



An Exploration of the Recreation & Amenity Potential of the Maigue Rivers



Rialtas na hÉireann
Government of Ireland

Funded by the Department
of Rural and Community
Development



Rialtas
na hÉireann
Government
of Ireland

Tionscadal Éireann
Project Ireland
2040



Comhairle Cathrach
& Contae Luimnigh
Limerick City
& County Council





Rialtas na hÉireann
Government of Ireland



Rialtas na hÉireann
Government of Ireland

Tionscadal Eorpach
Project Ireland
2040



Comhairle Cathrach
& Contae Luimnigh
Limerick City
& County Council



Funded by the Department
of Rural and Community
Development

AN EXPLORATION OF THE RECREATION & AMENITY POTENTIAL OF THE MAIGUE RIVERS

**Phase 2: Development Opportunities to encourage
Interaction with & Use of the Rivers & River Environs**



Prepared for: Maigue Rivers Trust

SLR Ref: 501.00697.0001 R2
Version No: v1 Final
July 2021





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



© Mague Rivers Trust, 2021

ISBN: 978-1-9161760-6-5

Recommended reference: Mague Rivers Trust (2021)

An Exploration of Recreation & Amenity Potential of Mague Rivers. Mague Rivers Trust, Ireland..

CONTENTS

1.0	INTRODUCTION.....	1
1.1	The Mague Rivers Trust.....	1
1.2	Terms of Reference	2
1.3	Methodology	3
1.3.1	Policy & Strategy Context	3
1.3.2	Desk Research.....	3
1.3.3	Mapping	4
1.3.4	Stakeholder Consultations.....	4
1.3.5	International Models of Riverine Recreation	4
1.3.6	Citizen Science	5
1.3.7	Analysis and Conceptualisation	5
1.3.8	Development Options.....	5
1.4	What is Recreation?	5
2.0	SUMMARY OF PHASE 1 REPORT: MAGUE RIVERS	7
2.1	Natural Environment of Mague Rivers.....	7
2.2	The Cultural Environment of the Mague Rivers.....	10
2.2.1	Demographics of Co. Limerick.....	10
2.2.2	Cultural Heritage.....	11
2.3	Current Recreational Provision in the Mague Rivers Catchment	13
2.3.1	Baseline Survey of Current Recreation Infrastructure	13
2.3.2	Current Usage of Recreational Amenities	13
2.3.3	SCOT Analysis.....	13
3.0	PROPOSALS FOR DEVELOPMENT	18
3.1	Recreation and Public Health	20
3.2	Recreational ‘Gateway’ Infrastructure.....	21
3.3	Proposals for Walking Amenities	23
3.3.1	Walking Infrastructure.....	23
3.3.2	Optimisation of Town Parks Network.....	30
3.4	Proposals for Cycling Amenities	33
3.5	Proposals for Boating Development	39
3.5.1	Boating Constraints	39
3.5.2	Boating Opportunities	39
3.5.3	Biosecurity & Invasive Species control	40

3.5.4	Proposals for Boating Infrastructure	40
3.5.5	Kayaking/ Small Vessel Trail Opportunities	45
3.5.6	Activity Zone in Croom on the Mague.....	47
3.5.7	Proposals for On-Water Activities	47
3.6	Proposals for Angling Development.....	55
3.6.1	Current Status of Angling.....	55
3.6.2	Habitat Restoration & Conservation	57
3.6.3	Angling Rehabilitation.....	57
3.6.4	Proposals for Angling Development	58
3.7	Proposals for Nature & Wildlife Observation	60
3.7.1	Proposals for Nature Viewing.....	60
3.7.2	Proposals for Outdoor Education	62
3.7.3	Citizen Science Engagement.....	63
3.7.4	Other Nature-based Activities	65
3.7.5	Proposals for Nature Viewing & Observation	66
3.8	Proposals for Other Actions	73
3.8.1	Festivals & Events	73
3.8.2	Calendar of Events	73
3.8.3	Environmental Summer School	74
3.8.4	Creative Events	74
3.8.5	Proposals for Other Opportunities	74
3.9	Promotion of Recreation along the Mague Rivers.....	76
4.0	SUMMARY OF PROPOSALS FOR Mague RIVERS CATCHMENT	77
5.0	POTENTIAL SOURCES OF FUNDING	84

DOCUMENT REFERENCES

TABLES

Table 1	Types of Outdoor Recreation	6
Table 2	Estimate of Current Recreational Usage	16
Table 3	SCOT Analysis – Mague Rivers Recreation & Amenity	17
Table 4	Sample Calendar of Events, Mague Rivers	74
Table 5	Conceptual Proposals: Recreation & Amenity, Mague Rivers	78
Table 6	Potential Sources of Funding for Implementation	84

FIGURES

Figure 1 Mague Rivers – Methodology Adopted.....	3
Figure 2 Map of Mague Rivers Catchment	7
Figure 3 EPA Water Quality in Rivers (2019) -Nutrient Quality.....	9
Figure 4 Limerick City & County: Settlement Strategy	10
Figure 5 Demographic Profile, Co. Limerick (CSO 2016)	11
Figure 6 Map showing Current Recreation, Amenity & Service Provision, County Limerick	14
Figure 7 Map showing current Recreational Infrastructure, Mague Rivers & hinterlands	15
Figure 8 Map showing Proposals for Recreation & Amenity - Mague Rivers Catchment	19
Figure 9 Proposed Trail along The Bank, Mague Estuary	25
Figure 10 Proposed eastern extension to Great Southern Greenway	27
Figure 11 Proposed Cycle Trail 1 (North)	36
Figure 12 Proposed Cycle Trail 2 (MID)	38
Figure 13 Key considerations for design of Water-based Trails (from Sport Ireland).....	46
Figure 14 Map showing proposed Mague Rivers Kayak Trails	50
Figure 15 Map of Combined Current and Proposed Recreational Infrastructure, Mague Rivers.....	78

APPENDICES

Appendix 01: Terms of Reference

ANNEXES

Annex 1: Phase 1 Baseline Report in pdf format

1.0 Introduction

The Maigue Rivers Trust commissioned SLR Consulting to undertake an *Exploration of the Recreation and Amenity Potential of the Maigue Rivers in County Limerick*. This final report presents development opportunities identified in Phase 2 of the study across five key recreation types and related amenities, with recommendations derived from baseline research, field mapping and consultations with a wide range of stakeholders.

SLR Environmental Consulting (Ireland) Limited (SLR Consulting/ SLR) was appointed by the Maigue Rivers Trust to undertake an *Exploration of the Recreation and Amenity Potential of the Maigue Rivers* in County Limerick, in December 2020. The Maigue Rivers include the Maigue, Barnakyle, Clonshire, Camoge, Morningstar and Loobagh Rivers, as well as their smaller tributaries. This report presents the findings of the second and final phase of the study to identify recreational development opportunities across the catchments, focused on interaction with and /or use of the rivers and their environs.

1.1 The Maigue Rivers Trust

Rivers Trusts are charities, established by local people, to protect and improve rivers, streams and lakes in a particular river-catchment or an area comprising many river catchments.

The Maigue Rivers Trust (MRT) www.maigueriverstrust.org was established in 2016 to protect, enhance and promote the use and enjoyment of the rivers of the Maigue catchment. Central among its objectives are to:

- ✓ **Create awareness** through education programmes, outdoor classrooms and school visits.
- ✓ **Encourage community participation** by developing networks of interest groups to input to the Trust's action plans and to get involved in helping enhance the river.
- ✓ **Improve water quality** by working with sectoral interests to minimise impacts.
- ✓ **Improve fish habitat and fish numbers** by carrying out in-stream works, to better understand current fish stocks and seeking funding for research and fishery management initiatives.
- ✓ **Protect biodiversity** by improving habitat for otter, kingfishers and other species and carrying out catchment wide biodiversity assessments.
- ✓ **Control invasive plants** such as Giant Hogweed, Japanese Knotweed and Himalayan Balsam which can seriously affect the biodiversity and amenity value of a river corridor.
- ✓ **Encourage the local angling tradition** by supporting juvenile angling programmes and competition and by supporting angling clubs in the catchment.
- ✓ **Develop amenity access to the river** for recreational activities such as walking, kayaking, etc.

The Trust is part of an all-islands network of established rivers trusts in Northern Ireland, England and Wales, and rivers and fisheries trusts in Scotland, linking a wealth of knowledge and expertise in river conservation and management. The Department of Environment, Climate and Communications (DECC) and the Local Authority Water and Communities Office (LAWCO) support the rivers trusts across Ireland (the umbrella body for rivers trusts www.theriverstrust.org) with the appointment of an all-island Ireland Development Officer. An integrated programme of water management activities (LAWPRO) is carried out by Local Authorities in Ireland to meet the requirements of the EU Water Framework Directive.

The MRT liaised with LAWPRO through the *Irish Rivers Trust Resilience Pilot Project* to appoint a development officer, to coordinate and apply best practice to the Maigue catchment programmes. The Resilience Pilot Project

is funded through the LAWPRO by the Department for Housing, Local Government and Heritage and is managed by The Rivers Trust.

A key objective of the Trust is to encourage public appreciation of the river environment by promoting its value for recreation and amenity purposes. It is in this context that the study to explore the recreation and amenity potential of the Maigne catchments was commissioned.

1.2 Terms of Reference

The following outlines a summary of the scope of work and objectives as set out in the terms of reference by MRT (see Appendix 1 for full terms of reference).

The aim of this project is to conduct a river recreation and amenity survey that will document river focussed facilities and services, address information gaps, and prescribe a range of potential developments that are likely to be effective. The study is required to collate focussed baseline information on the structure and composition of recreation and amenity provision in the Maigne catchment, and identify potential for developing recreational and leisure activities on and around the rivers in the Maigne catchment.

This will provide required data for the future management of the development in/near the catchment rivers for the benefit of biodiversity, water quality and recreational and other uses by local communities and visitors.

The core objective of this project is to identify a suite of recreational and amenity facilities, focused primarily on **walking, cycling, boating, angling and nature/ wildlife observation**.

This will include two key phases, with defined deliverables, as follows:

1. Analysis of the current usage of the Maigne Rivers for outdoor recreation and amenity

Deliverable 1: a document and presentation detailing the current recreation and amenity provision (and condition) for walking, cycling, boating, angling and nature and wildlife observation.

2. Identification of the potential for developing recreational and leisure activities on and around the rivers in the Maigne catchment

Deliverable 2: a document and presentation that outlines development possibilities in the above categories in order to encourage the interaction with and/or use of the river and/or river environs.

The early Phase 1 desk-based research and consultation stages of the project were undertaken during national Level 5 pandemic 'lock-down', which prohibited conduct of field work for most of the first four months of 2021. In the latter months, intensive field work and practical assessments were undertaken to test / enhance the concepts identified in the Phase 1 Baseline Report.

The results of the Phase 2 work are presented in the following chapters.

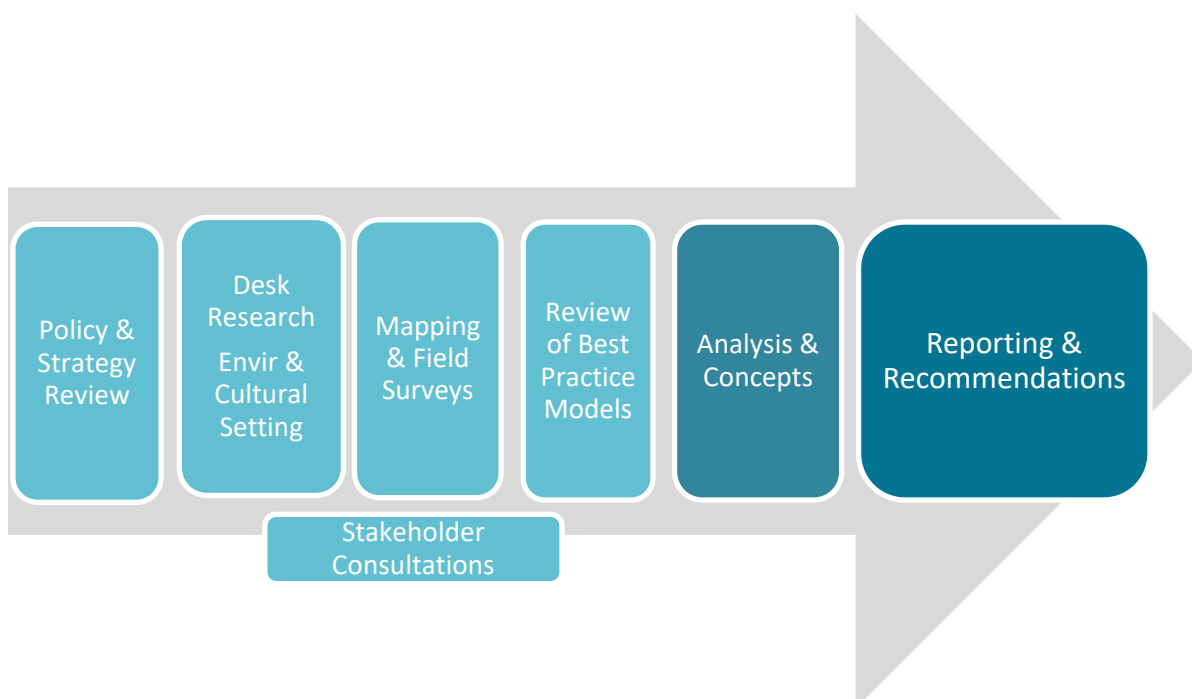
1.3 Methodology

The methodology adopted throughout the project reflected the peculiar circumstances of the global covid pandemic which necessitated national restrictions on travel and physical communications through 2020 to Q1/2021.

This prevented inter-county travel and any form of communal meetings/ workshops or internal gatherings during the project duration. Thus, planned consultations were largely undertaken electronically and face-to-face meetings were confined to outdoor meetings in the latter stages of the project.

The following phased methodology was adopted (Figure 1):

Figure 1 Mague Rivers – Methodology Adopted



1.3.1 Policy & Strategy Context

In Phase 1, a full review of European, national, regional and county policies regarding recreation, tourism and public health was undertaken:

- Review of planning, recreational infrastructure, tourism and biodiversity policies and strategies at EU, national, regional, county and local level;
- Review of Irish and international best practice and options for recreational management;
- Review of local development plans, policies and commitments.

A full summary of the review is presented in Appendix 2 of the final Phase 1 report (attached as Annexe 1).

1.3.2 Desk Research

Data gathering through extensive desk research was undertaken to identify the current provision for recreation in the Mague Rivers catchment, including the Mague, Loobagh, Morningstar, Camoge, Clonshire and Barnakyle rivers, including *inter alia* the Mahore, Flemingstown (Nóinín) and Greanagh streams in the catchment. This area drains the eastern portion of County Limerick from the Ballyhoura Mountains in the south, northwards to the Shannon Estuary.

This research looked at the geographical, geological, environmental and cultural setting of the Mague Rivers to ensure these factors informed the analysis.

There are very few detailed Mague-specific data available in terms of recreational usage of the rivers, apart from anecdotal data gathered through the consultations. Thus, an assessment was made of the demographic profile of County Limerick and future likely demand for recreational amenities.

The Phase 1 data gathering phase was supplemented in Phase 2 by field checking and verification, where possible, through discussions with stakeholders and site observations.

1.3.3 Mapping

In Phase 1, desk-based mapping was undertaken of a range of natural and cultural heritage features:

- Mapping of geographical, geological and landscape features;
- Designated natural heritage sites, including SACs, SPAs, NHAs and nature reserves.
- Digital mapping of all known recreational and amenity facilities in the Mague Rivers catchments, including activity trails, heritage sites and amenities;
- Digital mapping of amenities and services, as well as recording of contact details and digital presence.

In Phase 2, desk mapping was supplemented by field visits, to photograph features and assess in particular, key aspects of physical access and viability of some of the earlier identified options. Field surveying was carried out along the length of the Mague and its tributaries, travelling along each of the rivers, noting bridges/ crossings; access points where available; natural and cultural heritage features; potential constraints, public safety issues and identification of opportunities for enhanced public enjoyment of the rivers.

A series of maps were prepared of the identified options to demonstrate the recreational potential of this region.

1.3.4 Stakeholder Consultations

In Phase 1, a comprehensive list of potential stakeholders was drawn up and consultations were held with a wide range of stakeholders. This included:

- Stakeholders in the Mague Rivers catchment for recreation, amenity, landowners and land managers, amenity managers, local development officers, NGOs, active retirement groups, recreational users and clubs (walking, cycling, kayaking, rowing, astronomy, birdwatching, angling etc);
- Review of demographics and population profile of County Limerick, and assessment as to how it might influence recreational planning.
- Attendance at a number of related online workshops, including LAWPRO water management workshops; Lough Gur archaeo-astronomy workshop; Shannon Estuary Way communications and national EIP agri-environmental online meetings, all of which were relevant to the study.

