



Mullingar Community Biodiversity Action Plan 2020-2030

an initiative of Mullingar Tidy Towns with funding support
from the Community Foundation for Ireland 2020





Mullingar Tidy Towns Community Biodiversity Action Plan 2020-2030
Prepared by Nuala Madigan, B.Agr.Env.Sc., M.Ed.. 2021.
Ecologist & Education Officer, Irish Peatland Conservation Council
Bog of Allen Nature Centre, Lullymore, Rathangan, Co. Kildare, R51 V293
E-mail: bogs@ipcc.ie, Tel: 045-860133

Cover Images © Nuala Madigan including Marsh Thistle, Creeping Buttercup, Self Heal, Seven-spotted Ladybird, Marsh Woundwort and Common Daisy

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Bittersweet, identified along the banks of the River Brosna at Mount Street, Mullingar Town Park. Image © N. Madigan



1. Acknowledgements

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I am grateful to the committee members of Mullingar Tidy Towns including, but not limited, to Bill Collentine, Margaret Feely and John Bawle for their invitation to work with them over the past year and thank them for their commitment and enthusiasm throughout the project.

I would like to thank Brian Kelly, Executive Engineer with Mullingar Municipal District for his permission and local knowledge provided during the biodiversity survey of Mullingar Town Park.

I would like to acknowledge and thank Councillor Hazel Smyth, Green Party Representative, Westmeath County Council who took time to review the plan and provided recommendations of biodiversity actions to be included within the plan.

I would finally like to thank my colleagues from the Irish Peatland Conservation Council and volunteer Donal Lyons for their patience, expertise and support that was extended to me during the course of this project.



Image: Banks of the Royal Canal at Grange Bridge, Mullingar. © N.Madigan

2. Executive Summary

Mullingar Tidy Towns are an active voluntary community group who work towards enhancing the appearance of their town, making the town a more attractive place to live, to raise awareness of environmental issues, to promote the environmental & historical assets of the town, to encourage Residents, Retailers, and Industrial concerns to maintain their estates and premises, to identify “black spots” and “problem areas”, develop strategies to deal with them effectively and to lobby for better and more effective local government services. The development of this Community Biodiversity Action Plan aims to support the community in managing resources to contribute to the conservation of biodiversity, or wildlife at a local level.

Mullingar is considered an urban town and is located in the midlands of Ireland in the province of Leinster. It is steeped in History. Local Historians Jason McKeivitt and Ruth Illingworth provide a detailed account of the history of Mullingar Town dating back over 5,000 years (pages 8 & 9). This project focused on four biodiversity areas within the town, Mullingar Town Park, the River Brosna at Mount Street, the Royal Canal at Grange Bridge and the Famine Graveyard. A review of the Sites and Monuments Records and the National Inventory of Architectural Heritage identified a ford and water mill were once located at the River Brosna at Mount Street, a ‘Priest Well’ in the Town Park and the Famine Graveyard as a historical burial site (pages 10-13). Projects that aim to maintain and enhance the biodiversity of Mullingar should have no negative impact on the cultural heritage of the community.

The Development of this Community Biodiversity Action Plan aims to compliment the National Biodiversity Action Plan 2017-2021 and Westmeath County Council Biodiversity Action Plan by acting at a local level. It is important to note that wildlife in Ireland is protected under the Wildlife Act, 1976 and the European Communities (Birds and Natural Habitats) Regulations 2011, which transposes the E.U. Birds Directive and the Habitats Directive into Irish law. Any biodiversity projects undertaken should be mindful of this legislation implemented to protect biodiversity and habitats in Ireland.

Biodiversity is simply the variety of life on earth. A number of basic guidelines for maintaining and enhancing biodiversity in your community are presented in this plan. Including choosing peat free, improving biodiversity by improving height and structure of habitats, keeping your local area clean and choosing native species within your planting plans (page 17).

Before any biodiversity actions are undertaken it is always important to know what biodiversity data is currently available. A review of species data available online at the National Biodiversity Data Centre identified only 27 species recorded within the four biodiversity areas in focus. To compliment this biodiversity data a survey was undertaken in 2020 where 157 species were recorded. Although this species list increases the information available it should not be viewed as a absolute list (page 21).

Identifying biodiversity present in your community should be considered an ongoing process. Habitat maps were drawn up for each site and recommendations for biodiversity actions that would enhance and maintain biodiversity in Mullingar. Mullingar is your community and your environment and the committee of Mullingar Tidy Towns should consider these recommendation and choose to act on those that best suit the ethos and aims of the Tidy Towns. Thirty recommendations are offered for your community (pages 38-42).



Image: Irish Damselfly photograph on the banks of the Royal Canal, July 2020. © N. Madigan

3. Introduction to Mullingar Tidy Towns



Mullingar Tidy Towns is part of the national Tidy Towns initiative which was launched in 1958 by Bord Fáilte (now Fáilte Ireland). It was originally part of 'Tostal', a nationwide festival celebrating all things Irish. A step-up from the original National Spring Clean Campaign, which ran between 1953 and 1957, Tidy Towns rapidly developed its own identity and has gone on to become Ireland's most well known and popular local environmental initiative.

Right from the start, the primary focus of Tidy Towns was to encourage communities to improve their local environment and make their area a better place to live, work and visit. The competition aspect was an important element in developing friendly rivalry that would help boost standards across the board. However, the emphasis was always on participating rather than winning as the very act of taking part brought benefits to the community. As a result of this focus on long-term results rather than quick returns, Tidy Towns was seen as a unique and far-sighted initiative.

Although just 52 towns entered in its first year, Tidy Towns rapidly increased in popularity with an average of 700 entrants per year. Its success also spawned many other initiatives at national, county and local level, which further boosted its reputation and impact. It is impossible to accurately estimate the number of people who have had some involvement in Tidy Towns, but it is safe to say it has run into the hundreds of thousands, and its influence on the transformation of Ireland's landscape is undeniable.

The Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs assumed responsibility for Tidy Towns and now organises the initiative with the support of national sponsor SuperValu and a number of other agencies. While its success continues, and while it has moved with the times, the competition still retains the same core principle of its founders – "make your place a better place (Welcome to Mullingar, July 2020).

Mullingar Tidy Towns work towards their aims of:

- * To enhance the appearance of our town, making the town a more attractive place to live,
- * Work and enjoy the many recreational facilities available to the population.
- * To raise awareness of environmental issues among both the adult & school-going population.
- * To promote the environmental & historical assets of the town.
- * To encourage Residents, Retailers, and Industrial concerns to maintain their estates and premises, and show them to best effect.
- * To identify "black spots" and "problem areas", and develop strategies to deal with them effectively.
- * To lobby for better and more effective local government services.



Nuala Madigan, Ecologist with representatives of Mullingar Tidy Towns, February 2020.

3.1 Location

Mullingar is a town located in the midlands of Ireland in the province of Leinster (co ordinates 53.526028, -7.339744). It has a population of 20.928 (2016).

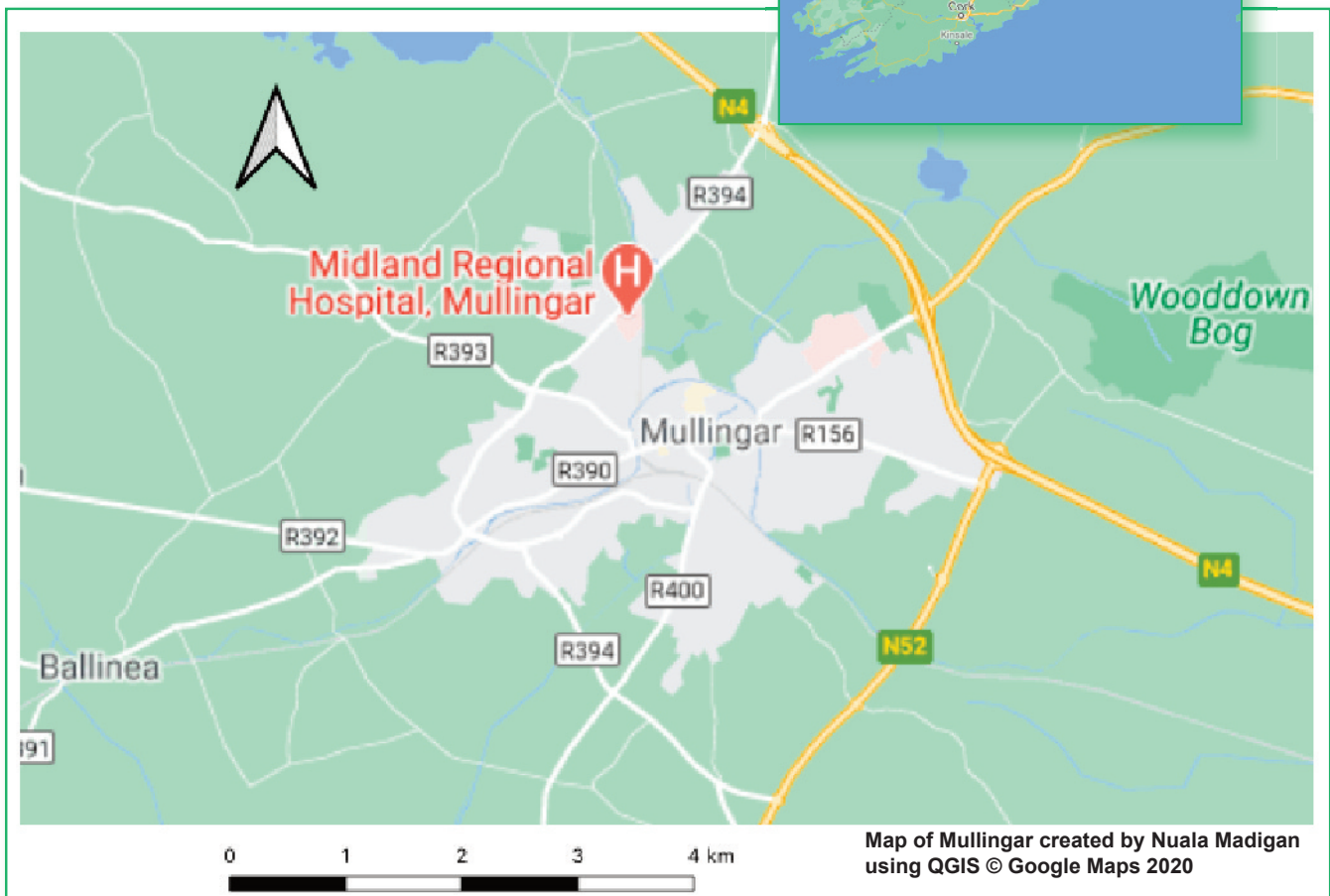
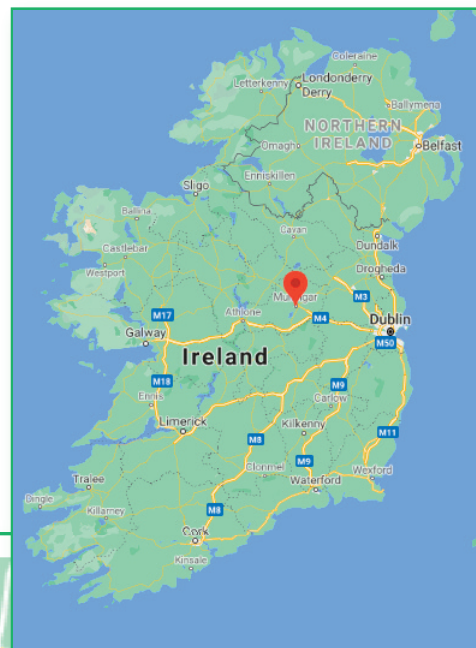
Mullingar lies near the national primary route N4, the main Dublin – Sligo road, 79 km from the capital. The N52 also connects Mullingar to the Galway-Dublin M6 motorway at Athlone to the southwest, and Kells, Ardee and Dundalk to the northeast. The town is served by Bus Éireann services to Dublin, Athlone (where passengers can catch connecting buses), Sligo, Cavan, Tullamore and Ballina.

In the 19th century the town was served for a time by the Royal Canal – however displaced first by the railway and then the car, it is no longer commercially used for the transport of goods or people. The town of Mullingar is also linked to Lough Ennell via Lacy's Canal and the River Brosna.

The town has a mix of local retailers and chain stores, and branches of the major banks. Among Mullingar's exports are items of pewterware produced by Mullingar Pewter. Also associated

with Mullingar is Genesis Fine Art, which produces gift items. Mullingar contains several industrial estates including Lough Sheever Corporate Park and Clonmore Industrial Estate and Mullingar Business Park. The Industrial Development Authority (IDA) also has a business park at Marlinstown. Mullingar has a Chamber of Commerce which represents almost 200 businesses from varying commercial sectors.

Mullingar's main tourist attractions are its lakes – Lough Owel, Lough Derravaragh and Lough Ennell – which are visited by anglers and the Royal Canal which flows through the town (Mullingar, 2020)



Map of Mullingar created by Nuala Madigan using QGIS © Google Maps 2020

3.2 Mullingar Tidy Towns: Celebrating both the Natural and Built Heritage of our Town by Jason McKeivitt Local Historian, Mullingar Tidy Towns

Notwithstanding the Anglo-Norman origins of the town of Mullingar in late 12th century, artefacts uncovered within its environs suggest that settlements were a common feature of this landscape over the previous millennia. One of the leading aims of Mullingar Tidy Towns is to promote the environmental and historical assets of the town. It is with this aim in mind that Mullingar Tidy Towns has always been to the forefront, when it comes to promoting our town's rich history and heritage as well as that of the environment.

In 2016, the Chairperson of Mullingar Tidy Towns, Cllr Bill Collentine set about forming a 1916 Centenary Subcommittee to assist in the creation and construction of the Mullingar 1916 Centenary Memorial along the banks of the Royal Canal at the Green Bridge area of the town centre. This memorial unveiled on Easter Monday 2017, not only celebrated a significant period in modern Irish History, but also through design and implementation combined both our rich historical heritage with that of our own unique natural heritage. In encouraging biodiversity, the seven trees which signify the seven signatories of the 1916 Proclamation of the Republic that surrounds the memorial, along with the wide spacing of the joints of the stone wall, allows for bees and other native Irish insects to source an abundance of food as well as securing a safe habitat, all within the confines of the town centre.

In 2020, Mullingar Tidy Towns created the Mullingar Heritage Trail App (Mullingar Heritage Trail App - Free Walking tour of Mullingar | National Heritage Week 14-22 August 2021) This app not only promotes our town's rich social history, but also promotes that of our town's natural history, particularly as its users stroll along locations such as, the Royal Canal, the River Brosna and Mullingar Town Park. The App encourages its users to take the time to absorb not only the richness of the built heritage, but also embrace the rich biodiversity found at these locations including at the Pollination and Apple Garden created by Mullingar Tidy Towns, situated in the Town Park. During 2021, Mullingar Tidy Towns will continue to celebrate this union of both the built and natural heritage of our town, as we set about creating The River Brosna Heritage

Trail. This Trail will include six information boards highlighting the vast history and biodiversity located along the banks of the river, as it meanders its way through our town exiting just beyond the County Buildings at Mount Street.

Going forward, the drive to further enhance and promote of our historic town's rich heritage, Mullingar Tidy Towns will also turn its eyes towards the Famine Graveyard and its respectful maintenance as well as shifting westwards towards the Royal Canal at Grange/Newbrook Bridge near the Old Rail Trail Greenway. The interweaving of heritage and biodiversity will underpin our plans for this location, thus allowing for the positive cohabitation of leisurely activity with that of our natural environment in a respectful manner. Mullingar Tidy Towns promotion and celebration of our town's built and natural heritage will ensure that implementing the Mullingar Community Biodiversity Action Plan will be a natural way forward for all. We will strive in our love for our town's extensive history and heritage of days past, to also underpin our desire for a more greener and sustainable environment into well into future.

