

The Lough Carra LIFE Project Newsletter 2023



Lough Carra LIFE

“The Lough Carra LIFE Project is an example of how organised local communities can take action on environmental issues and achieve environmental conservation successes at a grass roots level”. These were the words of Minister of State Malcolm Noonan in May of 2023, when he formally launched the Lough Carra LIFE Project, a 5-year project aiming to improve the water quality, and restore and protect the natural habitats, of Lough Carra.



Lough Carra



Lough Carra is an exceptionally rare and important habitat. It forms part of the Lough Carra/Mask Complex SAC, and the Lough Carra SPA, and is one of the finest examples of a Marl Lake habitat in Europe. It is a shallow, Spring fed lake, well known for its turquoise clear waters and the calcareous encrustations on its rocky lake floor and shores (marl). Its shores are fringed with a complex of limestone and wetland habitats, including limestone pavements, orchid rich grasslands, and fens, providing homes for a diverse range of key species including the lesser horseshoe bat, eurasian otter, and common gull.

From a natural habitat and wildlife point of view this is an important place, but the lake is also a key life support system for the people who live in the area, providing a direct drinking water source for hundreds of homes in the catchment through the local Group Water Scheme. It also flows directly into Lough Mask, which is the main drinking water source for thousands of homes throughout County Mayo.

It has been well documented that our waterways nationwide are deteriorating, and 2023 RTÉ news coverage of the declining

condition of Lough Neagh has brought greater national attention to this issue. This decline in water quality is primarily the result of pressures from intensive modern land management, specifically the increased levels of nutrient run-off from agricultural land, and the ongoing conversion of semi-natural habitats, such as areas of scrub, woodlands, and wildflower meadows, into improved grasslands for livestock. Though the area around Lough Carra is not particularly intensively farmed in comparison to other areas of the country, Lough Carra's hydrology means it is particularly vulnerable to the impacts of modern land management practices. Recent years have seen a continuous decline in the water quality of the lake and its surrounding habitats.



The Lough Carra LIFE Project



2023 January to March (Q1)

In 2018 concerned locals formed the Lough Carra Catchment Association (LCCA) aiming to restore and protect the lake, and in 2021 they secured funding from the European Commission LIFE Programme for the Lough Carra LIFE Project. This 5-year project will work closely with farmers, landowners, and community groups in the catchment to implement a comprehensive programme of actions to halt the deterioration of the lake, and to restore the quality of the water and the surrounding habitats. The project is jointly funded by the European Commission LIFE Programme and the Project Funding Partners: Mayo County Council, the Department of Agriculture Food and the Marine (DAFM), National Parks and Wildlife Services (NPWS), Geological Survey Ireland, a division of the Department of the Environment, Climate and Communications (GSI), Coillte, and the Lough Carra Catchment Association (LCCA). In addition to the Funding Partners, a long list of other associated partners are providing essential guidance and support to the project, including Teagasc, LAWPRO, Inland Fisheries Ireland, Environmental Protection Agency, National Federation of Group Water Schemes, Joyce Country and Western Lakes Geopark, Vincent Wildlife Trust, and the Office of Public Works.

The Project team and offices were established in the latter part of 2022, and 2023 was the first year of real progress with project actions.

2023 began with a newly established Project Team – Kieran Flynn (Project Manager), Leo Brogan (Surfacewater Officer), Siobhan Ward (Agri-environment Officer), Padraig Kelly (Groundwater Officer), Damian Jordan (Community Officer), and Aisling Burke (Administrator). The Project Team opened an office in Belcarra Community Centre and plans to remain based in this office for the duration of the project. The project office is open during office hours Monday to Friday, and anyone who wishes to meet with the project team is welcome to visit.

A project website, loughcarralife.ie, and social media accounts, Twitter and Facebook, were established early in the year to provide a platform for the project to begin its public outreach and awareness campaign. These social media accounts have been used throughout the year to provide regular updates to the public on project developments. The team also provided regular project updates at Lough Carra Catchment Association public meetings throughout the year. These public meetings are held at community centres throughout the catchment area every second month.

At the end of 2022 we began our initial engagement with the farming community of the catchment, with public meetings, an open day for farmers, and the opening of our invitation for Expressions of Interest (EOIs)

to take part in our pilot Agri-environment Scheme. We closed the acceptance of EOIs at the end of January, and then began the process of engaging with each farmer and gathering relevant information about the farms. Following an in-depth review of the catchment, we selected the key priority sub-catchment areas to be the focus of the pilot scheme for 2023, and began to develop farm plans with farmers in these areas. We also developed our specifications for the scheme, our Terms and Conditions document, and our results-based scorecards. All of these documents can be viewed on our website.