Consultations and interviews were held mainly by telephone/zoom calls, with limited Phase 2 face-to-face outdoor meetings held in the later stages of the project.

1.3.5 International Models of Riverine Recreation

The Phase 1 report presented a short review of best practice for riverine recreational models and management. Northern Ireland, the UK and USA present some pointers, but given land ownership patterns and management models in Ireland that differ from other jurisdictions, it is clear that new models may need to evolve here to integrate the recreational opportunities for on-water and beside-water amenities.

The key challenge, particularly for the Mague Rivers, is creating safe, public access to our riverine environments both on- and off-water, without compromising the rights of landowners.

1.3.6 Citizen Science

A short review of Citizen Science measures was conducted and a range of relevant initiatives in Ireland were identified through consultations with practitioners in Citizen Science initiatives.

There is considerable scope to harness public interest in engaging with citizen science as evidenced by the recent Mague Rivers Trust participation in the international freshwater Water Blitz¹ and other initiatives.

1.3.7 Analysis and Conceptualisation

Following Phase 1, an early analysis of the data was carried out and a SCOT matrix developed to identify strengths, challenges, gaps and possible opportunities for development.

This allowed the identification and mapping of conceptual recreation and amenity opportunities for presentation to the Board of MRT. The results of Phase 1 work were presented to the Board at the end of March 2021.

The Board provided written feedback and comments on the Draft Phase 1 report. These comments were included in the final report, attached as Annex 1 to this report.

1.3.8 Development Options

Following Phase 1, it was clear that the Board wished to focus on the river environment itself and enhanced recreational amenities along or beside the rivers. Thus the focus in Phase 2 has been to identify enhanced opportunities to access beside- and on-the-water activities, with particular reference to the lowland catchment of the Rivers.

The Board also acknowledges the role that wider 'honeypot' amenities such as Curraghchase and Lough Gur play in attracting both Limerick residents and visitors to this part of county Limerick.

Given the critical access constraints identified, the network of attractive Town Parks in the catchments provide vital and safe public access to the rivers, while also allowing recreational activities and nature viewing opportunities.

Details of the Phase 2 conclusions and recommendations are presented in the following chapters.

1.4 What is Recreation?

It is useful to define the concept of 'Recreation' at the outset to provide a clear focus for the Mague Rivers study. A useful definition was provided by the *National Countryside Recreation Strategy*², but this is currently (June 2021) being redeveloped under the auspices of Comhairle na Tuaithe as the **National Outdoor Recreation Strategy** and, based on current online public consultation information³, provides a clear definition as follows:

'Outdoor recreation'...means activities that take place in the natural environment, such as walking, canoeing, mountain biking, orienteering and wild swimming. It does not include activities that take place outdoors on confined courses or pitches (such as golf, football, show jumping) nor motorised activities (such as quads)'.

Thus, outdoor recreation may be seen to include the following types of activities (Table 1):

¹ [WaterBlitz | FreshWater Watch \(thewaterhub.org\)](https://www.waterblitz.ie/)

² www.gov.ie/en/policy-information/127c4b-national-countryside-recreation-strategy/

³ <https://www.gov.ie/en/consultation/42e3a-public-consultation-on-a-national-strategy-on-outdoor-recreation/#:~:text=The%20strategy%20will%20provide%20a,in%20Ireland's%20outdoor%20recreation%20sector.>

Table 1 Types of Outdoor Recreation

Land-Based	Water-Based	Air-Based
Walking	Angling	Para-gliding
Hiking/ Hillwalking	Canoeing/ Kayaking	Hang-gliding
Leisure Cycling	Rowing	
Mountain Biking	Wild swimming	
Horseriding	Surfing	
Trail/ Off-trail running	Coasteering	
Orienteering	Windsurfing. Kite-surfing	
Bouldering, Scrambling	Sailing	
Rock climbing	Diving	
Mountaineering		
Caving		

(from public consultation documentation on National Outdoor Recreation Strategy (2021))

Across Europe, the terms ‘Green’ and ‘Blue’ infrastructure are commonly used to describe natural and semi-natural areas and features (land, vegetation and waterways) in public or private, rural, urban and peri-urban areas that deliver a broad range of eco-system services (water and air quality, biodiversity) that underpin a healthy environment, including spaces for recreation and amenity⁴.

In Ireland, in discussing outdoor recreational infrastructure, ‘green’ typically refers to land-based activities (walking, cycling, hiking, nature viewing) and ‘blue’ refers to water based activities (kayaking, canoeing, swimming, boating, angling etc), and at best where green and blue infrastructure align as in ‘blueways’.

Based on these definitions, the five key areas of recreation set out in the terms of reference (walking, cycling, boating, angling and nature/ wildlife observation) were considered, including related aspects to enhance amenity value.

Although recreational tourism opportunities were not specifically identified in the terms of reference, the recently published national strategy for rural development ‘*Our Rural Future, 2021 - 2025*’⁵ (DRCD, 2021) sees outdoor recreation as an increasing driver of rural tourism with a key role to play in sustaining both rural communities and enterprises. Vibrant communities with opportunities to enjoy outdoor activities also provide attractive destinations for rural tourism.

⁴ https://ec.europa.eu/environment/nature/ecosystems/benefits/index_en.htm

⁵ <https://www.gov.ie/en/publication/4c236-our-rural-future-vision-and-policy-context/>

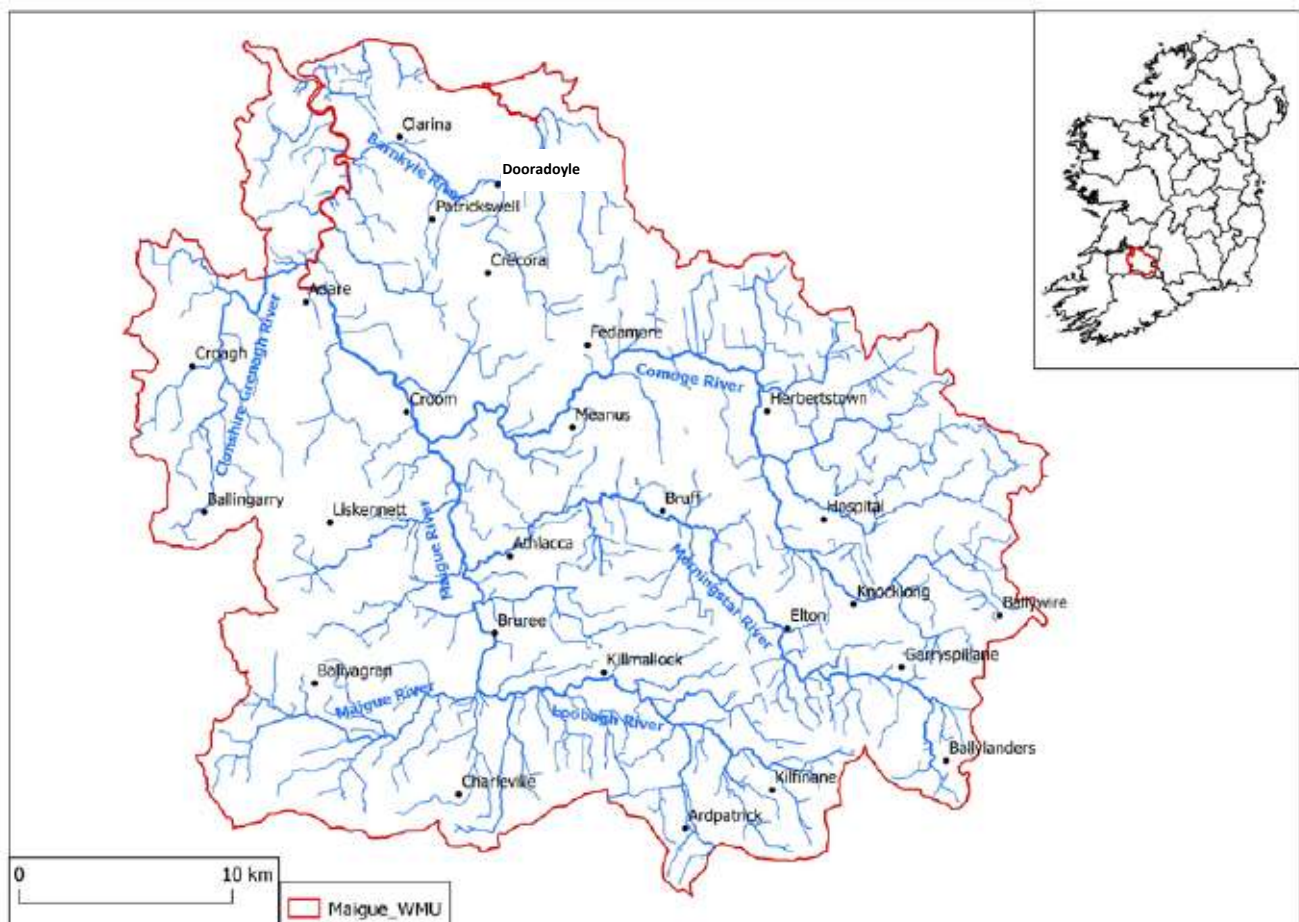
2.0 Summary of Phase 1 Report: Maigue Rivers

This section summarises key elements of the Phase 1 Baseline Report on the natural and cultural setting of the river catchments, as well as existing recreational provision in the area. The reader is referred to Annex 1 of this report for full details.

2.1 Natural Environment of Maigue Rivers

The River Maigue and its principal tributaries, the rivers Loobagh, Morningstar, Clonshire, Barnakyle and Camoge, encompass a land area of 1000 km² and include 1300 km of river channel, mainly in Co. Limerick. The river displays a classic dendritic drainage pattern as it crosses the lowlands of East Limerick (Figure 2).

Figure 2 Map of Maigue Rivers Catchment



The rivers Maigue and Loobagh rise in the Mullaghareirk and Ballyhoura Mountains to the south and southeast of County Limerick and drain northwards to the Shannon Estuary. The Morningstar and Camoge Rivers rise in the Galtees and Slieve Felim Mountains respectively, while the Clonshire rises in the hills at Knockfierna and the Barnakyle at Fedamore respectively.

The landscape of Limerick is largely sculpted by glacial activity, comprising rich pastoral lowlands with rolling hills, lakes, rivers, fens and woodlands. The Maigue Rivers are mainly situated in glacially derived soils that support diverse ecology and species-rich habitats, including fields and hedgerows, riparian zones alongside small lakes and rivers, as well as estuarine wetlands. The Maigue catchment lakes, including Gur, Bleach, Glasha and

Dromore Loughs respectively, are popular for angling, boating and a limited number of water sports, as well as for their amenity value and beauty.

East County Limerick is well served by national roads infrastructure. It is traversed by major national arterial routes, including the Limerick-Tralee/Killarney M20-N21; the Limerick-Cork N20 (planned to be upgraded to motorway M20), as well as the east-west scenic Shannon Estuary Way (N69), an extension of the Wild Atlantic Way. The N24 feeds north-westwards from Waterford-Tipperary to Limerick City in the eastern part of the county and catchment. A network of regional roads (R511, R512, R513, R516, R518) connect the main towns and settlements in the catchment areas of the Maigue Rivers.

The landmark 'rail-to-trail' *Great Southern & Western Greenway* currently runs from Rathkeale to Abbeyfeale. It is planned to extend it from Rathkeale westwards to Listowel and ultimately Tralee, with the feasibility of an eastern extension from Rathkeale to Adare and ultimately Limerick City being examined.

East Limerick is traditionally a landscape of intensive agriculture within the rich farmlands of the Golden Vale. It is associated with dairying, pork and equine production in the lowlands and sheep farming in the uplands. There is a strengthening organic and slow food movement within the region, with a number of flagship producers and food markets emerging, including the weekly Farmers Markets and Urban Cooperatives.

A fuller description of the unique aspects of the geology, landscape character, ecology, habitats and water quality is presented in Chapter 2 of the Phase 1 baseline report (Annex 1).

These natural characteristics inform the proposals contained within the current Phase 2 report.

As well as providing healthy habitats for fish and other river life, good water quality is essential to the development of recreation along the Maigue Rivers catchment – whether for angling, kayaking, walking or swimming – for all to enjoy!

Under the EU Water Framework Directive (WFD), the Maigue is part of the 'Shannon International River Basin District', and managed under its River Basin Management Plan. The EPA undertakes a full national assessment every three years, using ten physical, biological and chemical indicators, to measure surface water quality in Ireland. The most recent report on surface water quality was published by the EPA in late 2020⁶ which indicates that 47% of Ireland's river sites have unsatisfactory nitrate concentrations.

- **Phosphate**, shows higher concentrations in the east and northeast of Ireland, but also in the Shannon Estuary South catchment, including the Maigue (see Figure 3a);
- **Nitrate concentrations** are highest in rivers in the south/ southeast of Ireland where there is more intensive farming, coupled with freely draining soils and lower rainfall (see Figure 3b).

The EPA findings were not encouraging for the River Maigue catchment. Nutrient pollution (nitrogen and phosphorus) from intensive grass-based agriculture and wastewater treatment is the predominant pressure on water quality in the catchment. Of 33 locations sampled in 2017/18, 24 were unchanged from the previous sampling; two were improved slightly, and seven had deteriorated. Nearly all of the deterioration was in the Maigue, Mahore and Morningstar rivers.

Some rivers are at risk of not achieving the required standard of water quality under the Water Framework Directive. One of these, the River Camoge, has been designated as a priority Action Area with measures to improve water quality. The MRT has a number of projects underway to address water quality in the Maigue Catchments, *inter alia* at West Liskennett; Drumcamogue and citizen science projects, working with farmers, LCCC, LAWPRO and IFI to improve the habitat for salmon, trout and other river life.

⁶ <http://epa.ie/pubs/reports/water/waterqua/Water%20Quality%20in%202019%20-%20an%20indicators%20report.pdf>

Figure 3 EPA Water Quality in Rivers (2019) -Nutrient Quality

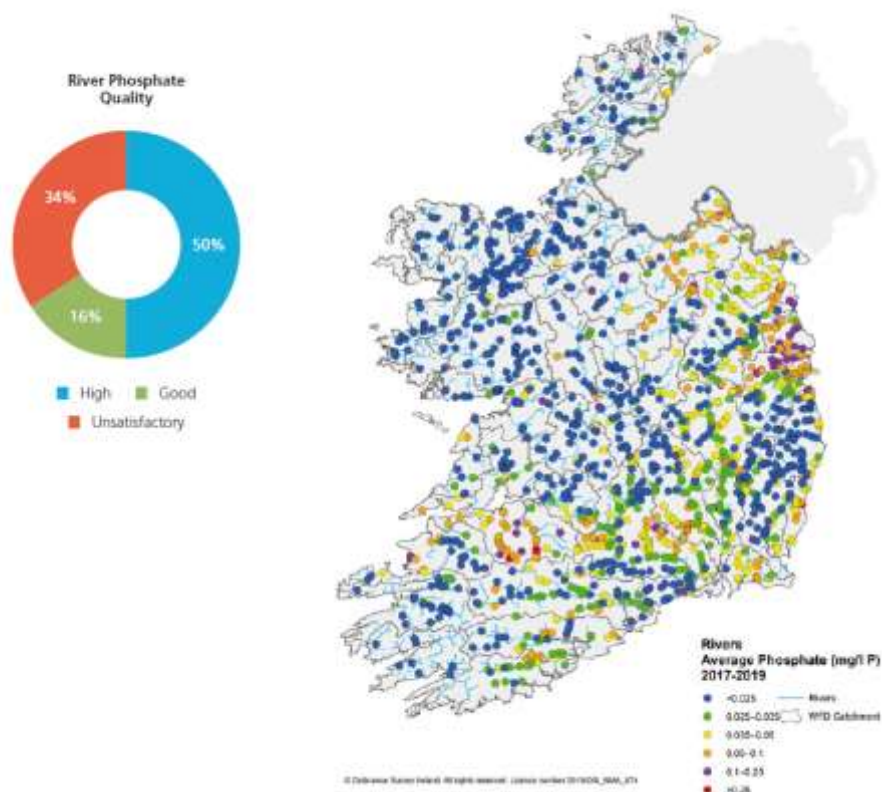


Figure 3a. River Phosphate Quality for 2019 (EPA 2020)

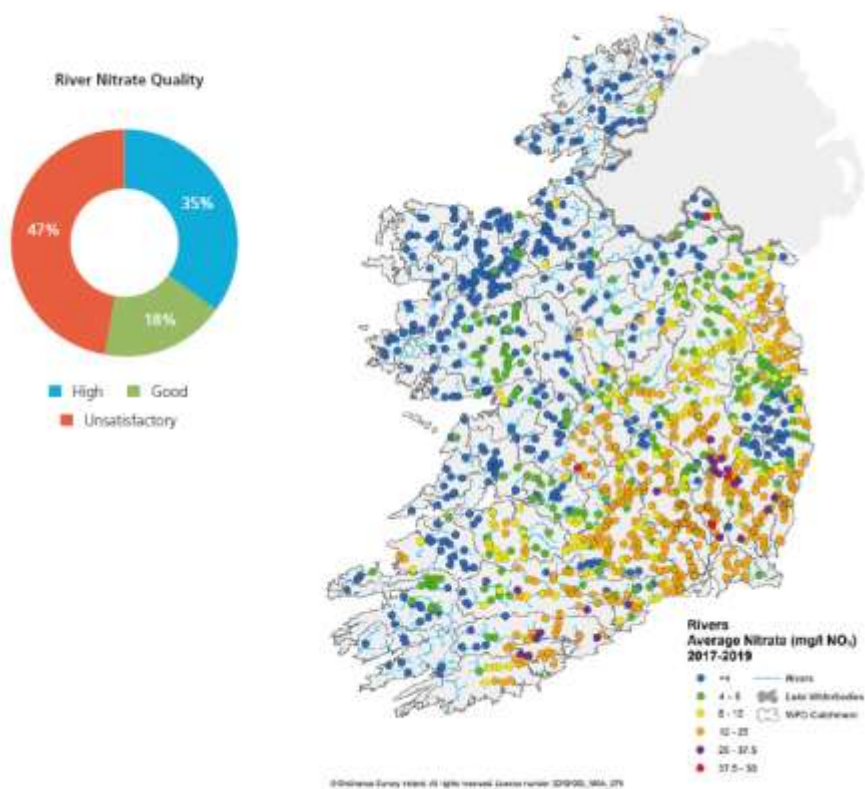


Figure 3b. River Nitrate Quality for 2019 (EPA, 2020)

2.2 The Cultural Environment of the Maigue Rivers

The cultural environment and setting of the Maigue Rivers was presented in some detail in the Phase 1 baseline report (Annex 1). This section provides a summary of key points.

