

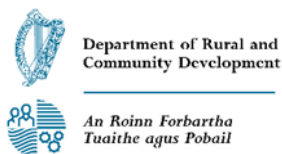


HELPING PEOPLE HELP NATURE HELP PEOPLE

Wild Work Public Lands – West Limerick Site (Newcastle West)

Biodiversity Action Plan 2022 - 2027

SECAD 



Comhairle Contae Chorcaí
Cork County Council



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas





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1. Introduction

As part of the suite of Biodiversity training undertaken in 2022 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, key stakeholders, and active members within their associated communities. The purpose of the course was about identifying a suitable publicly owned site such as a local park or public green space 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 were utilised to explore online tools and resources to allow the participants to better understand the biodiversity on their site and beyond and to 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 was as follows;

Module 1 - 13th July 11am-1pm - On site Assumpta Park

Module 2 – 3rd August 2pm-4pm - Online

Module 3 – 24th August 2pm-4pm - Online

Module 4 - 14th September 11am- 1pm - On site Assumpta Park



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.

Once the course was completed, a site-specific Biodiversity Action Plan was produced containing a habitat map, ecological appraisal of the site and a list of actions to be undertaken as directed by the participants.

The site focused on during this training course was a public green space in Assumpta Park which is a large housing estate in Newcastle West. Further details about the site and surrounds can be found below.

1.1. About Newcastle West

Newcastle West (Irish: An Caisleán Nua Thiar) is a town in west County Limerick, Ireland. It is the largest town in the county, excluding Limerick city and sits on the River Arra which flows into the River Deel. Newcastle West is in the middle of a great bowl-shaped valley in West Limerick, known one time as the valley of the Wild Boar, apparently due to the abundance of this animal here when the area was thickly wooded. The crest of the town carries the image of a wild boar. Newcastle West is on the N21 road from Limerick to Tralee, between Rathkeale and Abbeyfeale.

Newcastle West is a town with a history; a Desmond stronghold which has seen wars and conquest, harmony and development, a town which has adapted and changed to become a thriving centre with a wide range of facilities and services, underpinned by industry and enterprise. It is an expansive town, with lots of green and leafy spaces that make for relaxed and healthy life-styles, and which has drawn new people to live here over the past 25 years. Today Newcastle West has a population of close to 7000, an increase of almost 50% over the past 25 years. The town's motto, As dúchas, dóchas, packs a powerful message. Our hope springs from our traditions ([Wikipedia, 2022](#)).

Newcastle West is home to the Castle Demesne which is a mature parkland spanning over 100 acres which is set in a secluded location within walking distance of from the town centre. It is a dynamic site with plenty of wildlife to find and seating throughout to sit and observe.



A bilingual poet who spoke both Irish and English, Michael Hartnett (also Micheál ÓhAirtnéide) was born in Newcastle West, County Limerick. Hartnett won the American Ireland Literary Fund Award in 1975, 1980, and 1990, and the Irish American Cultural Institute Award in 1988. He lived in London, Dublin, Madrid, and Limerick. The Éigse Michael Hartnett, a poetry festival established in 2000, is held annually in Newcastle West, County Limerick, in his honour ([Poetry Foundation, 2022](#)). Michael is a much-loved local poet and some of his poems have clearly been influenced by the nature he witnessed in the area whilst he lived here. One such poem is the “A Necklace of Wrens” which has been included below.

A Necklace of Wrens by Michael Hartnett

When I was very young
I found a nest
Its chirping young
were fully fledged.

They rose and re-alighted
around my neck,
Made in the wet meadow
a feather necklet.

To them I was not human
but a stone or tree:
I felt a sharp wonder
they could not feel.

That was when the craft came
which demands respect.
Their talons left on me
scars not healed yet.



Image of a Wren from Shutterstock



1.2. Site Location

The site is located within a large housing estate in Newcastle West known as Assumpta Park. The site itself consists of a large maintained green area (approx. 158m x 115m) with a tarmac pathway running down the middle. The pathway provides access to the green from the housing estate and from Lower Maiden Street. The section of the path leading up from lower Maiden Street has a series of steps that have been painted with a mural to the famous local poet and previous resident of Assumpta Park Michael Hartnett. There are mature trees present along the boundary of the site and a lovely selection of mature hawthorn trees along the eastern section of the tarmac pathway. The site is bound to the North, South and West by housing and to the East by commercial properties.

The green is primarily amenity grassland which is mown regularly but there is a section of grassland along the Eastern side of the site that is currently not managed and is a haven for wildlife in the area. From the middle of the site there are views onto the Stack's to Mullaghareirk Mountains which form a Special Protected Area. The green is popular with local dog owners and there is heavy footfall along the pathway that cuts through the site; however, the green itself is infrequently used by residents in the area.



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)