3.2 History of Mullingar Town by Ruth Illingworth

The town of Mullingar has a history stretching back centuries. People have lived in this part of Ireland for at least 5,000 years. Artefacts dating back to the Stone and Bronze Age have been found near where the town now stands and there were important monastic settlements here during the early Christian centuries. The name Mullingar first appears in a twelfth century life of a local saint, Colman of Lynn. The Vikings traded and settled here over a millenium ago and the High Kings of Ireland had one of their palaces close to Mullingar on the shores of Lough Ennel a thousand years ago.

Mullingar as an urban settlement began around 1186 when a Norman Baron called William Petit was granted land between Lough Owel and Lough Ennel by the Norman ruler of Meath, Hugh de Lacy. Petit built a stone castle overlooking the River Brosna where the County Buildings now stand. His brother, Father Ralph Petit built a church close by on the site of the present day All Saints Church. Father Petit went on to become Bishop of Meath and, in 1227, he founded a monastery for the Augustinian Order. This religious house stood at the eastern end of the town close to what is now Supervalu, the Austin Friars Hotel and the Town Park. The Statue of the two monks at Austin Friars Street commemorates the fact that in the 13th century, some of the Augustinians went on pilgrimage to Santiago de Compostela in Spain. The Augustinian Monastery stood until 1540 when it was closed during the Reformation. A second religious house, belonging to the Dominican order was founded on the western side of the town in 1237. It closed in 1540 but the friars remained in the town until 1799, and had another friary close to what is now Cusack Park in the 17th century. A third religious foundation, belonging to the Capuchin Friars briefly existed in Mullingar from 1636 to 1652.

Mullingar is a town founded by immigrants. The first language spoken here was French and the early citizens of Mullingar came from France, Flanders, Wales, England, Brittany and other lands. Along what is now the main street houses and businesses were established by the burgesses who governed the town. The Parish of Mullingar was founded in 1205 and the earliest grant of a market dates to 1207. Over time Mullingar was granted the right to hold four fairs

a week as well as a weekly market. The town survived wars, famines, plague and climate change to become the county town when Westmeath was created in 1542. In the 17th century, Mullingar also became an as size town and an important military base. A county jail opened in 1566 and would remain in existence until 1900.

In 1747 a fire devastated the town. In its aftermath, Mullingar was rebuilt in stone and slate. A fine new Roman Catholic Parish church was built in 1730 on the site of the present Parish community centre and extended in 1755. The first county hospital opened in 1770 on the Dublin Road and what would become the Greville Arms Hotel was first opened sometime between 1750 and 1800. The 18th century town was a prosperous settlement which hosted one of the largest horse fairs in Ireland. A wealthy Roman Catholic merchant community funded the building of the parish church and, in 1825, helped set up the Presentation Convent school which still exists today.

A new Church of Ireland church was built in 1814 on the site of the original parish church of Mullingar. In 1825, a Presbyterian church opened in the town and, following visits to the town by John Wesley, a Methodist meeting house also opened in 1806. Georgian Mullingar also contained a post office, several inns and a number of breweries and malt houses, as well as two military barracks.

Mullingar developed as an important transport hub in the early 19th century. The main roads between Dublin and Galway and Sligo came through the town and there were a number of coach houses along the main streets. The Royal Canal reached Mullingar in 1806 and thousands of people travelled through the town by boat over the next 40 years. The coming of the canal boosted local trade and a number of warehouses were established at the fine canal harbour which opened in 1810. Some of the original canal bridges can still be seen in Mullingar. Passenger traffic ceased with the coming of the railway in 1848 but freight traffic continued between Mullingar and Dublin until 1951. Since the reopening of the canal through the town in 1999, it has become one of the towns most

significant amenities and tourist attractions.

The railway reached Mullingar for the first time in October 1848 and by the 1860s, Mullingar was one of the most important rail junctions in Ireland. The station remains one of the finest surviving examples of Victorian railway architecture in the country. The railway, like the canal, boosted local trade and commerce and became one of Mullingar's most significant employers. The 19th century also saw the establishment of a number of important institutional buildings in the town. A cathedral opened in 1836 and the Christian Brothers came to town in 1856 to run a new school for boys-now St Mary's College. Loreto Convent opened in 1881 and St Finian's College in 1908. The Asylum-now St Loman's Hospital, opened in 1855 and a new and extensive military barracks was built between 1811 and 1817. Throughout the 19th century, regiments from all over Britain and Ireland were stationed in Mullingar and local men served with the Army all over the world. The first police station in the town was opened around 1837 and the present day courthouse dates back to 1824. The County Town of Westmeath began to acquire local democracy in 1854 when the Town Commission was established. In 1899 Westmeath County Council and Mullingar Rural District Council came into being. Mullingar was also a Poor Law Union from the 1830s and the fine Workhouse building which was first opened in 1841 still stands. The Famine Memoria designed by local artist Gerald Leslie, and unveiled in 1997, is a sombre reminder of the tragic years of the 1840s when thousands of Westmeath people died from hunger. Towards the end of the 19th century conditions improved and the Town Commission began building Local Authority houses. Many of these houses are still inhabited today.

In 1858 the town acquired a new landlord when the Earls of Granard-landlords since 1661 sold Mullingar to the Greville family. Ten years later Lord Greville granted the lease of a right of way beside the Army Barracks to the British War Office for an incredible ten million years! It is the longest lease in history. Lord Greville also rebuilt buildings such as the Market House and the Greville Arms Hotel. The Greville Arms would be put on the literary map by James Joyce. Joyce lived in Mullingar for a few weeks in 1900 and 1901 and he never forgot the town. Mullingar is mentioned in three of his novels.

In the early decades of the 20th century Mullingar continued to grow and to change. A new Cathedral was built between 1932 and 1936 and became the landmark building in the town. The 1930s also saw the building of a new County Hospital, the Greyhound Stadium and the Cusack Park GAA Grounds, where Micheal O Hehir began his legendary broadcasting career on August 14th 1938. The Army Barracks had closed in 1928 following independence and the end of the Civil War, but it was reopened in 1939 after the Second World War began. From 1943 until 2012, Mullingar was the home of the 4th Field Artillery Regiment and soldiers from the town served all over the world on UN Peacekeeping missions from 1960 onwards.

In the last decades of the 20th century, Mullingar experienced a dramatic rise in its population. Markets and fairs gave way to factories and business parks. Supermarkets made their first appearance but Mullingar still retains a number of family businesses-some dating back as far as the 1870. Two of the pubs in the town centre have been around since the 1820s. Ring roads now encircle the town and a place which was founded by immigrants is now home to people from more than sixty different countries. Mullingar is a place with a rich and diverse history and heritage of which we can all be very proud (Illingworth, 2020).



Map of Mullingar created by Nuala Madigan using QGIS © Google Satellite 2020

3.3 Historic Environment of Mullingar

Although this Community Biodiversity Action Plan focuses on natural heritage as a group you must be aware of buildings, monuments and settings with a cultural heritage value to your community. Any biodiversity actions that your group undertake should not have a negative impact on your local cultural heritage. Using the Historic Map Viewer located online at <https://maps.archaeology.ie/HistoricEnvironment/> and the history of Mullingar Town presented by Ruth Illingworth it is evident that there is a strong link between the Mullingar of today and its past. It is advised that before you undertake any biodiversity actions that you contact your local Heritage Officer within Westmeath County Council, Melanie McQuade (044 933 2098 or Melanie.mcquade@westmeathcoco.ie) to seek advice and confirm if permissions for your biodiversity actions are required.

For the purposes of this Community Biodiversity Action Plan Mullingar Tidy Towns identified four keys community areas to focus on:

- * Mullingar Town Park
- * Famine Graveyard
- * Royal Canal at Grange Bridge
- * River Brosna at Mount Street

Information on the records of sites and monuments and buildings of architectural heritage within these four areas in Mullingar has been identified (pages 11 & 12) using the National Monuments Service (NMS) which is part of the Department of Culture, Heritage and the Gaeltacht and plays a key role in the protection of our archaeological heritage.

Monuments are protected under the National Monuments Acts in a number of ways:

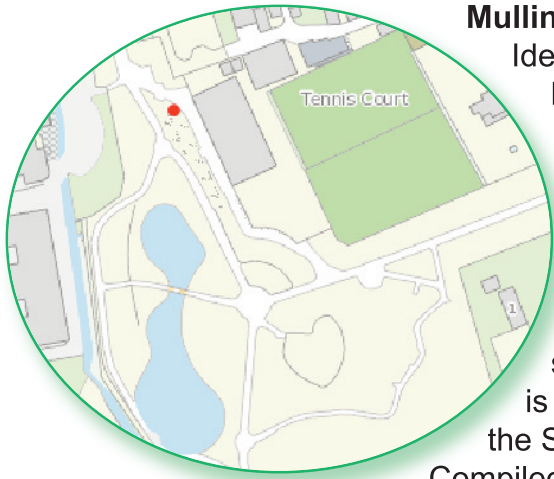
- * National monuments in the ownership or guardianship of the Minister or a local authority;
- * National monuments which are subject to a preservation order;
- * Historic monuments or archaeological areas recorded in the Register of Historic Monuments;
- * Monuments recorded in the Record of Monuments and Places.

For national monuments in the ownership or guardianship of the Minister or a local authority or which are subject to a preservation order, the prior written consent of the Minister is required for any works at or in proximity to the monument (About NMS, 28th July 2020).

Remember while you work towards enhancing and protecting the natural heritage within Mullingar it must not be at the expense of your local cultural heritage. It is recommended that your community group liaise with your local Heritage Officer seeking advice to better understand your local cultural heritage and if any of your biodiversity actions require permission prior to commencing your projects.



Map of Mullingar Town boundaries and four biodiversity areas to be included within this plan Prepared by N. Madigan using QGIS3.8, 2020. Map © Google Satellite 2020.



Mullingar Town Park

Identified within: Sites and Monuments Record

Ref: WM019-089012-

Class: Ritual site - holy well

Location: 53.525117, -7.337388

Scheduled for inclusion in the next revision of the RMP: Yes

Description: Well depicted as 'Priest's Well' on 1910 ed. OS 25-inch map but not depicted on 1837 ed. OS 6-inch map. Described in 1983 as 'The well has been covered in and the area is covered with tarmacadam. A swimming pool has been built to the S of the site of the well' (SMR File 25/07/1983).

Compiled by: Caimin O'Brien

Date of upload: 26th June 2014

Text & Image Source: <https://maps.archaeology.ie/HistoricEnvironment/>

Famine Graveyard

Identified within: National Inventory of Architectural Heritage

Previous Name: Mullingar Union Workhouse

Original Use: Graveyard/cemetery

Reg. No. 15309019

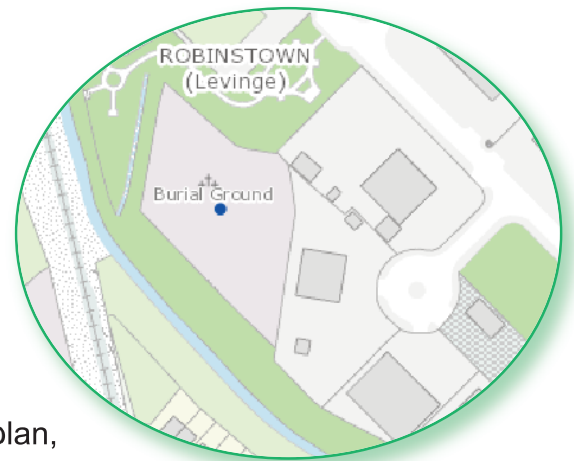
Date: 1840 - 1860

Location: 53.540533, -7.347264

Rating: Regional

Categories of Special Interest: Artistic Historical Social

Date Recorded: 22/07/2006



Description: Former union workhouse graveyard on irregular plan, used between c.1840 and c.1860. Now out of use. Cut stone gateway to the southwest side having a pair of wrought-iron gates.

Located to the north of the former Mullingar Union Workhouse complex (15309008 and 15309018) and to the north of Mullingar.

Appraisal: A somber graveyard associated with the former Mullingar Union Workhouse complex to the southwest (15309008 and 15309018). This graveyard largely contains the marked and unmarked graves of victims of the Great Famine (1845-9) and acts as a poignant reminder of this traumatic event in Irish history. The good quality cut stone gateway to the southwest adds a touch of dignity to this otherwise largely neglected site.

Text & Image Source: <https://www.buildingsofireland.ie/buildings-search/building/15309019/mullingar-union-workhouse-robinstown-mullingar-county-westmeath>



Royal Canal at Grange Bridge

No records were identified within the Sites and

Monuments Records or within the National

Inventory of Architectural Heritage for this location.

Location: 53.518774, -7.366951

River Brosna at Mount Street

1. Identified within: Sites and Monuments Record

Ref: WM019-089014-

Class: Ford

Scheduled for inclusion in the next revision of the RMP: No

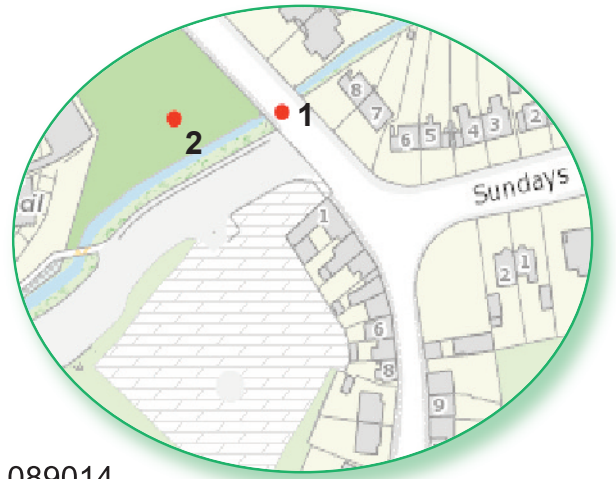
Location: 53.523397, -7.338977

Description: According to the Urban Survey of Westmeath (Bradley et. al. 1985), 'Mullingar, the county town of Westmeath, is situated in low-lying ground on the River Brosna between Lough Owel and Lough Ennell. In many medieval documents the name is prefixed by Ad- or Ath-, indicating that the town stood on an important ford (WM019-089014-

)'. The Irish Historic Towns Atlas of Mullingar places the fording point to the SE of the motte castle (WM019-089005-) in an area where the Bleach Yard road [Ballinderry Road] crosses the River Brosna. This fording point is shown on Richards map of Mullingar dating from 1691 (Andrews and Davies, 1992).

Compiled by: Caimin O'Brien

Date of upload: 27th June 2014



2. Identified within: Sites and Monuments Record

Ref: WM019-089006-

Class: Class: Water mill - vertical-wheeled

Scheduled for inclusion in the next revision of the RMP: Yes

Description: The site of a medieval watermill known as the 'Moate Mill' located in the S quadrant of the historic town of Mullingar (WM019-089----). This mill was located on the banks of the River Brosna in close proximity to the present site of Westmeath County Council Offices. The mill known in the 17th century as 'the moate mylle' (Orpen, 1911) belonged to Thomas Petit and was located SE of the Anglo-Norman motte castle (WM019-089005-) and immediately S of the fording point (WM019-089014-) over the River Brosna. In 1612 Thomas Petyt [Petit] of Irishtown was granted 'the Moate Mill on the S side of Mollingar' (Cal. pat. rolls Ire., Jas I). The 1641 Survey of Mullingar recorded the existence of 'the tan house (WM019-089049-), lying and being from the frank garden (WM019-089027-) of the said town on the north, the river (Brosna) leading to the motte mill on the east' (Andrews and Davies 1992) of Settlement and Explanation described the monument as 'Mount Mill with a parcell of pasture belonging to it' (NLI p 1895).

In 1682 Sir Henry Piers recorded that 'the name of the town if Englished, imports the short mill; indeed in my time, here hath been an over-shaft mill (WM019-089006-) of the least wheel that ever I saw, which with buckets and all was not eight foot (2.4m) in diameter, but now it is converted into a breast mill. There are also in this town on the same water [River Brosna], two other mills WM019-089033-; WM019-089038-) (Vallancey, 1786). Richards map of Mullingar dating from 1691 places the mill immediately S of the fording point and to the SE of the motte castle (WM019-089005-) standing on the S bank of the River Brosna (Andrews and Davies 1992). This watermill may have been built on the site of an early Christian horizontal watermill (Ibid.). This mill was probably located in the triangular shaped field depicted on the 25-inch OS map which is formed by a mill race running off the River Brosna.