2.2.1 Demographics of Co. Limerick

Limerick City and County Council has just published its first combined City-County Development Plan (2022-2028). The council proposes a hierarchy of towns to allocate resources and priorities according to servicing, transport and demographic requirements. In this framework, the Tier 2 town of Kilmallock is the key settlement for east Limerick, while the Tier 3 towns of Adare, Patrickswell and Croom are located on transport nodes. All other settlements are classified as villages or small villages, within a largely rural setting (Figure 4).

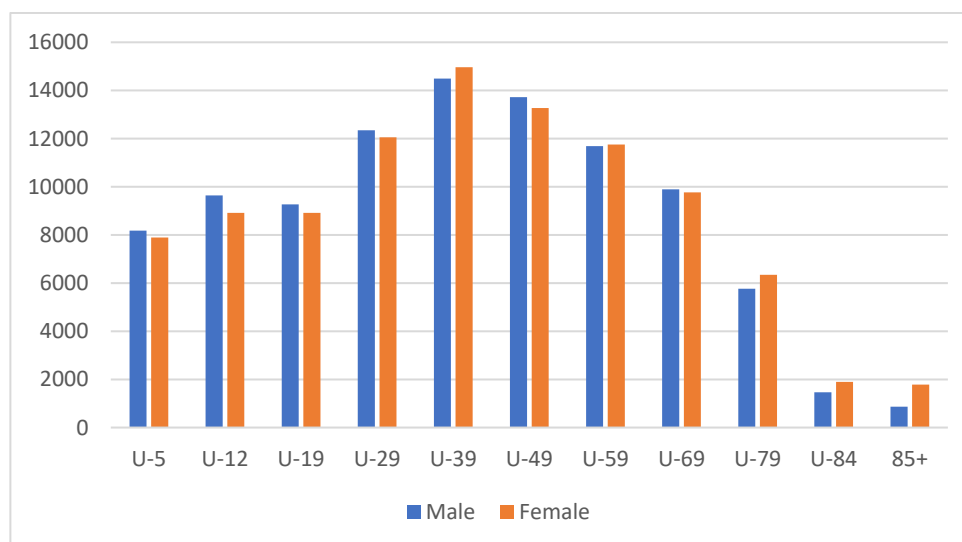
Figure 4 Limerick City & County: Settlement Strategy



The settlement patterns, demographics and age profile of County Limerick were considered in Phase 1.

Based on the most recent (2016) census data, the total population of the county (ex-city) was just under 195,000 people. Of these, 15% are living with a disability. The population demonstrates a classic 'bell curve', with a midlife (30-69 years) demographic bulge, while the under-5 year cohort is less than the under-12, or under-19 groups (Figure 5).

Figure 5 Demographic Profile, Co. Limerick (CSO 2016)



Demographic Observations:

- The large midlife demographic will be moving into retirement and will likely make **significant demands for outdoor recreational amenities**, based on recent national and international trends. These trends have been accentuated during the covid period, as people ‘discovered’ what was on their own doorsteps.
- The data suggest that the general population is in **good health** and will likely seek increasing opportunities for recreation to remain so as the population ages.
- The general population of county Limerick is **highly educated**, with more than 65% reporting a higher level qualification.
- In relation to transport, the CSO data show that **most people rely on the motor car** to get to work/ school and college, reflecting the **lack of integrated public transport** in rural areas to get to employment or college in the City area, and the lack of safety for walking or cycling to work or school on busy commuter routes. The majority of people commute less than 45 minutes to work, school or college (84%).

2.2.2 Cultural Heritage

East County Limerick enjoys a rich heritage from archaeological times to the present, which was presented in summary in the Phase 1 report. The region is host to a huge array of archaeological sites and monuments, as well as an extraordinarily rich medieval heritage.

The **Lough Gur archaeological complex**⁷, including **Grange Stone Circle**, is an internationally important heritage site, within an extraordinary array of prehistoric monuments and settlement features⁸.

Later structures were built in the vicinity of Lough Gur through the early Christian and later medieval periods. The Lough Gur complex was used for ritual purposes and ongoing research is investigating the potential for an **International Dark Skies Park** to celebrate the rich evidence of archaeo-astronomical understanding of seasonal celestial activities throughout the archaeological landscape.

The environmental history of East Limerick is recorded in the Lough Gur’s lake sediments, where pollen samples record an actively changing biota since prehistoric times, reminding us that climate change is constant (see Section 3.1 below also).

⁷ **Lough Gur** encompasses a complex archaeological site within an area rich in prehistoric monuments, that includes enclosures, stone circles, standing stones, hut sites, cairns, banks, pit burials, crannogs and other settlement features dating from the Neolithic period but also encloses features that range through the Beaker and Bronze age burial sites.

⁸ See: National Monuments Service: <https://maps.archaeology.ie/HistoricEnvironment/>

Elsewhere across the Maigue Catchments, there are multiple archaeological features and clusters of enclosures and ring barrows (Stephenstown, Elton, Mitchelstowndown West); ringforts (Greenmount, Crecora); souterrains, cists, ringforts and raths (Cush); fulacht fia (Ballycahane); and an innumerable array of archaeological features preserved in the rich pastoral lands of the Maigue catchments.

The early medieval period in East Limerick saw a number of early Christian sites developing (Dysert Aonghusa), with churches, graveyards and holy wells, many of which became important centres of monasticism and learning in the later medieval period (Adare, Monaster).



Dysert Aonghusa at Carrigeen, Croom, Co Limerick

A key feature of County Limerick is its fine heritage of Medieval towns and castles, with associated infrastructure of walls, bridges. The walled town of Kilmallock on the Loobagh River, displays merchants' houses, collegiate churches and wall gates, with a fine walk along the River Loobagh to the Franciscan Friary (Priory Walk) and along the restored Town Walls. At Ballingarry, there is the ruin of the Norman De Lacy castle in the upper Clonshire (Finshenagh) catchment, as well as Bruree Castle at Lotteragh Upper on the Maigue.

There are many tower houses and castles (Castleroberts) dotted across the landscape of East Limerick, frequently in defensive sites close to river crossings, as well as medieval corn mills on many of the smaller rivers in the Maigue catchment (Beabus/ Derryvinnane on the Clonshire) as well as at Croom on the Maigue. Medieval bridges survive (e.g. Bruff, Castleroberts, Adare, Kilmallock) and provide vital crossing points to this day.

Thus, there is a range of highly significant cultural heritage features that may be included in experiential recreational trails within the county.

2.3 Current Recreational Provision in the Mague Rivers Catchment

A detailed survey of current outdoor recreational provision in the Mague catchment was undertaken in Phase 1, which is appended as Annex 1 of this report. An outline summary and SCOT analysis is presented in this section.

2.3.1 Baseline Survey of Current Recreation Infrastructure

An initial survey was conducted in Phase 1 of the full range of recreation available in County Limerick, as well as amenities, heritage centres and service providers (accommodation, food, guides, etc). A spatial presentation of the data is shown on the map in Figure 6 overleaf.

The Phase 1 Baseline Report presented an analysis of the current recreational provision within the defined categories of:

- Walking
- Cycling
- Boating
- Angling
- Nature Viewing
- Other Recreation, and
- Heritage

A map showing current recreational provision is presented in Figure 7 overleaf.

There is a very significant baseline array of amenities and services available. As outlined in recent studies⁹, the challenge lies in the integration of these services and products to develop an outdoor destination of scale.

The reader is referred to Annex 1 for the full Phase 1 analysis.

2.3.2 Current Usage of Recreational Amenities

There are very limited data available on actual usage of these amenities in Co. Limerick at large, although Ballyhoura Country are working to achieve improved monitoring of visitor numbers and usage through emplacement of trail counters at key points along the Ballyhoura trails network and as part of the greater Beara Breifne Way initiative.

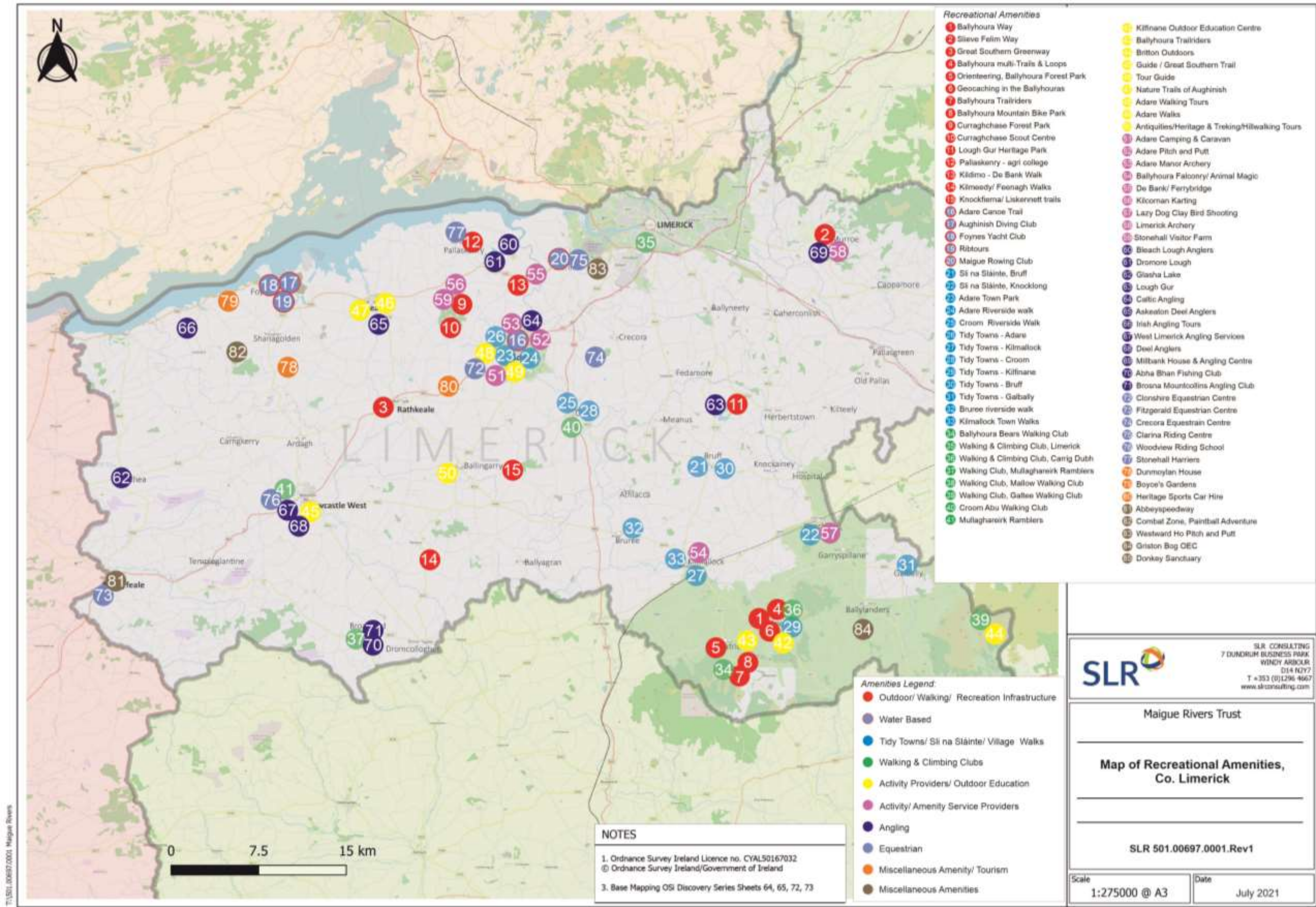
There are limited counters at access points to outdoor recreational amenities throughout the Mague Rivers catchment, and it is currently impossible to enumerate quantitatively, with confidence, exactly how many people use these facilities. Based on formal conversations with recreational amenity managers at Curraghchase and Lough Gur, and informal conversations held with recreational users, during the consultation phase of this project (*albeit possibly distorted by covid local restrictions*), the rivers are used to a mixed degree recreationally, with most local usage by walkers in defined amenities (parks and forests) – see Table 2 below.

2.3.3 SCOT Analysis

As part of the Phase 1 review of the recreational amenities of the Mague catchments, a Strengths, Challenges, Opportunities and Threats (SCOT) analysis was carried out. The results are presented below in Table 3.

⁹ e.g. *Ballyhoura Country – The Way Forwards* (2020) recommends a strategic approach to “Increasing Collaboration, Partnership & Buy-in” to developing the destination.

Figure 6 Map showing Current Recreation, Amenity & Service Provision, County Limerick



© This drawing and its contents are the property of SLR Environmental Consulting (Ireland) Ltd. and may not be reproduced or amended by other persons without prior written permission. SLR Environmental Consulting (Ireland) Ltd. accepts no liability for amendments made by other persons.