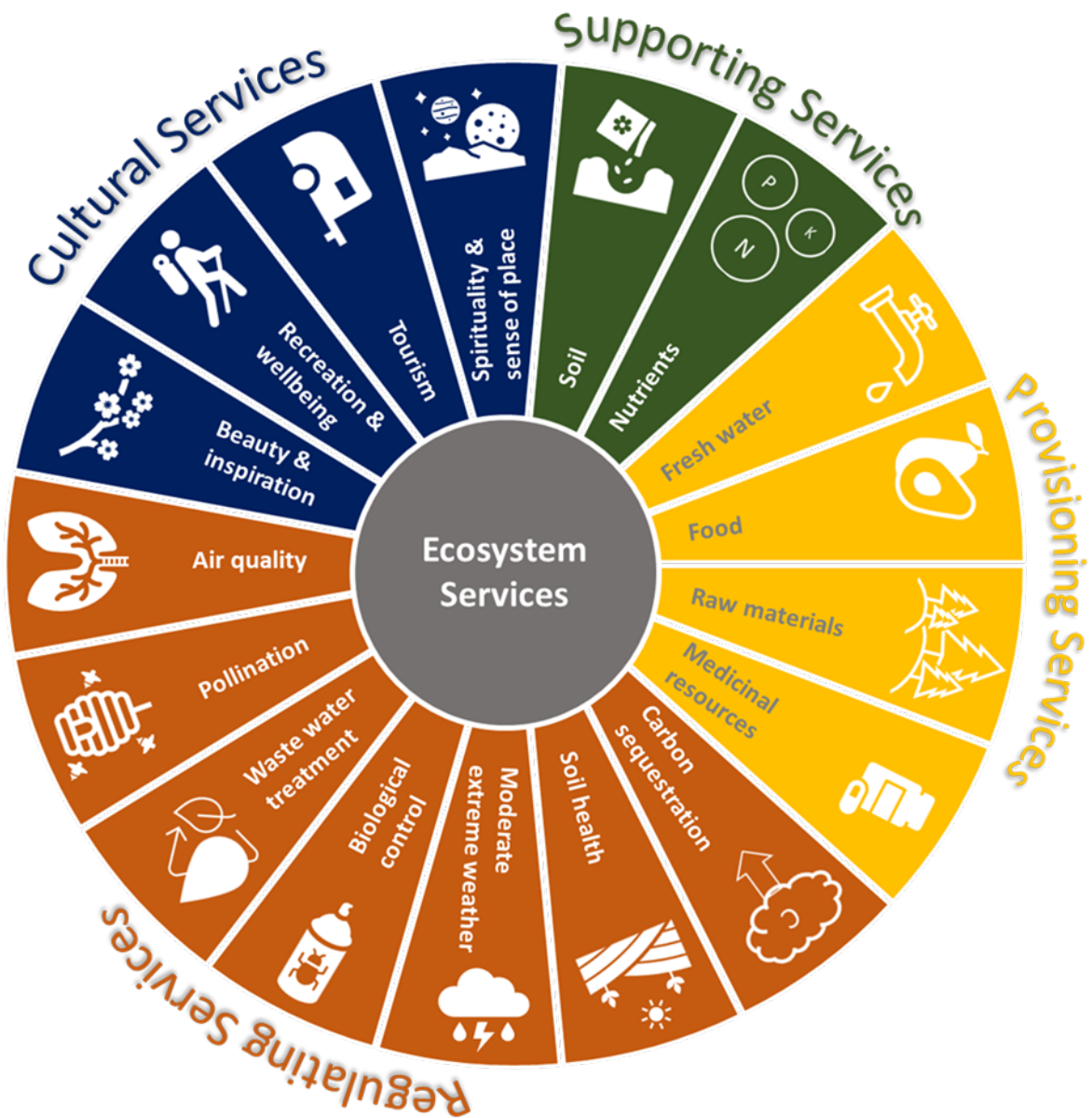
Ecosystem Services can be organised into 4 broad categories

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.

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.

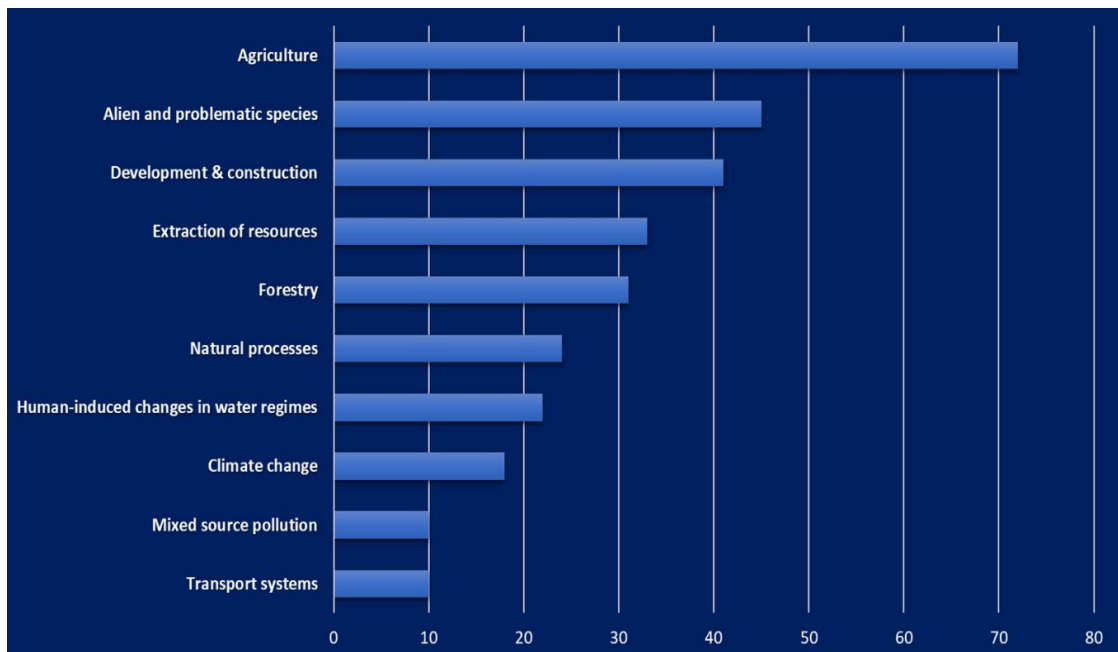


Figure 1 % of Habitats Directive Habitats affected by High and Medium Impact Threats. Adapted from (NPWS, 2019a).

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 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.
VU Vulnerable:	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 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:

- 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 and the **‘Water Framework Directive’**.

¹ <https://www.npws.ie/>



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 sub-species 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 Newcastle West, a number of 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 website². 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) GeoHive³ 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/>

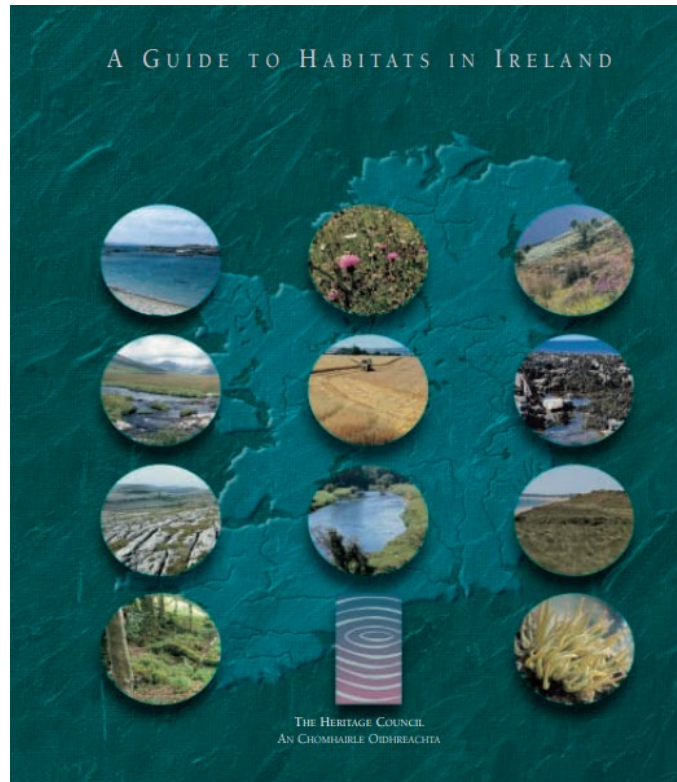


2.2. Habitat Mapping and other fieldwork

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 in tables in this BAP. Where this is the case, their scientific names are included in those tables. For named species not included in tables, their scientific names can be found in Appendix II.



