (175), Wigeon (934), Redbreasted Merganser (63), Golden Plover (5,759), Lapwing (2,713), Dunlin (1,353), Bar-tailed Godwit (182), Curlew (1,357), Black-headed Gull (2,727) and Common Gull (2,226). Other species which occur include Oystercatcher (610), Redshank (227) and Greenshank (26) **(NPWS Site Synopsis, 2010)**.

3.6. Old Head of Kinsale SPA

SITE CODE: 004021

The Old Head lies approximately 10 km south of the town of Kinsale in Co. Cork, and is a 5 km long headland formed of steeply inclined beds of rock. These show a cross section of the transition between the Devonian and Carboniferous periods and so have considerable interest from a geological point of view. The site comprises a section of the cliffs on the western side of the narrow isthmus leading to the Head and a 500 m seaward extension. These are vertical rock cliffs providing optimum habitat for ledge nesting seabirds including Kittiwakes (*Rissa tridactyla*) and Guillemots (*Uria aalge*) **(NPWS Site Synopsis, 2014)**.

3.7. Plants, Animals and Habitats within the Old Head of Kinsale SPA

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Kittiwake and Guillemot.

The Old Head is the largest seabird colony on the south coast between the Bull Rock and the Saltee Islands. In 2001 the Seabird 2000 Survey recorded nationally important populations of Kittiwake (951 pairs) and Guillemot (2,330 pairs), as well as smaller numbers of Fulmar (37 pairs), Shag (26 pairs), Herring Gull (11 pairs) and Razorbill (59 pairs). Chough and Peregrine, which breed elsewhere on the Head, are regularly seen within the site.

Old Head of Kinsale SPA is of high ornithological importance for its breeding seabird populations, two species of which occur in nationally important numbers. The presence of Chough and Peregrine, two species listed on Annex I of the E.U. Birds Directive, is also of note. Owing to the importance of the bird populations, the site was designated as a Refuge for Fauna in 1989 (**NPWS Site Synopsis, 2014**).

3.8. Places of Local Biodiversity Interest

Outside of the areas designated for protection in and around Ballinspittle there are other sites of note in terms of their biodiversity locally. One of the most prominent sites within close proximity to Ballinspittle village is the Garrettstown Marsh. The text that follows has been taken from a document produced by the NPWS which outlines the site as a proposed Natural Heritage Area (pNHA).

Garrettstown Marsh (1 km from Ballinspittle)

The beach on the western side of the base of the Old Head of Kinsale impedes the natural drainage to form two adjacent marshes - Garrettstown and Garrylucas which is also an NHA. Garrettstown lies in the valley of a north-south stream which empties through a sluice at the eastern end of the strand. There is little fine material on this beach so that only the very southern end of the marsh is affected by blown sand. For the most part it is on a clay or peat substrate, including some small scraws and some firmer ground.

The seaweed end of the marsh consists of a bed of Common Reed (*Phragmites australis*) enclosing one or two small pools. There is some salt influence which is shown by the occurrence of Common Scurvygrass (*Cochlearia officinalis*) and, at the sea end, of Celeryleaved Buttercup (*Ranunculus sceleratus*) and Distant Sedge (*Carex distans*). The Common Reeds give way to a stand of Greater Pond-sedge (*C. riparia*) on the landward side in which Yellow Iris (*Iris pseudacorus*), Meadowsweet (*Filipendula ulmaria*), Great Willowherb (*Epilobium hirsutum*) and Water Mint (*Mentha aquatica*) are also important constituents.

Outside this 'tall fen' community there is usually grazing land with abundant Soft Rush (*Juncus effusus*), Floating Sweet-grass (*Glyceria fluitans*), Yellow Flag and Cuckooflower (*Cardamine pratensis*). In particular wet areas Common Waterstarwort (*Callitriche stagnalis*), Ivy-leaved Crowfoot (*Ranunculus hederaceus*), Sharp-flowered Rush (*J. acutiflorus*) and Water Horsetail (*Equisetum fluviatile*) are found and there is one swampy site on the eastern side overgrown by Grey Willow (*Salix cinerea*) and Alder (*Alnus glutinosa*) where Branched Bur-reed (*Sparganium erectum*), Bulrush (*Typha latifolia*) and Bottle Sedge (*Carex rostrata*) combine to produce a treacherous scraw. A little Gypsywort (*Lycopus europaeus*) grows here too.

The birdlife of the marsh includes expected species like Sedge Warbler, Reed Bunting, Mallard, Snipe, Moorhen and Mute Swan. The latter species are associated with the small ponds where additional Teal and Mallard are likely in winter **(NPWS – pNHA Site Synopses).**

4.0. Ecological Appraisal of Site and Habitat Map

Site A: This site was teeming with pollinators during the initial site visit on the 6th of July 2022 which reflects the way the site is currently being managed with nature in mind. There were 2 distinct habitats observed during the site visit which are detailed in Table 2 on page 20 and a habitat map of the site can be found on page 27.

Figure 2. Site overview looking North towards the boundary treeline

The majority of the site has been classified as Wet Grassland (Fossit Code: GS4) however it should be noted that the site has been modified in recent years in order to create a "Mini Biodiversity Garden". During the time of the survey most of the grass on the site had been cut to create an access path for people and to promote wildflower growth across the site. Grass clippings remained on site after cutting and it has been recommended that these are removed to further promote the growth of wildflowers on site. When grass clippings remain on site after cutting, they break down and nutrify the soil, most of our native wildflowers require low levels of nutrient input to grow and thrive. There is a small patch of Willow trees (*Salix sp.)* present in the south-east corner of the site and due to their small footprint, they are being included in the Wet Grassland habitat.

Figure 3. Dense vegetation in front of the treeline

Dense patches of grass were present along the northern section of the site in front of the treeline. The main species present were Yorkshire Fog (*Holcus lanatus*), Cocksfoot (*Dactylis glomerata*), Reed Canary-grass (*Phalaris arundinaceae*), Creeping Bent (*Agrostis stolonifera*), Common Bent (*Agrostis capillaris*) and False Oat-grass (*Arrhenatherum elatius*). The treeline (Fossit Code: WL2) that bounds the northern side of the site has a mature Ash and Alder tree present with a dense understory comprised primarily of Bramble (*Rubus fructicosus)*, Common Nettle (*Urtica dioica*) and Cleavers (*Galium aparine*). The treeline extends north from the site along the banks of the stream as far as the eye can see.

Selective patches of grasses and wildflowers have been retained on site as part of the management and flowering species such as Hogweed (*Heracleum sphondylium*), Meadowsweet (*Filipendula ulmaria*), Ribwort Plantain (*Plantago lanceolata*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Water Mint (*Mentha aquatica*), Self-heal (*Prunella vulgaris*), Willowherbs (*Epilobium sp.)* and Red Clover (*Trifolium pratense*). Three species of bumblebee were recorded on site with the Common Carder Bee (*Bombus pascuorum*) being the most abundant followed by the White-Tailed Bumblebee (*Bombus lucorum agg.*) and the Red-Tailed Bumblebee (*Bombus lapidarius*). Males of the Red-tailed bumblebee were observed flying over the bramble on site searching for a mate. Three butterfly species were also noted on site, which included the Small Tortoiseshell (*Aglais urticae*), Painted Lady (*Vanessa cardui*) and Common Blue (*Polyommatus icarus*).

Figure 4. A patch of Meadowsweet in flower on site

Further modifications to the site include the installation of two solitary bee boxes on the wall that bounds the eastern side of the site and two small ($2m^2$) planted wildflower beds which consisted primarily of Mallow (*Malva sp.),* Phacelia (*Phacelia tanacetifolia*), Oxeye Daisy (*Leucanthemum vulgare*) and Borage (*Borago officinalis*). The presence of a handful of small Gorse (*Ulex sp.)* bushes was noted on site during the survey. This is a valuable native species for invertebrates as it is in flower for long periods, so is an important nectar source in early spring and early winter, when little else is in flower. However, this species can take over areas rapidly due to the high annual output of seed. This site is currently being managed as a grassland so consideration should be given to controlling the spread of this species. This could be achieved by retaining the plant on site as it is beneficial but ensuring that any new growth is removed in order to prevent it becoming the dominant species on site. The other option is to remove the plant entirely but preference should be given to retaining it on site and controlling any new growth.

Figure 5. Small, planted wildflower meadow on site with surrounding vegetation having been recently cut.

The vegetation that grows along the banks of a stream is known as the “riparian vegetation”. The riparian vegetation on this site is currently being mown as part of the management of the site and it is recommended as part of this action plan that this is restored on both sides of the stream. Riparian vegetation is extremely important because of the many functions it serves including increased biodiversity, improving stability of the streambank, and improving water quality by absorbing nutrients, trapping sediment and filtering water entering the stream.