Figure 7 Map showing current Recreational Infrastructure, Mague Rivers & hinterlands

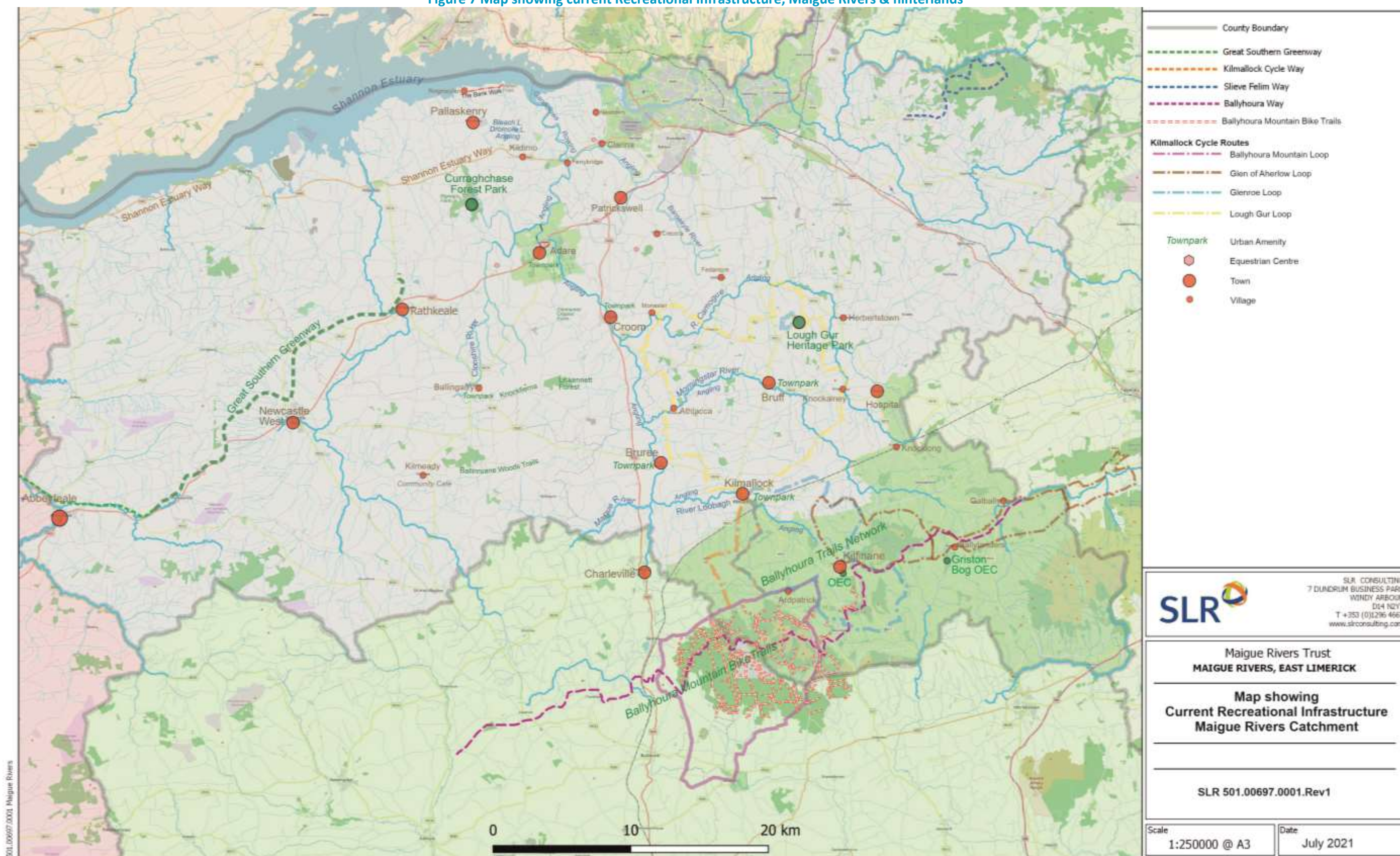


Table 2 Estimate of Current Recreational Usage

Activity	Estimates of Recreational Usage from Consultative Reports
Walking	<ul style="list-style-type: none"> • <i>Curraghchase Forest Park</i> receives up to 80,000 visitors per annum, but this is likely an under-estimation as many local users access the site from different entrances. • <i>Lough Gur Heritage Park</i> had more visitors in January 2021 than during normal summer peak periods, due to the increase in people using the facilities during covid lockdown. • The <i>River Walk at Adare</i> had to be directed as 'one-way-traffic' during the covid period due to numbers of people using it, reflecting the demand for walking access. • <i>Croom Town Park</i> enjoys high usage for Maigue riverside recreation; not enumerated. • Kilmallock walkers enjoy the Loobagh riverside <i>Priory Walk</i> and <i>Town Walls Walk</i> of c. 5km. • Local walkers at Ardpatrick in the Flemingstown (Noinín)/Loobagh catchment enjoy walks of 5km on a daily basis to and from the monastic site, along a waymarked track. • Walking Clubs located in the catchment seek longer half-day to full-day walks in the Ballyhoura and Mullaghareirk Mountains. • Active Retirement groups enjoy walks of 5-6km, followed by a social gathering at a café/hotel for coffee and chat, at locations such as Adare or Curraghchase; seeking new offroad options. • <i>Liskennett Forest</i> well used for walking; over-subscribed; concerns for traffic, parking, safety. • <i>Ballinruane Woods</i>, <i>Kilmeedy</i> and <i>Knockainy Hill</i> - enjoy high local usage; not enumerated
Cycling	<ul style="list-style-type: none"> • No estimate available of numbers of cyclists using the Great Southern Greenway • Significant numbers of Cyclists, particularly groups of men, use the intricate network of small link roads throughout the county to explore the countryside. • Family groups enjoy cycling at Curraghchase.
Boating	<ul style="list-style-type: none"> • Limited use of the rivers for boating, although community group in Adare is trying to restore the old Turf Quay to create a safe landing place for boating on the tidal section of Maigue. • Maigue Rowing Club at Ferrybridge is revitalising traditional 'gandelow' rowing, using 2 traditional fishing boats and 3 new boats. The club caters for just 15 rowers, but is under-resourced in terms of boats and landing facilities to accommodate applicants. • Up to 50 kayakers use the Maigue during annual river festival (see below)
Angling	<ul style="list-style-type: none"> • Angling is firmly controlled by the angling clubs along the Maigue. They do not issue day tickets, which limits the numbers of day visitors using the rivers. • Very strong international demand (particularly from USA) for wild brown trout offering on Maigue, provided by professional guides operating from hotels in the catchment. • Overall, anglers as a group are aging, with fewer young people taking it up (although there may be a recent upswing). Anglers worry as they are the 'eyes and ears' of the rivers.
Nature	<ul style="list-style-type: none"> • Annual 3-day October events at Curraghchase Forest Park (last held 2019) – attracted 700-800 people to enjoy guided walks & talks on trees, animals, bats. • An Taisce's LEAF (Learning About Forests) programme in Curraghchase with local primary schools to plant trees, attracts hundreds of school children • Birdwatch Ireland events in Curraghchase; annual Autumn viewing event • Limited bat walks held along the Maigue during Heritage Week
Other Recreation	<ul style="list-style-type: none"> • Liskennett Forest is used by school groups (e.g. Coláiste Chiaráin in Croom) for regular Transition Year orienteering and other recreational activities;
Festivals	<ul style="list-style-type: none"> • Summer <i>Festival of the Maigue</i> at Croom offers a family-friendly mix of activities and events, incl. c. 50 kayakers in paddling events (2 x 25); lessons in fly-fishing and biodiversity displays. • Maigue Rowing Club hosts a small annual regatta at Ferrybridge, with mixed boat races and fishing events – <i>no estimate of numbers</i>.

Table 3 SCOT Analysis – Maigue Rivers Recreation & Amenity

STRENGTHS	CHALLENGES
<ul style="list-style-type: none"> ✓ Beautiful pastoral scenery in the Golden Vale ✓ Walking/ Cycling provision good across range of settings – hill trails, greenway, forests, town parks, with potential for more ✓ Great Southern Greenway running across the county ✓ World class Ballyhoura Mountain Bike Trails in upper Maigue catchment ✓ Lough Gur and Curraghchase outdoor amenities, offering access to combined natural & cultural heritage ✓ Cultural history of fishing on Maigue & Shannon Estuary ✓ Expanding range of Town Parks and Slí na Sláinte routes within small villages and towns ✓ Demographic profile of educated young and middle ages, with likely increased demand for more amenities ✓ Increased participation in outdoor recreation among all age groups (particularly during covid), including retired ✓ Tourism access into county from Shannon Airport/ Limerick City of Sport and Wild Atlantic Way ✓ Increased policy & financial supports for outdoor recreation at national and county levels. ✓ Strong LDCs (Ballyhoura/ WLR) with track record in supporting outdoor recreation. 	<ul style="list-style-type: none"> ○ Poor Access along extensive river network, with limited beside-water / on-water access for a range of activities. ○ Weak infrastructure (parking, signage, gates, access) for riverside activities ○ Insurance and anti-social behaviour concerns of farmers (<i>perceptual</i>) ○ Supports to schools to enhance awareness through activities and resources ○ Uncertainty of rights re. ownership & access at river quays in Adare and Ferrybridge ○ Lack of signature recreational events & festivals in the lower the Maigue Catchments ○ Lack of defined infrastructure to view nature in the wild e.g. fish and bird migrations; spring wildflowers; bats ○ Lack of outdoor classrooms; camping facilities ○ Communication of local events in lowland communities could be improved to visitors ○ Marketing & packaging of activities could be improved across the region ○ Multiple policies for green infrastructure, but relatively limited implementation of access to green infrastructure in rural areas.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ❖ Increased use of Maigue Rivers for ‘blue’ recreation through negotiated access, working with farmers ❖ Restoration of traditional quays to provide access/ egress ❖ Development of Blueway for kayaking, boating, angling trails, linked to trails and Greenways ❖ Potential for recreational infrastructure of scale: <ul style="list-style-type: none"> • Great Southern Greenway >> extend to Adare & Tralee; expand its reach through Maigue catchment to.... • Consideration of greenway linking Ballyhoura Way >> Beara Breifne Way northwards to the Great Southern Greenway, parallel to the Maigue River as a Blueway • Develop The Bank Walk from Ferrybridge north to Estuary; potentially all the way to Adare ❖ Lough Gur as ‘Discovery Park’ with Dark Skies Park and cycle trail to Limerick Volcanic Centre (extend seasonality) ❖ Use Curraghchase Forest Park/ Knockfierna/ Liskennett/ Ballinruane and Knockaine woods to expand ‘soft’ recreation, nature viewing, sitting spots, forest school facilities and e.g. ‘Forest Therapy’ ❖ Enhanced nature viewing amenities; bird hides; bat walks ❖ Nature-based catchment management: create habitats ❖ Use of abandoned mills/ farmsteads to provide rustic accommodation, especially on long distance trails ❖ Networking of recreational enterprises: collaboration to compete through bundling of activities/ co-marketing ❖ Integrated calendar of events of local festivals & events 	<ul style="list-style-type: none"> • Lack of access to riverside / river frontage by landowners • Unaffordable insurance threatens project development and maintenance of services. • Inability to secure safe access and egress to realise some of the ‘beside water/ on-water’ opportunities. • Failure to secure requisite resourcing & funding to realise recreational opportunities • Lack of vision and management commitment to action on delivering the objectives of county and local development plans and tourism strategies – pastoral scenery threatened by inappropriate rural development.

3.0 Proposals for Development

It is clear from the Phase 1 assessment that there is a significant base of recreational amenities in the Mague River catchments. However, gaps exist and current levels of recreational usage are underperforming relative to the potential. This chapter makes proposals to develop identified opportunities within five key areas of recreation.

In the following sections, proposals are made for future focus based on the five core recreation types, as well as other amenities, within the mainly lowland areas of the Mague catchments, as close to the river as possible:

1. **Walking**
2. **Cycling**
3. **Angling**
4. **Boating**
5. **Nature & Wildlife Observation**
6. **Other Opportunities**

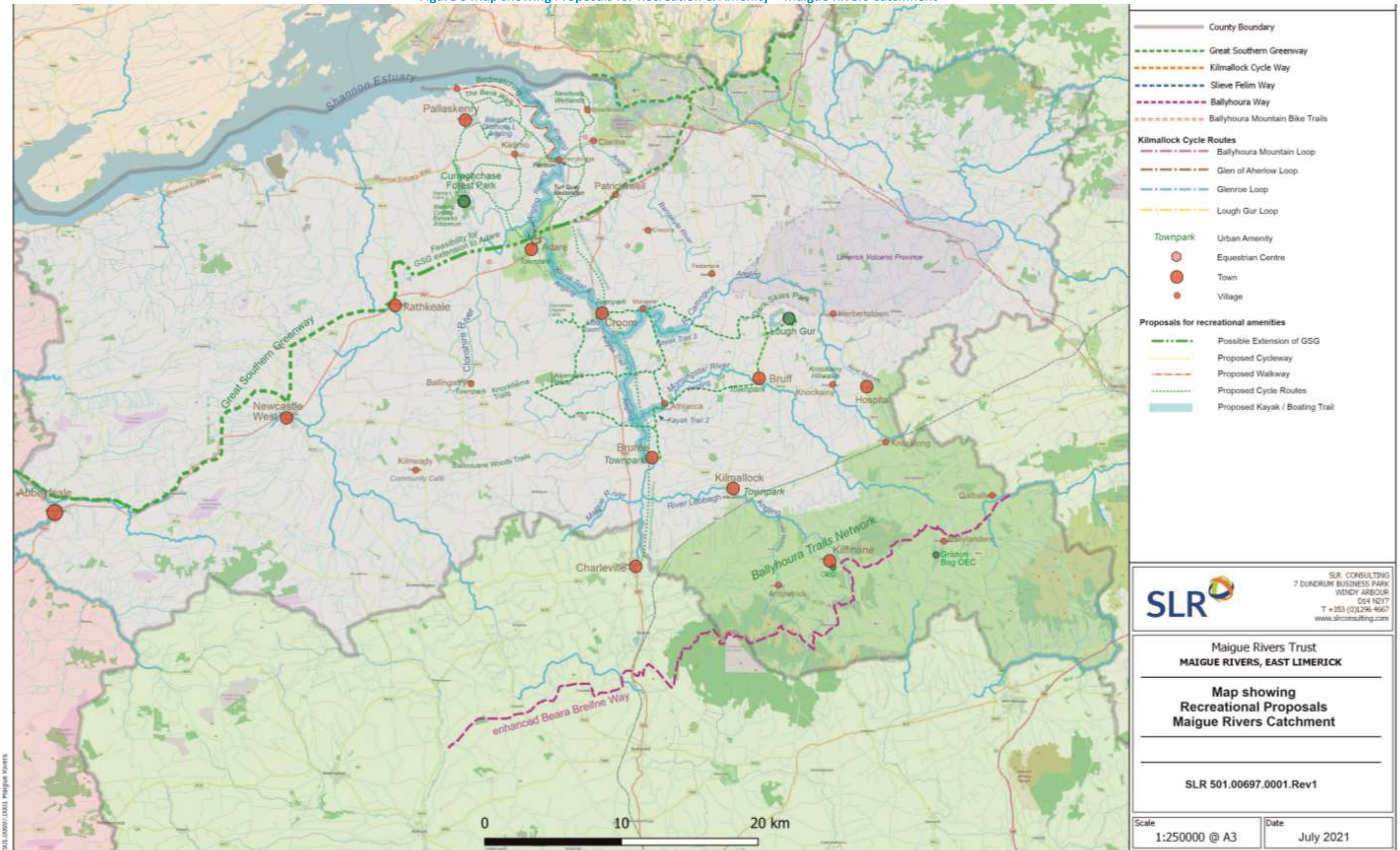
For each recreational type, proposals are presented with suggested development actions, as well as enhanced synergies to strengthen overall amenity provision in the catchment. Outline costs are presented where relevant.

The critical constraint for all riverside recreational amenities in the Mague Catchment is the ***lack of access*** to the riverbanks. This is due to historical private ownership rights and the intensity of equine, livestock and dairying activities in some of the most productive agricultural lands in Ireland, as well as fears of anti-social behaviour should access be allowed. To overcome the issue, it is proposed to utilise and enhance existing amenities where possible, creating improved linkages, information and public engagement along the river network.

Following the Phase 1 baseline study, the Board of the Mague Rivers Trust requested that the focus of the recreational amenities should lie as close to the rivers network as possible, rather than on the southern uplands' catchment, which is well served with existing amenities.

The key proposals for recreational development are shown spatially on the Map in Figure 8 overleaf.

Figure 8 Map showing Proposals for Recreation & Amenity - Maigue Rivers Catchment



© This drawing and its contents are the property of SLR Environmental Consulting (Ireland) Ltd. and may not be reproduced or amended by other persons without prior written permission. SLR Environmental Consulting (Ireland) Ltd. accepts no liability for amendments made by other persons.

3.1 Recreation and Public Health

It is instructive to consider why having access to recreation and recreational amenities is important in the lives of the citizens of the Maigue Rivers.

The benefits associated with involvement in physical recreation are well researched¹⁰:

- It provides a major contribution to personal health and wellbeing;
- Is key to human development;
- Is essential to quality of life;
- Reduces self-destructive and anti-social behaviour;
- Helps to build strong families and healthy communities;
- Reduces health care, social service and Garda/penal costs.

Consistent research demonstrates that physical inactivity is an independent risk factor for coronary heart disease, a risk factor for type 2 diabetes, obesity and high blood pressure. According to research carried out by SLAN, it was suggested that 29% of the Irish population were inactive/sedentary (26% male; 31% female). The generally accepted view is that the physical activity level required to maintain good health does not have to be strenuous to maximise the impact, rather it needs to be consistent.

The national guidelines for levels of activity in Ireland¹¹: suggest that

- **Adults should build up at least 30 minutes of moderate activity on most days of the week;**
- **Children should build up at least one hour of moderate activity on most days of the week.**

There is also increasing evidence that physical inactivity is a 'major causative physical link' between ill health and social inequality (Royal College of Physicians of Ireland, 2016)¹².

Physical activity has been shown to have a positive influence on mental health and wellbeing. There is strong evidence to show a 20-30% reduction in depression in adults who participate in physical activity daily¹³, while improving the quality of life of those experiencing such symptoms. It is also clear that green space is widely viewed as a health-promoting characteristic of residential environments, and has been linked to mental health benefits such as recovery from mental fatigue and reduced stress. Additionally, exposure to natural environment can significantly reduce health inequalities.

Physical inactivity globally has critical implications for the cost of healthcare required to treat related chronic illnesses. In Sweden, it is estimated that up to 60% of all illnesses can be attributed to lifestyle choices¹⁴.

Therefore, it is prudent to support initiatives to encourage greater levels of physical activity across all ages and abilities by providing the requisite infrastructure to ensure access. Repeated studies validate the concept that **'spending money now in recreational infrastructure and measures saves healthcare costs later'** as the cost to society of physical inactivity is enormous. Investing in mechanisms to get inactive people more active leads to a significant medium to long term economic saving for society at large.