3. Biodiversity in Newcastle West

3.1. Nature Conservation Sites in and around Newcastle West

Approximately 7km from the site there is a large Special Protected Area (SPA), the Stacks to Mullaghareirk Mountain, West Limerick Hills and Mount Eagle SPA. The mountain range is visible from the green area in Assumpta park and the views create a wonderful link between the urban and wild landscapes. 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.

The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA

Site Code: 004161

The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA is a very large site centred on the borders between the counties of Cork, Kerry and Limerick. The site is skirted by the towns of Newcastle West, Ballydesmond, Castleisland, Tralee and Abbeyfeale. The mountain peaks included in the site are not notably high or indeed pronounced, the highest being at Knockfeha (451 m). Other mountains included are Mount Eagle, Knockanefune, Garraunbaun, Taur, Rock Hill, Knockacummer, Mullaghmuish, Knight's Mt, Ballincollig Hill, Beennageeha Mt, Sugar Hill, Knockanimpuba and Knockathea, amongst others. Many rivers rise within the site, notably the Blackwater, Owentaraglin, Owenkeal, Glenlara, Feale, Clydagh, Allaghaun, Allow, Oolagh, Galey and Smerlagh.

The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA is of ornithological importance because it provides excellent nesting and foraging habitat for breeding Hen Harrier and is one the top sites in the country for the species. The presence of three species, Hen Harrier, Merlin and Short-eared Owl, which are listed on Annex I of the E.U. Birds Directive is of note ([NPWS Site Synopsis](#)). Further details on the plants, animals and habitats found within this protected site are given below.



3.2. Plants, Animals and Habitats within Protected Area

The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA

The site consists of a variety of upland habitats, though almost half is afforested. The coniferous forests include first and second rotation plantations, with both pre-thicket and post-thicket stands present. Substantial areas of clear-fell are also present at any one time. The principal tree species present are Sitka Spruce (*Picea sitchensis*) and Lodgepole Pine (*Pinus contorta*). A substantial part (28%) of the site is unplanted blanket bog and heath, with both wet and dry heath present. The vegetation of these habitats is characterised by such species as Ling Heather (*Calluna vulgaris*), Bilberry (*Vaccinium myrtillus*), Common Cottongrass (*Eriophorum angustifolium*), Hare's-tail Cottongrass (*Eriophorum vaginatum*), Deergrass (*Scirpus cespitosus*) and Purple Moor-grass (*Molinia caerulea*). The remainder of the site is mostly rough grassland that is used for hill farming. This varies in composition and includes some wet areas with rushes (*Juncus spp.*) and some areas subject to scrub encroachment.

This site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Hen Harrier. This SPA is a stronghold for Hen Harrier and supports the largest concentration of the species in the country. A survey in 2005 recorded 45 pairs, which represents over 20% of the all-Ireland total. A similar number of pairs had been recorded in the 1998-2000 period. The mix of forestry and open areas provides optimum habitat conditions for this rare bird, which is listed on Annex I of the E.U. Birds Directive. The early stages of new and second-rotation conifer plantations are the most frequently used nesting sites, though some pairs may still nest in tall heather of unplanted bogs and heath. Hen Harriers will forage up to c. 5 km from the nest site, utilising open bog and moorland, young conifer plantations and hill farmland that is not too rank. Birds will often forage in openings and gaps within forests. In Ireland, small birds and small mammals appear to be the most frequently taken prey.

Short-eared Owl, a very rare species in Ireland, has been known to breed within the site. Nesting certainly occurred in the late 1970s and birds have been recorded intermittently since. The owls are considered to favour this site due to the presence of Bank Voles, a favoured prey item. Merlin also breed within the site but the size of the population is not known. Red Grouse is found on some of the unplanted areas of bog and heath – this is a species that has declined in Ireland and is now Red-listed ([NPWS Site Synopsis](#)).



3.3. Places of Local Biodiversity Interest

A biodiversity survey was undertaken of Newcastle West in 2020 by a prominent local biodiversity consultant Geoff Hunt which highlights the richness of species and habitats present in the area. The report is filled with high quality photographs from the author and is a must read for locals as it can be used as a guide for what to expect to see when you are out exploring local biodiversity hotspots. From the report it was noted that a Sparrowhawk (*Accipiter nisus*) was observed in the Demesne. This is an amazing bird of prey species that usually nests in dense woodland as can be found at the Demesne. It's a great record for the area and certainly something to keep an eye out for. The report is freely available online here:

<https://www.limerick.ie/sites/default/files/media/documents/2021-04/newcastle-west-biodiversity-survey-2020.pdf>

The Limerick Greenway

The following text is from an article penned by Councillor Seán Hartigan of the Green Party following his visit to the Limerick Greenway in 2022. The article entitled "Make space for nature: Biodiversity on the Limerick Greenway" was published on the 25th of April 2020 on the Green Party website: The Limerick Greenway is a 40km off-road cycle and walking trail between Rathkeale in County Limerick and Listowel in County Kerry, with plans to eventually extend to Limerick City. The Limerick Greenway follows the route of the Great Western Railway and much of the track was cut through stone, with this narrow-sheltered corridor providing an ideal habitat for many of our 35 butterfly species. On our cycle, we were lucky to encounter the Orange Tip, whose caterpillars feed on Lady's Smock; Red Admirals, who are dependent on the many nettles on the Greenway as food for their larvae; Meadow Browns, whose young feast on the profusion of grasses growing beside the Greenway such as fescues, bents and meadow-grasses; and Small Whites, who have a preference for wild and garden members of the cabbage family.

Early spring flowers, especially Dandelion and Willow, are vital sources of pollen and nectar for emerging pollinators. On the 7km stretch from Newcastle west to Barnagh, we were lucky to encounter five bumblebee species: the Buff-tailed, White-tailed, Early Bumble Bee, Red-tailed and the Common Carder Bee.

As well as supporting active travel and attracting visitors to the area, the Limerick Greenway provides much needed habitat for our pollinators, many of which are in danger of extinction due to the replacement of flower rich habitat with monocultures of perennial ryegrass.



Greenways also provide connectivity between distant habitats for pollinators, bats and other mammals, reducing the danger of genetic isolation of populations.

On our visit to the viewing point at Barnagh, we passed through the Barnagh Tunnel, which was hewn by hand out of solid rock in the 1880s. The wet rock surfaces of the tunnel support a luxuriant growth of bryophytes, mosses and liverworts, including Scaly Male-fern, Lady-fern, Polypody, Maidenhair Spleenwort and Black Spleenwort.

Barnagh Tunnel is home to a Brown Long-eared Bat night roost, and other species such as the Common Pipistrelle, Soprano Pipistrelle and Leisler Bat can be seen in the vicinity of the tunnel at dusk ([Green Party, 2022](#)).