Compiled and revised by: Caimin O'Brien

Date of revised upload: 27th July 2015

Text & Image Source: <https://maps.archaeology.ie/HistoricEnvironment/>

4 What is Biodiversity?

Biodiversity is shortened from 'biological diversity'. It is the variety of all life forms on Earth, from the tiniest bugs living in the soil, to the butterflies in your garden, the plants they feed from, and the biggest whales in the sea. Biodiversity includes the diversity of:

- Individuals within a species (genetic diversity),
- Species within an ecosystem or habitat (species diversity) and
- Ecosystems or habitats (habitat diversity).

The biological diversity we see today is the result of millions of years of evolution. Biological diversity is constantly changing and evolving as some species adapt to new surroundings, become extinct, and others, over time, evolve into new species. We as human beings are an integral part of biodiversity and we can influence it in a positive or negative way

(<http://www.noticenature.ie/learn.html>).

4.1 Why is Biodiversity Important?

Biodiversity has many benefits and it is the basis for life on earth. We are also part of Ireland's biodiversity! An ecosystem is the interaction between living organisms and their physical environment. Although many of us enjoy watching biodiversity visiting our gardens or communities we often forget about the services they offer us from pest control, a source of food, air filtration and maintenance of soil fertility. These services are referred to as ecosystem services, that is the benefit people obtain from nature. To follow are four categories identified within our ecosystems and some examples of the services biodiversity offers us all:

1. Provisioning Service	2. Supporting Service	3. Regulating Service	4. Cultural Service
Nutrient Cycling Primary Production Soil Formation	Nutrient Cycling Primary Production Soil Formation	Climate Regulation Flood Regulation Disease Regulation Water Purification	Aesthetic Spiritual Educational Recreational

* Biodiversity & Health

Did you know that many of our modern day medicines are made from extracts from plants and animals. Digoxin is a drug that is used to treat heart disease - *Digitalis lanicata* is the extract taken from foxglove for the manufacture of this drug. Retreating to our wild spaces in our community also offers health benefits both physically and mentally.

* Biodiversity & Food

Bees and butterflies are important pollinators within our communities. For plants to produce their fruit they first need to be pollinated. Plants also need a healthy nutrient rich soil, soil decomposers recycled dead plant litter enriching our soil for food production.

* Biodiversity & Business

Around the world Ireland is known as the 'Emerald Isle'. We have promoted ourselves in tourism as the island of lush green fields and wild spaces. Business who manufacture products including the world famous Guinness need a clean fresh supply of water.

* Biodiversity & People

We are part of Ireland's biodiversity and as our towns and cities expand we enjoy exploring our local wildlife and habitats and for some our biodiversity offers inspiration to artists and poets. Encouraging biodiversity offers opportunities for people to get involved in creating and looking after parts of their local neighbourhood or park or for recording species through citizen science initiatives.

4.2 Legislation protecting Biodiversity and Nature Conservation in Ireland

The two principal pieces of national legislation protecting wildlife are the Wildlife Acts, 1976 and the European Communities (Birds and Natural Habitats) Regulations 2011, which transposes the E.U. Birds Directive and the Habitats Directive into Irish law. Both of those statutes are administered by the Minister for Arts, Heritage and the Gaeltacht through the National Parks and Wildlife Service of that Department.

The Wildlife Act, 1976, is the principal national legislation providing for the protection of wildlife and the control of some activities that may adversely affect wildlife. The Wildlife Act, 1976, came into operation on 1st June 1977. It was the only major legislation concerned with wildlife that was passed in the previous 45 years. It replaced the Game Preservation Act, 1930, and the Wild Birds (Protection) Act, 1930.

The aims of the Wildlife Act, 1976, are to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims (Wildlife Act, 1976, 28th July 2020).

Your community must be aware of this act and when preparing to take action for biodiversity within your community confirm that your actions are not in violation of legislation. Make contact with your local Heritage Officer in Westmeath County Council who will support you to ensure your actions are in compliance with the act. To follow are some areas you should be aware of:

Hedge Cutting Season

Wildlife Act Section 40 of the Wildlife Act 1976 as amended by the Wildlife (Amendment) Act 2000 states that these Acts stipulate that it is an offence to destroy vegetation on uncultivated land between the 1st March and the 31st August each year. This includes the cutting of trees and hedgerows.

Flora Protection Order

Wildlife Act Section 21 Flora (Protection) Order, 2015 it is illegal to cut, uproot or damage the listed species in any way, or to offer them for sale. This prohibition extends to the taking or sale of seed. In addition, it is illegal to alter, damage or interfere in any way with their habitats. This protection applies wherever the plants are found and is not confined to sites designated for nature conservation. For a full list of species visit (S.I. No. 356/2015 - Flora (Protection) Order, 2015.)

Interfere with or Destroy the Breeding Places of Any Wild Animals

Wildlife Act Section 23 (5)(d) of the Wildlife Act 1976 as amended states that any person who wilfully interferes with or destroys the breeding place or resting place of any protected wild animal, shall be guilty of an offence.

Birds of Conservation Concern in Ireland

A number of birds are listed of conservation concern. A traffic light system using green, amber and red is used to describe their current status. Reviewing this list I have identified a number of species listed as amber (unfavourable conservation status in Europe and those whose population or range has declined moderately in recent years) that may be found in Mullingar. These include Greenfinch, Robin, Swift, Mute Swan, Swallow, House sparrow, Cold crest and Starling (Nelson, B. et al, 2019).

The community should also be aware that habitats can be designated as Special Areas of Conservation under the European Union Habitats Directive and Natural Heritage Areas under the Wildlife Act. No Special Areas of Conservation or Natural Heritage Areas were identified within your community. Although you should be aware that the Royal Canal (Site Code: 002103) is a proposed Natural Heritage Area (<https://www.npws.ie/maps-and-data>).

4.3 National & County Biodiversity Action Plans

Ireland's National Biodiversity Action Plan 2017-2021 is the third National Biodiversity Action Plan published in Ireland. It reports that globally, biodiversity is declining and despite increased awareness and efforts to halt its loss, biodiversity remains threatened by human activities worldwide (Secretariat of the Convention on Biological Diversity, 2014). Major causes of global biodiversity loss include over exploitation of wild species (Maxwell et al, 2016) and conversion of land to agricultural use (Newbold et al, 2016). Loss of biodiversity worldwide led to the wide acceptance of the need to co-ordinate action for biodiversity on a global scale. In 1992 the United Nations established the Convention for Biological Diversity and Ireland ratified the Convention in 1996. The objectives of the Convention for Biological Diversity are "the conservation of biological diversity, the sustainable use of its components

Ireland's vision for biodiversity is expressed within the plan as:



'That biodiversity and ecosystems in Ireland are conserved and restored, delivering benefits essential for all sectors of society and that Ireland contributes to efforts to halt the loss of biodiversity and the degradation of ecosystems in the EU and globally.'

National Biodiversity Action Plan 2017-2021

Ireland's National Biodiversity Action Plan identifies seven objectives each with targets and actions to support achievements

Objective 1: Mainstream biodiversity into decision-making across all sectors

Objective 2: Strengthen the knowledge base for conservation, management and sustainable use of biodiversity

Objective 3: Increase awareness and appreciation of biodiversity and ecosystem services

Objective 4: Conserve and restore biodiversity and ecosystem services in the wider countryside

Objective 5: Conserve and restore biodiversity and ecosystem services in the marine environment

Objective 6: Expand and improve management of protected areas and species

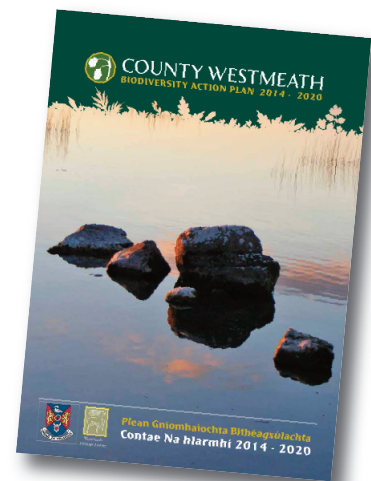
Objective 7: Strengthen international governance for biodiversity and ecosystem services

Each local authority has also prepared a county Biodiversity Action Plan. The first County Westmeath Biodiversity Action plan was published in 2014. The overall aim of County Westmeath Biodiversity Action Plan was to

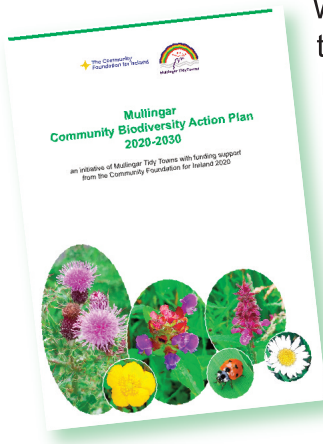
'to conserve and enhance the Biodiversity of County Westmeath by prioritising, coordinating and initiating actions to ensure effective conservation and enhancement in our county and raising awareness of biodiversity in partnership with local communities.'

County Westmeath Biodiversity Action Plan 2014-2020

This first plan identified 102 biodiversity actions that could support the overall aim of the plan. In 2021 a review was undertaken of the plans actions to date and a new Biodiversity Action Plan was being prepared for the county as Mullingar's Biodiversity Action Plan 2020-2030 was being published.



4.4 Why Develop a Community Biodiversity Action Plan?



While the National Biodiversity Action Plan 2017-2020 sets objectives, targets and actions for the whole of the country and the County Westmeath Biodiversity Action Plan sets objectives for County Westmeath a Community Biodiversity Action Plan (CBAP) is a means of managing your resources to contribute to the conservation of biodiversity, or wildlife at a local level. A CBAP is basically a management system to maintain and enhance biodiversity within your local area. A management system helps to reduce risk and maximise opportunity in a planned way. Developing a CBAP for your local area provides you with a managed plan that will help you to put the correct procedures in place to conserve and enhance biodiversity.

4.5 Basics of Biodiversity Management

When starting out on your journey to maintain and enhance biodiversity within your community there are some general principles that should be remembered and considered before any action is acted upon:

Sometimes you don't need to do anything!

Today we accept that our actions have had an impact on both the habitats and populations of biodiversity within our communities. However sometimes we don't need to do anything for the biodiversity present in our communities it may be thriving without any action. For example a mature tree may have stood for hundreds of years supporting a wide variety of biodiversity in your community. Just because we now support biodiversity by erecting bird boxes and bat boxes it does not mean that we need to fill the mature tree with them - birds and bats have been nesting in trees for many years!

Myth buster

It was once thought that to be a community for biodiversity acres and acres of land were required. Habitats come in all shapes and sizes and even in a small corner of your local park you can create a haven for biodiversity.

Your biodiversity actions should not have a negative impact on another habitat

Enhancing biodiversity can be achieved by increasing the diversity of plants in your community, however this should not be at the expense of another habitat. Peat moss compost is used as a potting mix and is widely available for sale. Harvesting of peat moss compost has resulted in the dramatic decline in peatland habitat nationwide. Always choose peat free in your community.

Choose native

We have learned a hard lesson in Ireland by introducing a variety of ornamental species often for their 'beautiful' flowers. Today we know the negative impacts introducing these species has had on native habitats and biodiversity and many are now considered invasive. When taking action for biodiversity we should choose native over ornamental species.

Diversity diversity diversity

Regular mowing of our grassland's is an accepted method of keeping our communities tidy, however this monoculture of mown grass does not support a rich diversity of species. The more diverse the habitat the more food and shelter offered for biodiversity. When looking at an area always considered how best to maximise the range of habitats and the structure of them by including tall trees and grasses (wildflower meadow), unmown swards, lower layers of herbs and plants, rotting wood and yes, mown grass has a place aswell.

Keep in clean

Although as a group your role within the community has grown and changed from painting and litter picking don't forget your foundation. Litter can have a negative impact on our biodiversity and your actions keeping your community tidy are just as valuable for supporting biodiversity as other actions.


You can't do it on your own

Your community group is made of a dedicated committee of volunteers. To maintain and enhance biodiversity always bring your wider community along with you. Let people know what you are doing, how they can get involved to support you and inform them of your projects values not just for biodiversity but for them aswell.

Choose chemical free

These can pollute our watercourses and harm biodiversity. Nature has its own pest controllers, so if you can attract them to your community, you won't need to use chemicals. For instance, ladybirds, hoverflies and lacewings feed on greenfly and aphids while frogs and hedgehogs feast on slugs. You can attract hoverflies by planting the poached egg plant amongst your vegetables or flowerbeds. A hoverfly can eat a thousand greenfly in its short lifetime! Use mulch to suppress weeds in flower beds rather than using herbicides. Make your own nutrient rich liquid feed using comfrey.

Keep it sustainable

 The United Nations Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace and justice. There are 17 goals identified and while not all of them relate to biodiversity each of your actions should align with these goals supporting your community today and in the future.

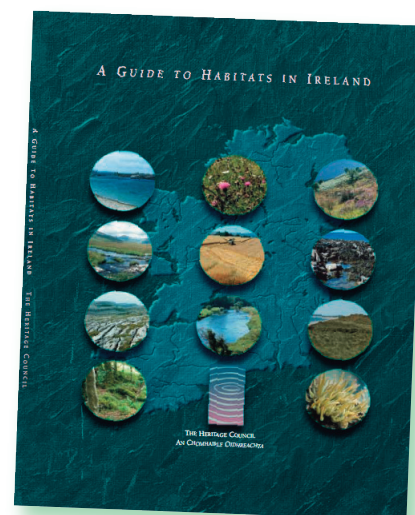
Review

When we complete a task in our community a sense of achievement is felt. However just because we have completed the biodiversity action does not mean we can forget about it. Some of your actions may need regular maintenance and having a system in place to review the completed projects is just as important as getting started on new biodiversity enhancing project.

When taking action for biodiversity in your community always remember these basic principles for management biodiversity.

4.6 Habitats for biodiversity in Ireland

All biodiversity, that is living plants and animals, require shelter or a home. A place of shelter or a home used by biodiversity is referred to as a habitat. Habitats are the basic building blocks of the environment that are inhabited by animals and plants, and which are important as units for site description and conservation management. Habitats can range in size from an open water canal to a small pond. All habitats in Ireland are classified according to 'The Habitats of Ireland' by J. A. Fossitt published in 2000 by the Heritage Council. This guide provides a standard scheme for describing habitats in Ireland. The publication of this guide, for the first time, provided consistent or complementary habitat data collection and such consistency in the work of habitat classification is recognised as following best practice (Fossitt, 2000).



Maintaining and enhancing biodiversity in your community includes habitat management. This plan will present a habitat map for each biodiversity area.

5. Biodiversity of Mullingar

As a community you cannot take action for biodiversity until you know what you already have. In developing this plan two approaches were taken to investigate the variety of biodiversity present in Mullingar:

1. Review of biodiversity records available through the National Biodiversity Data Centre
2. Complete a biodiversity survey 2020

5.1 Records from the National Biodiversity Data Centre



The National Biodiversity Data Centre is Ireland's national centre for the collection, collation, management, analysis and dissemination of data on Ireland's biological diversity. Biodiversity data are a key requirement for understanding our natural surroundings, for tracking change in our environment and for gaining a greater insight on how we benefit from, and impact upon, the ecosystem goods and services provided by biological

diversity; a national asset which contributes at least €2.6 billion to the Irish economy each year. The National Biodiversity Data Centre is an Initiative of the Heritage Council and is operated under a service level agreement by Compass Informatics. The data centre is funded by the Department of Culture, Heritage and the Gaeltacht, and the Heritage Council (www.biodiversityireland.ie/about-us/).

Supporting the national biodiversity data centre are professional recorders but also citizen scientists. All data gathered and records are shared online through Biodiversity Maps (<https://maps.biodiversityireland.ie>) which serves as a portal to access biodiversity data published as open data, and as a shop window to display other existing sources of data on Ireland's biodiversity.