The combination of low intensity management and allowing areas to grow wild at Site A has created a dynamic space that has areas of long and short vegetation allowing different flowering species to express themselves. There are benches present along the western boundary of the site and a handful of small planted raised beds. This little patch of land is a lovely pocket of biodiversity in the village and appeared to be popular with visitors who were observed sitting on the benches and gazing over the site.

Fossit Habitat Name	Fossit Code
Treeline	WL2
Wet Grassland	GS4

Table 2. Habitats recorded in the BAP area – Site A

Site B:

This site is a popular linear park and children's playground which has ample parking, benches and outdoor exercise machines on site. There are two main habitats on site which include Amenity Grassland (Fossit Code: GA2) and Treeline (Fossit Code: WL2) which are detailed in Table 3 on page 25 and a habitat map of the site can be found on page 28. The site is regularly mown as part of its management as a public park. There have recently been some attempts to improve the site for biodiversity by leaving small sections along the western bound unmown and creating "mini wildflower" meadows where possible. There is a great selection of informative signage found across the site which includes two large signs from the National Biodiversity Data Centre detailing the butterfly and bumblebees of Ireland along with a handful of signs associated with the unmown sections of the site that state, "Never mind the weeds, we are feeding the bees". A handful of small trees have also been purposely planted on site along the edge of the pathway.

Figure 6. Signage on site informing the public that a small area is being actively managed for wildlife

There is a tarmac pathway that runs from the northern entrance of the site down to a bridge at the southern end that will bring you onto the grounds of the local GAA club. The pathway is bound on either side by narrow strips of amenity grassland. Despite being regularly mown the grassland was relatively species rich with numerous flowering species present. Some of the flowering species observed included, White Clover (*Trifolium repens*), Common Mouse-ear (*Cerastium fontanum*), Self-heal (*Prunella vulgaris*), Creeping Buttercup (*Ranunculus repens*), Thyme-leaved Speedwell (*Veronica serpyllifolia*), Daisy (*Bellis perennis*), Dandelion (*Taraxacum vulgaria*), Ribwort Plantain (*Plantago lanceolata*), Yellow Pimpernel (*Lysimachia nemorum*), Silverweed (*Potentilla anserina*) and Black Medick (*Medicago lupulina*).

Figure 7. Thyme-leaved Speedwell, one of the small flowering species found in the grassland

This diversity of species in flower at the time of the survey is an indication that there is a healthy and viable native wildflower seedbank present within the soil here. A simple change to the mowing regime as outlined in the Actions section on page 32 will allow these species to grow, flower and set seed which over time will increase their abundance. Where appropriate 8-week short flowering meadows could be implemented such as directly alongside the pathway, this will still ensure the site is being managed for human visitors to the park whilst also providing more space for nature and food for our pollinator species. Sections away from the path such as along the boundary fence that runs along the western edge of the park could be managed as long flowering meadows which are mown only once or twice a year. Long flowering meadows provide food and shelter for many of our pollinator, small mammal and bird species.

Figure 8. Section of the path on site. The left side of the path would be suitable for an 8-week short flowering meadow whilst the right side would be suitable for an 8 week short flowering meadow that transitions into a long flowering meadow along the fence line.

Figure 9. Yellow pimpernel which was in flower along the sloped grassy bank at the northern entrance to the site

The other habitat on site is the Treeline which contains mature Ash (*Fraxinus excelsior*), Horse Chestnut (*Aesculus hippocastanum*), Elder (*Sambucus nigra*), Alder (*Alnus glutinosa*), Sycamore (*Acer Psuedoplatanus*), Birch (*Betula sp.*) and Hawthorn (*Crataegus monogyna*). The largest trees are located at the northern entrance to the site where they are growing between the roadway and the carpark. The mature Ash trees here are noteworthy due to their size and that they had evidence of preferential bat roost features. These are sheltered fissures or cracks in the tree trunk and branches that may be used as a roosting place for a variety of bat species. One such species is the Leisler's Bat (*Nyctalus leisleri*) which can often be found roosting in mature trees and is relatively common here in Ireland, which is viewed as the European stronghold for the species.

Figure 10. Self-heal which was in flower on site and displaying its eye-catching purple flowers

The rest of the treeline extends from the western corner down to the southernmost end of the site. The stream which is visible along certain sections of the path behind the fence line is afforded dappled shading by the mature overhanging tree canopy. The riparian vegetation that is visible behind the fence line has a similar composition of grass and flowering plant species as that described on Site A. If long flowering meadows are created along this fence line it would be expected that similar species may extend onto this section of the park site.

Meadow Brown (*Maniola jurtina*), Ringlet (*Aphantopus hyperantus*) and Peacock (*Inachis io*) butterflies were observed on site. Workers of the Common carder Bee (*Bombus pascuorum*) was noted to be extremely abundant, possibly suggesting a nest site for this common species of bumblebee was close by. Bumblebees tend to nest underground in preformed burrows such as those created by small mammals. These nest sites are commonly found amongst dense vegetation or at the base of trees.

Figure 11. Section of the site showing the dense riparian vegetation just behind the fence line that bounds the site

Fossit Habitat Name	**Fossit Code**
Treeline	WL2
Amenity Grassland (Improved)	GA2