3.4. Ecological Appraisal and Habitat Map of Assumpta Park

This site is a large green area which serves as an amenity space for the surrounding housing estate. The site is typical of what you would find in many housing estates across Ireland in so far as it contains a managed green space that is bordered by large mature trees with a handful of smaller trees scattered across the site. The site is currently being managed by Limerick County Council.



Figure 2. Stairway with mural to local poet Michael Hartnett at the Southern entrance to the site

There were 3 distinct habitats observed during the site visit which are detailed in Table 2 on page 21 and a habitat map of the site can be found on page 22. The majority of the site is classified as Amenity Grassland (Fossit Code: GA2), which is regularly mown, and species diversity was generally low. However, there is a section of this site along the east and southeast that has been left unmown or is grazed on occasion. This part of the site had a greater diversity of flowering species on display which included White Clover (*Trifolium repens*), Red Clover (*Trifolium pratense*), Bird's-Foot-Trefoil (*Lotus corniculatus*), Ribwort Plantain (*Plantago lanceolata*), Creeping Buttercup (*Ranunculus repens*) and Common Vetch (*Vicia sativa ssp. Segetalis*) to name a few. These sections of the site highlight the potential



that is present in the soil seedbank and what species to expect to see thriving initially if a change of mowing regime is implemented.



Figure 3. Comparison of species diversity between regularly mown area on the left and unmown area on the right

An abundance of grass species are present along the verges of the site which included Cock's-foot (*Dactylis glomerata*), Common Bent (*Agrostis capillaris*), Creeping Bent (*Agrostis stolonifera*), False Oat-grass (*Arrhenatherum elatius*), Smooth Meadow-grass (*Poa pratensis*), Rough Meadow-grass (*Poa trivialis*) and Red Fescue (*Festuca rubra* agg.).



Figure 4. Entrance to site from the housing estate with evidence of recent grass cutting



The Treeline (Fossit Code: WL2) that borders the site is made up of several tree species including Ash (*Fraxinus excelsior*), Elder (*Sambucus nigra*), Hawthorn (*Crataegus monogyna*), Sycamore (*Acer pseudoplatanus*) and Lime (*Tilia cordata*). Some of the Ash trees due to their size and age, 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. There is a loose treeline of mature Lime and Sycamore trees bordering the southern entrance to the site. The rest of the treeline bounding the site is more compact, creating a dense row of mature trees. Below this boundary treeline there are unmanaged sections where extensive pockets of Spear Thistle (*Cirsium vulgare*), Common Nettle (*Urtica dioica*), Dock (*Rumex sp.*), Silverweed (*Potentilla anserina*), Hogweed (*Heracleum sphondylium*) and Bramble (*Rubus fruticosus*) can be found. This dense vegetation creates a sheltered corridor and a vital food source around the site for small mammals, birds and insects.



Figure 5. Spear thistle (*Cirsium vulgare*) in flower under treeline along site boundary

Hawthorn trees are present amongst the treeline but most notably there are three mature Hawthorns that stand alone in the middle of the grassland and one that is located at the corner of a row of domestic properties to the northeast. These mature trees have patches of Ivy (*Hedera hibernica*) present on them which extend to the upper canopy. The Ivy was in flower and supporting a host of beneficial pollinators (Hoverflies, Honey bees, Bumblebees and Butterflies) during the groups final site visit on the 14th of September. Ivy is a native species and due to it flowering in Autumn it's a vital source of nectar for pollinators at this time of year when most other plants have ceased flowering. The flowers once pollinated will



form fruit that are an important food source for birds in Winter. Ivy is an evergreen species meaning it retains its leaves year-round, the dense foliage of Ivy is a favoured location for invertebrate species to seek shelter or hibernate overwinter. One such species is the Brimstone butterfly that regularly overwinters amongst the leaves of the Ivy plant. It was noted that some of the Ivy had been cut at the base in an attempt to remove the species from the Hawthorn, this practice is to be discouraged as the Ivy is not harming the trees on site and is in fact a very beneficial species as outlined above.



Figure 6. One of the mature Hawthorn (*Crataegus monogyna*) trees on site that has Ivy (*Hedera hibernica*) growing from its canopy

Red Admiral (*Vanessa atalanta*) and Small Tortoiseshell (*Aglais urticae*) butterflies were the most abundant invertebrate species noted during the site visit. The Red Admiral is one of our largest species of butterfly and is a migrant that travels here from North Africa and Southern Europe every summer. Both the Red Admiral and Small Tortoiseshell are brightly coloured butterflies and as caterpillars their preferred food plant is Nettle. The abundance of these two species on site may be a result of the abundance of Nettle plants found around the site boundary.



Figure 7. An unmown section of the grassland extending out from below the canopy of the tree line

Three species of Bumblebee were recorded feeding on a variety of food plants across the site with clover proving to be very popular with this important group of pollinators. The Bumblebees recorded were the Red-tailed Bumblebee (*Bombus lapidarius*), White Tailed Bumblebee (*Bombus lucorum*) and the Common Carder Bee (*Bombus pascuorum*). Numerous Drone flies (*Eristalis tenax*) were observed basking on the leaves of Hawthorn and Ivy and one species of Ladybird was noted too, the 7-Spot Ladybird (*Coccinella septempunctata*).

The section of scrub on site is comprised of Elder (*Sambucus nigra*), Snowberry (*Symphoricarpos albus*) and Dogwood (*Cornus sanguinea*). There was evidence of Foxes (*Vulpes vulpes*) on the site due to the presence of fox droppings in front of the line of scrub. The droppings were purple/black and filled with seeds suggesting the fox was feeding on the bramble berries found across the border of the site.

Due to its location in a built up urban area this site is acting as a refuge for local wildlife and holds massive potential for the future to become a biodiversity hotspot in the locality.



Figure 8. Fox (*Vulpes vulpes*) droppings found on site

Habitats listed in Table 2 below are classified according to 'A Guide to Habitats in Ireland' (Fossit, 2000).

Fossit Habitat Name	Fossit Code
Treeline	WL2
Amenity Grassland (Improved)	GA2
Scrub	WS1

Table 2. Habitats recorded in the BAP area



Figure 9: *Habitat Map of Site*



From the [National Biodiversity Data Centre's](#) species list for the 2km square that encompass the site at Assumpta Park there are records for 48 species of bird, 60 species of flowering plants, 14 species of butterfly, 7 species of bumblebee, 3 species of ladybird, 2 species of crustacean and 2 species of terrestrial mammal to name some. Most of these records are from the 2000's with the majority of records being logged in the past 10 years.