In developing Mullingar's Biodiversity Action Plan a review of data available on this website was completed in February 2020. Across the four biodiversity areas included within this plan 14 100m grid squares were reviewed.

Famine Graveyard

Grid square	Number of species recorded
N431552	1
N431553	0
N432553	0
N432552	0

Royal Canal at Grange Bridge

Grid square	Number of species recorded
N419521	1
N419522	0
N420522	0
N420521	0

River Brosna at Mount Street

Grid square	Number of species recorded
N438527	2

Mullingar Town Park

Grid square	Number of species recorded
N439528	0
N439529	3
N440529	19
N440528	0
N441529	0

During the review of the species recorded online within the National Biodiversity Data Centre records for this Community Biodiversity Action Plan only 27 records were presented within the four biodiversity areas included within this plan. On visiting any of these biodiversity areas in Mullingar 19

it would be evident to the visitor that significantly more species are present at each site. Along the use of species data available online does not, at this time, give a representative view of the species diversity of Mullingar. To compliment the species recorded online a biodiversity survey was completed as part of the development of this plan. It must be noted at this point that only the four biodiversity areas within the survey were reviewed online at the National Biodiversity Data Centre and surveyed in 2020. It would be expected that if the review online and the survey areas were extended to the wider community areas and lands owned privately in Mullingar the species records online would increase.

5.2 Biodiversity Survey 2020 Methods

Meeting with Mullingar Tidy Towns in early 2020 it was identified that to complete a biodiversity survey of the entire Mullingar Town area was not viable within the project timeframe and budget. Mullingar Tidy towns identified four areas that this plan would focus on. As mentioned earlier in this plan these were identified as:

- * Mullingar Town Park coordinates 53.524460, -7.337149
- * Famine Graveyard, coordinates 53.540297, -7.347380
- * Royal Canal at Grange Bridge, coordinates 53.518576, -7.368146
- * River Brosna at Mount Street, coordinates 53.523355, -7.339002

On concluding this first meeting between the ecologist and Mullingar Tidy Towns a brief site visit of each of the areas was completed.

Desktop research was then carried out on each of the biodiversity areas, this included:

- * Review of species recorded online on the National Biodiversity Data Centre
 - 27 species identified in the four biodiversity area (for details see page 19)
- * Review of sites and monuments of cultural importance available online at www.archaeology.ie
 - 4 areas of cultural significance identified (for details see pages 11 & 13)
- * Review of National Parks and Wildlife Service (NPWS) SAC (Special Area of Conservation) and NHA (Natural Heritage Area) boundaries (for details see page 15)
 - No designations identified although the Royal Canal is a proposed NHA
- * Review of water data available from www.catchments.ie
 - For details identified relating to the Royal Canal see page 37
 - For details identified relating to the River Brosna see page 34

Using satellite imagery draft habitats maps were drawn up for each of the areas using MapInfo.

Over two days in July site visits to each of the areas were completed. At each location a ground truthing of the draft habitat maps and species list for biodiversity identified were recorded. The biodiversity survey included butterflies, damselflies and dragonflies, birds, flowering plants, ferns and trees. Each of the habitat maps prepared are presented within this plan alongside recommended biodiversity actions and a record of all species identified during the survey are presented on pages 21-29 of this plan.

All data gathered was then included within the Mullingar Community Biodiversity Action Plan 2020-2030.

To improve the diversity of species recorded online at the National Biodiversity Data Centre a dataset was drawn up for the biodiversity recorded in 2020 and was submitted to the National Biodiversity Data Centre in July 2021.



Image: Donal Lyons surveys freshwater invertebrates in the royal Canal at Grange Bridge © Nuala Madigan

5.3 Biodiversity Survey 2020 Results

Common Name	Scientific Name	Irish Name	Royal Canal	Famine Graveyard	Town Park	River Brosna	Status
Wildflowers							
Water Forget me Knot	<i>Myosotis scorpioides</i>	Ceotharnach uisce	x	x			Native
Self Heal	<i>Prunella vulgaris</i>	Duán ceannchosach	x		x	x	Native
Water Mint	<i>Mentha aquatica</i>	Mismín mionsach	x				Native
White Clover	<i>Trifolium repens</i>	Seamair bhán	x	x	x		Native
White Water-lily	<i>Nymphaea alba</i>	Bacán bán	x		x		Native
Yellow Flag Iris	<i>Iris pseudacorus</i>	Feileastram	x	x			Native
Yellow Water Lily	<i>Nuphar lutea</i>	Cabhán abhann	x				Native
Red Clover	<i>Trifolium pratense</i>	Seamair dhearg	x	x			Native
Ribwort plantain	<i>Plantago lanceolata</i>	Slánlus	x	x	x		Native
Rosebay Willowherb	<i>Chamaenerion angustifolium</i>	Lus na tine	x		x		Native
Silverweed	<i>Potentilla anserina</i>	Briosclán	x	x	x		Native
Smooth Sowthistle	<i>Sonchus oleraceus</i>	Bleachtán mín	x		x		Native
Spear thistle	<i>Cirsium vulgare</i>	Feochadán colgach	x	x	x	x	Native
Tufted Vetch	<i>Vicia cracca</i>	Peasair na luch	x				Native
Common Vetch	<i>Vicia sativa ssp. Segetalis</i>	Peasair chapaill		x	x		Native
Ragwort	<i>Jacobaea vulgaris</i>	Buachalán buí	x		x	x	Native
Nipplewort	<i>Lapsana communis</i>	Duilleog Bhríde	x				Native
Meadow Buttercup	<i>Ranunculus acris</i>	Fearbán féir	x				Native
Common nettle	<i>Urtica dioica</i>	Neantóg	x	x	x	x	Native
Knapweed	<i>Centaurea nigra</i>	Mínscoth	x	x	x		Native

Common Name	Scientific Name	Irish Name	Royal Canal	Famine Graveyard	Town Park	River Brosna	Status
Wildflowers							
Herb Robert	<i>Geranium robertianum</i>	Ruithéal rí	x	x	x	x	Native
Hedge bindweed	<i>Calystegia sepium</i>	Ialus fáil	x	x	x	x	Native
Hedge parsley	<i>Torilis japonica</i>	Fionnas fáil	x				Native
Hogweed	<i>Heracleum mantegazzianum</i>	Feabhrán capaill	x	x			Native
Marsh Woundwort	<i>Stachys palustris</i>	Cabhsadán	x			x	Native
Hedge woundwort	<i>Stachys sylvatica</i>	Créachtlus	x		x		Native
Greater Plantain	<i>Plantago major</i>	Cuach Phádraig	x		x		Native
Great Willowherb	<i>Epilobium hirsutum</i>	Lus na Tríonóide	x	x	x	x	Native
Eyebright	<i>Euphrasia officinalis</i>	Glanrosc	x				Native
Red Osier Dogwood	<i>Cornus sericea</i>	Conbhaiscne	x				Introduced
Dandelion	<i>Taraxacum vulgaria</i>	Caisearbhán	x		x	x	Native
Bramble	<i>Rubus fruticosus</i>	Dris	x		x	x	Native
Curled Dock	<i>Rumex crispus ssp. Crispus</i>	Copóg chatach	x				Native
Broad Leaved dock	<i>Rumex obtusifolius</i>	Copóg shráide		x	x	x	Native
Bush vetch	<i>Vicia sepium</i>	Peasair fhiáin	x				Native
Butterbur	<i>Petasites hybridus</i>	Gallán mór	x				Native
Creeping buttercup	<i>Ranunculus repens</i>	Fearbán (reatha)	x		x		Native
Meadow buttercup	<i>Ranunculus acris</i>	Fearbán féir		x			Native
Cow Parsley	<i>Anthriscus sylvestris</i>	Peirsil bhó	x				Native
Common Mouse Ear	<i>Cerastium fontanum</i>	Cluas luchóige mhara	x				Native
Common Marsh-bedstraw	<i>Galium palustre</i>	Rú corraigh	x	x			Native
Common Daisy	<i>Bellis perennis</i>	Nóinín	x	x	x		Native

Common Name	Scientific Name	Irish Name	Royal Canal	Famine Graveyard	Town Park	River Brosna	Status
Wildflowers							
Cleavers	<i>Galium aparine</i>	Garbhluas	x	x	x		Native
Ivy	<i>Hedera hibernica</i>	Eidhneán	x	x		x	Native
Lesser Spearwort	<i>Ranunculus flammula</i>	Glasair léana bheag	x				Native
Colt's foot	<i>Tussilago farfara</i>	Sponc	x	x			Native
Meadowsweet	<i>Filipendula ulmaria</i>	Airgead luachra	x	x		x	Native
Wild Marjoram	<i>Origanum vulgare</i>	Máirtín fiáin	x	x	x		Native
Cat's-ear	<i>Hypochaeris radicata</i>	Cluas chait	x	x			Native
Common Spotted-Orchid	<i>Dactylorhiza fuchsii</i>	Nuacht bhallach	x				Native
Black Medick	<i>Medicago lupulina</i>	Dúmheidic		x			Native
Wild Angelica	<i>Angelica sylvestris</i>	Gallfheabhrán	x	x			Native
Snowberry	<i>Symphoricarpos albus</i>	Póirín sneachta		x			Introduced
Common Field Speedwell	<i>Veronica persica</i>	Lus cré garraí		x			Introduced
Lesser Stitwort	<i>Stellaria graminea</i>	Tursarraing chorraigh		x			Native
Groundsel	<i>Senecio vulgaris</i>	Grúnlas		x			Native
Ladies Bedstraw	<i>Galium verum</i>	Bolach cnis		x			Native
Butterfly Bush	<i>Buddleja davidii</i>	Tor an fhéileacáin			x	x	Introduced
Winter heliotrope	<i>Petasites pyrenaicus</i>	Plúr na gréine			x	x	Invasive
Snowberry	<i>Symphoricarpos albus</i>	Póirín sneachta			x	x	Introduced
Bittersweet	<i>Solanum dulcamara</i>	Fuath dubh			x	x	Native
Orse	<i>Ulex europaeus</i>	Aiteann gallda				x	Native
Groundsel	<i>Senecio vulgaris</i>	Grúnlas			x		Native
Hoary willowherb	<i>Epilobium parviflorum</i>	Saileachán liath			x		Native

Common Name	Scientific Name	Irish Name	Royal Canal	Famine Graveyard	Town Park	River Brosna	Status
Wildflowers							
Himalayan Honeysuckle	<i>Leycesteria formosa</i>	Féithleann Álainn			x		Invasive
Chive	<i>Allium schoenoprasum</i>	Síobhas			x		Ornamental
Lady's-mantle	<i>Alchemilla vulgaris</i>	Dearna Mhuire			x		Native
Lemon balm	<i>Melissa officinalis</i>	Balm líomóide			x		Ornamental
Fuchsia	<i>Fuchsia magellanica</i>	Fiúise or deora dé			x		Introduced
Butterfly verain	<i>Verbena bonariensis</i>	Beirbhéine féileacán			x		Ornamental
Great water plantain	<i>Alisma plantago-aquatica</i>	Corrchopóg			x		Native
Broad leaved pond weed	<i>Potamogeton nodosus</i>	Liach Bhríde			x		Native
Creeping- jenny	<i>Lysimachia nummularia</i>	Lus an dá phingin			x		Native
Lesser celandine	<i>Ficaria verna ssp verna</i>	Grán arcáin			x		Native

Common Name	Scientific Name	Irish Name	Royal Canal	Famine Graveyard	Town Park	River Brosna	Status
Trees/Hedgerow							
Beech	<i>Fagus Sylvatica</i>	Feá	x				Native
Lime	<i>Tilia Cordata</i>	Crann aoil	x	x	x		Introduced
Silver birch	<i>Betula pendula</i>	Beith gael	x		x		Native
Alder	<i>Alnus glutinosa</i>	Fearnóg	x				Native
Ash	<i>Fraxinus excelsior</i>	Fuinseog	x	x		x	Native
Elder	<i>Sambucus nigra</i>	Trom	x	x	x	x	Native

Common Name	Scientific Name	Irish Name	Royal Canal	Famine Graveyard	Town Park	River Brosna	Status
Trees/Hedgerow							
Grey Alder	<i>Alnus incana</i>	Fearnóg liath	x				Introduced
Hawthorn	<i>Crataegus monogyna</i>	Sceach gheal	x	x	x		Native
Sycamore	<i>Acer pseudoplatanus</i>	Seicmar	x	x	x	x	Introduced
Willow	<i>Salix</i>	Saileach	x	x	x	x	Native
Blackthorn	<i>Prunus Spinosa</i>	Draighean		x			Native
Copper Beech	<i>Fagus sylvatica Atropunicea</i>	Crann feá copair		x	x		Introduced
Common Spindle	<i>Euonymus europaeus</i>	Feoras		x			Native
Leylandii	<i>X cupressocyparis leylandii dallim</i>	Leylandii		x			Introduced
Mountain Ash	<i>Sorbus aucuparia</i>	Caorthann		x	x	x	Native
Holly	<i>Ilex aquifolium</i>	Cuilleann			x		Native
Cherry Laurel	<i>Prunus laurocerasus</i>	Labhras silíní			x		Introduced
Common privet	<i>Ligustrum vulgare</i>	Pribhéad			x		Introduced
Crab-apple	<i>Malus sylestris</i>	Crann fia-úll			x		Native
Guelder-rose	<i>Viburnum opulus</i>	Caor chon			x		Native
Atlas cedar	<i>Cedrus atlantica</i>	Cedar atlas			x		Introduced
Apple tree (Park Orchard)		Crann úll			x		

Fungi							
Bracket Fungi	Polyporales	Fungais lúibí	x				Native
Parosol Fungi	<i>Macrolepiota procera</i>	Fungais parosol		x			Native
Brick cap fungus	<i>Hypholoma lateritium</i>	fungais caipín bríce			x		Native

Common Name	Scientific Name	Irish Name	Royal Canal	Famine Graveyard	Town Park	River Brosna	Status
Ferns							
Harts tongue	<i>Asplenium scolopendrium</i>	Creamh na muice fia	x		x		Native
Maidenhair spleenwort	<i>Asplenium trichomanes</i>	Lus na seilge			x		Native

Rushes							
Hard rush	<i>Juncus inflexus</i>	Luachair chrua	x	x			Native
Bulrush	<i>Typha latifolia</i>	Coigeal na mban sí	x				Native

Grasses							
Yorkshire fog	<i>Holcus lanatus</i>	Féar an chinn bháin	x	x	x	x	Native
Timothy	<i>Phleum pratense</i>	Tiomóid / Féar capaill	x	x			Native
Tall fescue	<i>Festuca arundinacea</i>	Feisciú ard	x				Native
Cocks foot	<i>Dactylis glomerata</i>	Garbhfhéar	x	x			Native
Creeping bent	<i>Agrostis stolonifera</i>	Feorainn	x	x	x		Native
False oat grass	<i>Arrhenatherum elatius</i>	Coirce bréige	x				Native
Reed Canary-grass	<i>Phalaris arundinacea</i>	Cuiscreach	x	x		x	Native
Purple moor grass	<i>Molinia caerulea</i>	Fionnán		x		x	Native
Couch	<i>Elytrigia repens</i>	Broimfhéar		x			Native