Table 3. *Habitats recorded in the BAP area – Site B*

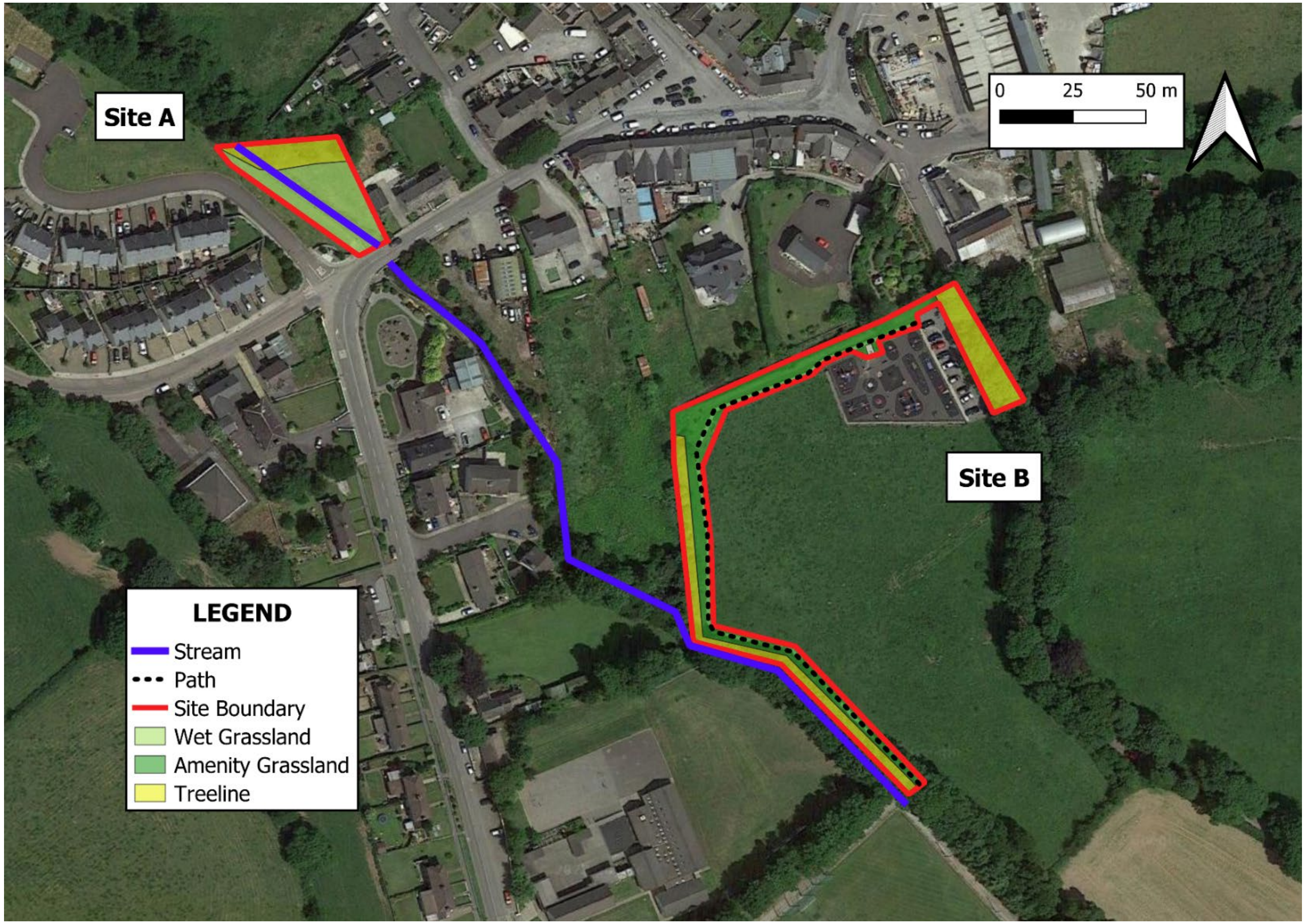


Figure 12. *Habitat Map Overview showing location of Site A and Site B*

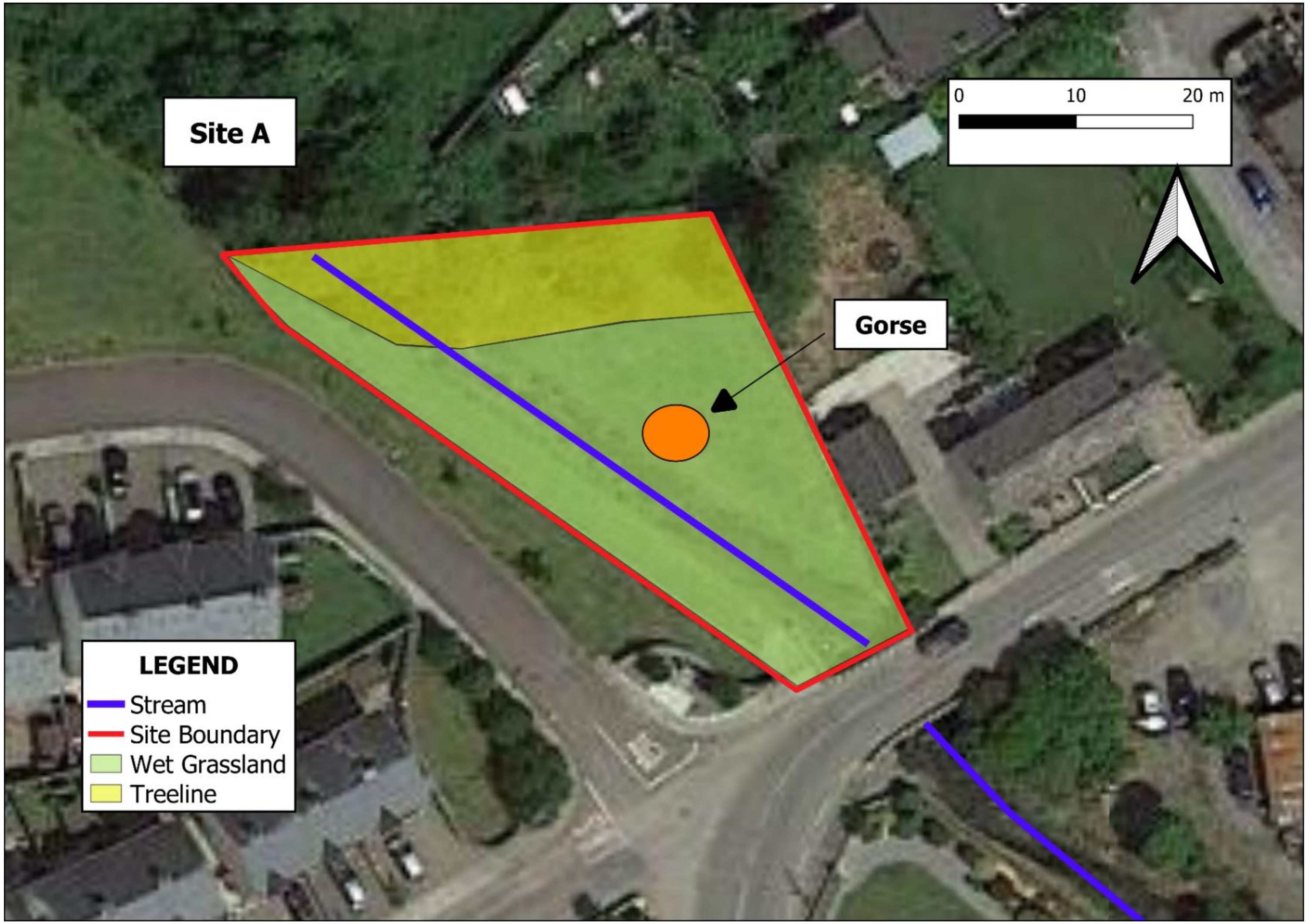


Figure 13. *Habitat Map for Site A*

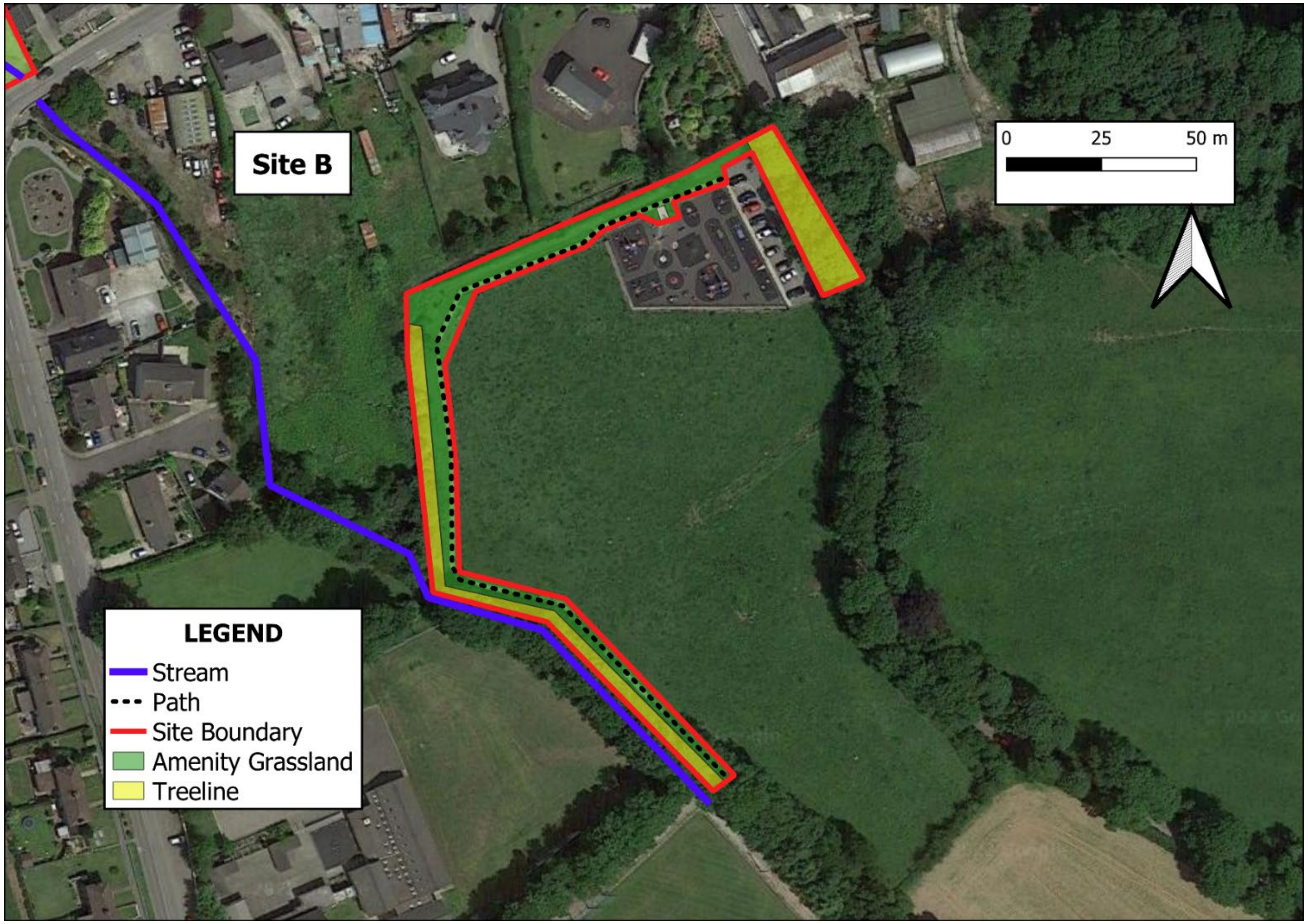


Figure 14. *Habitat Map for Site*

From the **National Biodiversity Data Centres species list** for the 1km & 2km squares that encompass both sites at Ballinspittle there are records for 39 species of Bird, 5 species of Flowering plant, 21 species of Butterfly, 1 species of Bumblebee, 3 species of Solitary bee, 31 species of Aquatic macroinvertebrates, 1 species of Bony fish and 2 species of terrestrial mammal. The majority of these records are from the 2000s with most records being logged in the past 10 years.