Some of the 48 bird species include common species such as the Black-billed Magpie (*Pica pica*), Blue Tit (*Cyanistes caeruleus*), Chaffinch (*Fringilla coelebs*), Common Blackbird (*Turdus merula*), Common Buzzard (*Buteo buteo*), Eurasian Collared Dove (*Streptopelia decaocto*), European Robin (*Erithacus rubecula*), Grey Heron (*Ardea cinerea*) and Stonechat (*Saxicola torquata*). Some birds of conservation concern that are afforded varying degrees of protection under national or European law have also been recorded within the area, these species include the Barn Swallow (*Hirundo rustica*), Black-headed Gull (*Larus ridibundus*), Common Kingfisher (*Alcedo atthis*), House Martin (*Delichon urbicum*), House Sparrow (*Passer domesticus*), Jack Snipe (*Lymnocyptes minimus*), Rock Pigeon (*Columba livia*), Sand Martin (*Riparia riparia*) and the Spotted Flycatcher (*Muscicapa striata*).

A White-throated Dipper (*Cinclus cinclus*) was recorded within the river Arra during 2020. This is a marvellous bird which is known as an aquatic passerine (songbird) species that can be found on fast moving, shallow and rocky streams or rivers that have good water quality. It's an unusual songbird due to the unique way it acquires its food source which is aquatic invertebrates such as the larvae of caddis and mayflies. This medium sized songbird feeds by diving into fast flowing waters and searching underwater through stones and pebbles in the riverbed for food.

Of the 60 species of flowering plants logged there are records for many common species such as Ash (*Fraxinus excelsior*), Blackthorn (*Prunus spinosa*), Bramble (*Rubus fruticosus agg.*), Cleavers (*Galium aparine*), Common Nettle (*Urtica dioica*), Cuckooflower (*Cardamine pratensis*), Greater Plantain (*Plantago major*), Hedge Bindweed (*Calystegia sepium*), Meadow Buttercup (*Ranunculus acris*), Red Valerian (*Centranthus ruber*) and Smooth Sow-thistle (*Sonchus oleraceus*).

Amongst the Flowering Plants there are two records for Invasive Alien Species that are listed as species of European Union Concern and are subject to strict control and regulation under National and European Union Law. The presence of Invasive Alien Species within an area is of concern as they can rapidly colonise an area displacing and out competing our native species. This can have knock on effects for the functioning of an ecosystem and the delivery of vital ecosystem services. The two species recorded are Indian Balsam (*Impatiens glandulifera*) and Japanese Knotweed (*Fallopia japonica*) which were not recorded in the area in 2020.

Of the 7 species of Bumblebee and 14 species of Butterfly the most observed species in the area are the Small Tortoiseshell Butterfly (*Aglais urticae*) with 63 individuals recorded, Small



White Butterfly (*Pieris rapae*) with 65 individuals recorded and the Common Carder Bumblebee (*Bombus pascuorum*) with 34 individuals recorded in 2021.

Two Crustacean species have also been recorded one of which is the Freshwater White-clawed Crayfish (*Austropotamobius pallipes*) which was recorded in 2017 as part of the EPA's national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018. The Freshwater White-clawed Crayfish (*Austropotamobius pallipes*) is a species afforded protection under the EU Habitats Directive/Irish Wildlife Acts. Crayfish are freshwater relatives of the marine lobsters, which they closely resemble in appearance. This species is currently under threat here in Ireland due to the crayfish plague, which was transmitted by introduced crayfish species and is caused by the fungus *Aphanomyces astaci*. This fungus has thought to be negatively affecting the species in Ireland since the late 1980s. It is concerning to note that the fungus known as the Crayfish plague (*Aphanomyces astaci*) was recorded in the area in 2017.

The European Otter (*Lutra lutra*) and West European Hedgehog (*Erinaceus europaeus*) are also present in the records. 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](https://www.geohive.ie) it appears that the site hasn't changed much in terms of its layout since the mid-1800s. Although the urban fabric of Newcastle West extended to surround the site the area appears to have been a green space of some description since the first maps were produced in the mid-1880s. This is an interesting observation that warrants further research as the Hawthorn trees described above are mature. Due to superstitions surrounding this species of tree it could be speculated that they may have remained in place since the time of the original maps. The oldest known Hawthorn tree on record is thought to be around 700 years old.



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>.

4. 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 Meadow Management	
1.1	Increase areas of the green to be managed for pollinators. A suggested area is along the site boundary where the flower rich grassland could be extended out a meter or two. Cut & lift once a year as per NBDC Guidelines on managing grasslands for pollinators.	
1.2	Implement 8-week meadows in appropriate areas of the green. Consider No Mow May and allowing Dandelions to bloom across the green in Spring.	
2.	Tree Planting	
2.1	Gather acorns with children from the area in Autumn and plant them in suitable areas along the site boundary or along the pathway that runs through the site.	
2.2	Plant a small selection of fruit trees on site with the goal of creating a small edible community garden in the future. The trees	



	should be clearly labelled with the species name and include some information about the species, role of pollinators and folklore.	
3.	Natural Bug Hotels & Hedgehog Homes	
3.1	Using wood gathered locally create natural bug hotels/log piles amongst breaks in the dense vegetation along the site boundary.	
3.2	Create a “home for hedgehogs” within the dense vegetation along the site boundary.	
4.	Install Bird & Bat Boxes in mature trees on site	
4.1	Consult with the local branch of Birdwatch Ireland and Bat Conservation Ireland to see where the most suitable location for bird/bat boxes would be to be installed on site.	
4.2	Reach out to a local secondary school that teaches woodwork or a local men’s shed group with design plans and see if they can facilitate construction of bird/bat boxes.	
4.3	Monitor any boxes installed on site to see if they are being utilised.	
5.	Public engagement with green space – Events & Outreach	
5.1	Host biodiversity themed event days/walk and talks on site. Invite public engagement officers from LAWPRO, Bird Watch Ireland, The Heritage Council, The Irish Wildlife Trust etc. to attend and highlight the importance of the biodiversity on the site and in the surrounding area.	
5.2	Host an annual Bioblitz event on site during National Biodiversity Week.	
5.3	Host other events on site such as Street Feast and use these events to promote the green space and the importance of it for biodiversity and local inhabitants.	
6.	Interpretive signage regarding Biodiversity, Local history & Points of interest on site	
6.1	Erect signage on site and/or at entrance to site that explains that the area is being “Managed for Wildlife”. Use of “NBDC Meadow Management” signage.	
6.2	Use signage to highlight biodiversity on site eg. Identify and clearly label trees on site. A good place to start would be with the hawthorns that are close to the path.	