As part of our habitat enhancement programme, we visited and surveyed all publicly owned forestry in the area, including the islands of Lough Carra, with project partner Coillte, and commenced with the development of Biodiversity Management Plans for this forestry. Local NPWS Rangers carried out surveys of the populations of Lesser Horseshoe Bats in the catchment, and we installed the first of our mobile overnight bat roosts to help support this population. Further to this, and in collaboration with our project partners, we began security reinforcements to the existing and long-established bat roosts at Moorehall and Towerhill.

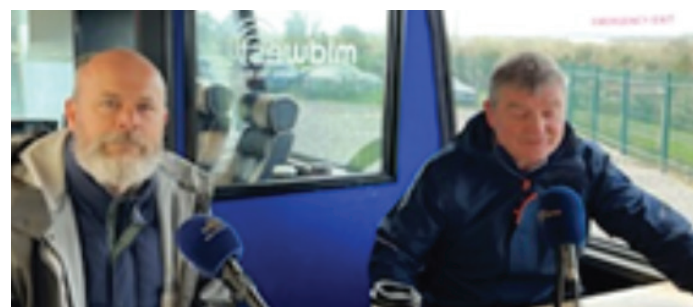
Our Invasive species control officer worked throughout the winter and spring months, controlling the populations of invasive predators, and implementing protections for some of the more vulnerable bird species of the catchment.

We began developing our monitoring programme in the early part of the year and established 33 water chemistry sampling points on rivers and streams throughout the whole of the catchment area. Monitoring the

water chemistry at these points on a regular basis will help us to better understand the quality of the water flowing into Lough Carra from different parts of the catchment area throughout the year. Monthly monitoring of the water chemistry at each of these points commenced in March and will continue for the duration of the project.

In collaboration with Project Partner Geological Survey Ireland, we commenced a comprehensive karst mapping campaign, mapping the catchment's karst features, such as sinkholes and springs. This was done to know more about the vulnerable areas in the catchment and to prepare for the second tracing experiment. Questionnaires were distributed to farmers and other landowners throughout the area to assist with this process. Find out more about karst features and our Groundwater study at our project website.

In February the Project hosted the LAWPro Western Region Operational Committee event at the project offices in Belcarra, and welcomed more than 40 representatives from public bodies and other organisations involved in managing water quality throughout the West of Ireland. This committee provides a forum for all relevant organisations to give updates and to coordinate on projects and activities ongoing in the region. The project team also took part in the World Water Day event hosted by the Lough Carra Group Water Scheme in March.



April to June

(Q2)

At the beginning of Q2 we installed public information boards about the project at seven key sites around the lake and throughout the catchment. We also began distributing our newly published project booklet, packed with fantastic photos and information about Lough Carra and the LIFE Project.

We continued to develop farm plans with 30 farmers who elected to be part of our 2023 pilot Agri-environment scheme. These farm plans outline all actions to be implemented on the farm as part of the project and detail the agreement between the farmer and the project. Actions are focused on reducing nutrient run off from the farms and protecting vulnerable habitats. Examples include the instalment of riparian buffer zones, settlement ponds, management of drains, planting of trees and hedgerows, and results-based monitoring of grasslands. Results-based monitoring of these farms is a key aspect of this scheme and allows us to reward farmers who are delivering a higher standard of water quality actions on their farms. We commenced results-based monitoring of farms in June.

The project team began consultation with the Office of Public Works (OPW) to review the management of drains in the catchment, and we subsequently developed a Drain Management Plan for the catchment. This Drain Management Plan focuses on reducing nutrient and sediment run off from the

existing arterial drainage channels into the lake. We also continued with the development of our Biodiversity Management Plans, our renovation and protection works on the existing bat roosts at Moorehall and Towerhill, and our Invasive Species Control Officer continued to work on the lake throughout the spring and into the summer months.

Having established our monthly catchment-wide water chemistry monitoring in March, we continued to collect and analyse water samples from 33 sites monthly and, in addition to this, in May we carried out our first round of 'kick sampling', a procedure which allows us to measure the health of invertebrate populations in the streams throughout the catchment area. This helps us to further develop our understanding of the general health of the lake and the water flowing into it from different parts of the catchment at different times of year.