Common Name	Scientific Name	Irish Name	Royal Canal	Famine Graveyard	Town Park	River Brosna	Status
Invertebrates							
Great Diving Beetle & larvae	<i>Dytiscus marginalis</i>	Ciaróg iontach	x				Native
Ramshorn Snail	<i>Planorbis</i>	Seilide ramshorn	x				Native
Dragonfly nymph	Anisoptera	Dragan	x				Native
Freshwater hoglouse	<i>Asellus aquaticus</i>	Hoglouse uisce	x	x	x		Native
Pond skater	<i>Gerris lacustris</i>	Scátálaí locháin	x				Native
Water mite	Hydrachnidae	Mite uisce	x				Native
Swimming mayfly nymphs	Ephemeroptera	Cuil Bhealtaine	x		x		Native
Lesser water boatman	<i>Corixa punctata</i>	Bádóir uisce níos lú	x		x		Native
Cased caddisfly	Trichoptera	An cuil chadáin	x				Native
Greater waterboatman	<i>Notonecta glauca</i>	Bádóir uisce níos mó	x				Native
Damselfly nymph	Zygoptera	Cruinneog	x				Native
Freshwater Shrimp	<i>Gammarus pulex/fossorum</i> agg.	Ribí róibéis uisce	x				Native
Pond snail	<i>Lymnaea</i>	Seilide locháin	x		x		Native
White-clawed Crayfish	<i>Austropotamobius pallipes</i>	Gliomach glas			x		Native
Pinkeen (Minnow)	<i>Phoxinus phoxinus</i>	Pincín					Native
Seven spotted ladybird	<i>Coccinella 7-punctata</i>	Bóin Dé sheachtbhallach	x	x			Native
Common Red Soldier beetle	<i>Rhagonycha fulva</i>	Ciaróg saighdiúir rua	x	x			Native
Black Ant	<i>Lasius niger</i>	Seangán dubh	x				Native
Marmalade hoverfly	<i>Episyrphus balteatus</i>	Hoverfly marmalade			x		Native

Common Name	Scientific Name	Irish Name	Royal Canal	Famine Graveyard	Town Park	River Brosna	Status
Dragonflies and Damselfies							
Blue tailed damselfly	<i>Ischnura elegans</i>	Cruinneog gorm	x				Native
Brown Hawker Dragonfly	<i>Aeshna grandis</i>	Seabhcaí Ómrach	x				Native
Banded demoiselle	<i>Calopteryx splendens</i>			x			Native

Butterflies							
Speckled wood butterfly	<i>Pararge aegeria</i>	Breacfhéileacán Coille	x				Native
Ringlet Butterfly	<i>Aphantopus hyperantus</i>	Fáinneog	x		x		Native
Meadow Brown Butterfly	<i>Maniola jurtina</i>	Donnóg Fhéir	x	x			Native
Small Tortoiseshell	<i>Aglais urticae</i>	Ruán Beag		x			Native
Small white	<i>Pieris rapae</i>	Bánóg Bheag		x			Native
Brimstone	<i>Gonepteryx rhamni</i>	Buíóg Ruibheach		x			Native
Common Blue	<i>Polyommatus icarus</i>	Gormán Coiteann		x	x		Native

Bumblebees							
Common Carder bee	<i>Bombus pascuorum</i>	Bumbóg	x		x		Native
White tailed Bumblee	<i>Bombus lucorum</i>	Bumbóg		x			Native
Buff tailed bumblebee	<i>Bombus terrestris</i>	Bumbóg			x		Native

Common Name	Scientific Name	Irish Name	Royal Canal	Famine Graveyard	Town Park	River Brosna	Status
Fish Stocks*							
Pike	Esox lucius	lasc pike	x				Native
Perch	Perca fluviatilis	lasc péirse	x				Introduced
Roach	Rutilus rutilus	lasc róiste	x				Introduced
Roach/Perch Hybrid	-	-	x				Introduced

* Royal Canal fish stock provided by David Cooke a local fisherman the ecologist met on the banks of the Royal Canal July 2020

Birds							
House martin	Delichon urbicum	Gabhlán Binne		x			Migratory
Moorhen	Gallinula chloropus	Cearc uisce		x		x	Native
Hooded Crow	Corvus cornix	Caróg liath		x			Native
Robin	Erithacus rubecula	Spideog		x		x	Native
Chaffinch	Fringilla coelebs	Rí Rua			x		Native
Feral Pigeon	Columba livia f. domestica	Colm aille			x	x	Native
Blackbird	Turdus merula	Lon dubh					Native
Rook	Corvus frugilegus	Rúcach				x	Native
Song thrush	Turdus philomelos	Smólach ceoil				x	Native

6. Community Biodiversity Action Plan & Biodiversity Enhancing Recommendations

6.1 Mullingar Town Park Introduction & Habitat Map

Mullingar Town Park is located in the centre of Mullingar Town coordinates 53.524460, -7.337149. It is managed by Mullingar Municipal District and includes a variety of public amenities including the swimming pool, a playground, seating areas and habitats including amenity grassland, scattered trees, hedgerows and a large pond. The park is involved in the Green Flag awards and was first awarded a Green Flag in 2016 which has been maintained to date.



Images: Mullingar Town Park showing seating, litter management, amenity grassland, scattered trees and pond. Above: The Green Flag award is promoted within the park. © N. Madigan

The following are the variety of species identified within the park as part of the 2020 biodiversity survey. It should be noted that the species list presented in this plan should be considered as a representative sample of the diversity of wildlife in the park and not considered a complete list. Weather, time of year and even the time of the day the survey was undertaken can all have an impact of the variety of biodiversity recorded. It does however provide an increased sample of biodiversity within the park that will improve the online presence of diversity of species on the National Biodiversity Data Centre. To review a full list of species recorded please see pages 21-29 of this plan.

- * 41 Wildflowers
- * 15 Trees
- * 1 Fungi
- * 2 Ferns
- * 2 Grasses
- * 2 butterflies
- * 6 Invertebrates
- * 2 Bumblebees
- * 5 Birds















Images: Brick Cap Fungi, Common Daisy, Common Marjoram and Yorkshire Fog a sample of the biodiversity identified in Mullingar Town Park during the 2020 biodiversity survey. © N. Madigan

To support the community in better understanding the habitats present in Mullingar Town Park and to ensure that those habitats are maintained, where appropriate, throughout any biodiversity actions undertaken by the community a habitat map was completed and is presented here:

Mullingar Town Park Habitat Map 2020



Map Legend

- | | | | |
|---|---------------------------------------|---|---|
|  | FL8 Artificial pond |  | Skateboard park |
|  | BL3 Buildings and artificial surfaces |  | Swimming pool |
|  | GA2 Amenity grassland |  | Orchard |
|  | Playground |  | WS3 Non native shrub (Invasive species) |
|  | FW2 Lowland river |  | WL1 Hedgerow |
|  | WD 5 Scattered trees and parkland |  | BL1 Stonewalls and other stonework |

6.3 Famine Graveyard Introduction & Habitat Map

The Famine Graveyard is located at coordinates 53.540297, -7.347380. It is an environment within the community of Mullingar with great spiritual significance and it reminds us all of a time in Irish history when our people struggled for survival. The Famine Graveyard is under the management of the Famine Graveyard Committee and while this Biodiversity Action Plan makes recommendations to maintain and enhance the biodiversity of this area, Mullingar Tidy Towns should work in partnership and first seek approval for any actions undertaken from the Famine Graveyard Committee.



Images: Entrance to the Famine Graveyard and general overview of the landscape on entering the site © N. Madigan

The following are the variety of species identified within the Famine Graveyard and on the approach to the entrance from the R394 as part of the 2020 biodiversity survey. It should be noted that the species list presented in this plan should be considered as a representative sample of the diversity of wildlife in the graveyard and not considered a complete list. Weather, time of year and even the time of the day the survey was undertaken can all have an impact of the variety of biodiversity recorded. It does however provide an increased sample of biodiversity in this area of Mullingar that will improve the online presence of diversity of species on the National Biodiversity Data Centre. To review a full list of species recorded please see pages 21-29 of this plan.

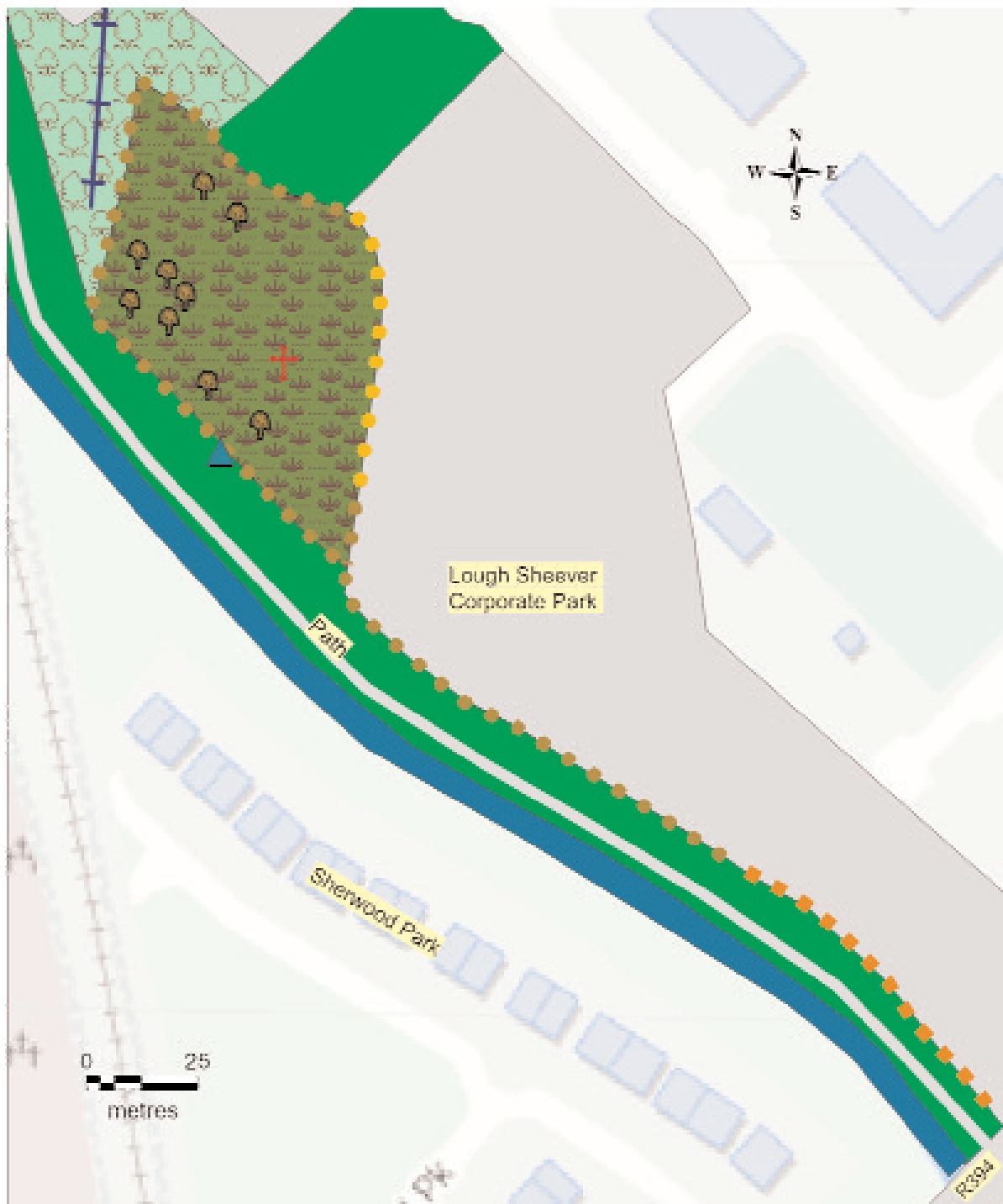
- * 31 Wildflowers
- * 11 Trees
- * 1 Fungi
- * 0 Ferns
- * 7 Grasses
- * 5 Butterflies
- * 3 Invertebrates
- * 1 Bumblebee
- * 2 Birds















Images: Common Field Speedwell, Seven Spotted Ladybird, Great Willowherb and Herb Robert a sample of the biodiversity identified in Famine Graveyard during the 2020 biodiversity survey. © N. Madigan

To support the community in better understanding the habitats present in the Famine Graveyard and to ensure that those habitats are maintained, where appropriate, throughout any biodiversity actions undertaken by the community a habitat map was completed and is presented here:

Famine Graveyard Habitat Map 2020



Map Legend

- | | | | |
|---|------------------------------|---|--------------------------|
|  | BL1 Stonewall entrance |  | WD5 Scattered trees |
|  | WD1 Mixed broadleaf woodland |  | Religious monument |
|  | GS2 Dry meadow |  | FW4 Drainage ditch |
|  | GA2 Amenity grassland |  | WL2 Treeline (conifer) |
|  | BL3 Artificial surface |  | WL2 Treeline (broadleaf) |
|  | FW3 Royal Canal supply |  | WL1 Hedgerow |

6.5 River Brosna at Mount Street Introduction & Habitat Map

The River Brosna flows through Mullingar town. It is part of the Shannon River Basin District and according to www.catchments.ie the water quality of the water course is considered poor. For the purposes of this community development plan only one area of the river was surveyed at Mount Street. Access was limited to the waters edge due to safety railings within the town and this prevented a survey of freshwater invertebrates found within the water. A review of www.archaeology.ie identified two areas of importance at this location a ford and a watermill, details of each can be found on page 13 of this report.



Images: View of the River Brosna at Mount Street from a pedestrian access bridge entering Westmeath County Council offices and view towards the location of the water mill. © N. Madigan

The following are the variety of species identified along the River Brosna at Mount Street. It should be noted that the species list presented in this plan should be considered as a representative sample of the diversity of wildlife in the area and not considered a complete list. Weather, time of year and even the time of the day the survey was undertaken can all have an impact of the variety of biodiversity recorded. It does however provide an increased sample of biodiversity in this area of Mullingar that will improve the online presence of diversity of species on the National Biodiversity Data Centre. To review a full list of species recorded please see pages 21-29 of this plan.

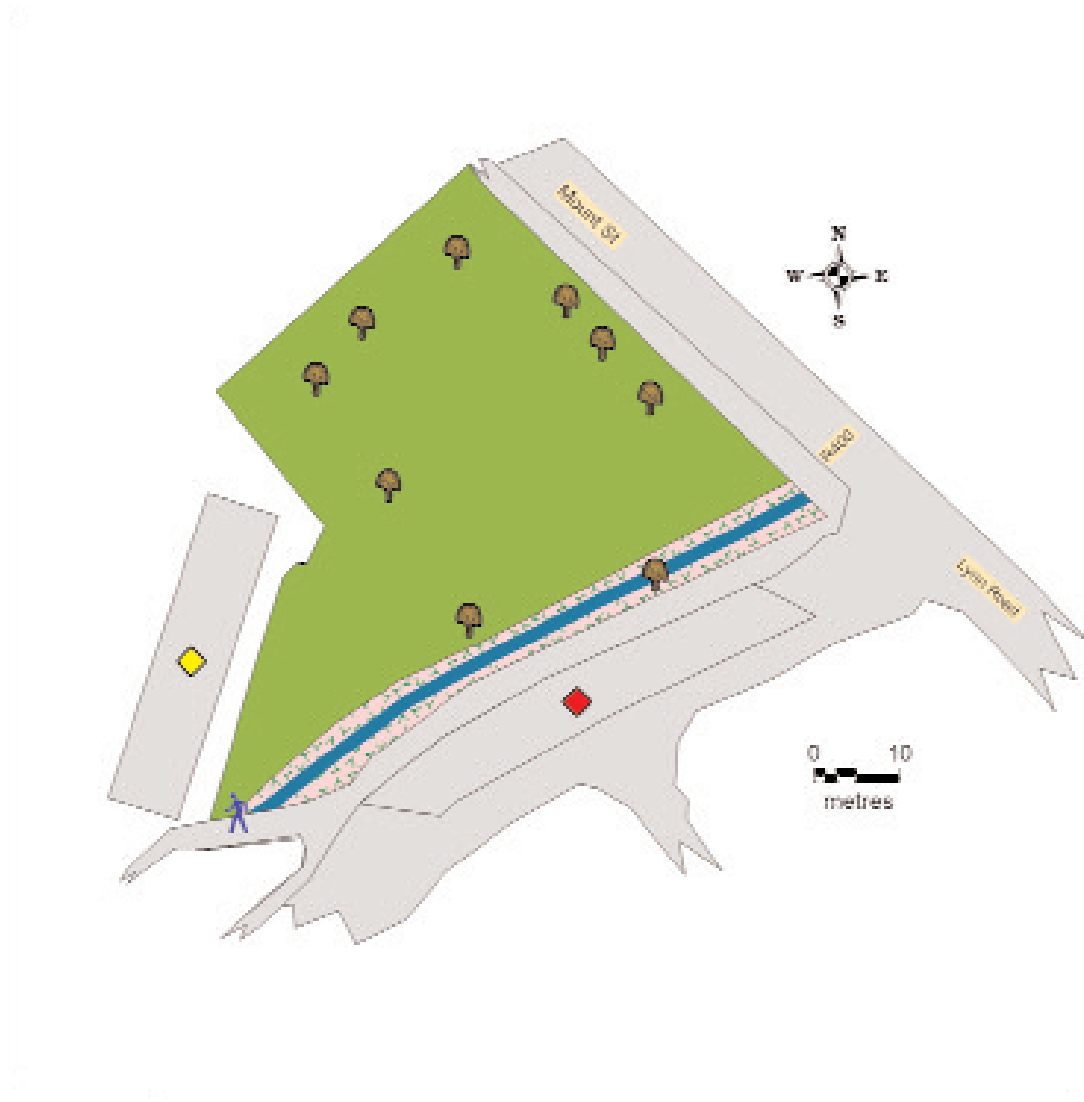
- * 25 Wildflowers
- * 5 Trees
- * 0 Fungi
- * 0 Ferns
- * 3 Grasses
- * 0 Butterflies
- * 0 Invertebrates
- * 0 Bumblebees
- * 0 Birds