6.3	Signage to connect the green space with the mountains that are viewable from the middle of the green. Highlight importance of biodiversity to humans in terms of ecosystem services and mental health.	
6.4	Promotion of citizen science on site by using NBDC signs relating to pollinator monitoring & FIT counts.	
7.	Citizen Science Monitoring	
7.1	Gathering of baseline data relating to Pollinators. Undertake Butterfly and Bumblebee monitoring as per NBDC methodology. Over time this will provide data on the effectiveness of pollinator friendly management on site. Involve local community residents/groups, local schools and youth organisations.	
7.2	Partake in Flower Insect Timed (FIT) count on site. Involve local community residents/groups, local schools, and youth organisations.	
7.3	Uploading of casual records onto the NBDC database. Increase number of records and species uploaded locally. Consider uploading records for Ladybirds, Shield bugs, Trees, Birds, Common Flowering Plants, Bumblebees, Butterflies and Mammals.	
7.4	Utilise the NBDC online training relating to Citizen Science schemes to assist in training of participants and locals to encourage engagement with Citizen Science locally.	
7.5	Engage with LAWPRO and begin Citizen Science Stream Index (CSSI) monitoring of River Arra.	
8.	Paint Bollards and ESB boxes on site	
8.1	Seek relevant permissions from Council and ESB regarding painting of bollards at entrance to site and ESB boxes on site.	
8.2	Engage with local artists, youth and community to design and paint biodiversity themed pieces on ESB Boxes. The bollards if acceptable could be painted with bright colours to draw eyes and people to the green space.	
9.	Public Art – Creative, Upcycled & Recycled	
9.1	The creation of public art pieces to be displayed on site using upcycled or recycled materials. The pieces should be biodiversity themed, engaging and created with residents.	
10.	Durable benches, Public Seating, Creative seats for Children	



10.1	Once a few actions have been successfully completed on site consideration should be given to installing public seating to allow people to further engage with the site. Location for any seating should be considerate of the views of the mountain range which can be seen from the middle of the green. Seating could be fun and creative eg. Wooden mushroom shaped seats for kids and should be accessible to all.	
11.	Maintenance of site boundary using herbicide free methods	
11.1	Site boundary to be kept clean and tidy and free of plant growth. If possible, herbicide free options should be considered to further promote the pollinator friendly management of the space.	
12.	Compile history of site – Stories from the past	
12.1	Use online resources and public records to research the history of the green space in Assumpta Park.	
12.2	Interview long term residents of Assumpta Park and compile their stories relating to the green space and nature in the area.	
12.3	Publish research online or in print and share within the community and beyond to promote use of the green space.	



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](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://www.pan-uk.org/>

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](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/>



Abarta Heritage – Interpretive Signage

<https://www.abartaheritage.ie/what-we-do/heritage-interpretation-services/interpretive-signage-design/>

Signiatec - Interpretive Signage

<http://www.signiatec.ie/>

Heritage Council – Ideas for interpreting Heritage sites

https://www.heritagecouncil.ie/content/files/bored_of_boards_1mb.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/>

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://creativestarning.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_EN_G.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/>

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>

Local Community using Green Hay. Marches Meadow Group

<http://www.marchesmeadowgroup.com/green-hay/>

Natural England Green Hay Trial. Ken Slater. (YouTube video)

<https://www.youtube.com/watch?v=7pd0gzu-5mc>



Deadwood

Wood Wise Life in Deadwood. The Woodland Trust

<https://www.woodlandtrust.org.uk/search/?q=life+in+deadwood&Submit+search=&p=1>

Veteran Trees

Veteran Trees: A guide to good management. Natural England

<http://publications.naturalengland.org.uk/publication/75035>

Estimating the Age of Large and Veteran Trees in Britain. Forest Research (U.K.).

<https://www.forestresearch.gov.uk/research/archive-estimating-the-age-of-large-and-veteran-trees-in-britain/>

The importance of smaller veteran trees. Arboricultural Journal

<https://www.tandfonline.com/doi/pdf/10.1080/03071375.2017.1295702>

Trees for the Future: Growing

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/>

Irish Hedge Laying Association

<https://hedgelaying.ie/>

Planting a Native Hedgerow or Woodland: Bórd Bia

<https://www.bordbia.ie/globalassets/lifestyle/resources/organic-gardening-english/planting-a-native-hedgerow-or-woodland.pdf>



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/>

Hedgerow Planting- Answers to 18 Common Questions: Natural England

http://hedgelink.org.uk/cms/cms_content/files/75_ne_hedgerow_planting.pdf

Wildlife Hedgerow: The Conservation Volunteers

<https://treegrowing.tcv.org.uk/grow/planting/hedge>

Hedgerows for Pollinators: All Ireland Pollinator Plan

<https://pollinators.ie/wordpress/wp-content/uploads/2018/04/How-to-guide-Hedgerows-2018-WEB.pdf>

Other useful things to consider when planting a native hedgerow: Irish Times

<https://www.irishtimes.com/life-and-style/homes-and-property/gardens/dig-in-now-s-the-ideal-time-to-plant-your-native-hedgerow-1.2936324#:~:text=Soak%20the%20root%20systems%20in%20water&text=Using%20a%20garden%20fork%20to,metre%20but%20stagger%20the%20rows>

Tips on Managing older Hedgerows: RSPB

http://ww2.rspb.org.uk/images/englishhedgerows1_tcm9-133255.pdf

Ivy

Ivy on Walls. Historic England.
(this includes recommendation on when and when not to remove ivy, how to remove ivy, and how to manage ivy).

<https://research.historicengland.org.uk/Report.aspx?i=15604>

The Irish Times – Give Ivy a Break

<https://www.irishtimes.com/news/environment/give-ivy-a-break-it-s-a-sanctuary-for-beleaguered-wildlife-1.3802920#:~:text=Ivy's%20insects%2C%20in%20turn%2C%20are,%2C%20woodpigeons%2C%20blackcaps%20and%20more.>



NBDC - Naturalists buzzing as new bee arrives in Ireland – Ivy Bee

<https://biodiversityireland.ie/naturalists-buzzing-as-new-bee-arrives-in-ireland/>

Dog Fouling & Litter

Dogs Trust Ireland – Big Scoop Campaign

<https://www.dogstrust.ie/whats-happening/issues-campaigns/the-big-scoop/>

Fingal Council – Dog Fouling Campaign Resources

<https://www.fingal.ie/council/service/green-dog-walker-initiative>

West Suffolk Council - Community-Action-Plan-Dog-Fouling

<https://www.westsuffolk.gov.uk/bins/street-cleaning/upload/Community-Action-Plan-Dog-Fouling-2.pdf>