The National Physical Activity Plan (2016) made specific recommendations for Local Authority (LA) action:

- Development & promotion of walking and cycling strategies in each LA area;
- Ensure planning, design and development of towns, villages promote activity through a network of cycling routes and footpaths;

¹⁰ EU Physical Activity Guidelines (2008)

¹¹ Irish Department of Health. The National Guidelines on Physical Activity for Ireland. Dublin 2009

¹² RCPI (2016) Physical-activity-a-wonder-drug-the-evidence.pdf

¹³ https://www.fsem.ac.uk/position_statement/the-role-of-physical-activity-and-sport-in-mental-health/#

¹⁴ http://avbp.net/docs/huddinge_map.pdf

- Continuous professional development of those responsible for design on the role of physical activity.
- Explore opportunities for recreational in the natural environment.

There may scope to work collaboratively with LCCC officers, the HSA and local community health officials to increase activity for many who may not normally avail of green or blue recreational amenities, through walking, nature viewing, gardening or angling along the Maigue Rivers, to promote better physical and mental wellbeing.

3.2 Recreational 'Gateway' Infrastructure

There are a number of 'honeypot' amenities, offering recreational opportunities, which act as gateways to the Maigue Rivers catchment. Although each amenity is managed independently, they are highlighted in this study to mark their potential for providing recreational linkages and synergies (walking, cycling, kayaking, nature viewing) with the other proposals. These centres are the key drivers of tourism in the sub-region.

- (i) In the **Ballyhoura Mountains** (Ballyhoura Country), walking, hiking, cycling and mountain biking in the Maigue catchments of the Loobagh, Glenduff and Nónín Rivers are delivered through an extensive network of well-developed looped and linear trails through forestry and extensively farmed uplands. The *Ballyhoura Trails Guide App* provides up-to-date maps and trail information, with links to accommodation, guiding and food services. All are managed and marketed through *Ballyhoura Country*.



<https://visitballyhoura.com/pages/get-app>

The recreational infrastructure in the Ballyhoura Mountains is well developed and managed, and has not been dealt with in any great detail in Phase 2 stage of the study. However, it is important to note that Ballyhoura will provide an important gateway to the Maigue Catchments to the north, with vital linkages to the enhanced *Beara Breifne Way* as well as the *Munster Vales* to the south.

In addition to the trails network, Ballyhoura hosts the **Kilfinane Outdoor Education & Training Centre** that offers significant opportunities for land- and water-based recreation and learning, including canoeing, kayaking, paddle-boarding and raft building, as well as mountain biking, rock climbing, hillwalking and abseiling.



- (ii) The **Lough Gur Heritage Park**, an archaeological complex of international importance, a wildfowl sanctuary and proposed Natural Heritage Area (pNHA) in River Camoge catchment. It provides essential recreational amenities in an area that is otherwise lacking. It hosts a series of walking trails from the visitor centre along the lakeshore, but due to access and conservation constraints in the western zone of the lake, there is not a full circumnavigational trail. A programme of kayaking, yoga, wellbeing and nature viewing activities has been introduced¹⁵. Lough Gur is also on the Kilmallock Cycling Trails circuit.

¹⁵ For example, see <https://loughgur.com/wellbeing-by-the-water-summer-2021/>

To address environmental and carrying capacity issues, the Lough Gur management team is implementing strategic measures to expand the seasonality of the facility. There are proposals to develop a *Dark Skies Park* to celebrate Lough Gur's archaeo-astronomical landscape complex, including *Grange Stone Circle*, with potential to attract winter visitors.

- (iii) Coillte's **Curraghchase Forest Park** in the west/ northwest of the mid-Mague and Clonshire catchments, provides a range of family-friendly walking and cycling trails, as well as orienteering, picnic facilities, education, guides, the De Vere arboretum, café / WC services. The cellars of Curraghchase House are home to the internationally protected Lesser Horseshoe Bat, and is a designated SAC.

VISITORS FACILITIES ON SITE



<https://www.coillte.ie/site/curragh-chase-forest-park/>

- (iv) The **Great Southern Greenway** in the western Clonshire catchment passes from Rathkeale to Abbeyfeale, managed by Limerick City & County Council. There is exceptional potential to extend the Greenway east to Adare, and possibly via Patrickswell to Limerick City, subject to feasibility. This would introduce 'slow' recreation and tourism from the City to County Limerick and could be an economic primer for rural villages and towns along the way. LCCC are developing off-route links to neighbouring towns to promote slower travel and longer stays in the region.



- (v) The **Shannon Estuary Way** is an emerging tourism route that follows the N69 scenic route from the *Wild Atlantic Way* from Kerry eastwards along the southern shore of the Shannon Estuary to Limerick City, wrapping around the northern Shannon Estuary through Co. Clare. The route is linked to heritage, viewpoints and recreational infrastructure at key points along the Way.

It is primarily promoted as a driving route, that will act as a major feeder into the Maigue Catchments.
<https://www.limerick.ie/discover/explore/recommended-trips/explore-shannon-estuary-way>

The Shannon Estuary Way route offers potential for development of looped cycle routes and walking trails in the future. Some proposals are made in the following sections linked to the Maigue Rivers.

The above amenities provide a superb recreational base; the challenge is to 'join the dots' with a range of other activities across the Maigue Rivers catchment. Proposals are made below to achieve this objective.

3.3 Proposals for Walking Amenities

The Phase 1 Baseline Study presented a review of the current status of the walking infrastructure in the Maigue Rivers (see Annex 1, Phase 1 Report).

3.3.1 Walking Infrastructure

Walking is a highly accessible recreational activity, suited to all ages and abilities. The demand is particularly high among recreational users who may not be actively involved in formal sports or 'high octane' activities. Research indicates that families, active retirement groups and wheelchair users seek safe and accessible trails, that are not too long (<5km), within reach of parking and services. Walking as an activity is also continuing to grow as a tourism attractor and can be a key element in the delivery of integrated rural tourism (see Chapter 4, Annex 1, Phase 1 report).

The key constraint for development of walking infrastructure along the River Maigue is **lack of access to the riverbanks**. The terms of reference alluded to avoidance of proximity to residential homes, private lands and hotels in making suggestions for development. Given current private landholdings and rural housing densities across the catchment, there are thus significant constraints to development of new riverine walking trails.

Acknowledging the significant 'Gateway' amenities presented above (Section 3.1), and with constraints in mind, the study focused on the identification of routes that may be elevated to formal permissive access, as well as identification and promotion of lesser known walks. The town parks network also provide important amenities.

The proposals for recreational amenity acknowledge the potential for towns and villages along proposed routeways and trails to benefit from safe, accessible and integrated recreational amenities, linking cultural, educational and tourism services and activities, such as the Ballyhoura Mountain Bike Trails, the Kilmallock Cycling Hub, the Great Southern Greenway and the Shannon Estuary along the Maigue Catchments. The proposals aim to provide for more vibrant places with opportunities for improved physical and mental health, environmental and economic sustainability.

The proposals herein also seek to identify trails that may exist but which are not well known e.g. low hill trails and smaller forests or the many town parks along the rivers, as well as opportunities for enhanced recreational connectivity north-south along the Maigue Rivers catchment.

This section presents a series of walking opportunities for development, colour coded in **green**.

PROPOSALS FOR WALKING INFRASTRUCTURE				
No	River	Access Point	Potential Opportunity	Issues/ Comment
W1	Mague	Ferrybridge - Ringmoylan Quay	<p>Development of The Bank Walk (14.7km) from Ferrybridge along raised bank to Ringmoylan along the Mague Estuary</p> <p>The Bank is currently used informally by local people, accessing the feature from Ringmoylan Quay via Mellon Point, Faha and from De Bucket Pub.</p> <p>The Bank Walk would offer excellent opportunities for walking, angling, nature viewing and birdwatching</p>	<p>This walk traverses up to 37 separate landholdings and would require a single entity to negotiate permissive access to develop the walk, with trailheads, signage, stiles, parking at key spots.</p> <p>Efforts were made in 2013 to negotiate this walk by Kildimo/ Pallaskenry Community Dev. Associations – the effort could be reinvigorated</p> <p>The owners of De Bucket Pub are willing to offer the carpark as a Trailhead in the south; with Ringmoylan Quay as Trailhead to north.</p>
<p>Development & Strategic Considerations</p> <p>Break down into 4 stages (see Figure 9 below)</p> <ul style="list-style-type: none"> • Faha Loop (8.2km) • Ballynacarriga Loop (7.9km) • Mellon Loop (7km) • Ringmoylan-Mellon (3.5km, or 7km round trip) <p><i>Recommend:</i> As each section of the walk is negotiated with the relevant landowners, progress to the next stage.</p> <p>Development Considerations:</p> <p><i>Staged access points with bike ports & parking facilities, may be viable at Mellon, Ballynacarriga and Faha, to provide shorter 'legs' of the Walk, subject to access</i></p> <ul style="list-style-type: none"> • Negotiation of permissive access (with almost 40 landowners) • Assessment of public safety issues; detailed assessment of gates, stiles, and fencing as required • Insurance requirements • Mapping / signage / interpretation requirements • Management and maintenance plan for the Walk. • Acquiring National Trails Office approval – critical for insurance • Project costs could be supported by a future RDP/Leader application <p>Synergies</p> <p>This will link to (i) proposed pontoon and landing facilities at Ferrybridge, and (ii) to the Cycle Trail 1, North) proposed in this study</p> <p>Strategic Fit:</p> <p>This could form a strategic recreational link with the Shannon Estuary Way, which passes Ferrybridge and is directed to Ringmoylan Quay.</p> <p>Potential Cost: Time and trail infrastructure (gates, stiles, signs) – est. €50,000 <i>note - not surfacing; retaining natural grassy base</i> Optional benches along route: €5,000</p>				

Figure 9 Proposed Trail along The Bank, Maigue Estuary



Photo: The Bank Walk at Faha, at low tide, May 2021



No	River	Access Point	Potential Opportunity	Issues/ Comment	Development Considerations
W2	Maigue Greanagh Barnakyle	Adare Patrickswell Rathkeale	Great Southern Greenway extension eastwards to Adare and Patrickswell (see Figure 10, overleaf)	There are already plans afoot by Limerick City & County Council to extend the GS Greenway eastwards to Adare and Patrickswell to provide safe walking/ cycling off-road options from Rathkeale to Annacotty, east of Limerick City	<p>Development Considerations:</p> <ul style="list-style-type: none"> Discussions with Limerick City & County Council re planning requirements <p>Feasibility Study, to include:</p> <ul style="list-style-type: none"> Property Registration Authority searches to establish ownership of line Detailed surveying of track safety/ bridges/ crossings/ viaducts/signage Access requires negotiations with CIE Holdings; Limerick CCC; Foynes Port, Adjacent farmers, residents & landowners; community stakeholders Environmental & Social Impact Assessment Detailed development costings (outline estimate €4 mill from Rathkeale to Patrickswell (20km) based on reported costs from Mayo & Waterford Greenways) <p>Synergies This will link to (i) Adare heritage town as a key centre of tourism & activities (ii) proposed Cycle Trail 1, North, as trail hub and (iii) Kayak Trail 4 proposed in this study</p> <p>Strategic Fit: Strategic recreation link from Kerry to Limerick along Great Southern Greenway.</p> <p>Potential Cost: 20km (Rathkeale to Patrickswell) –est. €8.7 million (excl. time, VAT)¹⁶</p>
W3	Maigue Morningstar Camoge	Charleville Kilmallock Bruree Croom Adare Patrickswell	Consideration of a Greenway /Blueway link from southern county Limerick close to River Maigue, linking northwards to Great Southern Greenway and Shannon Estuary Way	A longer term proposition to provide safe walking/ cycling trails to complement water trails on the Maigue and to develop a fully integrated 'Blueway'	<p>Development Considerations:</p> <ul style="list-style-type: none"> Commissioning of Feasibility Study, to scope out possible routes, infrastructural requirements and outline costings Consultations re. possibilities with Limerick CCC; residents; community stakeholders and landowners/ managers <p>Synergies: Development of a north-south Greenway would enhance the potential for a multi-functional recreational Blueway along the Maigue, with boating, kayaking, walking and cycling trails, linking villages and supporting services.</p> <p>Strategic Fit: Strategic recreational link from Ballyhoura/ Munster Vales / Beara Breifne Way to the Great Southern Greenway and Shannon Estuary Way, linking ultimately from Limerick & Kerry</p> <p>Potential Cost: to be determined by Feasibility Study.</p>


¹⁶ Greenway estimated costs based on published costs for Shannon Greenway (estimate), Waterford Greenway and Mayo Greenway.

Figure 10 Proposed eastern extension to Great Southern Greenway



Photo: Great Southern Rail line at Adare, Maigue River crossing

	River	Access Point	Potential Opportunity	Issues/ Comment	Development Considerations
W4	Maigue	Croom Town Park	<p>Enhanced links from Town Park to the walking trail upstream of the Bridge in Croom.</p> <p>This will extend the visible connectivity of riverside walking amenities.</p>	Develop safe walking link (behind main street) from Town Park to bridge, crossing to trail leading upstream of the mills and castle at Croom Bridge to view the river upstream.	<p>This will require:</p> <ul style="list-style-type: none"> • Permissive access to the back lane behind Main Street, leading from the Town Park, southwards to the bridge; this will require negotiations with residents backing onto the lane and Limerick CCC. • Safe crossing point at the Bridge, with LCCC engineering teams • Connecting signage to the existing trail leading upstream along the R. Maigue <div>   </div> <p>Synergies</p> <ul style="list-style-type: none"> • This will enhance the walking amenity along the banks of the Maigue River, where access is otherwise severely limited. • The trail will link with proposed kayak trails (Trails, 1, 4) – with potential to develop an integrated recreational Blueway on the Maigue Rivers <p>Strategic Fit:</p> <ul style="list-style-type: none"> • Providing critical access from Town Park to enhanced riverside amenity. • Link with proposed north-south Greenway (W3 above) ultimately.
W5	Maigue and Clonshire	Croom Ballingarry Kilmeedy	<p>Promotion & Information of existing walking trails, including Liskennett Forest, Knockfierna and Ballinruane Woods, in the lower-mid catchments</p>	These excellent amenities are almost unknown outside immediate localities. Potential to optimise usage of existing amenities and use for Forest Therapy (see Section 3.5 below)	<p>Development Requirements</p> <ul style="list-style-type: none"> • Enhanced car parking and bike lock-ups (with Coillte) • Directional signage • Promotion on www.limerick.ie/discover <p>Synergies</p> <ul style="list-style-type: none"> • Significant potential for walk-cycle linkages along the proposed Cycle Trail 2 (Mid) to the villages of Kilmeedy and Ballingarry to the central Maigue towns. • Provision of accessible 'trails of scale' for safe walking in rural Limerick. <p>Strategic Fit: Provide links to Coillte's own efforts to expand access to nature in forests</p>

W6	Nóinín / Loobagh	Ardpatrick Kilfinane	Walking trail at Ardpatrick along the waymarked track to the monastic heritage site of <i>Árd Phádraig</i>, with spectacular views over the entire Mague catchment from source to the Shannon Estuary.	Walk from charming village with services, along lane and waymarked track to the monastic hilltop complex (<i>which still functions as a cemetery</i>).	<p>Development Requirements</p> <ul style="list-style-type: none"> Enhanced car parking and bike lock-ups in Ardpatrick village Directional signage to the monastic site Promotion on www.limerick.ie/discover <p>Synergies</p> <ul style="list-style-type: none"> Significant potential for walk-cycle linkages within the Ballyhoura Hills complex. Provision of accessible 'trails of scale' for safe walking in rural Limerick. <div data-bbox="1240 491 2101 802">  </div> <p><i>Views from Ardpatrick over Mague Catchment to Shannon Estuary</i></p> <p>Strategic Fit: Provide links to Ballyhoura Trails network to Mague upper catchment</p>
W7	Camoge Drumcamoge Mahore Morningstar	Knockainy Hospital	Knockainy Hill and Knocklong Hill provide walking amenities & viewing points of the Mague Rivers	Knockainy Hill and Knocklong Hill provide walking amenities in the eastern catchment of the Mague Rivers, with spectacular 360 degree views to the Ballyhoura, Slieve Felim and Galtee Mountains.	<p>Development Requirements</p> <ul style="list-style-type: none"> The hills are held in private ownership and formal permissive access must be negotiated if they are to be promoted publicly as amenities Small trail heads and bike lock-ups at GAA Club (Knockainey)/ Community Hall (Knocklong) Finger posts directional signage / Interpretative signage Promotion on www.limerick.ie/discover <p>Synergies</p> <ul style="list-style-type: none"> Significant potential for cycle linkages from the Lough Gur complex. <p>Strategic Fit:</p> <ul style="list-style-type: none"> Provide recreational amenity for the eastern rivers of the Mague catchment

3.3.2 Optimisation of Town Parks Network

Limerick City & County Council (LCCC) published the *Draft Development Plan 2022-2028* on 26/06/2021, setting out its strategy for planning and sustainable development of Limerick over a six-year period. It has committed to enhanced urban connectivity of open spaces to address wider sustainable transport goals and biodiversity principles to encourage flora, fauna, pollinators and insects. Connected open urban spaces contribute to an active and healthy lifestyles and create recreational opportunities, safe from traffic.