Images: Buddleia (butterfly bush), Willow species, fruit of Bittersweet and Winter Heliotrope. Winter Heliotrope is consider an invasive species in Ireland. © N. Madigan

To support the community to better understanding the habitats present along the River Brosna at Mount Street and to ensure that those habitats are maintained, where appropriate, throughout any biodiversity actions undertaken by the community a habitat map was completed and is presented here:

River Brosna at Mount Street Habitat Map 2020




Map Legend

 ED3 Recolonising Bare Ground

 FW2 Lowland River Brosna

 BL3 Buildings & Artificial Surfaces

 GA2 Amenity Grassland

 WD5 Scattered Trees & Parklands

 Foot Bridge

 Civic Offices

 Car Park

6.7 Royal Canal at Grange Bridge Introduction & Habitat Map

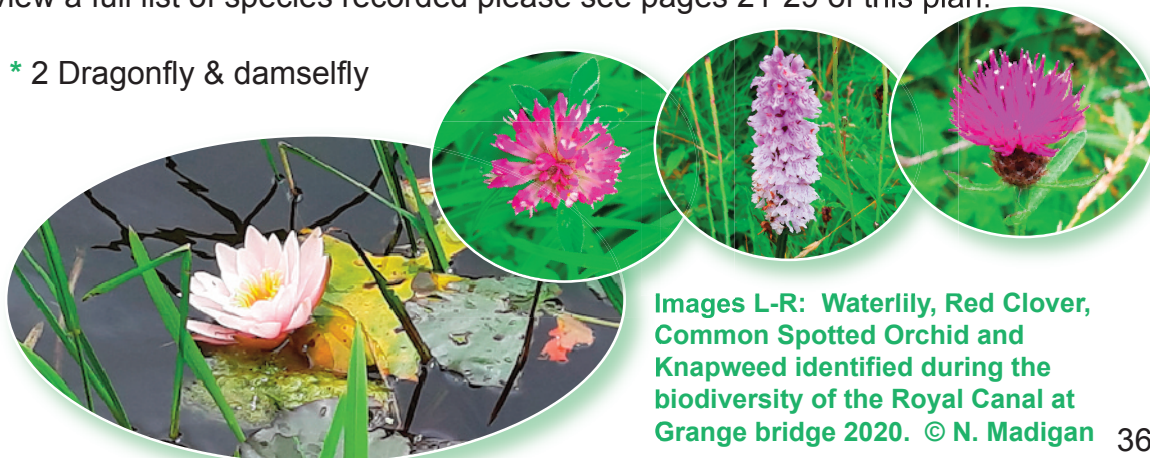
The Royal Canal at Grange Bridge, coordinates 53.518774, -7.366951, was the only area within the development of this plan that was identified as a proposed NHA under the Wildlife Act. Although no official conservation designation is allocated to the Royal Canal at this time its status as 'proposed' indicates that this stretch of water in the future could be designated. The Royal Canal is also under the management of Waterways Ireland. Considering the management along with the proposed future designation it is recommended that your community group should work alongside your local Heritage Officer and Waterways Ireland seeking advice and permission for any future biodiversity actions in this area. No records of cultural importance were identified within the Sites and Monuments Records or within the National Inventory of Architectural Heritage for this location. No information was available on www.catchments.ie about this stretch of water. However in the course of desktop research a published Ecological survey of the Royal Canal focusing on a section of the Royal Canal and Lough Owel feeder was identified. This report provides habitat classification and species identification along this stretch of waterway however the report took a stretch from the Green Bridge - Grange Bridge while this report focused only on the area around Grange Bridge. Therefore no habitat classifications or species list could be used to gather data from the report as coordinates were not provided for either habitats or species identified. In the future should the survey area be extended information can be found on pages 42-46 (Smith et al, 2014) of the Waterways Ireland report.



Images: Images taken at the banks of the Royal Canal with bulrush meadowsweet and red clover dominated. Above: Overview of the survey area taken from Grange Bridge. © N. Madigan

The following are the variety of species identified at the Royal Canal at Grange Bridge. It should be noted that the species list presented in this plan should be considered as a representative sample of the diversity of wildlife in the area and not considered a complete list. Weather, time of year and even the time of the day the survey was undertaken can all have an impact of the variety of biodiversity recorded. It does however provide an increased sample of biodiversity in this area of Mullingar that will improve the online presence of diversity of species on the National Biodiversity Data Centre. To review a full list of species recorded please see pages 21-29 of this plan.

- * 48 Wildflowers
- * 10 Trees
- * 1 Fungi
- * 1 Ferns
- * 2 Rushes
- * 7 Grasses
- * 3 Butterflies
- * 16 Invertebrates
- * 1 Bumblebee
- * 4 Birds
- * 2 Dragonfly & damselfly













Images L-R: Waterlily, Red Clover, Common Spotted Orchid and Knapweed identified during the biodiversity of the Royal Canal at Grange bridge 2020. © N. Madigan

To support the community to better understanding the habitats present at the Royal Canal at Grange bridge and to ensure that those habitats are maintained, where appropriate, throughout any biodiversity actions undertaken by the community a habitat map was completed and is presented here:

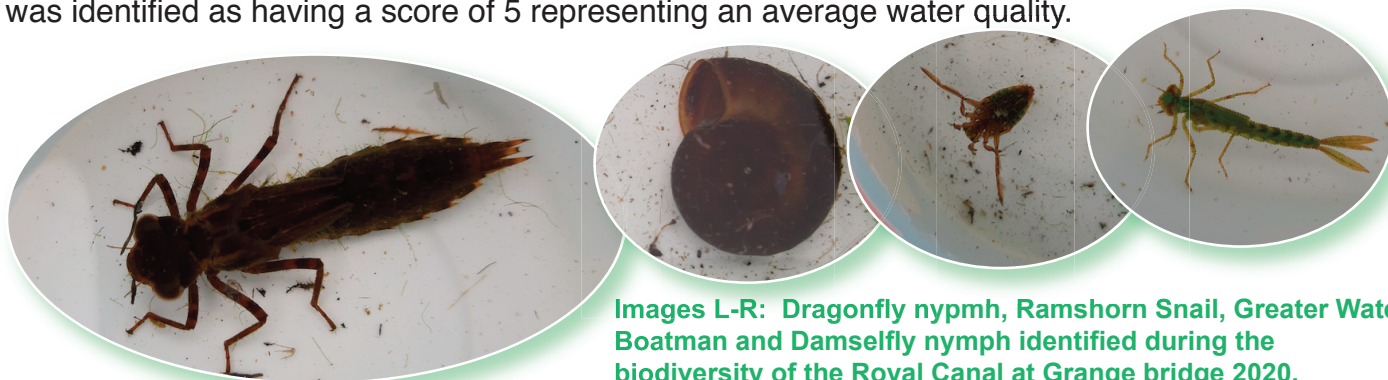
Royal Canal at Grange Bridge Habitat Map 2020



Map Legend

	GA2 Amenity Grassland		BL3 Artificial Surface
	GS4 Wet Grasslands		FW3 Royal Canal
	WN6 Wet Willow & Ash Woodland		Proposed NHA Boundary
	WD5 Scattered Trees		WL1 Hedgerows
			WL2 Tree lines
			WS3 Non-Native Shrub

With access to the water body a freshwater invertebrate dipping identification also took place at this study area. The purpose is to identify freshwater invertebrates below the surface of the water body and estimate water quality. The biodiversity survey identified thirteen different freshwater invertebrates. Each of these has been given a biotic score (see Appendix 2). The biotic score index is between 1-10 with 10 being considered pristine water quality and 1 representing extremely poor water quality. Using the freshwater biotic index the water quality of the Royal Canal at Grange Bridge was identified as having a score of 5 representing an average water quality.



Images L-R: Dragonfly nymph, Ramshorn Snail, Greater Water Boatman and Damselfly nymph identified during the biodiversity of the Royal Canal at Grange bridge 2020.
© N. Madigan

6.2 Mullingar Town Park Biodiversity Actions

The following biodiversity actions are recommendations, Mullingar is your community and your environment therefore as a group it is your choice to consider these biodiversity actions and whether these recommended biodiversity actions are to be implemented in your community. Mullingar Tidy Towns should always seek permission for actions planned with partner organisations who may manage the various areas of biodiversity throughout the town including, but not limited to, Mullingar Municipal District, Waterways Ireland and the Famine Graveyard Committee

Project Number	Action	Priority	Location	What will benefit
1	Enhance pollinators in your community by creating pollinator friendly planting areas. The Pollinator Friendly Planting Code of the National Biodiversity Centre will provide you with a range of plants that are suitable for this bed. Perennial plants are better sources of nectar and pollen than annuals. They are also cost effective as they grow and flourish over the following years. See Appendix 3 for suggested planting schemes.	High	Parks, green spaces & established flower beds	Butterflies, bees, birds, mammals, nectar rich plants & ground bugs
2	Short sward height is known to offer less biodiversity value to a community. Remember diversity diversity diversity! Height and structure variations of habitats enhance biodiversity value. Working with Mullingar Municipal District and other land managers consider selecting areas of your community to allow the sward height grow or consider leaving an uncut margin of 1 metre long roadsides or indeed consider creating a wildflower meadow as an alternative.	Medium	Parks, green spaces & road verges	Butterflies, bees, birds, mammals, nectar rich plants & ground bugs
3	In urban centres exposed walls can be enhanced through hedgerow planting or creation of a pollinator friendly green wall where the wall is lined with hanging planters filled with pollinator friendly flowers.	High	Walls	Butterflies, bees & nectar rich plants
4	Cherry Laurel is a non native species to improve biodiversity value it is recommended to remove the Cherry Laurel from hedgerows in your community and replace with native species such as holly or hawthorn.	High	Hedgerows	Butterflies, bees & nectar rich plants
5	It was identified that many planters appeared to be using peat - remember the basics of biodiversity management. Enhancing your local biodiversity should not be at the expense of another habitat. Work with Mullingar Municipal District and Westmeath County Council to become a peat free community.	High	Planters throughout the town	Wetland birds, plants, bugs, Amphibians and reptiles
6	When we consider pollinators our nocturnal pollinating moths are often overlooked. There are over 1,200 species of moth in Ireland and they not only support in pollination but are an important source of food for our bats. Honeysuckle is a night scented plant that climbs and could be incorporated within the already established hedgerows throughout the town.	High	Hedgerows	Moths, bats and birds

Project Number	Action	Priority	Location	What to expect
7	Managing a site for its biodiversity should always include regular monitoring for invasive species. The 2020 biodiversity survey identified a number of invasive species present in Mullingar including Winter Heliotrope, Japanese Knotweed and Himalayan Honeysuckle. Firstly as a community group don't disturb the infestations. Although management was underway on the Japanese Knotweed no evidence of management of the other remaining invasive species was observed. Draw attention of the presence of these species to Mullingar Municipal District and confirm what management they have in place for these species in your community. Invasive species are known to have a devastating impact on native biodiversity and habitats.	High	Throughout the town	Native nectar rich plants, trees, shrubs, butterflies, bees, birds and mammals
8	Engage members of the public - it was noted that few of the wildlife species around the town had labels to encourage members of the community to learn the variety of species that call Mullingar their habitat. Why not create a nature trail around the town or indeed within the park for people to explore the diversity of species - it would also make a very good educational tool for local school students. Also consider biodiversity information boards.	Medium	Throughout the town & parks	Community & biodiversity
9	Create a hibernating ground for Ireland's mining bees. 62 species of solitary bee are found in Ireland - raise the profile of their importance by creating a bee hibernation area. A bee bank is bare soil located on a south or east facing bank that will support pollinators.	High	Park & green open spaces	Bees
10	A popular activity for many members of our community is bird watching - why not create an amenity while also enhancing biodiversity by creating a bird feeding station. This could be a seasonal feature for the winter which links with BirdWatch Ireland's garden bird survey (December - end February annually) encouraging citizen science in your community and encourage community members to enhance biodiversity in their own gardens.	High	Parks and public accessible areas	Community & biodiversity

Mullingar Town Park is a successful Green Flag park and much work has been done by Mullingar Municipal District staff to achieve this status for your local park. Work with the staff and together consider the recommendations outlined within the plan. Remember sometimes we don't need to do anything to enhance biodiversity. Maintaining and enhancing biodiversity is not only good for wildlife but also benefits our community members.



Note: No recommendations have been offered for the pond within the park. During the survey Freshwater Crayfish were identified - please do not disturb this species, it is one area we have to do nothing!
© N Madigan

Project Number	Action	Priority	Location	What will benefit
11	Reflecting on the location of the Famine Graveyard, its history and its spiritual connections it is recommended that Mullingar Tidy Towns consider installing a bench in this area for community members to take time to reflect in the surrounding peaceful environment. This bench will also serve as a biodiversity observation area where community members can take time to watch the variety of species around them.	Medium	Famine Graveyard	Community & biodiversity
12	The preferred habitat of butterflies includes sunlight, shade and nectar rich species. The position of the Famine Graveyard and the treeline surrounding the site offer these ideal conditions. It appears the grassland is regularly mown to keep the sward short. However it was noted that the sward was also dominated with Meadowsweet - to enhance nectar rich species such as Meadowsweet for butterflies alternatively mowing patterns could be considered to allow Meadowsweet to flower. Mowing could create paths through the varying height sward that could be considered a reflective walk in our past.	Medium	Famine Graveyard	Butterflies, bees, birds, mammals, nectar rich plants & ground bugs
13	Significant stands of <i>leylandii</i> are located along the boundary of the Famine Graveyard although an ideal species offering the site shelter from wind and a habitat for nesting birds consideration could be given to replacing this <i>Leylandii</i> over time with native tree species such as Yew (which also has connections with religion). This could happen in stages giving immature trees planted an opportunity to grow. One consideration is Yew prefers free draining soil - check the boundary for evidence of this before making your decision.	Medium	Famine Graveyard	Butterflies, trees, bees, birds & nectar rich plants
14	Areas of the open grassland area within the Famine Graveyard were quite wet. Young Hawthorn trees planted in the North-West of the site did not appear to be thriving. Monitor these over the coming year and consider if they need to be replaced with a native species such as alder that is more tolerant of wetter ground.	High	Famine Graveyard	Birds & trees
15	Tree canopies offer shade in summer however in spring the open canopy would be a suitable ground for growing bluebells, primroses and snowdrops. Consider adding spring colour by planting a selection of bulbs. All of which will also offer early sources of nectar to pollinators.	Medium	Throughout the town	Butterflies, bees and nectar rich plants
16	The stone gate entrance at the Famine Graveyard is a haven for mosses and lichens although it could be tempting to power wash the stone work it is not recommended and this would have a negative impact on the biodiversity using the stone as a habitat and may also cause damage to the stonework.	Medium	Famine Graveyard	Lichens & mosses