What is most noticeable from the records is there is an abundance of Butterfly species present in the area with a total of 21 species recorded in the area between 2014 and 2017. These records were logged as part of the National Biodiversity Data Centres Irish Butterfly Monitoring Scheme. Considering there are 35 species of Butterfly that are found in Ireland this is an impressive array of species present in the area and reflects the variety of habitats found in the locality from patches of woodland to open grassland. The species recorded include; Clouded Yellow (*Colias croceus*), Common Blue (*Polyommatus icarus*), Green-veined White (*Pieris napi),* Holly Blue (*Celastrina argiolus*), Large White (*Pieris brassicae*), Meadow Brown (*Maniola jurtina*), Orange-tip (*Anthocharis cardamines),* Painted Lady (*Vanessa cardui*), Peacock (*Inachis io*), Red Admiral (*Vanessa atalanta),* Ringlet (*Aphantopus hyperantus*), Silver-washed Fritillary (*Argynnis paphia*), Small Copper (*Lycaena phlaeas*), Small Tortoiseshell (*Aglais urticae*), Small White (*Pieris rapae*), Speckled Wood (*Pararge aegeria*) and Wood White (*Leptidea sp.).* Four species of Butterfly whose populations are categorised as Threatened were also recorded these include the Dark Green Fritillary (*Argynnis aglaja*), Gatekeeper (*Pyronia tithonus*), Grayling (*Hipparchia semele*) and Wall Brown (*Lasiommata megera*).

The Wall Brown Butterfly (*Lasiommata megera*) is currently categorised as endangered. Its caterpillars can be found feeding on grass species such as, Bents (*Agrostis spp*.), Cock's-foot (*Dactylis glomerata*), False Brome (*Brachypodium sylvaticum),* Wavy Hair-grass (*Deschampsia flexuosa*) and Yorkshire-fog (*Holcus lanatus*). The adults acquire nectar from a variety of plants such as, Daisy (*Bellis perennis),* Fleabane (*Pulicaria dysenterica*), Hawkweeds (*Hieracium/Hypochoeris*), Knapweeds (*Centaurea spp.),* Marjoram (*Origanum vulgare*), Ragged Robin (*Lychnis flos-cuculi),* Ragwort (*Senecio jacobaea*), Thistles (*Cirsium spp. and Carduus spp*.), Water Mint (*Mentha aquatica*) and Yarrow (*Achillea millefolium*). The majority of the species required for this butterfly's life cycle can usually be found within a meadow site managed for pollinators.

An abundance of macroinvertebrates records were logged within the area as part of a national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network which was undertaken by the EPA from 2007–2018. 31 species in total were recorded, including the largest dragonfly in Ireland the Emperor Dragonfly (*Anax imperator*) which has a wingspan of 10.3cm. This is a very active species which hunts and catches its prey in the air, they can usually be found hunting over waterbodies. The majority of macroinvertebrates recorded are species of Stonefly, Mayfly and Caddisfly which are indicator species for good water quality in the area.

In 2006 the critically endangered European Eel (*Anguilla anguilla*) was recorded as part of the River Biologists' Database from the EPA. The European eel is a "catadromous fish", which means that it hatches in the ocean but migrates to rivers to spend most of its adult life in freshwater before migrating back to the ocean to spawn. European eel populations have declined massively since the 1970s with a reported decline of 90% or more in the number of eels returning to freshwater habitats across Europe. In October 2011 the European eel was classified as Critically Endangered on the All-Ireland IUCN Red Data List for Freshwater Fish, Amphibians and Reptiles, making it our most threatened native fish species.

Three species of solitary bee have been recorded, two of which are mining bees (Andrena) *Andrena fucata* and *Andrena scotica*. The third species is Marsham's Nomad Bee (*Nomada marshamella*) which is a common solitary bee that mimics a wasp with its black and yellow stripes. Marshams Nomad Bee is a cuckoo species that has a similar lifecycle to that of the Cuckoo bird whereby it doesn't build its own nest but instead lays its eggs in the nest site of another species. This is known as a cleptoparasites and this species is known to be a cleptoparasite of mining bee species especially *Andrena scotica*.

One species of Bumblebee was recorded in the area, The White-Tailed Bumblebee (*Bombus lucorum*) which is common throughout Ireland and is one of many species that benefits from having Dandelions in an area as a food plant.

Two mammal species are noted in the area: the Eurasian Badger (*Meles meles)* and European Rabbit (*Oryctolagus cuniculus*).

There are only 5 species of Flowering plants in the record database for the area which is very low considering the diversity of plant life evident in the area. This is a great opportunity for Citizen Scientists in the area to get active in the recording of this group. The grid square that was consulted for the above information can be found in **Appendix III NBDC Grid Square**.

From the old maps accessed on Geohive.ie it appears that the sites haven't changed much in terms of the layout since the mid-1800s. There have clearly been some developments in the area since this time and fields have been divided into smaller plots. Interestingly the Ballinspittle stream that runs through the village appears to still run the same course as it does to this day however it may have been modified to deepen the channel to prevent flooding in the village. The maps accessed can be viewed in **Appendix IV Geohive Maps**.

Additional Resources for Actions – Please see the Resources Section below the Actions table to find links to relevant organisations, articles and best practice documents that will help guide you with any of the actions described. Additional resources have been included that do not correspond to the Actions listed below, these can be used to investigate future actions to include in this BAP or to inform actions in your own garden. Please also see the online resources to support certain actions available through the Wild Work Toolkit here https://wildwork.veri.ie.

5. Actions

This section details the actions that were discussed by the group during the course of the Wild Work Public Lands training in 2022. The actions detailed in the table below are up for consideration and may change over time depending on funding and resources available to the group. It should be noted that this is a live document, and this table should be updated as and when appropriate by the group.

Number	Action	Year (To be determined by group)
1.	**Pollinator Friendly Management of selected spaces**	
1.1	Implement pollinator friendly management of suitable green spaces at Site A & B using "cut and lift" methodology as per NBDC guidelines on managing grasslands for pollinators. A combination of 1 cut/year meadows & 6-8 weeks meadows would be most suitable for Site A. Choose areas away from the pathway and along the site boundary including below the treeline at the carpark for 1 cut/year meadow, the rest of the site could be managed as 6–8-week meadows. Site B should continue being managed as it has been recently with a combination of 1 cut/year meadow and the access/pathways through the site being cut every 6–8-weeks.	

1.2	Retain the patch of Nettles	
1.3	Promotion of "No Mow May" and allowing Dandelions to bloom on site and locally	
1.4	Encourage chemical free management at Site A and locally	
2.	**Interpretive signage**	
2.1	Install signage at both entrances to Site A that explains that the area is being "Managed for Wildlife". Use of "NBDC Meadow Management" signage.	
2.2	Install signage at entrance to Site B that explains that the area is being "Managed for Wildlife". Use of "NBDC Meadow Management" signage.	
2.3	Use of signage to highlight species of interest across both sites eg. Patches of wildflowers, Native tree species etc.	
3.	**Citizen Science – Pollinators & CSSI**	
3.1	Gathering of baseline data across site A & B relating to Pollinators. Undertake Butterfly and Bumblebee monitoring as per NBDC methodology.	
3.2	Partake in Flower Insect Timed (FIT) count on both sites.	
3.3	Uploading of casual records from both sites onto the NBDC database. Increase number of records and species uploaded locally especially for flowering species.	
3.4	Citizen Science Stream Index (CSSI) monitoring of Ballinspittle stream	
3.5	Promotion of citizen science across sites using NBDC citizen science signs. Further promotion of citizen science locally and within schools.	
4.	**Edible/Herb Garden**	
4.1	Develop a raised bed for an edible/herb garden on Site A.	
4.2	Label all plants within the edible/herb garden and give some information on their benefits to both humans and biodiversity.	
4.3	Use this edible/herb garden as an educational tool to promote the "Grow your Own" philosophy.	
5.	**Natural Bug Hotels (Log Piles)**	

5.1	Create a Bug Hotel/Log Pile using natural locally sourced materials at Site A & B.	
6.	**Home for Hedgehogs**	
	Create Hedgehog Home using natural locally sourced materials at Site A & B.	
7.	**Outreach/Public Engagement**	
7.1	Outreach & Public Engagement Day with local Heritage Officer (Cork County Council).	
7.2	Outreach & Public Engagement Day with local Community Water Officer (LAWPRO).	Completed September 2022
7.3	Organise Biodiversity themed walks and talks with local biodiversity champions.	
7.4	Organise Biodiversity themed talks and event days with national/local organisations eg. Birdwatch Ireland, Bat Conservation Ireland, Irish Wildlife Trust, National Biodiversity Data Centre etc.	
8.	**Annual Bioblitz**	
8.1	Organise an annual Bioblitz for both sites and the surrounds during National Biodiversity Week.	
8.2	Upload all records from the Bioblitz onto the NBDC online database.	
9.	**Restore Riparian Margin at Site B**	
9.1	Cease cutting of vegetation bordering stream at Site B. Leave at least 1 meter of vegetation unmown along both sides of stream where possible.	
10.	**Control of Gorse at Site B**	
10.1	Prevent the grassland being overrun with gorse by controlling any new growth. Monitor and remove new growth on an annual basis. This area has the potential to be overrun by gorse if not managed.	