The recreational infrastructure of the river-focused **town parks network** of Kilmallock (*Loobagh*), Adare (*Maigue*), Bruff (*Morningstar*), Bruree (*Maigue*) and Croom (*Maigue*) in particular, with a number of smaller scale green developments in Kilfinane (*Glenduff*), Hospital (*Mahore*), Knocklong (*Drumcamoge*), Ballingarry (*Clonshire*) and other villages. These developments are supported through the Local Area Planning (LAP) process, including:

- The **riverside walk in Adare** is the only formal ‘beside water’ trail in the northern Maigue catchment, offering a 2km loop to users. It is intensely well used, such that it had to be directed as ‘one way traffic’ during covid lockdown. It is also used by young anglers as an amenity below the main bridge at Adare.
- **Croom** is home to a substantial town park that offers enormous scope as a **riverine recreational hub**.
- **Kilmallock** offers a very attractive 2km riverside walk along the River Loobagh from the northern bridge zone southwards via *Priory Walk* to the Franciscan Friary. The circular walk extends through the medieval town core along the Town Walls Walk and back to the river via the church, offering a 4km loop.
- **Bruff** enjoys two riverside parks, upstream and downstream of the lower bridge. The upstream park lies between the old and new bridge as a more formal urban park, but the lower park provides a wheelchair accessible, wooded walking trail and opportunities to interact with nature.
- **Bruree** enjoys a small riverside park, both upstream and downstream of its medieval bridge. The lower park offers great nature viewing of fish, birds and insects. The upstream park is less formal and is well used by local children for play and exploration.
- **Ballingarry** has a small park along the upper Clonshire, with play areas and semi-wild zones to encourage biodiversity. It provides a safe place for older citizens to meet and enjoy the river setting
- **Kilmeedy village** is the trail head and service centre for the Ballinruane Woods trails, which are drained eastwards by Maigue streams. The village hosts the excellent community owned Roots Café that sells coffee, refreshments, crafts and local vegetable produce.
- **Kilfinane** enjoys a small town park and (non-continuous) riverside walk along the Glenduff stream.

Some examples are shown below:



The Loobagh riverside Priory Walk in Kilmallock provides safe walking infrastructure for all ages to enjoy



The Clonshire riverside park in Ballingarry provides walking amenities and biodiversity zones



Kilmeedy – the Roots Community Café



Kilfinane riverside walk, adjacent to the Glenduff stream, a tributary of the Loobagh River

The key proposals pertaining to the Town Parks is to continue to expand the network and to build awareness of these valuable spaces as safe walking and wellness zones, linking them by cycle and kayaking trails as much as possible.

The Mague Rivers Trust has worked to enhance biodiversity in the town parks by inserting information boards and hosting events on a regular basis. These efforts are considered further in Section 3.7 below.

	River	Access Point	Potential Opportunity	Issues/ Comment	Development Considerations
W8	Maigue Morningstar Camoge Clonshire Loobagh Glenduff	Adare Croom Bruree Bruff Kilmallock Ballingarry Kilmeedy Kilfinane	<p>Town Parks: build awareness of these exceptional recreational spaces as safe walking and wellness zones.</p> <p>Continue to link them by cycle and kayaking trails as much as possible.</p> <p>Create Nature Viewing Zones (see Section 3.5 below)</p>	Build awareness and links among the Town Parks network, via recreational opportunities and biodiversity / education	<p>This will require:</p> <ul style="list-style-type: none"> Continued collaboration with LCCC through the Local Area Planning process (LAP) to extend the park spatial reach and creation of new parks where land available Add outdoor exercise/ gyms where space allows Create semi-natural biodiversity zones to promote public awareness of river ecology; conduct of riparian surveys (see Section 3.6 below for further biodiversity proposals in town parks) <p>Synergies</p> <ul style="list-style-type: none"> Link proposed cycling (Section 3.4) and kayaking trails (Section 3.5.5) to the town parks network <p>Strategic Fit:</p> <ul style="list-style-type: none"> Concurs with LCCC strategic objectives to provide green infrastructural linkages in County Development Plan 2022-2028 Providing distributed recreational and educational amenities via the Town Park network throughout East Limerick

3.4 Proposals for Cycling Amenities

County Limerick enjoys a significant investment in cycling infrastructure through the **Great Southern Greenway** from Rathkeale westwards to Abbeyfeale (see proposals in Section 3.3 above); the innovative **Ballyhoura Mountain Bike Park** in the upper reaches of the Maigue and Loobagh catchments; and the **Kilmallock Cycle hub**, with its web of cycle trails leading southwards to Ballyhoura Mountains and northwards to Lough Gur (Figure 7). Additionally, there are cycling trails in **Curraghchase Forest Park**, suited to all ages and abilities.

The development of a new Greenway (W3 above) could strategically link the Great Southern Greenway in the north, south along the Maigue River to the Ballyhoura Mountains and onwards to the Munster Vales. This link would be transformational for the towns and villages along the way, offering an integrated serviced network from Limerick to Kerry to Charleville (onwards to Munster Vales).

Phase 2 of the study focused on the identification of **cycling trails** that ‘hug’ the Maigue Rivers, while allowing opportunities to visit lesser known villages and heritage sites, while linking the network of town parks in the catchment as nature viewing points. Two trails (North and Mid, respectively) are proposed that link key towns and heritage features – see Figure 11 (north route) and Figure 12 (mid route) respectively. The southern catchment is well serviced with the Kilmallock Hub Cycle Trails (see Figure 7) and the Ballyhoura Mountain Bike complex.

This section presents cycling opportunities for development, colour coded in **amber**.



Great Southern Greenway, Co. Limerick

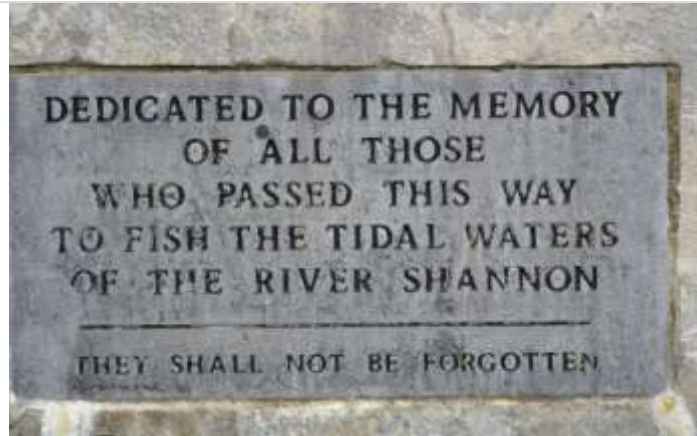

Cycling is a family friendly activity, suited to a range of ages and abilities

PROPOSALS FOR CYCLING

No	River	Access Point	Potential Opportunity	Issues/ Comment	Development Considerations
C1.1	Maigue Estuary Barnakyle Greanagh	Adare Heritage Centre (trail Head in carpark)	CYCLE TRAIL 1 (NORTH) See Figure 11 below <i>Circuit 1:</i> Depart from Adare to Cloonanna Church via Doon Cross and Ballybrown to Newtown (14km) Option to visit Carrigogunnel and do some birdwatching on the Newtown Flats (+4km) Cycle back via Ferrybridge to Adare (16km) (28 – 32km return)	Visit to Newtown Hedge School & local community museum	Development Requirements <ul style="list-style-type: none"> Discussions with LCCC engineering & planning departments, particularly with reference to cycle safety issues; traffic calming Safety measures & signage at N69 crossings; Ferrybridge crossing; consider cycle lanes where possible Bike stands/lock-ups at key points along routes Directional signage from Adare Hub Promotion on www.limerick.ie/discover/ / www.visitballyhoura.com Synergies <ul style="list-style-type: none"> Potential to open up nature viewing points along the Mague Estuary at Ringmoylan Quay and Newtown Flats Strategic Fit: Linkages with emerging amenities along the Shannon Estuary Way; Provision of accessible cycle trails in rural Limerick. Estimate Cost: time and signage €20,000; bike racks €5,000



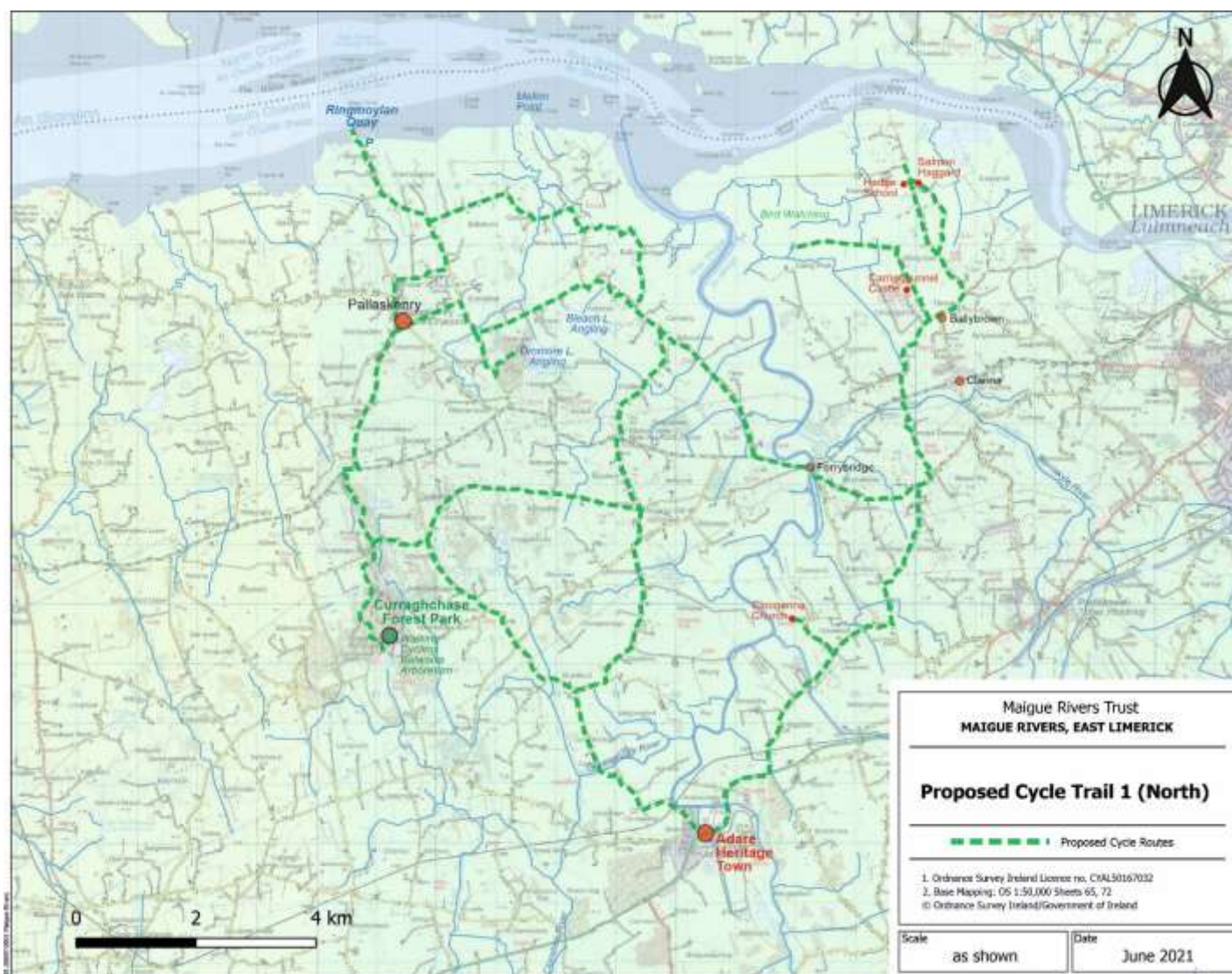
Hedge School restored at Newtown by community, 2018


C1.1			Circuit 1: continued	Visit to Salmon Haggard — memorial to the tradition of Shannon salmon fishery at mouth of the River Maigue, erected in 2018 by the local community and craftsmen to the memory of all those ‘who passed this way’ to fish the tidal waters of the Shannon	
C1.2	Maigue Estuary Shannon Estuary	Adare Heritage Centre (Trail Head in carpark)	CYCLE TRAIL 1 (NORTH) Circuit 2: Depart from Adare / Ferrybridge via Faha, Ballynacarriga and Mellon to Ringmoylan Quay (20km) Cycle back by Pallaskenry with option to visit Dromore Lough or Bleach Lough (+5km) Drop in to Curraghchase Forest Park (+9.5km) for a range of recreational activities or refreshments at the De Vere café Home to Adare (+8km) Round trip (40-50km) depending on chosen route.	These cycling routes will traverse the Shannon Estuary Way and complement current tourism measures	

Salmon Haggard memorial to previous generations of fishermen

Ringmoylan Quay has parking and picnic amenities; access to shore walks and spectacular birdwatching

Figure 11 Proposed Cycle Trail 1 (North)



No	River	Access Point	Potential Opportunity	Issues/ Comment	Development Considerations
C2.1	Maigue Camoge Morningstar	Croom Town Park (Trail Head) Lough Gur Bruree	<p>CYCLE TRAIL 2 (MID) See Figure 12</p> <p><i>Circuit 1 (35-49km in total)*</i> Depart from Croom Town Park on the Maigue eastwards to Monaster (4km) beside the Camoge River. Continue to Grange Stone Circle (+10km) and Lough Gur archaeological heritage complex (+3km)</p> <p>Cycle southwards to Bruff Town Park (+6km) on the Morningstar, and back by Athlaccra (+7km) to Bruree (+5km).</p> <p>From Bruree, option to return to Croom (+14km) via Monaster .</p>	<p>These routes provide direct access to the Maigue Rivers in the central zone of the catchment and many charming villages along the way.</p> <p>There is a wealth of heritage (Lough Gur, Monaster, Grange, Dysert Aonghasa, De Valera Museum & Cottage) and nature viewing opportunities on the rivers and Liskennett Forest.</p>	<p>Development Requirements</p> <ul style="list-style-type: none"> Discussions with LCCC engineering & planning departments, with reference to cycle safety issues; traffic calming Safety measures & signage at N20 crossings; consider traffic calming and cycle lanes where possible Bike stands/lock-ups at key points along routes Directional signage from Croom and Bruree Hubs Promotion on www.limerick.ie/discover/ / www.visitballyhoura.com <p>Synergies</p> <ul style="list-style-type: none"> Link Croom/ Bruree to Lough Gur, Grange, Dysert Aonghasa Interlinkage with Kilmallock cycle Trails (South) Promotion of excellent Town Parks network in mid-Limerick Potential for SME development - bike hire; coffee docks; B&Bs <p>Strategic Fit</p> <ul style="list-style-type: none"> Sustainable transport options along clearly marked trails for visitors to Lough Gur, Grange, Bruree, Dysert Aonghasa <p>Costs: directional signage €20,000; emplacement of bike racks by LCCC at key locations €5,000.</p>
C2.2	Maigue Clonshire Camoge Granagh	Croom	<p><i>Circuit 2 (24.5km / 49km)*</i> Depart Croom Town Park westwards to Dysert Aonghasa in the headwaters of the Clonshire (+3km) and onwards to Dunamann Organic Farm (+1km). Onwards to Liskennett Forest (+6.5km) and walk to hilltop for stunning views of the Maigue Valley. Return along Granagh stream to Maigue, crossing at Banoge, to Monaster and back to Croom (+14km)</p> <p><i>*with options for shorter routes within suggested circuit</i></p>		 <p><i>The Morningstar at Athlaccra Bridge</i></p>

Maigue Rivers Trust
MAIGUE RIVERS, EAST LIMERICK

Proposed Cycle Trail 2 (Mid)

----- Proposed Cycle Routes

1. Ordnance Survey Ireland License no. CVAL50167032
2. Base Mapping: OS 1:50,000 Sheets 85, 72
© Ordnance Survey Ireland/Government of Ireland

Scale: as shown Date: June 2021

3.5 Proposals for Boating Development

The Maigue Rivers are currently used only to a limited extent for boating and kayaking recreation. The catchment has restricted access for boating all along its length, due to both natural and cultural constraints.

3.5.1 Boating Constraints

Natural constraints include the fact that the Maigue is tidal from the Shannon Estuary to just above Adare town. This requires expert knowledge of running and flowing tides, current flows and related safety issues, as well as understanding of the depositional mudbanks within the river channel. This lower section of the river is a designated SAC as part of the entire Lower Shannon Natura designation, which prohibits certain types of developments. Biosecurity is a major risk and is discussed further in Section 3.5.3 below).