Leave No Trace – Love This Place Campaign

<https://www.leavenotraceireland.org/love-this-place-leave-no-trace/>

National Spring Clean Campaign

<https://nationalspringclean.org/>

Pure Mile Project

<http://www.pureproject.ie/the-pure-mile/>

Zero Waste Scotland – 7 successful anti-litter campaigns

<https://www.zerowastescotland.org.uk/litter-flytipping/top-campaigns>

Public Art/Biodiversity Themed Art

Irish Wildlife Trust – Wild Art Competition (Keep an eye on Spring 2023)

<https://iwt.ie/wildart/>

Team Limerick Clean-up – Annual Biodiversity Photo Competition

<https://www.teamlimerickcleanup.ie/campaigns-resources/biodiversity>
<https://www.ilovelimerick.ie/tlc-biodiversity-photography/>

The Limerick School Project – Biodiversity Displays

<http://www.limerickschoolproject.ie/biodiversity-displays/>



Arts Council Ireland – Biodiversity Themed Art Project example

<https://www.arts council.ie/blog/mark-clare-an-urgent-enquiry/>

Dan Leo – Biodiversity Themed Street Art

<https://www.danleodesign.com/>

Recreate.ie – Recycled & Upcycled Art

<https://recreate.ie/>

Upcycling Project – Materials & Ideas

<http://www.upcyclingproject.ie/>

Public Seating

Reliance Foundry – Park Bench Guide

<https://www.reliance-foundry.com/blog/park-benches-guide>

ABES – A closer look on ... Public benches!

<https://abes-online.com/en/guides-en/a-closer-look-on-public-benches/>

Age Friendly Ireland – Age Friendly Seating

<https://agefriendlyireland.ie/wp-content/uploads/2021/10/AFI-Seating-Guide.pdf>

Sports Ireland – Great Outdoors - A guide for accessibility

<https://www.sportireland.ie/sites/default/files/2019-10/great-outdoors-a-guide-for-accessibility.pdf>

Irish Wheelchair Association – Best Practice Access Guidelines (See section on Outdoor seating)

https://www.iwa.ie/app/uploads/access-guidelines/best-practice-access-guidelines/3188_IWA_Best_Practice_Access_Guidelines_4.pdf

Local History

Limerick City & County Council – Local Studies Database

<https://www.limerick.ie/council/services/community-and-leisure/libraries/local-studies>

Limerick Historical Society

<http://limerickhistoricalsociety.ie/>



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Geo Hive – Historical Mao Viewer

<https://www.geohive.ie/>

National Archives – Historical Records

<https://www.nationalarchives.ie/historical-records/>

Irish Archives Resource

<https://iar.ie/>

Abarta Heritage - Online Research Guide

<https://www.abartaheritage.ie/online-research-guide-tips/>



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.

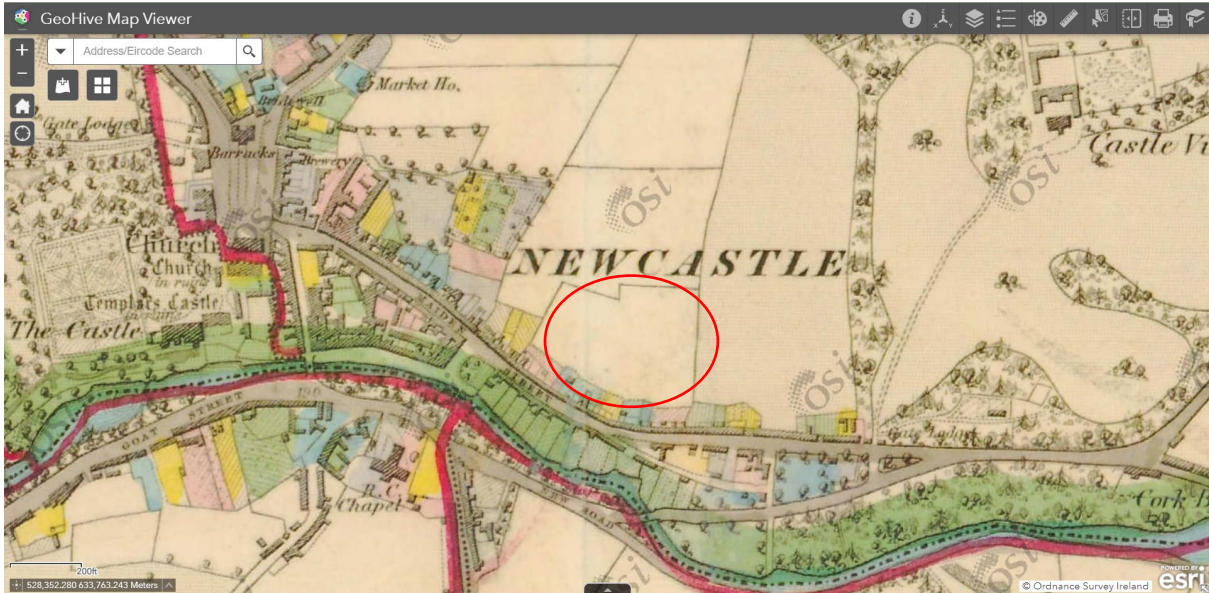
For example, developing and managing woodlands as spaces for people to exercise and play while also prioritising the need to manage the woodland for the benefit of the species of flora and fauna that live there.

Actions included in this plan take this concept into consideration.