Resources

Gardening / pesticide reduction	
Greener Gardening Your Guide to Chemical-Free Affordable Gardening. EPA	https://www.epa.ie/pubs/reports/waste/wpp/Greener%20Gardening%20(web).pdf
Gardening for Biodiversity. Juanita Brown	https://laois.ie/gardening-for-biodiversity/
Fresh Air, Fresh Savings, Greener Gardening Your Guide to Chemical-Free Affordable Gardening	www.mywaste.ie
Pesticide Action Network U.K.	https://pollinators.ie/wp-content/uploads/2021/05/Alternatives-to-herbicides-a-guide-for-the-amenity-sector.pdf
Pesticide Free Towns	https://www.pesticide-free-towns.info/
All-Ireland Pollinator Plan	
Lots of resources here on actions	https://pollinators.ie/
NBDC Signage Templates & How to Guides	https://pollinators.ie/resources/
Local Community Actions to help Pollinators document	https://pollinators.ie/wp-content/uploads/2021/08/Local-Communities_actions-to-help-pollinators-July-2021-WEB-JB.pdf
Citizen Science	
NBDC – Beginners Guide to Recording Irelands Wildlife – Best place to start if considering Citizen Science	https://biodiversityireland.ie/app/uploads/2021/08/NBDC-Beginners-Guide-to-Recording-2022-WEB.pdf

Dragonfly Ireland 2019 – 2024	https://www.biodiversityireland.ie/projects/monitoring-scheme-initiatives/dragonfly-ireland-2019-2024/
Bumblebee Monitoring Scheme – Links to eLearning and other resources	https://biodiversityireland.ie/surveys/bumblebee-monitoring-scheme/
Butterfly Monitoring Scheme - Links to eLearning and other resources	https://biodiversityireland.ie/surveys/butterfly-monitoring-scheme/
Flower Insect Timed (FIT) Count	https://biodiversityireland.ie/surveys/fit-counts/#:~:text=FIT%20Counts%20are%20very%20simple,change%20in%20their%20local%20biodiversity.
Rare Plant Monitoring Scheme – For experienced Citizen Scientists to record Vascular Plants on Red List	https://biodiversityireland.ie/surveys/rare-plant-monitoring/
Spring Flower Monitoring Scheme	https://biodiversityireland.ie/surveys/spring-flowers-project-2022/
NBDC & Partners Citizen Science Schemes – Links to all schemes currently run by the NBDC	https://biodiversityireland.ie/monitoring/
Bird Watch Ireland Citizen Science Schemes – Garden Bird Survey, Barn Owl Survey, iWebs etc.	https://birdwatchireland.ie/our-work/surveys-research/research-surveys/
Citizen Science Stream Index - CSSI Tutorial Video	https://www.youtube.com/watch?v=HsDZ0siO6Ds
Bioblitz	
Bioblitz Ireland	https://bioblitz.ie/about/

Biodiversity Maps Ireland - Dataset Details - Ireland's BioBlitz	https://maps.biodiversityireland.ie/Dataset/189
Heritage Council – Heritage in Schools - School Bioblitz: Teacher's notes	https://www.heritageinschools.ie/content/files/BioBlitz_teachers_guide.pdf
Green Schools Ireland – Bioblitz	https://greenschoolsireland.org/resources/bioblitz/
Public Engagement & Signage	
EPA - Protecting-and-developing-Irelands-Green and Blue-spaces	https://www.epa.ie/publications/research/environment--health/Final_Brochure_Protecting-and-developing-Irelands-GB-spaces.pdf
EPA – Connecting with Nature for Health and Well being	https://www.epa.ie/publications/research/environment--health/JS---NEAR-Toolkit-FINAL-V1.6-1Oct20.pdf
Catchments - Public engagement & environmental policy	https://www.catchments.ie/public-engagement-environmental-policy/
EPA – Innovative Methods of Community Engagement	https://www.ucc.ie/en/media/projectsandcentres/imagining2050/InnovativeMethodsofCommunityEngagement(lowres).pdf
Leave No Trace – Biodiversity Toolkit for Communities	https://www.leavenotraceireland.org/wp-content/uploads/2020/01/Leave-No-Trace-Ireland-Biodiversity-Toolkit-for-Communities.pdf
Business in The Community Ireland – Biodiversity Handbook for Local Businesses	https://www.bitc.ie/wp-content/uploads/2019/02/Biodiversity-for-Business.pdf
Street Feast – A lovely Lunch with your Neighbours	https://streetfeast.ie/
NBDC – Wildlife Signage Templates	https://pollinators.ie/resources/signs/

Heritage Council – Ideas for interpreting Heritage sites	https://www.heritagecouncil.ie/content/files/bored_of_boards_1mb.pdf
Green Schools – Biodiversity in Schools	https://greenschoolsireland.org/wp-content/uploads/2020/10/Guidance-doc-Biodiversity.pdf
Rivers and Streams	
Useful Tips to Conserve Water at Home. Green Schools Ireland	https://greenschoolsireland.org/water/
10 Ways to Keep Our Lakes and Rivers Clean. PeopleService Inc.	https://www.peopleservice.com/wp-content/uploads/2018/08/23250_10Ways_Flier.pdf
12 Things You Can Do to Clean Up Your Rivers and Streams. Chesapeake Bay Foundation	https://www.cbf.org/join-us/more-things-you-can-do/12-things-you-can-do-to-clean.html
Water Pollution: Keeping Our Rivers Clean. Monaghan County Council	https://monaghan.ie/environment/water-pollution/
SEPA - Riparian Vegetation Management	https://www.sepa.org.uk/media/151010/wat_sg_44.pdf
Local Authorities Waters Program, catchments.ie	
Local Authorities Waters Program. Contacts.	http://watersandcommunities.ie/community-water-officers/
Catchments.ie	https://www.catchments.ie/learn/
Local Authorities Water Program Citizen Science Scheme	https://lawaters.ie/citizen-science/

Natural Bug Hotels (Log Piles) & Homes for Hedgehogs	
RSPB – Log Piles for Wildlife	https://www.rspb.org.uk/birds-and-wildlife/advice/gardening-for-wildlife/dead-wood-for-wildlife/
Biodiversity in Schools – Create a log pile	https://www.biodiversityinschools.com/create-a-log-pile.html
Creative Star Learning - Log Piles – Creating a Flourishing Wildlife Community	https://creativestarlearning.co.uk/early-years-outdoors/log-piles-creating-a-flourishing-wildlife-community/
Silver Oak Tree Surgery - Ideas for a Bug Hotel? Build a Log Pile Instead	https://silveroaktreesurgery.com/article/ideas-for-a-bug-hotel-build-a-log-pile-instead
Biodiversity Ireland – Helping Hedgehogs (Hedgehog Highways, Shelter etc)	https://biodiversityireland.ie/app/uploads/2022/02/Helping_Hedgehogs_A4_WEB_ENG.pdf
Biodiversity in Schools – Build a Hedgehog Home	https://www.biodiversityinschools.com/build-a-hedgehog-house.html
DLR Co.Co. – Discovering Hedgehogs	https://www.dlrcoco.ie/sites/default/files/atoms/files/discovering_hedgehogs.pdf
RSPB – Build a Hedgehog Home	https://www.rspb.org.uk/get-involved/activities/nature-on-your-doorstep/garden-activities/build-a-hedgehog-house/
Bird & Bat Boxes	
Birdwatch Ireland – Bird & Bat Box Designs	https://birdwatchireland.ie/irelands-birds-birdwatch-ireland/nestbox-designs-for-birds-and-wildlife/
Irelands Wildlife - Garden Bird Nestbox Resources	https://irelandswildlife.com/nestboxes/