A further natural constraint to boating is the generally shallow nature of the river above Adare, particularly during the summer season when rainfall is low and vegetation is at full peak. This means that the river is not navigable above Bruree on the Maigue; above Athlacca on the Morningstar; or above Grey Bridge on the Camoge. Additionally, there are 13-14 weirs along the system and if the river levels are too low, it is necessary to disembark to cross the weirs.

Cultural constraints include lack of access to private lands for launching of boats, as well as very weak infrastructure for parking and riverine access at the many bridges along the rivers. There is a dearth of quays, pontoons or safe landing places all along the length of the rivers outside of private facilities.

However, despite these constraints, there is significant potential to create a number of boating amenities while using the rivers' town parks network as launching zones.

3.5.2 Boating Opportunities

In the Maigue and Shannon Estuaries, a long tradition of licensed salmon fishing, using traditional wooden boats known as ***gandelows***, survived until 2016, when the salmon licences were finally rescinded for stock conservation purposes. This boating / fishing tradition passed down through families and a local group based in Newtown is aiming to retain the heritage and skills involved in both boat building and fishing. A monument, the Salmon Haggard, was commissioned by the community to celebrate the salmon fishing heritage in Newtown. There is also an opportunity to record the memories of the salmon fishermen and the communities who relied on them. While memories are still active, there is potential **to record a short film** about the families, estuarine knowledge of tides, shoals, mudbanks and navigation, as well as the inherited knowledge of salmon fishing, boats, materials, techniques and, of course, stories and lore (see Section 3.8 / Action O4 below).



Traditional Shannon Gandelow

The small Newtown **rowing club** trains young people in **gandelow boat-building** and navigation techniques, a project that requires enhanced amenities at Ferrybridge to provide safe access and egress by constructing a floating pontoon to deal with tides, and/or restoration of the old Turf Quay, with related parking/WC and changing facilities. A small **festival of rowing** is held annually to celebrate the gandelow tradition at Ferrybridge.

In Adare, a project has been proposed locally to restore the **old Turf Quay** on the Maigue near the railway crossing. There is scope to develop a floating pontoon at the Quay allowing boating downstream and kayaking/canoeing upstream of Adare. This would require consideration of tidal ranges, access and egress points, as well as training of skippers on specific navigational issues for the tidal stretches of the river. Similarly, there is potential to restore the **old Turf Quay at Ferrybridge**, subject to landowner consultation and permissions, environmental consents and approvals as this is an SAC, and safety considerations of tidal conditions.

There is a dearth of on-water activities along the Maigue waters. There is potential to develop **activity zones** and **small vessel trails for kayaking/ paddle boarding/ canoeing** etc, subject to considerations of seasonal variations of water depths, access points and safe access/egress. If the Turf Quays above were redeveloped, they could also serve as the terminus for the proposed **Maigue Kayak Trail 4** to Adare (see Section 3.5.5 below).

3.5.3 Biosecurity & Invasive Species control

The risk posed to waterways by invasive species is highly significant. It is recognised that recreational water users have the potential to be a vector for the spread of invasive species. It is estimated internationally that 7% of invasive species across Europe were introduced by leisure activities (hiking, anglers, boating, SCUBA diving and rowing).

IFI and Canoeing Ireland are actively collaborating to reduce the recreational spread of invasive species by producing guidelines in 2014 for the disinfection of paddle sport (kayaking, canoeing, paddle boarding etc) equipment¹⁷; the provision of wash down facilities at major events; and workshops on raising awareness of invasive species.

For all boat users, biosecurity awareness is critical and signage across the Maigue catchment reminds boat users to observe the necessary cleansing protocols (*check, clean, dry*) to prevent further spread of invasive species.





Biosecurity is a key issue for all users of the Maigue Rivers system to prevent spread of invasive species

3.5.4 Proposals for Boating Infrastructure



The following section proposes a number of options for enhancement of the boating infrastructure in **blue**.




¹⁷ <https://www.fisheriesireland.ie/documents/invasive-species-1/438-invasive-species-disinfection-guidelines-for-paddle-sports.html>

PROPOSALS FOR BOATING INFRASTRUCTURE

No.	River	Access	PROPOSAL	Development Issues	Photographs/ Maps
B1	Maigue	Ferrybridge	<p>Floating Pontoon for Maigue Rowing Club on west bank at De Bucket – on the lower tidal reaches of the Maigue</p> <p>Significant tidal mud deposits all along the banks of the river, provide challenge for safe access/ landing on Maigue.</p> <p>Maigue Estuary is located in the Lower Shannon Special Area of Conservation (SAC) and any proposed development requires advance notification to the NPWS as a 'Notifiable Action'.</p>	<p>Maigue Rowing Club (MRC) are attempting to retain the traditional gandelows (rowing boats) of the Lower Maigue; through rowing and traditional boat building classes, but need Improved access.</p> <p>MRC have limited access at De Bucket at Ferrybridge using 'cut-outs' (with fixed poles) to tether the boats, whence they access the river at flowing tide. This necessitates embarking/ disembarking along tidal mudbanks. The construction of a floating pontoon would resolve safety issues as well as providing safe landing for other craft coming from Adare upstream.</p> <p>The owners of the pub De Bucket are supportive of the floating pontoon as it encourages outdoor recreation/ dining at the premises.</p> <p>Development Requirements</p> <ul style="list-style-type: none"> • Discussions with LCCC planning department • Discussions with NPWS re. SAC notifiable • Engineering assessment of river safety issues • LCCC traffic calming measures at Ferry Bridge • Feasibility Study to include engineering, planning, environmental issues, costings <p>Synergies</p> <ul style="list-style-type: none"> • Link to pontoon proposals in Adare Turf Quay • Potential restoration of Ferrybridge Turf Quay (see below) <p>Strategic Fit</p> <ul style="list-style-type: none"> • Located on Shannon Estuary Way <p>Costs: Feasibility Study €7,500 to determine costs. Est. €75-100,000 construction, EIA costs</p>	 <p><i>Gandelow cut-outs, to tether boats, on the bank at De Bucket</i></p>  <p><i>Gandelow moored on mudbanks along the River Maigue</i></p>

B2	Maigue	Ferrybridge	<p>Restoration of Turf Quay on east bank of Maigue at Ferrybridge</p> <p>The old Ferrybridge turf quay sits on private land on the east bank of the Maigue, downstream of the bridge – but is no longer accessible by road due to access issues from the bridge to the Quay.</p> <p>It would provide an excellent alternative for safe landing for craft entering the Maigue from the Shannon Estuary, or for craft coming downstream from Adare.</p> <p>Development Requirements</p> <ul style="list-style-type: none"> • Discussions with LCCC planning department • Discussions with NPWS re. SAC notifiable • Structural engineering assessment • Feasibility Study to include engineering, planning, environmental issues, costings <p>Synergies:</p> <ul style="list-style-type: none"> • Link to pontoon proposals for Adare Turf Quay <p>Strategic Fit</p> <ul style="list-style-type: none"> • Located on Shannon Estuary Way <p>Costs: Feasibility Study €10k & €50-75,000 construction & EIA costs</p>	 <p>Detail of Old Turf Quay, just downstream on east bank of Maigue at Ferrybridge Old Turf Quay is derelict and unused, on private lands</p> <p>Costs: Feasibility Study €7,500 & €50-75,000 construction & EIA costs</p>
----	--------	-------------	--	--

B3	Mague	Adare	<p>Restoration of Turf Quay on west bank of Mague at Adare, just downstream of railway bridge.</p>  <p><i>Original limestone bollard at Adare Turf Quay, May 2021</i></p>	<p>The old Turf Quay underlies a small LCCC carpark, on the west bank of the Mague just downstream of the railway bridge in Adare. Three bollards remain, and at low tide the remains of the old quay wall can be seen on the river side.</p> <p>Formal ownership requires to be established. However, the original stonework of the Quay is covered by a modern carpark (managed by LCCC)</p> <p><i>Note the Mague is tidal upstream to Castleroberts, with up to 3m difference in low-to-high tides.</i></p> <p><i>Due to designation of the tidal reaches of the River Mague as an SAC, any development to restore the Turf Quay would require a 'Notifiable Action' to NPWS, as well as negotiation with LCCC and Inland Fisheries Ireland (IFI).</i></p> <p>Development Requirements</p> <ul style="list-style-type: none"> • Restoration of wall of Quay • Emplace new floating pontoon extending from the old Quay • Discussions with LCCC & IFI re. planning requirements • Discussions with NPWS re. SAC notifiable • Feasibility Study to include engineering/ stability, planning, environmental issues & costings 	 <p><i>Adare Turf Quay wall looking upstream to railway bridge, May 2021 – observe the overgrown zone on the river side of the Quay</i></p> <p>Synergies</p> <ul style="list-style-type: none"> • Link to pontoon proposals for Ferrybridge and • Potential restoration of Ferrybridge Turf Quay • Provide safe landing for craft voyaging upstream along Mague from Shannon Estuary • Safe launch & landing for kayaks / canoes paddling downstream from Bruere/ Croom on proposed Kayak Trails <p>Strategic Fit</p> <ul style="list-style-type: none"> • Complements other proposals herein <p>Costs</p> <ul style="list-style-type: none"> • Feasibility Study €10,000 • Determine construction & EIA costs (est.€50,000 +)
----	-------	-------	---	---	---

B4	Maigue	Adare	<p>Development of Floating Pontoon at Adare Turf Quay</p>	<p>Modular floating pontoons could provide flexible and safe landing solutions for both Adare and Ferrybridge, along the tidal reaches of the Maigue.</p> <p>Costs</p> <ul style="list-style-type: none"> • Feasibility Study €7,500 • Determine construction & EIA costs (est.€50,000 - 100,000+) 	 <p>Adare Turf Quay looking downstream at high tide, May 2021 <i>Photo: Kevin Cribben</i></p>  
----	--------	-------	--	---	---

3.5.5 Kayaking/ Small Vessel Trail Opportunities

Water Trails provide a unique way to engage with the natural and cultural heritage of Rivers. The maintenance of water quality is vital and any development proposal should consider measures to avoid adverse impact on the receiving environment through proactive planning from the outset.

These initial steps are recommended by Sport Ireland to guide project planning, design and mitigation:

- Ensure local ecological and heritage expertise is included within the Project Development Group –
- Undertake an appraisal of ‘constraints’ by a reputable ecologist to ensure the project is in an informed position
- Engage in pre-planning consultation with the local authority
- Consult relevant actions and recommendations for the River Basin Management Plan for Ireland 2018 – 2021
- Engage with Local Authority Water and Communities Office (Republic of Ireland)

It will be necessary to undertake extensive consultations prior to any development action:

Biosecurity / Invasive Alien Species The quality of the local water environment and the need to protect it is paramount. At an early stage trail developers should consult with River Basin Management Plans and engage with their local LAWPRO Water and Communities Office – Community Water Officers <http://watersandcommunities.ie/community-water-officers>.

Inland Fisheries Ireland (www.fisheriesireland.ie): Where any trail development works are proposed alongside, or close to a river or watercourse, consultation should take place with IFI. A new slipway or canoe step at a watercourse should also be discussed with IFI, who can advise on precautions to be taken to prevent any discharges of silt or soil. IFI has developed a Guidance Document to the IFI Environmental Assessment Process describing the process and procedures in place to facilitate development and conservation works within Ireland’s inland and coastal waters. <https://www.fisheriesireland.ie/NSAD/environmental-assessment-process.html>

Planning Permission Early consultations should be held with LCCC officers re. any planning intentions. Planning permissions are typically required for car parks or services toilet/shower block. However, slipways, canoe steps and quays may also require planning permission.

A water based trail does not necessarily have to be a ‘Blueway’ but can be a stand-alone trail. However, it should conform to the safety and environmental requirements as outlined above.

In the longer term, the Maigne Rivers Trust could aim to develop a full Blueway, with all the related promotional and experiential offerings. In particular, if the walking and cycling trails proposed in this report are implemented, there may then be scope to develop a Blueway.

A **Blueway** is defined as: ‘a network of approved and branded multi-activity recreational trails and sites, based on and closely linked with the water, together with providers facilitating access to activities and experiences.’ It provides a network of recreational trails or sites, concentrated within a reasonable travel time within one area / destination. It should offer a series of accredited and branded trails, on and alongside water. Central to the concept is the availability of a water trail or site (hence the term ‘Blueway’). Land based trails (i.e. walking and cycling) with strong connectivity to water must complement the water trails (see map of designated Blueways on the inland waterways - right).



Blueway development could be considered in the longer term for the Mague Rivers, as the other amenities develop and based on Sport Ireland guidance as set out in the *Blueway Development & Management Guide* (2020¹⁸).

For a **Blueway Trail**, each component trail should offer an attractive proposition in its own right¹⁹. A **Blueway Site** typically relates to a service point e.g. landing point or harbour from which a range of activity trails can radiate. The extent of each trail must be defined e.g. a kayak trail must be defined by mapping and information. Blueways will typically include a combination of trails suited to 'dabbler' type activities (i.e. not requiring advanced training):

- ✓ Paddling Trails
- ✓ Canoeing / Kayaking
- ✓ Stand-up Paddle boarding
- ✓ Snorkelling Trails
- ✓ Walking Trails /Cycling Trails – off road / segregated trails

Sport Ireland has defined a clear procedure for development, guidance, partnership and accreditation for any water-based trails, where safety is the paramount consideration, with technical design, consideration of environmental impacts (including bio-security and potential for introduction of invasive species); sustainability in terms of management, maintenance and marketing; and learning from experience in all aspects of its management (Figure 13 below).



Figure 13 Key considerations for design of Water-based Trails (from Sport Ireland)

Activity providers should be accredited by the National Governing body, Canoeing Ireland (www.canoe.ie), to ensure that highest safety and technical / experience standards are adhered to at all times.

¹⁸ <https://www.sportireland.ie/sites/default/files/media/document/2020-08/blueway-development-and-management-guide-full-report.pdf>

¹⁹ e.g. the 'Lough Derg Blueway' is comprised of several component Blueway trails e.g. 'Portumna Forest Walking Trails' and 'Mountshannon to Holy Island Paddling Trail.. <https://www.bluewaysireland.org/destinations/lough-derg>

3.5.6 Activity Zone in Croom on the Mague



An **Activity Zone at Croom Town Park** could act as a hub for kayaking, paddleboarding and bike hire, to provide a proactive recreation hub to encourage people to try out water sports and accessible activities on and beside the Mague.

The concept of all-year-round swimming is highly popular among adults nationwide. Emplacement of a **seasonal Summer Lido** could be explored, to provide a safe swimming area that is easily accessible within the Activity Zone.

This would require the establishment of a bathing water testing point with regular monitoring of water quality by Limerick City & County Council to meet the EU Bathing Water Standards.

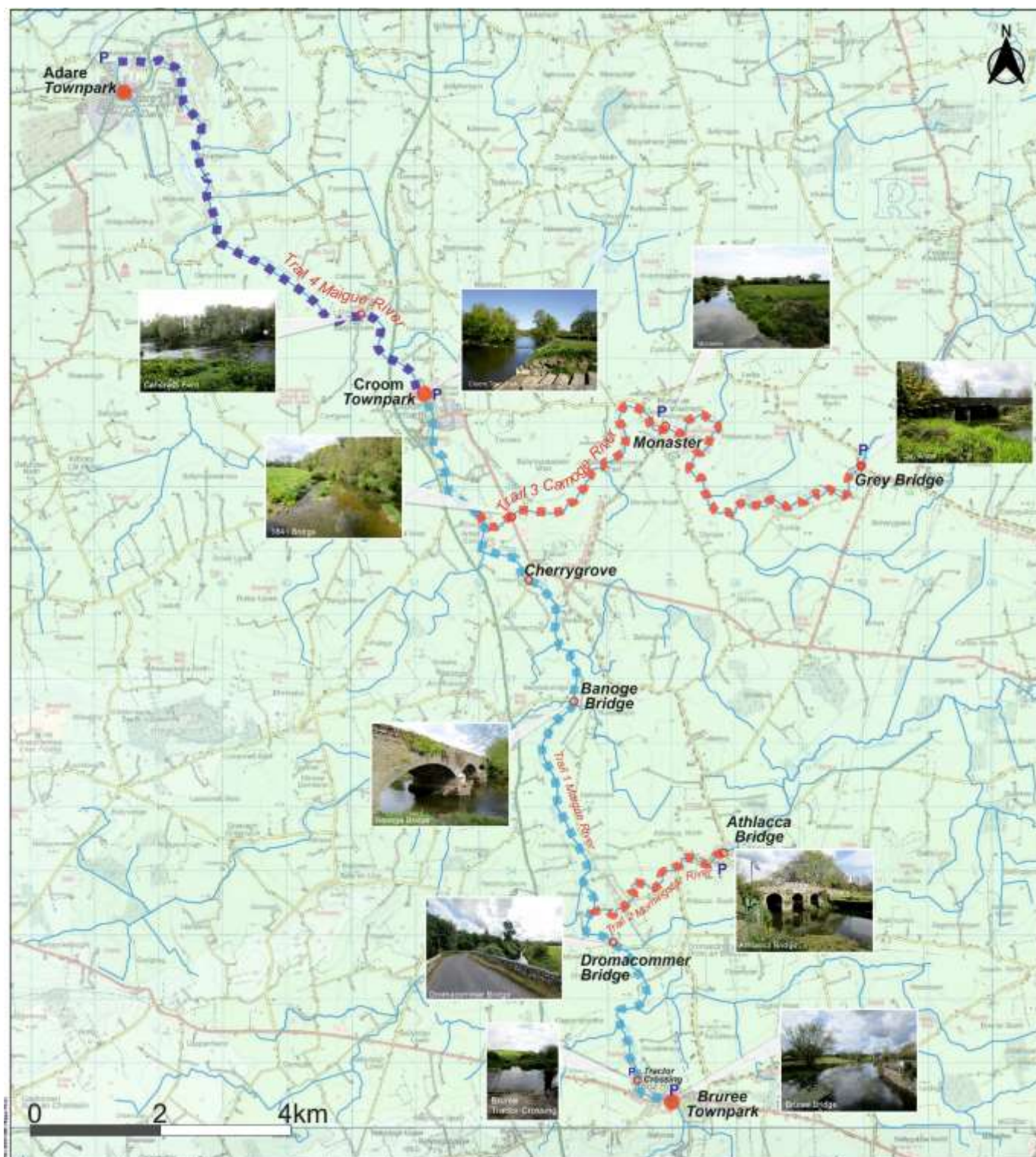
3.5.7 Proposals for On-Water Activities

The following section presents a series of water-based recreational opportunities for development, colour coded in **blue**.