In May, Minister of State at the Dept. of Housing, Local Government and Heritage, Malcolm Noonan, formally launched the Lough Carra LIFE Project in Belcarra, with an event attended by over 100 people, representing partner organisations, government bodies, local authorities, local communities, and a host of other stakeholder groups. The formal Project Launch was followed by an Open Day with stalls and information displays managed by project partners. Our project Partner GSI contracted in the services of Tobins Engineering to assist in the delivery of our groundwater study. Under the guidance of GSI they subsequently commenced, along with assistance from the project team, the second round of water tracing, focused on the southeastern region of the catchment. This followed karst feature mapping and dye tracing that was undertaken prior to the project start. Graduate geologists from GSI also assisted in this programme.

During Q2 we had a significant amount of engagement with schools and universities. In collaboration with South East Technical University (SETU), the project team assisted in surveying the Otter population in the catchment area, and delivering workshops and talks about the otters to local primary



schools. First year students from Dublin City University (DCU) History and Geography faculty visited the project for a field trip in April, and attended a workshop delivered by the project Surfacewater Officer on our kick sampling procedure. Two Atlantic Technical University (ATU) students worked as interns on the project for the month of June, where they took part in a range of project activities. During these early summer months we also assisted the LCCA in delivering pond dipping workshops and tree planting workshops to primary schools in the catchment area. Further details of all of these activities can be found on our website.

Throughout Q2 we continued our public outreach and awareness campaign through our website, social media accounts, and our presentations at LCCA public meetings. The project received further media coverage during the national EPA water conference, where it was mentioned several times as an example of local communities coming together to protect valuable water sources. RTÉ coverage of this conference used Lough Carra as an example of declining waterways in Ireland.



July to September (Q3)

In Q3 we completed our 2023 Farm Plans and the results-based monitoring of these farmlands. This monitoring will influence the level of payments farmers will receive from the scheme this year. Farmers also began implementing some of the supporting actions outlined in their farm plans. We held the first of our farmer workshops in August, discussing results-based monitoring and its application in the Lough Carra LIFE Project. Further workshops were held monthly throughout the autumn.

Two further mobile bat roosts were installed at Moorehall and Towerhill, and our project partner NPWS hired an external contractor to carry out formal bat surveys of the catchment area. The output of these surveys will direct us in the installation of permanent hibernation roosts – hibernacula – in selected key locations, to help reinforce and stabilise the populations of lesser horseshoe bats in the catchment.

During the summer we hired contractors to carry out some very specialist monitoring as part of our lake monitoring programme, including snorkel surveys of the submerged vegetation of the lake, marl crust surveys, and emergent vegetation surveys. The results of this monitoring will help us to build a baseline data set to assess the current health of the lake. These surveys will be repeated in the final year of the project to assess any immediate impacts of the project. During



these months we continued with our monthly chemistry monitoring, carried out our second round of kick sampling, and completed the second round of groundwater tracing.

We continued with our public outreach campaign through our social media accounts and public meetings, and we recruited a film producer to help us make a short promotional film about Lough Carra and the LIFE Project. Work on this film continued throughout Q3 and Q4.



October to December (Q4)

During the closing months of the year, we finished the installation of all supporting actions on our participating farms and ran the final workshops with farmers. In December we held a public meeting with all farmers in the area to discuss how the scheme went in 2023, and to make plans for expanding the scheme in 2024.

At the beginning of November, a new Surfacewater Officer, Ann Marie Meaney, joined the team and got straight to work on our monthly water chemistry monitoring. Ann Marie will provide water quality guidance, and scientific oversight to all aspects of the project going forward.

In November we carried out a third round of water tracing as part of our Groundwater study, we continued with the implementation

of our biodiversity management plans, and our Invasive Species Control Officer continued to work into the winter months. We also hosted a class of Galway University third year Environmental Science students for a workshop on our Agri-environment Scheme.

To close off the year we provided end of year updates to the local community at the LCCA end of year public meeting, we produced pieces for local newspapers and Radio, we presented at Mayo Ideas Month events, and we took part in a new podcast series on Lough Carra produced by the local ATU student Jarek Majkusiak. Further details on this podcast series will follow in 2024. We also completed our project promotional film and we look forward to releasing this early in 2024.



Overall, 2023 has been a busy year. We have made huge strides forward on many of our key project actions and have established a strong foundation for progressing with the project into 2024 and beyond.

The Lough Carra LIFE Project is very much reliant on the support of the local community, and working closely with the local community is central to the project. Find out more about the project on our website or visit our Twitter (X) and Facebook pages for regular updates on project activities. We will continue to provide project updates at LCCA public meetings throughout 2024, and details of these meeting dates will be published throughout the year on our social media pages, or the social media pages of the LCCA. Finally, our office doors are open Monday to Friday, so please call in to meet with the project team.

Many thanks for all your support in 2023. We are very much looking forward to progressing further in 2024.



Kieran Flynn, Project Manager, Dec 2023.

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