Project Number	Action	Priority	Location	What will benefit
17	Water is associated with cleansing and purification of body and spirit and all life depends on it. The addition of water to an area would benefit biodiversity. The addition of a bird bath would also act as a bee bar (a shallow source of water) and would benefit biodiversity in areas of the town where there is no water source for biodiversity.	Medium	Throughout the town	Birds and bees
18	During the survey the highest number of butterfly species were recorded at the Famine Graveyard however the survey only focused on four biodiversity areas within the town. Consider implementing a butterfly monitoring programme and submit data collected to the National Biodiversity Data Centre. This could act as a citizen science initiative similar to the proposed winter garden bird feeding station recommended.	Medium	Throughout the town	Community & biodiversity
19	In Christianity, the bee has historically been seen as a symbol of Jesus Christ's attributes. The honey reflecting his sweet and gentle character, whilst the sting pertaining to justice and the cross. As the Famine Graveyard is quieter than the busy town park consider installing a bee hive at this site promoting pollination in the area. Have a discussion with your local bee group the Lake County Beekeepers (lakecobeekkeepers@gmail.com) to enquire if the site would be a suitable location for a hive.	Medium	Famine Graveyard or other suitable location	Bees
20	Bats are often associated with the steeples of churches and bridges - as they are quite spaces with few human visitors they are considered ideal to establish a roost. Consider erecting bat boxes in the surrounding areas of these built structures in your community. Bat boxes are used as summer nesting grounds of male and juvenile bats. Make contact with your local Bat Group and complete a survey of bats in the town.	Medium	Throughout the town	Bats
21	According to www.catchments.ie the River Brosna is considered as having a poor water quality. Trees are planted along water courses to minimise bank erosion but they are also important filters of water - where appropriate planting trees will not only enhance biodiversity but may also benefit the protection of the water course. Alder and willow species grow well in the wet conditions along bank edges.	Medium	River bank edges	Trees, birds and bugs
22	Encouraging community engagement in all your biodiversity projects will enhance the awareness of its importance within your community. Consider a river walk during Heritage Week (August) or National Biodiversity Week (May).	High	Throughout the town	Community & biodiversity
23	On publication of a Biodiversity Action Plan it is given a time frame to achieve actions. This set time frame allows for both action but also review of the plan. Within the time frame of Mullingars Biodiversity Action Plan the County Westmeath Biodiversity Action Plan will be reviewed it is recommended Mullingar Tidy Towns engage in the consultation process.	High	Throughout the town	Community & biodiversity

Project Number	Action	Priority	Location	What will benefit
24	Along the banks of the Royal Canal the common spotted orchid was recorded. To protect this species and others no chemicals should be used in the area and the banks allow grow wild. To be fair this is already implemented into practice but the Tidy Towns should monitor this. Allowing the bank edges grow wild will also offer shelter for nesting wetland birds	High	Royal Canal	Butterflies, bees, wetland birds & nectar rich plants
25	Waterways Ireland already have a programme promoting the value of the canal and other waterways known as Nature Navvies (https://learning.waterwaysireland.org/schoolprogrammes/7/nature-navvies-programme) - encourage young people outdoors to explore our waterways by promoting this programme through your social media and through local schools.	High	Royal Canal	Community & biodiversity
26	Although a biodiversity survey was completed as part of the development of this plan - the time allocated and the many restrictions in place due to Covid-19 the surveys results presented should be read as a representative sample and not a definite list of biodiversity species within Mullingar. Continue to carry out biodiversity surveys and add new species identified to the National Biodiversity Data Centre dataset submitted as part of this project.	Ongoing	Throughout the town	Community & biodiversity
27	As an established group in Mullingar Town the Tidy Towns should actively engage with Westmeath County Council by making submissions to policy documents that affect the biodiversity for example Westmeath County Council Development Plan and campaign for changes to ensure biodiversity is considered in all local buildings and development projects.	Medium	Throughout the town	Community & biodiversity
28	During the Westmeath Swift Survey carried out by Heritage office of Westmeath County Council in 2018 – Mullingar was identified as home to some of the largest swift colonies in Ireland. Mullingar Town Towns should continue their work in promoting the swift and installing swift nest boxes especially when development of buildings may result in loss of habitat for the swift.	Medium	Throughout the town	Swifts
29	Working with local businesses and Westmeath County Council encourage more native tree planting in the town - this would both create habitat for biodiversity but also improve air quality and support the climate mitigation measures.	Ongoing	Throughout the town	Trees, birds & bugs
30	Litter is harmful to wildlife - Mullingar Tidy Towns should continue to promote the threat litter poses to your local biodiversity and engage with volunteers to host regular litter picks	Ongoing	Throughout the town	Community & biodiversity

In conclusion to the biodiversity recommendations presented in this plan please remember Mullingar is your community and your environment. It is your decision to implement these biodiversity recommendations. As the plan is to be implemented over ten years during this time your community may identify further projects that would maintain and enhance the biodiversity of Mullingar Town. To enable the community to review this plan in ten years it is recommended that any extra biodiversity projects identified and undertaken should be recorded within the plan using the table below:

Project Number	Action	Priority	Location	What will benefit
A				
B				
C				
D				
E				

Project Number	Action	Priority	Location	What will benefit
F				
G				
H				
I				
J				
K				

7 Sources of Funding



It is recognised that there is sometimes a financial cost associated with taking action to maintain and enhance biodiversity at a local level. There are a number of organisations that offer financial support through competitive grant awards to formally established community groups. Applying for these grant awards does not mean that your group will secure funding for your proposed project. It is always

recommended before applying for any fund that your group carefully read the criteria/guidelines and discuss as a group how your project meets the application requirements. Grant applications take time it is recommended that your group identify competitive grant awards available in a timely manner. For costs associated with your project most grant applications require three quotes this is to ensure value for money and this may also take time. My best advice is be prepared - it will make the application process easier.

7.1 Funding Sources for Projects

- * Westmeath County Council Community Grant Award
<http://www.westmeathcoco.ie>
- * Westmeath County Council Community Enhancement Programme
<http://www.westmeathcoco.ie>
- * Westmeath County Council Community Environment Action Fund
<http://www.westmeathcoco.ie>
- * Westmeath County Council Conservation & Heritage Grant
<http://www.westmeathcoco.ie>
- * Heritage Council Grants
<https://www.heritagecouncil.ie/funding>
- * Local Authority Water Programme Development Fund
<http://watersandcommunities.ie>
- * Waterways Ireland Heritage Grant
www.waterways.org
- * Community Foundation for Ireland Environment & Nature Fund
<https://www.communityfoundation.ie>
- * Áitiúil by Airbnb
<https://www.airbnb.ie>
- * NPWS (National Parks and Wildlife Service) grants for small recording projects
<https://www.npws.ie>
- * Inland Fisheries Ireland Midland Fisheries Fund
www.fisheriesireland.ie
- * Leader- Westmeath Community Development
<https://www.westcd.ie>

7.2 Funding Sources for Events

- * Waterways Ireland Event programme
<https://www.waterwaysireland.org>
- * Local Authority Water Programme Development Fund
<http://watersandcommunities.ie>
- * Westmeath County Council Festival and Events Grants
<https://www.westmeathcoco.ie>

Many of your local businesses may like to get involved and support your action for biodiversity or local schools or youth groups may like to host a fundraising event such as a uniform free day or bake sale. Make contact through a personal call, e-mail or letter with these groups asking them to support your work maintaining and enhancing the biodiversity of Mullingar.

8. Useful Websites

Useful Links

Understanding the variety of biodiversity found within our local habitats is a lifelong learning process. There are government, local government, non-governmental and community groups that can offer you guidance in identifying local biodiversity and how best to manage habitats for biodiversity. To follow are some groups that can offer you guidance with your biodiversity and habitat enquiries:

For enquiries relating to general habitats and biodiversity:

- * National Biodiversity Data Centre : www.biodiversityireland.ie
Biodiversity maps : maps.biodiversityireland.ie
- * National Parks and Wildlife Service : www.npws.ie
- * Coillte : www.coillte.ie
- * Westmeath County Council Environment Section : <http://www.westmeathcoco.ie/en/ourservices/environment/>
- * Waterways Ireland : www.waterwaysireland.org
- * Local Authority Water Programme : www.waterandcommunities.ie
- * An Taisce : www.antaisce.org
- * Irish Wildlife Trust : www.iwt.ie

For specific species enquiries:

- * BirdWatch Ireland : www.birdwatchireland.ie
- * Bat Conservation Ireland : www.batconservationireland.ie
- * Butterfly Conservation Ireland: www.butterflyconservation.ie
- * Tree Council of Ireland : www.treecouncil.ie
- * Crann : www.crann.ie
- * Irish Peatland Conservation Council (Amphibians) : www.ipcc.ie
- * Native Woodland Trust : www.nativewoodlandtrust.ie
- * Vincent Wildlife Trust : www.vincentwildlife.ie

For species identification enquiries:

- * National Biodiversity Data Centre : www.biodiversityireland.ie
- * Wild Flowers : www.wildflowersofireland.net
- * Butterfly : <https://www.biodiversityireland.ie/projects/monitoring-scheme-initiatives/butterfly-monitoring-scheme/about/how-to-identify-butterflies/>
- * Dragonfly & damselflies : <https://www.biodiversityireland.ie/projects/monitoring-scheme-initiatives/dragonfly-ireland-2019-2024/dragonflies-and-damselflies/>
- * General wild plants : www.irishwildflowers.ie

Don't forget to use your social media accounts you may be surprised to learn that a habitat or biodiversity expert lives in your community!

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Species list for N431552



One species recorded

Quality of information The National Biodiversity Data Centre makes every effort to ensure the quality of the information available on this website and updates the information regularly. Before relying on the information on this site, however, users should carefully evaluate its accuracy, currency, completeness and relevance for their purposes. The National Biodiversity Data Centre cannot guarantee and assumes no legal liability or responsibility for the accuracy, currency or completeness of the information. To assist the Centre in the provision of high quality information, should you identify an error in any of the information provided, please notify the Centre and every effort will be made to rectify the error.

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - butterfly	Small Tortoiseshell (<i>Aglais urticae</i>)	1	29/03/2020	Butterflies of Ireland	

Species list for N431553



No species recorded

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Species list for N432553



No species recorded

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Species list for N432552



No species records recorded

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National Biodiversity Data Centre Species Review

River Brosna at Mount Street

Species list for N438527



Two species recorded

Quality of information The National Biodiversity Data Centre makes every effort to ensure the quality of the information available on this website and updates the information regularly. Before relying on the information on this site, however, users should carefully evaluate its accuracy, currency, completeness and relevance for their purposes. The National Biodiversity Data Centre cannot guarantee and assumes no legal liability or responsibility for the accuracy, currency or completeness of the information. To assist the Centre in the provision of high quality information, should you identify an error in any of the information provided, please notify the Centre and every effort will be made to rectify the error.

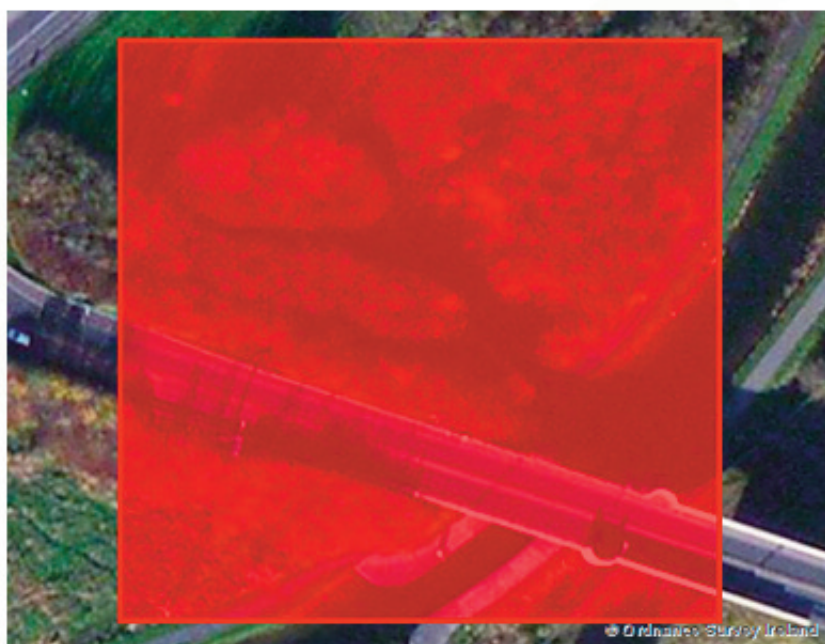
Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Common Moorhen (<i>Gallinula chloropus</i>)	1	02/08/2017	Birds of Ireland	
Custom	flowering plant	Japanese Knotweed (<i>Fallopia japonica</i>)	1	08/05/2012	National Invasive Species Database	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)

National Biodiversity Data Centre Species Review

Royal Canal at Grange Bridge



Species list for N419521



One species recorded

Quality of information The National Biodiversity Data Centre makes every effort to ensure the quality of the information available on this website and updates the information regularly. Before relying on the information on this site, however, users should carefully evaluate its accuracy, currency, completeness and relevance for their purposes. The National Biodiversity Data Centre cannot guarantee and assumes no legal liability or responsibility for the accuracy, currency or completeness of the information. To assist the Centre in the provision of high quality information, should you identify an error in any of the information provided, please notify the Centre and every effort will be made to rectify the error.

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - true bug (Hemiptera)	Green Shieldbug (Palomena prasina)	1	21/04/2015	True Bugs (Heteroptera) of Ireland	

National
Biodiversity
Data Centre

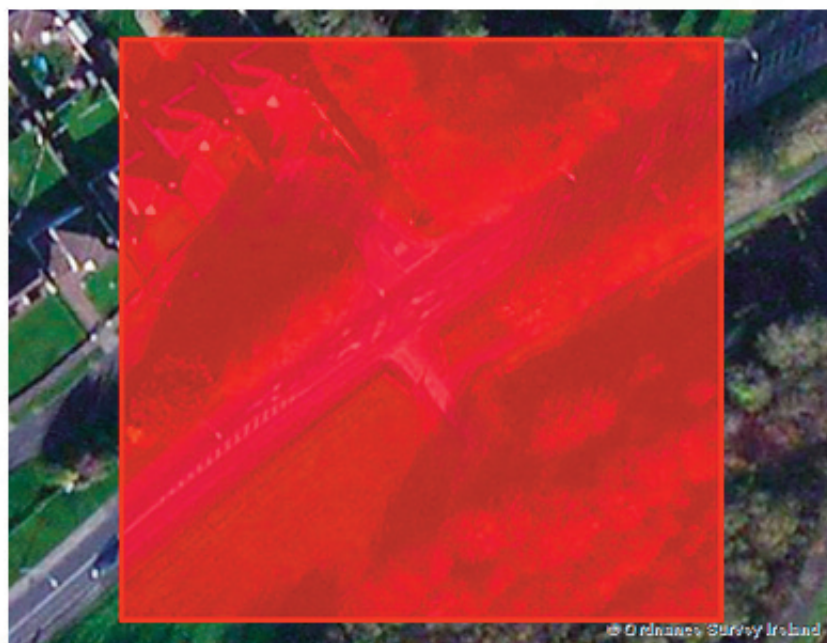
Documenting Ireland's Wildlife

National
Biodiversity
Data Centre

Documenting Ireland's Wildlife



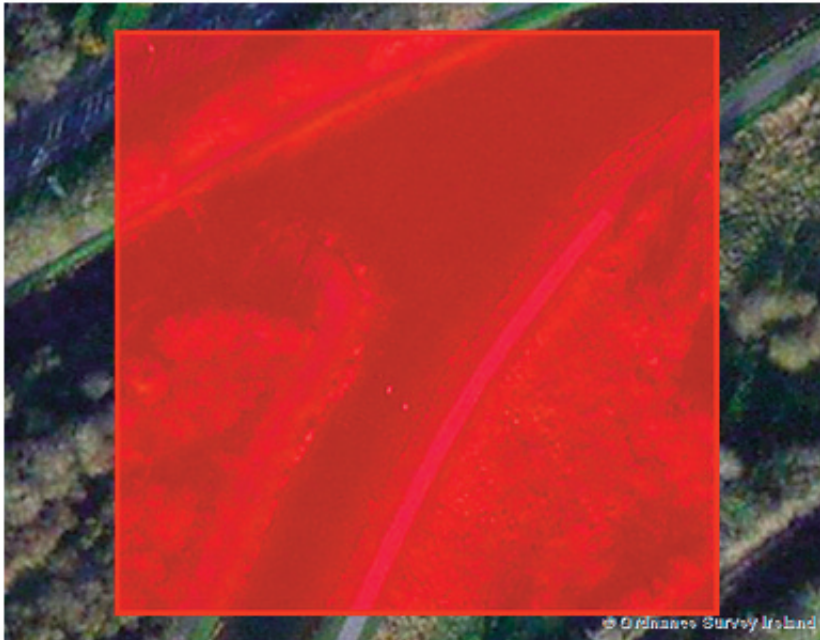
Species list for N419522



No species recorded

Quality of information The National Biodiversity Data Centre makes every effort to ensure the quality of the information available on this website and updates the information regularly. Before relying on the information on this site, however, users should carefully evaluate its accuracy, currency, completeness and relevance for their purposes. The National Biodiversity Data Centre cannot guarantee and assumes no legal liability or responsibility for the accuracy, currency or completeness of the information. To assist the Centre in the provision of high quality information, should you identify an error in any of the information provided, please notify the Centre and every effort will be made to rectify the error.