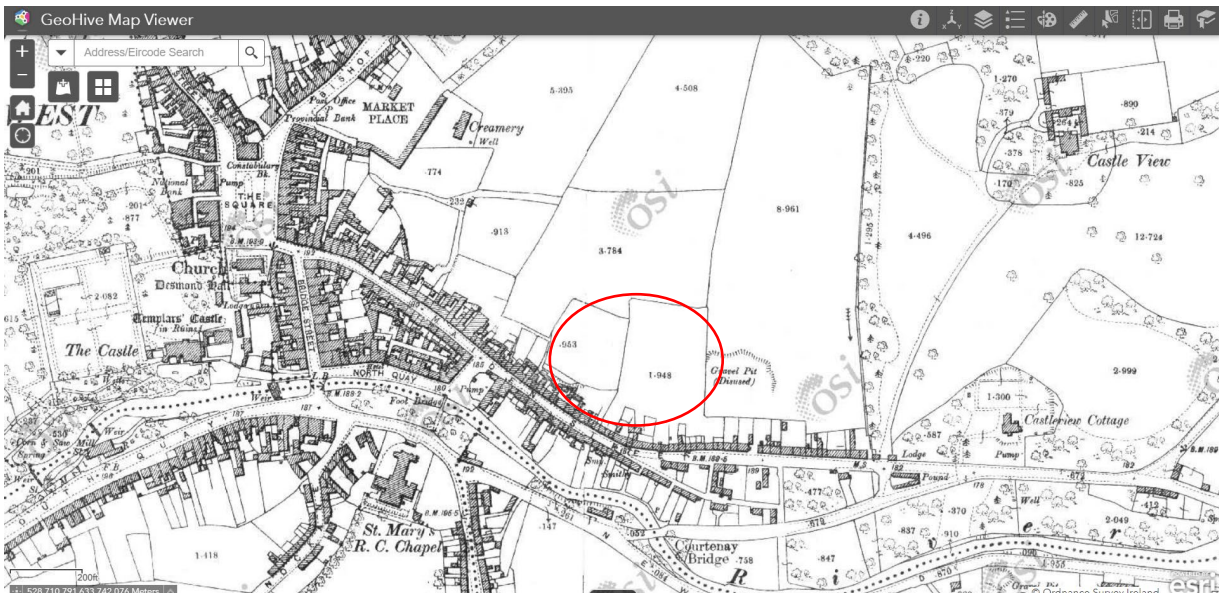


Appendix II Geohive

The maps below were accessed on Geohive.ie and are for the site at Assumpta Park. The location of green site in Assumpta Park is circled in red in the maps below.



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 III NBDC Grid Square

Data downloaded for this BAP from the NBDC website was from the following 1km and 2km Grid Squares: R2833 & R23W.

1km

The screenshot shows the Biodiversity Maps web application interface. The top navigation bar includes 'Home', 'Maps', 'Dataset', 'Species', 'About', and 'Help'. The left sidebar has tabs for 'Layers', 'Active', 'Legend', and 'Reports'. Under 'Reports', 'Step 1: Report type' is set to '1Km'. 'Step 2: Selected area' shows 'Square R2833 was selected.' with a 'Change' button and a 'Generate report' button. Below the buttons, a message states: 'Report area selected. It can be changed (click 'Change') or used to generate a report (click 'Generate').' The main map area displays a satellite view with a red grid square labeled 'R2833' overlaid on a residential area. A scale bar indicates 0.2 km, and the map metadata shows 'Scale: 1:10000 - Resolution: 100m' and coordinates '530132, 632666'. A search bar at the bottom right contains the text 'Find address or place'.

2km

The screenshot shows the Biodiversity Maps web application interface. The top navigation bar includes 'Home', 'Maps', 'Dataset', 'Species', 'About', and 'Help'. The left sidebar has tabs for 'Layers', 'Active', 'Legend', and 'Reports'. Under 'Reports', 'Step 1: Report type' is set to '2Km'. 'Step 2: Selected area' shows 'Square R23W was selected.' with a 'Change' button and a 'Generate report' button. Below the buttons, a message states: 'Report area selected. It can be changed (click 'Change') or used to generate a report (click 'Generate').' The main map area displays a satellite view with a red grid square labeled 'R23W' overlaid on a rural landscape. A scale bar indicates 0.6 km, and the map metadata shows 'Scale: 1:25000 - Resolution: 100m' and coordinates '532249, 632947'. A search bar at the bottom right contains the text 'Find address or place'.



Appendix IV References

Geoff Hunt 2020, Biodiversity Report Newcastle West. Available at:

<https://www.limerick.ie/sites/default/files/media/documents/2021-04/newcastle-west-biodiversity-survey-2020.pdf> (Accessed on 10th October 2022).

Councillor Seán Hartigan 2022, Make Space for Nature. Biodiversity on the Limerick

Greenway. Available at: <https://www.greenparty.ie/news/make-space-nature-biodiversity-limerick-greenway> (Accessed on 10th October 2022).

NPWS 2015, Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA Site Synopsis. Available at: <https://www.npws.ie/protected-sites/spa/004161> (Accessed on 10th October 2022).

Poetry Foundation, Michael Hartnett. Available at:

<https://www.poetryfoundation.org/poets/michael-hartnett> (Accessed on 10th October 2022).

Wikipedia 2022, About Newcastle West. Available at:

https://en.wikipedia.org/wiki/Newcastle_West (Accessed on 10th October 2022).



Appendix V Important Local Contacts

Limerick County Council Heritage Officer

Name: Tom O'Neill

Phone: 061 557229

Email: heritage@limerick.ie

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

LAWPRO Community Water Officer

Name: RUAIRÍ Ó CONCHÚIR

Phone: 085 808 3715

Email: roconchuir@lawaters.ie

Website: <https://lawaters.ie/>

National Parks and Wildlife Services (NPWS)

Southern Division Regional Manager

Phone: (01) 539 3208

District Conservation Officer (Limerick, Tipperary north)

Phone: (01) 539 3201

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

Bat Conservation Ireland

Email (Local Branch): limerickbatgroup@gmail.com

Website (Local Branch): <https://limerickbatgroup.wixsite.com/website>

Website: <https://www.batconservationireland.org/>

Geoff Hunt – Local Ecologist

Phone (Home): 069 -61488 evenings

Mobile: 087-7656439

Email: geoffreyhunt@eircom.net



Website: <https://www.heritageinschools.ie/heritage-expert/profile/geoff-hunt>

An Taisce Limerick

Head Office Phone: 01 454 1786

Local Email: limerick@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/>

Feale Biodiversity

Phone: 089 446 0570

Email: annekeire@gmail.com

Facebook: facebook.com\fealebiodiversity

Irish Wildlife Trust

Phone: 01 445 7259

Email: info@iwt.ie

Email (Local Branch): limerickbranch@iwt.ie

Facebook: <https://www.facebook.com/IWTLimerickBranch>

Website: <https://iwt.ie/>



Wildwork

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Birdwatch Ireland – Limerick Branch

Phone: +353 87 7927972

Email: birdwatchirelandlimerickbranch@gmail.com

Facebook: <https://www.facebook.com/birdwatchlimerick/>

Website: <https://birdwatchireland.ie/>

Grow It Yourself – Limerick

Website: <https://www.changex.org/ie/giy/limerick-city>

Facebook: <https://www.facebook.com/LimerickGrowItYourself/>

Website: <https://giy.ie/>

Maigne River Trust

Phone: 0860669606

Email: info@maiguerivertrust.ie

Website: <https://maiguerivertrust.ie/>

Easy Treesie

Phone: (01) 627 5075

Email: Orla@easytreesie.com

Website: <https://easytreesie.com/>

Crann – Trees for Ireland

Phone: +353 (0)1 627 5075

Email: info@crann.ie

Website: <https://crann.ie/>

Leave No Trace

Phone: +353 (0) 1 9059009

Email: info@leavenotraceireland.org



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Website: <https://www.leaveontraceireland.org/>



Appendix VI About Wild Work and SECAD

Wild Work⁴ 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).