Ulster Wildlife - How to build a nest box for birds	https://www.ulsterwildlife.org/help-wildlife/help-wildlife-home/help-garden-birds/how-build-nest-box-birds
Bat Conservation Ireland – Bat Boxes Leaflet	https://www.batconservationireland.org/wp-content/uploads/2013/09/Leaflet_3_batboxes.pdf
Birdwatch Ireland – Making a Bat Box	https://birdwatchireland.ie/app/uploads/2021/01/5362-BirdWatchIreland-BatBox_leaflet_HR.pdf
RSPB – Build a Bat Box	https://www.rspb.org.uk/get-involved/activities/nature-on-your-doorstep/garden-activities/build-a-bat-box/
Grasslands	
Biodiversity, well-being, educational, and financial benefits of nature friendly amenity grass management and links to other resources. Forest Research (U.K.)	https://www.forestresearch.gov.uk/tools-and-resources/urban-regeneration-and-greenspace-partnership/greenspace-in-practice/benefits-of-greenspace/grassland-habitats/
Wild Work - Climate Change and Amenity Grassland Management	https://wildwork.ie/wp-content/uploads/2022/01/Wild-Work-Climate-Change-and-Amenity-Grassland-Management.pdf
NBDC - The importance of species-rich meadows and grasslands (even mini ones!)	https://pollinators.ie/the-importance-of-species-rich-meadows-and-grasslands-even-mini-ones/
NBDC - Practical advice on managing wildflower meadows	https://biodiversityireland.ie/practical-advice-on-managing-wildflower-meadows/
Green Hay	
Restoring species-rich grassland using green hay. Save Our Magnificent Meadows.	http://www.magnificentmeadows.org.uk/assets/pdfs/Restoration_using_green_hay.pdf
Sward enhancement: diversifying grassland by spreading species-rich green hay. Natural England.	https://webarchive.nationalarchives.gov.uk/20150303045930/http://publications.naturalengland.org.uk/publication/23025

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Deadwood

Wood Wise Life in Deadwood. The Woodland Trust	https://www.woodlandtrust.org.uk/search/?q=life+in+deadwood&Submit+search=&p=1

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Growing Trees. The Conservation Volunteers.	https://treegrowing.tcv.org.uk/grow
Propagation. The Conservation Volunteers.	https://www.conservationhandbooks.com/tree-planting-aftercare/propagation/
Our Trees: A guide to growing Ireland's native trees in celebration of a new Millennium. Woodlands of Ireland	http://www.woodlandsofireland.com/publications/our-trees
How to Collect and Grow Local Tree Seeds Leaf Tree Nursery Project with Kerry Earth Education Project & Learning About Forests Ireland	https://leafireland.org/wp-content/uploads/2020/04/LEAF-Tree-Nursery-Project-low-res.pdf
Tree related resources for schools at the leafireland.org resources section	https://leafireland.org/resources/
The Challenge of Mature Tree Replacement: Contemporary approaches to amenity tree replacement in mature urban landscapes. Treenet	https://treenet.org/resources/the-challenge-of-mature-tree-replacement-contemporary-approaches-to-amenity-tree-replacement-in-mature-urban-landscapes/

Crann – Tree Planting Tips	https://crann.ie/trees/tree-planting-tips/
DLR Co.Co. – Tree Guide	https://www.dlrcoco.ie/sites/default/files/atoms/files/dlr_tree_guide.pdf
Fruit and Nut – Fruit & Nut Tree Planting Guide	https://fruitandnut.ie/advice.html#:~:text=At%20Fruit%20and%20Nut%2C%20most,not%20frozen%20or%20too%20wet.
The Apple Farm – Growing Fruit Trees Guide	https://www.theapplefarm.com/growingapples.pdf
Hedgerows and Treelines	
Tips from A Tidy Towns Group on Hedgerows: Newbridge Tidy Towns	http://www.newbridgetidytowns.com/tidy-towns-competition/wildlife-habitats-natural-amenities/protect-local-hedgerows/
The Bórd Bia website has a page with loads of other useful tips on organic gardening, wildflower meadows etc. in English and as Gaeilge with links to primary school curriculum – but useful for everyone]	https://www.bordbia.ie/primary-school/organic-gardening-for-primary-schools/worksheets/
Hedgerows for Pollinators: All Ireland Pollinator Plan	https://pollinators.ie/wordpress/wp-content/uploads/2018/04/How-to-guide-Hedgerows-2018-WEB.pdf
Tips on Managing older Hedgerows: RSPB	http://ww2.rspb.org.uk/images/englishhedgerows1_tcm9-133255.pdf
Edible/Herb Garden	
NBDC – Pollinator Friendly Herbs to Plant	https://www.pollinators.ie/wordpress/wp-content/uploads/2019/03/AIPP-Herbs-A5-Flyer-PRINT.pdf
Grow it Yourself Ireland	https://giy.ie/

Quick Crop - HOW TO CREATE A RAISED BED HERB GARDEN	https://www.quickcrop.ie/blog/how-to-create-a-raised-bed-herb-garden
Green Schools – Designing a School Garden	https://greenschoolsireland.org/wp-content/uploads/2016/08/Designing-a-school-garden_Second-Level.pdf
Greenside Up - HOW TO CREATE AN HERB GARDEN	https://greensideup.ie/how-to-create-herb-garden/
Agri-aware – Incredible edibles for Schools	https://www.agriaware.ie/incredible-edibles-programme/
Teagasc – Vegetable Growing Guide	https://www.teagasc.ie/media/website/publications/2017/Veg_Growing_Guide_Edition_8.pdf
Quickcrop - HOW TO START A VEGETABLE GARDEN	https://www.quickcrop.ie/getting-started/
Gorse Control	
RSPB – Managing Gorse	https://www.rspb.org.uk/our-work/conservation/conservation-and-sustainability/farming/advice/techniques-to-help-wildlife/managing-gorse/
Permaculture Research Institute – Control Gorse	https://www.permaculturenews.org/2010/12/02/managing-gorse-ulex-europeaus-a-permaculture-approach/

Appendix I: Further information related to the actions

General principles

The following general principles should be followed in the implementation of any actions included in this biodiversity action plan:

1. Always preserve features of high conservation value.

2. Strive to use native species whenever planting/sowing.

3. When attempting to help nature, try to fully understand the habitats and species of flora and fauna already associated with the given location.

4. Consult with a qualified ecologist or Wild Work staff to learn how to implement best practice.

5. Work with, rather than against nature to make biodiversity enhancement more efficient.

6. Cease using herbicides, insecticides, fungicides and any other pesticides or chemicals where possible. For example, it is possible to maintain border edges of green areas without using herbicides. This task can be carried out quite easily either with a manual hoe, shovel, or use of strimming equipment.

7. Follow Sustainable Use Directive guidelines if applying any pesticides.

8. Wild can be beautiful. Always strive to make places aesthetically pleasing, so that others will be inspired to copy your good example.

9. Try to understand the big picture and be aware that some actions considered to be beneficial may not always be of benefit to biodiversity and nature in every setting. For example, planting trees is usually a good idea, but not if we are trying to protect a rare grassland and its associated fauna. There are plenty of other examples…

10. Remember that people can benefit from biodiversity, as much as biodiversity can benefit from people; Help people, to help nature, to help people…

Helping biodiversity and helping people

Biodiversity Action Plans usually consider the needs of flora and fauna in isolation and as something separate to human needs.

Wild Work's motto of "helping people, help nature, help people" is about recognising that people want to help nature and that people can benefit in doing so. If we help nature, we can also help ourselves and our communities, particularly in terms of health and well-being.

For example, developing and managing woodlands as spaces for people to exercise and play while also prioritising the need to manage the woodland for the benefit of the species of flora and fauna that live there.

Actions included in this plan take this concept into consideration.

Appendix II References

Explore West Cork, 2022. Available at: https://explorewestcork.ie/villages/ballinspittle/ (Accessed on 3rd October 2022).

NPWS 2015, Courtmacsherry SAC. Available at: https://www.npws.ie/protected-sites/sac/001230 (Accessed on 3rd October 2022).

NPWS 2010, Courtmacsherry SPA. Available at: https://www.npws.ie/protected-sites/spa/004219 (Accessed on 3rd October 2022).