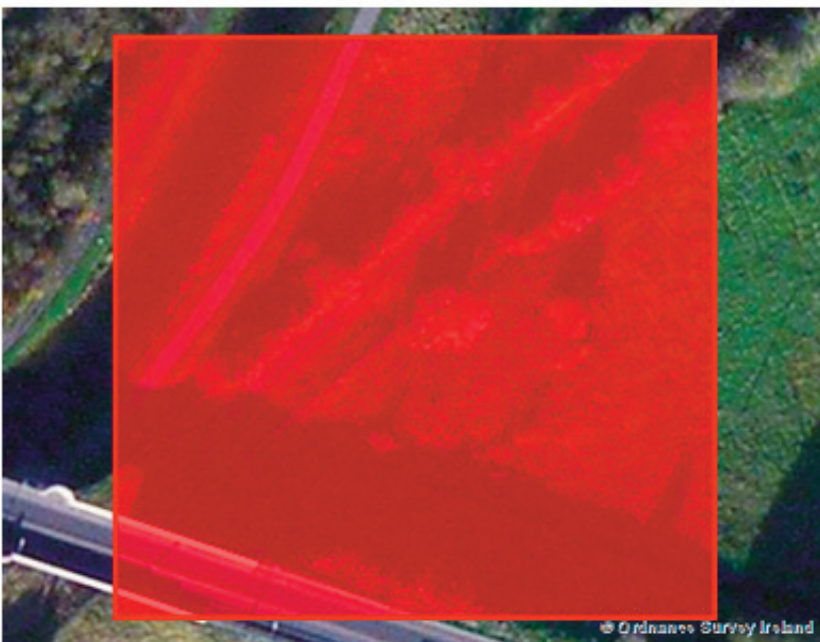
Species list for N420522



No species recorded

Quality of information The National Biodiversity Data Centre makes every effort to ensure the quality of the information available on this website and updates the information regularly. Before relying on the information on this site, however, users should carefully evaluate its accuracy, currency, completeness and relevance for their purposes. The National Biodiversity Data Centre cannot guarantee and assumes no legal liability or responsibility for the accuracy, currency or completeness of the information. To assist the Centre in the provision of high quality information, should you identify an error in any of the information provided, please notify the Centre and every effort will be made to rectify the error.

Species list for N420521



No species recorded

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Species list for N439528

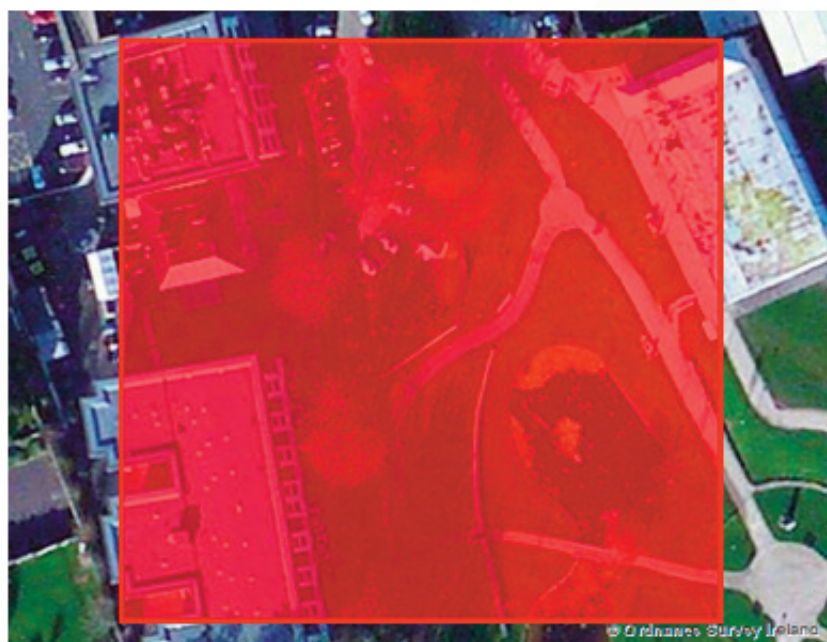


No species recorded

Quality of information The National Biodiversity Data Centre makes every effort to ensure the quality of the information available on this website and updates the information regularly. Before relying on the information on this site, however, users should carefully evaluate its accuracy, currency, completeness and relevance for their purposes. The National Biodiversity Data Centre cannot guarantee and assumes no legal liability or responsibility for the accuracy, currency or completeness of the information. To assist the Centre in the provision of high quality information, should you identify an error in any of the information provided, please notify the Centre and every effort will be made to rectify the error.



Species list for N439529



Three species recorded

Quality of information The National Biodiversity Data Centre makes every effort to ensure the quality of the information available on this website and updates the information regularly. Before relying on the information on this site, however, users should carefully evaluate its accuracy, currency, completeness and relevance for their purposes. The National Biodiversity Data Centre cannot guarantee and assumes no legal liability or responsibility for the accuracy, currency or completeness of the information. To assist the Centre in the provision of high quality information, should you identify an error in any of the information provided, please notify the Centre and every effort will be made to rectify the error.

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	flowering plant	Branched Bur-reed (Sparganium erectum)	1	03/08/2017	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Japanese Knotweed (Fallopia japonica)	1	03/08/2017	Online Atlas of Vascular Plants 2012-2020	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Custom	flowering plant	Water-plantain (Alisma plantago-aquatica)	1	03/08/2017	Online Atlas of Vascular Plants 2012-2020	



Species list for N440529



Nineteen species recorded

Quality of information The National Biodiversity Data Centre makes every effort to ensure the quality of the information available on this website and updates the information regularly. Before relying on the information on this site, however, users should carefully evaluate its accuracy, currency, completeness and relevance for their purposes. The National Biodiversity Data Centre cannot guarantee and assumes no legal liability or responsibility for the accuracy, currency or completeness of the information. To assist the Centre in the provision of high quality information, should you identify an error in any of the information provided, please notify the Centre and every effort will be made to rectify the error.

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	fern	Maidenhair Spleenwort (<i>Asplenium trichomanes</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Annual Meadow-grass (<i>Poa annua</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Beech (<i>Fagus sylvatica</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Broad-leaved Dock (<i>Rumex obtusifolius</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Broad-leaved Willowherb (<i>Epilobium montanum</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Cleavers (<i>Galium aparine</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Common Nettle (<i>Urtica dioica</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Creeping Buttercup (<i>Ranunculus repens</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Gorse (<i>Ulex europaeus</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Groundsel (<i>Senecio vulgaris</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Hawthorn (<i>Crataegus monogyna</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Ivy (<i>Hedera helix</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Japanese Knotweed (<i>Fallopia japonica</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Custom	flowering plant	Prickly Sow-thistle (<i>Sonchus asper</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Rosebay Willowherb (<i>Chamerion angustifolium</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Sycamore (<i>Acer pseudoplatanus</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species
Custom	flowering plant	Taraxacum aggregate	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Wavy Bitter-cress (<i>Cardamine flexuosa</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	
Custom	flowering plant	Winter Heliotrope (<i>Petasites fragrans</i>)	1	06/02/2020	Online Atlas of Vascular Plants 2012-2020	

Species list for N440528



No species recorded

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No species recorded

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Apoendix 2

Using freshwater invertebrates to estimate water quality template

Indicating Water Quality in Your Local Area Using the Biotic Score

Animals Name	Score	Animals Name	Score
Flatworm	4	Other damselfly nymphs	6
True Worm	1	Dragonfly nymph	8
Leeches	3	Stonefly nymph	10
Snails	3	Water measurer	5
Pea cockles	3	Pond skaters	5
Swan mussels	6	Water scorpion	5
Freshwater limpet	3	Greater water boatman	5
Freshwater crayfish	10	Lesser water boatman	5
Water hoglouse	3	Alderfly larvae	4
Freshwater shrimp	6	Cased caddis larvae	7
Water mites	4	Caseless caddis larvae	5
Burrowing mayfly nymph	10	Water beetles	5
Flattened mayfly nymph	10	Crane fly larvae	5
Swimming mayfly nymph	6	Rat-tailed maggots	3
Demoiselle nymph	3	Blackfly larvae	5
		Non-biting midge larvae	2

Step 1: Using a net and white basin catch a selection of invertebrates from your local stream/canal/ river etc..

Step 2: Using an identification chart identify each invertebrate caught and record the different invertebrates below (only record each different invertebrate once)

Name of Invertebrate	Score

Step 3: To calculate the water quality add the value of the scores together for each invertebrate identified and divide this sum by the total number of different invertebrates in your list

Your biotic index score should lie between 1-10, the higher the score the cleaner your water



Perennial planting schemes

Pollinator friendly perennial plants are excellent sources of pollen and nectar. They are much more attractive to bees when planted in blocks rather than as single plants. Having a pollinator friendly perennial bed is an excellent way to provide food for pollinators across their lifecycle.

Perennials can be used to great effect in traffic islands and public spaces, providing a strong visual impact and giving a good display of flowers over a long period. Pollinator friendly perennial planting should be designed to provide a food source from spring through to autumn. In addition they are:

- Low maintenance
- Easy to establish
- Have strong visual impact
- More cost effective than bedding schemes over the long term
- Less maintenance than lawn mowing
- Provides a natural style of planting
- Provides habitat and nesting materials for birds and insects

Costing: Pollinator friendly perennial planting versus annual bedding

Planting regime	Approximate costs per m ² (2016)	Typical replacement
Pollinator friendly perennials	€10-13 (9 x 9cm pots)	Life span of 10-12 years if well planted and well maintained. Small amount of annual replacement may be required depending on the site
	€17-19 (6 x 2L pots)	
Annual bedding	€10-29	Twice per year

Based on prices from a large Irish perennial plant nursery. Typical annual bedding costs were provided by a Council in ROI.

Key Points:

- Soil preparation before planting is essential
- Dense planting will reduce weeding
- Regular maintenance is important
- Use only good quality plants from a reliable source



Suggested plant lists:

These are examples of planting selections that have been used to create pollinator friendly perennial beds in Ireland. These mixes create an attractive and colourful display for the public while also providing food for pollinators. Grass is included to provide colour and structure in autumn/winter.



Option A

Little Experience with Perennials		Flowering
Aster 'Asran' / 'Stardust'	Pollinator	Aug - Sept
Crocsmia 'Babylon'	Pollinator	Aug - Sept
Geranium 'Cambridge'	Pollinator	May - Aug
Hemerocallis 'Stella d'or'	Pollinator	May - Aug
Nepeta 'Walkers Low'	Pollinator	May - July
Oregano 'Golden'	Pollinator	June - July
Rudbeckia 'Goldstrum'	Pollinator	July - Aug
Sedum 'Autumn Joy'	Pollinator	July - Aug
Stachys 'Byzantina'	Pollinator	July - Aug
Stipa arundinacea	Grass	

Plants from List A are easy to grow and maintain, ideal to start off with.

Option B

Some Experience with Perennials		Flowering
Achillea 'Moonshine'	Pollinator	May - Aug
Allium schoenoprasum	Pollinator	June - July
Anemone 'Splendens'	Pollinator	July - Aug
Aster 'Little Carlow'	Pollinator	Sept - Oct
Calamagrostis 'Karl Foerster'	Grass	
Calamintha	Pollinator	Aug - Sept
Fennel	Pollinator	July - Sept
Kniphofia	Pollinator	July - Sept
Lamium 'Pink Chablis'	Pollinator	April - Aug
Lavender	Pollinator	May - July
Leucanthemum	Pollinator	July - Aug
Monarda Jacob Cline	Pollinator	July - Aug
Osteospermum ecklonis	Pollinator	May - Aug
Salvia nemerosa	Pollinator	May - July
Stachys 'Hummelo'	Pollinator	July - Aug
Stipa 'Ponytails'	Grass	
Symphytum 'Wisley Blue'	Pollinator	April - May
Thyme	Pollinator	June - July

Plants from List B can be added to schemes to provide more interest in colour and form



Appendix 4

Project Community Engagement

To maintain and enhance biodiversity the support of your community is always welcomed. It was identified at the meeting between Mullingar Tidy Towns and the ecologist that community engagement was important and should be incorporated within the development of the plan. 2020 was an unprecedented year in Ireland with the arrival of Covid-19 physical gatherings and restrictions on movement limited community engagement potential during the development of Mullingar's Community Biodiversity Action Plan. With Covid-19 restrictions it was identified that the use of social media would offer the best opportunity to ensure community engagement. Five community newsletters were presented to Mullingar Tidy Towns, a social media video encouraging members of the public to become citizen scientists through submitting their local biodiversity observations and a second video on freshwater invertebrates was also provided following the cancellation of an event. To officially publish the new Community Biodiversity Action Plan National Biodiversity Week 2021 was chosen - a press release was prepared and submitted to local newspapers in the area.



Mullingar a Haven for Biodiversity
 An initiative of Mullingar Tidy Towns - communicating their Community Foundation for Ireland Biodiversity Project with the wider community

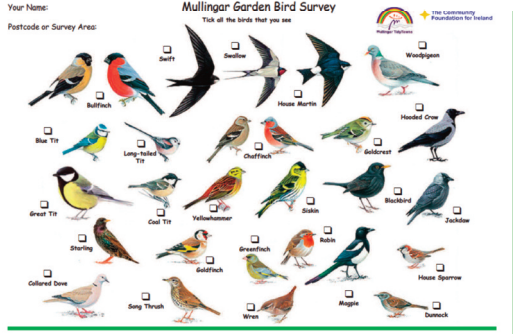
The Community Foundation for Ireland

Mullingar Tidy Towns

A video filmed and edited by Nuala Madigan. Contact with the Irish Peatland Conservation Council, Lifford, Rathfriland, Co. Wick, H1 2V83. E-mail: info@ipc.ie Telephone: 045-860133

A video that was suitable for social media was developed to encourage members of the community in Mullingar to become citizen scientists.

A garden bird survey was submitted to the Tidy Towns to encourage members of the community to monitor garden birds during a nationwide lockdown between March and June 2020.



River Brosna Heritage Information Day 2020

Due to COVID-19 restrictions and the safety of everyone Mullingar Tidy Towns have postponed their scheduled River Brosna Heritage Information Day on 22nd August 2020

One of the activities on the day was to share with you the value of the freshwater invertebrates found beneath the water surface - until the event can take place please enjoy this information video on how freshwater invertebrates can be used to indicate water quality.

The Community Foundation for Ireland

Local Authority Waters Programme

A physical event planned for Heritage Week was cancelled as a result of Covid-19, a social media video on freshwater invertebrates was presented as an online offering for community members as a result.