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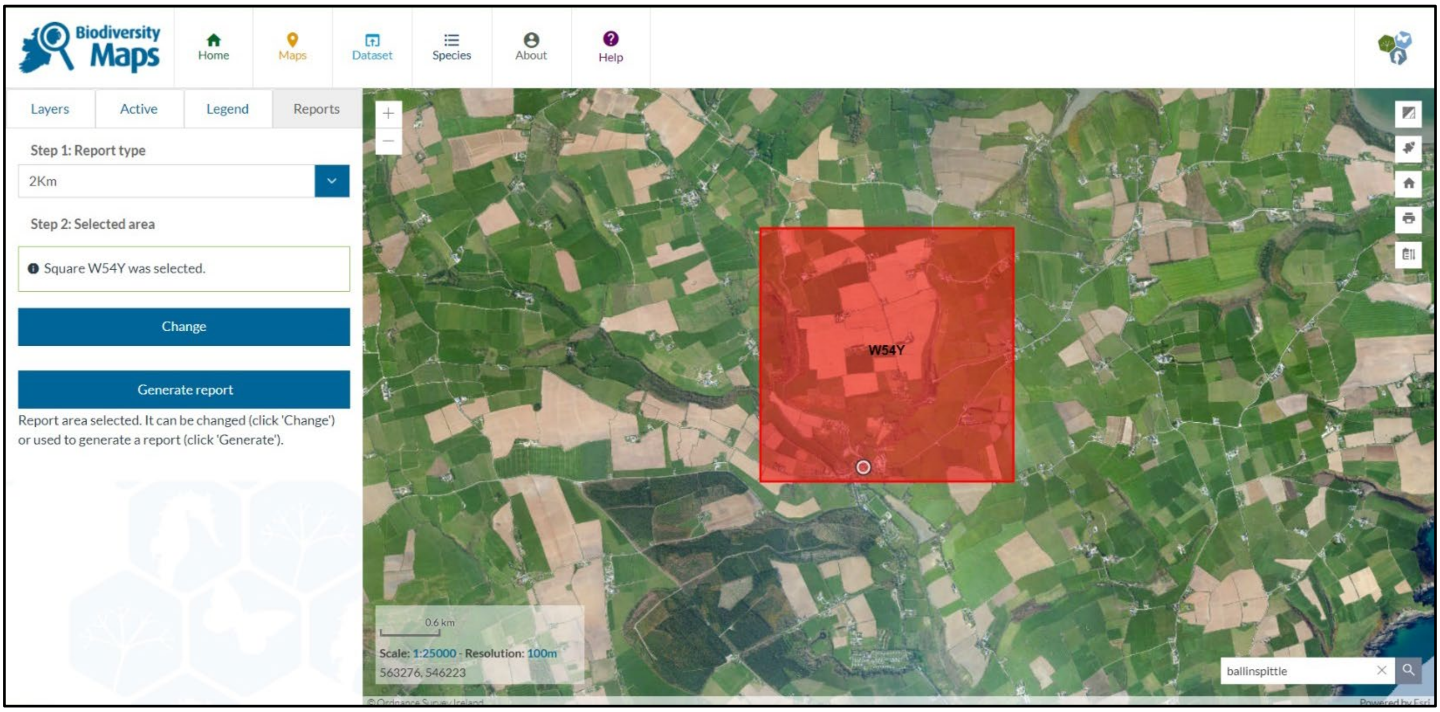
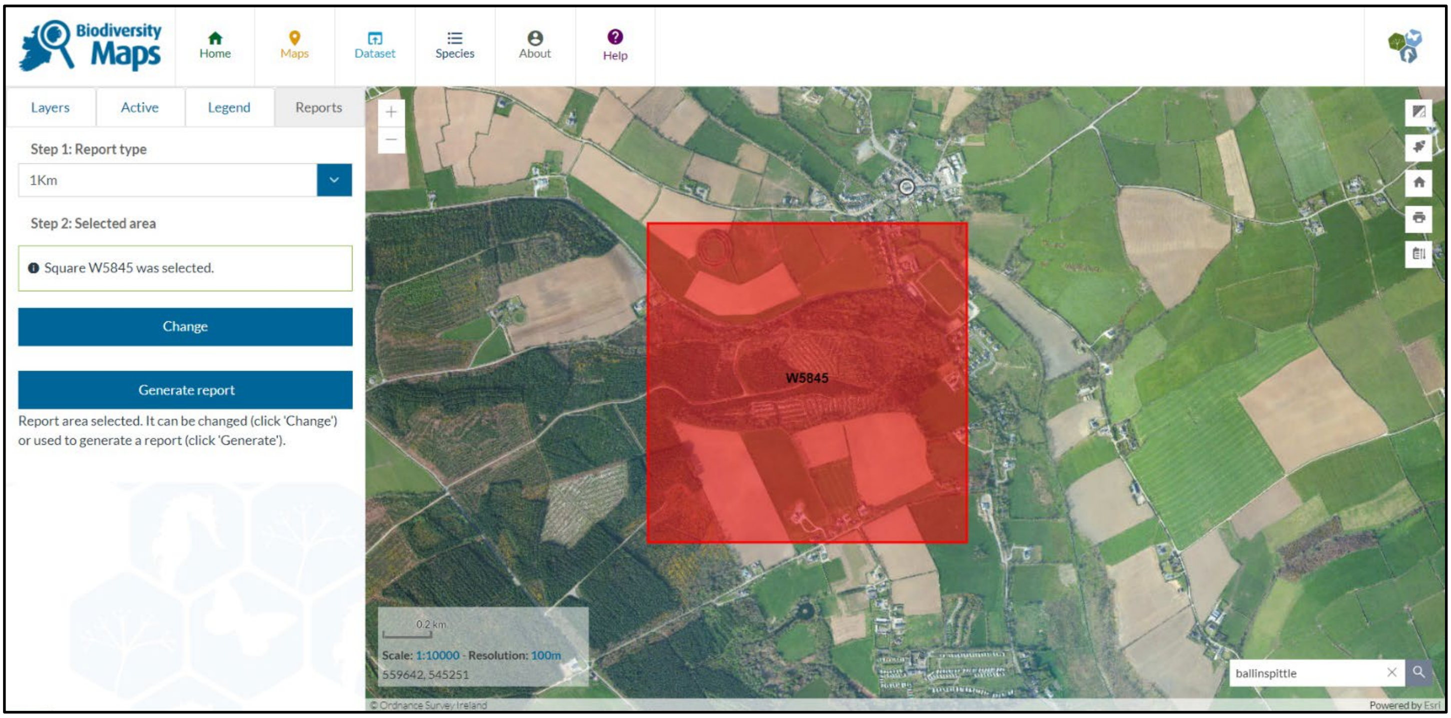
NPWS 2016, pNHA Site Synopses. Available at: https://www.npws.ie/sites/default/files/general/pNHA_Site_Synopsis_Portfolio.pdf (Accessed on 3rd October 2022).

Wikipedia 2022, Ballinspittle. Available at: https://en.wikipedia.org/wiki/Ballinspittle (Accessed on 3rd October 2022).

Appendix III NBDC Grid Square

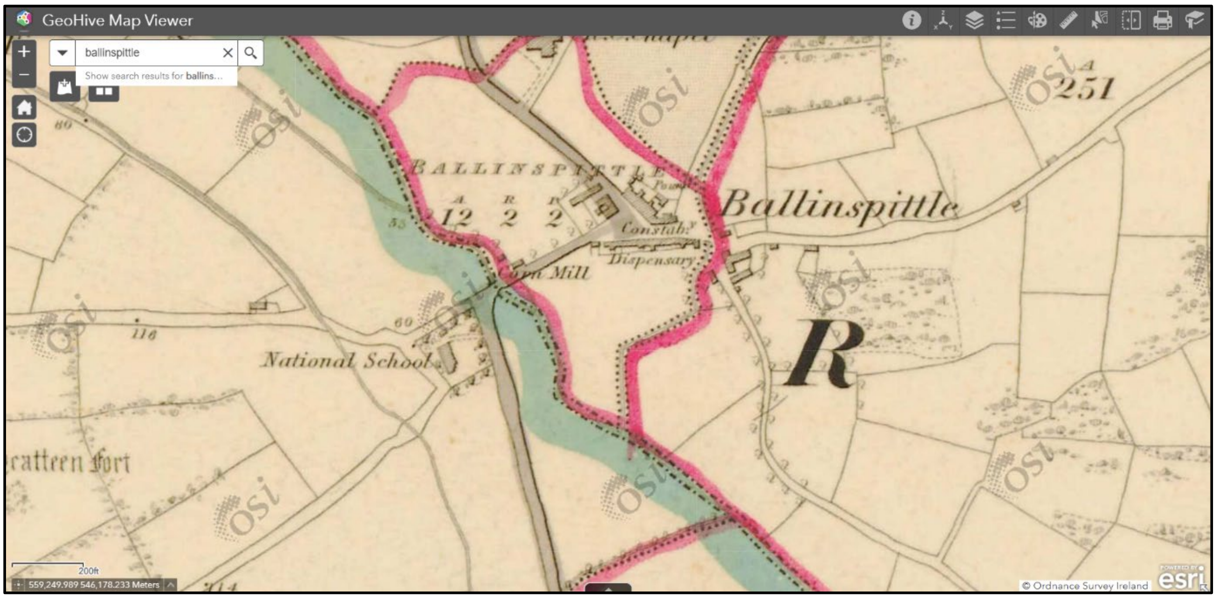
Data downloaded for this BAP from the NBDC website was from the following 1km Grid Squares: W54Y & W5845.



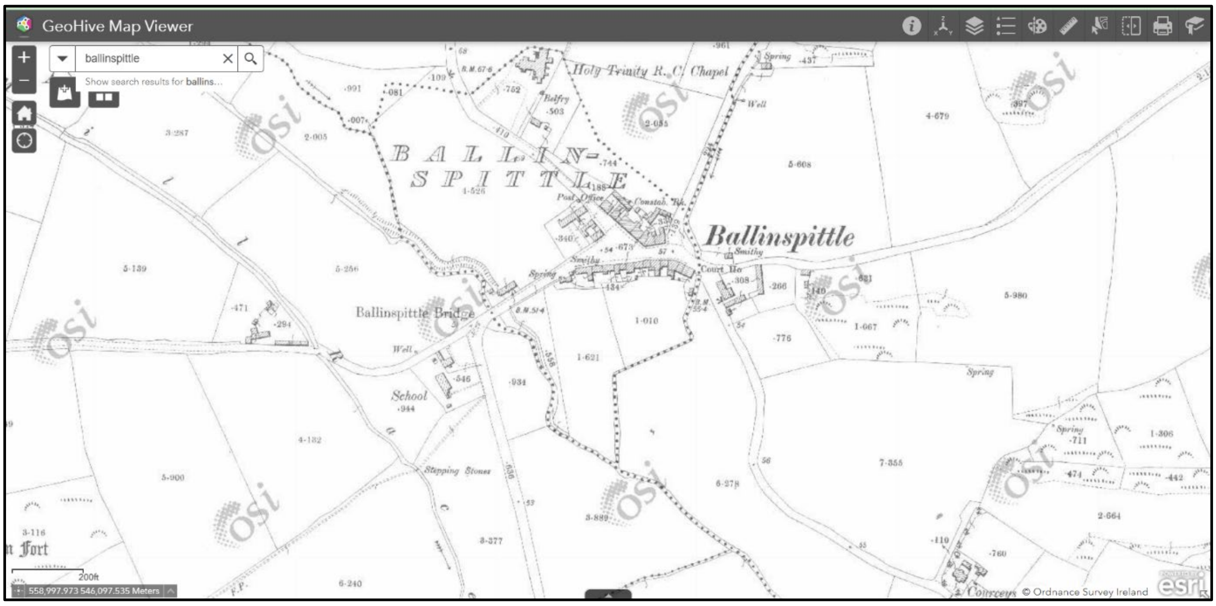


Appendix IV Geohive

The maps below were accessed on Geohive.ie and are for both sites in Ballinspittle.



Between **1829 and 1842** Ordnance Survey Ireland completed the first ever large-scale survey of an entire country. Acclaimed for their accuracy, these maps are regarded by cartographers as amongst the finest ever produced. These maps are particularly relevant for genealogy or those with an interest in social history. This presentation of the Historic **Map 6 inch (1837-1842)** is in colour.



The 25 inches to one mile (1:2500) scale mapping was created to facilitate the land reforms initiated in the **1880s – 1913.**

Appendix V Important Local Contacts

Cork County Council Heritage Officer

Name: Conor Nelligan

Phone: 021 428 5905

Email: conor.nelligan@corkcoco.ie

Website: https://www.heritagecouncil.ie/

LAWPRO Community Water Officer

Name: Catherine Seale

Email: cseale@lawaters.ie

Website: https://lawaters.ie/

National Parks and Wildlife Services (NPWS)

Southern Division Regional Manager

Phone: (01) 539 3208

District Conservation Officer (Cork city, Cork south and west, Kerry south-west)

Phone: (01) 539 3396

Website: https://www.npws.ie/

Bat Conservation Ireland

Email (Local Branch): No local Branch in Cork

Website (Local Branch): No local Branch in Cork

Website: **https://www.batconservationireland.org/**

An Taisce Cork

Head Office Phone: 01 454 1786

Local Email: cork@antaisce.org

Administration Email: info@antaisce.org

Website: https://www.antaisce.org/

Environmental Trust Ireland

Email: environmentaltrustireland@gmail.com

Website: https://environmental-trust-ireland.business.site/

National Biodiversity Data Centre

Phone: (051) 306 240

Website: https://biodiversityireland.ie/

Irish Wildlife Trust

Phone: 01 445 7259

Email: info@iwt.ie

Local Branch Facebook: https://www.facebook.com/IrishWildlifeTrustCork/

Website: https://iwt.ie/

Birdwatch Ireland – Cork & West Cork Branch

Email: info@birdwatchcork.com & secretary@birdwatchirelandwestcork.ie

Facebook: https://www.facebook.com/BirdWatchIrelandCorkBranch/ & https://www.facebook.com/BirdWatchIrelandWestCork

Local Branch Website: https://birdwatchcork.com/ & http://www.birdwatchirelandwestcork.ie/

Website: https://birdwatchireland.ie/

Cork Environmental Forum

Website: https://www.cef.ie/

Facebook: https://www.facebook.com/CorkEnvironmentalForum

Phone: 083 146 8064

Email: info@cef.ie

Oceans Plastic Project

Website: http://oceansplasticproject.ie/

Facebook: https://www.facebook.com/westcorkoceanspp/

Phone: 083 406 6021

Email: rory@oceansplasticproject.ie

Deep Maps – West Cork Coastal Cultures

Website: http://www.deepmapscork.ie/

Facebook: https://www.facebook.com/deepmapscork/

Email: deepmapscork@gmail.com

Wildflowers of West Cork

Facebook: https://www.facebook.com/wildflowersofwestcork

Grow It Yourself – Cork

Facebook: https://www.facebook.com/groups/185831658597/?mibextid=6NoCDW

Website: https://giy.ie/

Cork Nature Network

Phone: 087 228 2040

Email: contact@corknaturenetwork.ie

Facebook: https://www.facebook.com/corknaturenetwork/

Website: https://corknaturenetwork.ie/

Leave No Trace

Phone: +353 (0) 1 9059009

Email: info@leavenotraceireland.org

Website: https://www.leavenotraceireland.org/

Appendix VI About Wild Work and SECAD

Wild Work[4] is a unique initiative with biodiversity at its heart. We support everyone committed to helping nature; and our particular focus is to connect business, biodiversity and local communities. We support the work of local and national organisations involved in the conservation and protection of our natural environment. With our practical expertise, we help people create and care for meadows, woodlands, beaches, rivers and other natural habitats, both in urban and rural settings. We strive to work in line with best practice, with nature and not against nature and we value research as a key component of our work. Our aim is to understand the bigger picture, so we can help people do the right thing.

We work with:

- Local community groups and individuals
- Businesses big and small
- Schools and colleges
- Farmers
- Local authorities and other state bodies
- Conservation organisations and charities

Wild Work's Social Ethos

To benefit society and nature, we want to foster people's good will to ensure that our local flora, fauna and habitats are protected, valued and enhanced. We also want people who connect with the Wild Work movement to benefit positively in terms of improved health and well-being. **To educate and raise awareness,** we follow a place-based approach, working with nature and the environment in a positive way to have a real and practical impact on environmental issues; because increasing people's awareness, respect and understanding, helps them care more effectively for our natural world. **To support**

[4] Visit www.wildwork.ie for more information.

employment activation, we provide quality work experience opportunities for people and aim to contribute to the creation of fulfilling jobs, particularly in the biodiversity sector.

About SECAD

Wild Work is a SECAD Initiative, developed in response to a need identified by SECAD from years of experience in supporting environmental projects in local communities. Established in 1995, SECAD Partnership CLG is a Local Development Company with charitable status. SECAD has evolved over the years to manage a wide range of funds and services on behalf of various Irish government departments, state bodies and other organisations. SECAD is overseen by a voluntary board of directors made up of representatives from all sectors of society and the workplace.

As a Local Development Company, SECAD works with a range of different clients and stakeholders including: community and voluntary groups; disadvantaged target groups; job seekers; businesses (including private and social enterprise); farmers; schools; and the corporate sector. SECAD operates across various regional territories, as well as on a national basis. Primarily, the organisation works within the county (administrative area) of Cork in the area east and west of Cork Harbour. SECAD provides supports for the following: tourism (including infrastructure, marketing, training, networking); enterprise development; food producers; employment; rural and coastal towns and villages; community and youth services; community infrastructure; environment (including natural, built and cultural heritage, conservation, biodiversity etc); and social inclusion (working with people on low incomes, long term unemployed, disadvantaged communities and young people).