PROPOSALS FOR ON-WATER ACTIVITIES					
No	River	Access Point	Potential Opportunity	Issues/ Comment	Development Considerations
B5	Mague	Croom	Create an Activity Zone at Croom Town Park to provide a hub for water-based recreational activity for the Mague Rivers.	<p>An Activity Zone at Croom Town Park could act as defined hub (and future <i>Blueway Site</i>) with paddleboard, kayak and bike hire, to provide a proactive recreation zone to encourage people to try out water sports, swimming etc, safely.</p>  <p>The Activity Zone could also provide junior angling training (see A5 below) and opportunities for nature viewing at key points down- and upstream.</p>	<p>This would require:</p> <ul style="list-style-type: none"> Establish a bathing water testing point & regular monitoring of water quality by LCCC to meet EU Bathing Water Standards. Safe, permissive access and egress points Signage, water safety, guidance boards Proactive engagement with schools and youth clubs to get young people on the water, providing free kit via e.g. festivals, sports days or summer camps. Water Safety Ireland offers training / coaching and advice through national summer camps. <p>Costs</p> <ul style="list-style-type: none"> LCCC & IFI authorisations Health & Safety risk assessment Equipment €20,000
B6	Mague	Croom Town Park	Emplace a seasonal 'Lido' amenity at Croom Town park	<p>Establish a Lido amenity to provide a family friendly safe paddling/swim/splash zone on the Mague river.</p> <p><i>Outdoor Lido on Shannon at Banagher, Co Offaly</i></p> 	<ul style="list-style-type: none"> Initial testing to see if Mague waters meet EU Bathing Water Standards, If suitable, regular testing and monitoring by LCCC Ecological impact assessment Planning & engineering advice to secure suitable site for Lido structure Emplacement of Lido <p>Costs</p> <ul style="list-style-type: none"> LCCC & IFI authorisations Health & Safety risk assessment €15,000 estimate





B7	Mague Morningstar Camoge	Bruree Athlacca Grey Bridge Croom Adare	<p>Create a series of short inter-linked kayak/ small vessel trails along the Mague Rivers (see Figure 14)</p> <p>Trails must be based on the national guidance by Waterways Ireland:</p> <p><i>Guide to Planning & Developing of Small Vessel Water Trails in Ireland (2013)</i> for planning & development of water trails.</p>	<p>Four potential trails are proposed:</p> <ul style="list-style-type: none"> Trail 1 starting at Bruree/ Tractor crossing on the Mague Trail 2 start from the Athlacca Bridge on the Morningstar to re-join Trail 1 on Mague at Cooleen Trail 3 start from the Grey Bridge above Monaster on the Camoge to the 1841 bridge re-joining Trail 1 on Mague at Anhid East Trail 4 start at Croom Town Park downstream to Castleroberts and onwards to Adare Turf Quay (to be restored)*. <p><i>*No 4 is dependent on development of landing zones at floating pontoons at Turf Quay in Adare - see Proposals B3 / B4 above.</i></p>	<p>For all trails: advance considerations include</p> <ul style="list-style-type: none"> Safety, strategic planning & partnership, development costs; responsibilities for long term management & maintenance. Landowner consultation and agreement to gain permissive access, and other permissions that may be required. Key issues are ownership rights in relation to the navigation as well as fishing rights Potential environmental considerations in relation to impact on natural heritage, archaeological sites and Potential for introduction of invasive species into spawning streams/ lakes are presented. <p>Implementation considerations include</p> <ul style="list-style-type: none"> Practical trail planning and design based on national trail classification and grading systems, including water & wind; trail length; and access and egress. Planning of kayak/canoe trails must consider trail head, signage, travel distances, route options, technical standards and supporting services such as accommodation. Practical planning and advice on funding, Management and maintenance
----	--------------------------	---	---	---	---

Figure 14 Map showing proposed Maigue Rivers Kayak Trails





PROPOSALS FOR KAYAK/ SMALL VESSELS TRAILS

River	Access Point	Potential Opportunity	Issues/ Comment	Development Considerations
B7.1 Maigue	Banoge Bridge	Kayak Trail 1 (12km) Bruree to Croom Town Park (along Maigue artery) (see Figure 14)	<p>Kayak Trail 1: launch at (i) Bruree Town Park below the weir or (ii) at Bruree Tractor Crossing 200m downstream (see below)</p>  <p>Bruree Town Park (above); Tractor Crossing (below)</p> 	<p>For all Kayak Trails (see Blueway Guidance 2020)</p> <p>Development Requirements</p> <ul style="list-style-type: none"> • Identification of safety & biosecurity measures • Discussions with LCCC with reference to engineering design & planning; Landing heights should be min. 300mm; max. 700mm above water level; staging points; trail specifications • Discussion re. Trailhead design at e.g. Bruree, Croom, Adare to accommodate parking, launch zones, WC • Discussions with LAWPRO re water quality, biosecurity • Discussions with IFI re. water access, riparian environment, biosecurity • negotiations with landowners re. access at bridges • Aim for highest standards from the outset to secure accreditation by Canoeing Ireland. <p>Synergies</p> <ul style="list-style-type: none"> • Link Bruree to Croom, Adare by water • Interlinkage with proposed Cycle Trails (Mid and North) • Strengthened role for Town Parks network as activity hubs in mid-Limerick • Potential for SME development - kayak/ bike hire; water kit, refreshments <p>Strategic Fit</p> <ul style="list-style-type: none"> • Sustainable activity options along clearly marked water trails for citizens and visitors <p>OMC Costs: planning/ environmental costs; emplacement of access / egress points along the rivers via steps/ launch pads at key points €50-100,000; Locational & safety signage €25,000</p>

			<p>Pass downstream to Dromacummer Bridge, below which enters the Morningstar; continue northwards to Banoge Bridge and onwards to Croom</p>  <p><i>3-arch Banoge Bridge over Mague, with potential for safe landing point (right) on western upstream bank</i></p>	 <p>There is poor access to the river at all bridges, with scant space for parking. There may be scope for negotiation at Cherrygrove Bridge with landowner, LCCC and IFI re use of access points</p>
B7.2 Morningstar	Athlacca Bridge	<p>Kayak Trail 2 (2.5km) - launch at Athlacca, passing downstream to rejoin the Mague River at Cooleen/Howardstown.</p> <p>(see Figure 14)</p>	<p>The Morningstar may be too shallow for kayaking for most of the year, particularly during periods of low rainfall and/or heavy summer vegetational growth. Generally in summer, water levels are low, and Trail 2 would only be navigable by an experienced kayaker.</p> 	 <p>Trail 2 Launch Point: Athlacca Bridge (left), with access just 5m upstream (see right) of bridge at small park area, with roadside parking.</p>

River	Access Point	Potential Opportunity	Issues/ Comment	Development Considerations
B7.3 Camoge	Grey Bridge Creamery	<p>Kayak Trail 3 (7.5km)</p> <p>Launch at Grey Bridge, just 1km downstream of Meanus.</p> <p>Rejoin Mague at Anhid East</p> <p>(see Figure 14)</p>	<p>Launch at Grey Bridge Creamery just above bridge</p> <p>Follow the Camoge to the old 1841 Lyons bridge just south of Croom, re-joining the Mague at Anhid East. The Camoge River may be too shallow for kayaking for periods of low rainfall.</p> <p><i>The '1841' bridge at Anhid (above); and looking downstream on River Camoge (below)</i></p>	<p><i>Camoge River just downstream of Grey Bridge</i></p> <p><i>Grey Bridge – 4 arch span over Camoge River</i></p>

B7.4 Maigue	Croom - Adare	<p>Kayak Trail 4 (7km) Start at Croom to finish at Adare Turf Quay</p> <p>(see Figure 14)</p>	<p>Launch at Croom Town Park and continue north to Caherass Ford and weir; paddle onwards to Castleroberts and downstream to Adare.</p> <p>Pass the riverine heritage of Adare, Friary, Castle, Abbey and Adare Manor – pass under Adare Bridge, paddle along river walk and under Railway bridge to old Turf Quay*</p> <p><i>*requires safe access/egress point to be emplaced</i></p> <p>Depending on tides, experienced paddlers may be able to paddle northwards to the Maigue Estuary at Ferrybridge</p>		<p><i>Launching point from Croom Town Park could be expanded to accommodate kayak access/ egress (above)</i></p>		<p><i>Adare Turf Quay at low tide– requires safe access/ egress (above)</i></p>
----------------	------------------	---	---	---	--	--	---

3.6 Proposals for Angling Development

The River Maigue and its tributaries were once renowned for its salmon and wild brown trout fishery. Today, despite many challenges, they support a wide variety of fish, with seventeen species recorded across the catchment²⁰, albeit in diminished numbers. Development of angling opportunities is a challenging proposition as key conservation and restoration measures must inform any proposals for angling as a recreational activity.

3.6.1 Current Status of Angling

Both **salmon** and **brown trout** require very good water quality to flourish.

Trout are present in the main Maigue channel, but are absent or scarce in other tributaries, due to poor water quality. However, trout grow well in most of the catchment and healthy brown trout populations are reported in the Maigue, Camoge and Loobagh rivers. The Morningstar Angling Association maintains a 'catch-and-release' trout policy.

Unfortunately, the numbers of returning salmon to the Maigue have declined drastically in recent decades. In 2020, 1800 salmon returned to spawn in the catchment, an increase of +25% since 2012, the prior reporting year. Although an improvement, this is insufficient to produce a healthy salmon population, and consequently, the Maigue is closed to salmon fishing. Given the size of the catchment, it is estimated that in excess of 4,600 salmon (the conservation limit) would need to return annually to produce a surplus of fish (for angling or harvesting). The **eel** population has also declined catastrophically, from a time when there were 8 eel weirs on the Camoge²¹. As a further indicator of declining health of the rivers, the much heralded (among anglers) **mayfly** hatch is now patchy and irregular.



Anglers along the Maigue downstream of Adare Bridge, April 2021

The reasons for the salmon fishery collapse are many and is reflected across Ireland. Marine survival rates are low and intensification of population and agriculture led to declines in water quality due to eutrophication (see

²⁰ <https://maigueriverstrust.ie/wp-content/uploads/2017/05/Fish-stocks-in-the-Maigue-full-report.pdf> (Harrington, 2017)

²¹ The 17th century Civil Survey mentions up to 8 eel weirs on R. Camoge between R. Maigue confluence and Dunkip (Went, 1960)

Section 2.1 above). Decades of arterial drainage led to disruption of spawning beds as well as the ‘canalisation’ of stretches of the tributaries, although much of the catchment retains its natural character.

One of the aims of the **Maigue Rivers Trust** is to work, in cooperation with Inland Fisheries Ireland (IFI) and other bodies, towards the restoration of a sustainable recreational salmon fishery in the Maigue catchment.

“Whether the restoration of the salmon fishery is achievable or not depends on understanding and counteracting the factors that have caused the salmon decline. Foremost of these are: how well the salmon are surviving at sea; water quality in their spawning rivers, barriers to migration such as weirs and dams; overexploitation and illegal fishing. Currently, the survival of salmon at sea is very poor...declining from 15% in 1996 to c. 5% now. The reasons are not clear but may be related to changes in the salmon’s feeding patterns at sea caused by climate change. Against this background, it is essential to maximize the number of young salmon smolts returning to sea. Removal of migration barriers and prevention of illegal fishing are important, but in the Maigue catchment water quality is more critical. Salmon need very good water quality for spawning and for growth and survival of when young.

Juvenile salmon are scarce or absent from the upper part of the Maigue, the upper Camoge tributaries and Glosha and Barnakyle rivers, where poor water quality makes the water body unfavourable for salmon survival. Restoration of spawning habitats and good water quality is essential for the future of salmon in the Maigue catchment.”

<https://maigueriverstrust.ie/fish-in-the-river-maigue-catchment/>

Despite these challenges, there are three active angling clubs on the Maigue mainly fishing for brown trout, and each controls different stretches of the rivers. It was noted by respondents that angling membership is aging and clubs are actively trying to recruit younger members. In order to fish the Maigue, one must become a member of a club and it is not easy to acquire a visitor day ticket.



Lake angling is popular in the catchment on Bleach Lough and Dromore Lough²². Each provides reliable access, with varied options for coarse and/or game angling. Bleach Lough is managed by a club, with excellent facilities including piers, boats, wheelchair accessible boats, club house and related amenities.

²² <https://www.limerick.ie/discover/eat-see-do/sports-recreation/activities/fishing-angling/dromore-lough-coarse-angling>

Access to the Maigue Rivers for angling relies on the goodwill of the landowners. Open permissive pathways for angling along the riverbanks do not exist.

3.6.2 Habitat Restoration & Conservation

The restoration of the salmon fishery is a priority for MRT and requires a medium to longer term approach, working with Inland Fisheries of Ireland (IFI), researchers and local angling clubs to restore key riverine habitats.

In 2008, the *Environmental River Enhancement Programme* (EREP) was initiated by the OPW and co-ordinated and managed by IFI. The Maigue catchment was included in the 5-year programme focused on the enhancement of drained salmonid rivers / catchments. The EREP adopted two approaches to enhancement, namely capital enhancement works and enhanced maintenance works. Capital works ameliorate the negative effects of drainage on a river channel and its biology, involving importation of e.g. gravel (for spawning beds), boulders, construction of deflectors; vortex and other types of weirs, excavating pools, riffles and thalwegs, stabilisation of banks, fencing and restoration of riparian vegetation. These measures provide improved conditions for salmonid spawning and habitat for larger trout. Enhanced maintenance works are smaller-scale works that use on-site materials and require less investment (EREP, IFI Report for 2014).

Capital enhancement works were carried out extensively on the Camoge, Morningstar and Loobagh, the latter following a serious pollution incident in 2014 (Catchments 2016²³). Enhanced maintenance works were carried out on the Clonshire, Mahore and the Ballynamona Rivers. Capital works were accompanied with stocking of salmon fry in the tributaries and main channel in an effort to stabilize salmon returns in the catchment and to start the process of rebuilding salmon stocks.

Abridged slightly from: <https://maigueriverstrust.ie/fish-in-the-river-maigue-catchment/>

There are positive physical models that could build on these EREP restorative measures, that could be adopted locally as citizen science recreation measures for the Maigue, to promote healthy salmon and trout fisheries.

3.6.3 Angling Rehabilitation

A restored and well managed trout fishery is required to generate significant angling activity among citizens and tourists. A catchment-wide trout population survey would be useful to identify areas of high and low productivity and to identify priority measures to improve the overall trout fishery.

Salmon stocks in the Maigue catchment are currently below 30% their conservation limit. While marine environments are key for stock recovery, acceleration of river enhancement and water quality improvement measures to enhance salmon spawning is urgently required to bring the stock above its conservation limit. There may be potential for MRT, working with IFI and salmon fishery experts, to explore the benefits of a salmon hatchery program on the Maigue to prevent extinction in the coming years.

An excellent model has been developed on the **Lower Shannon** by a voluntary community group, the *Castleconnell Fishery Association (CFA)*, in **Castleconnell**, Co. Limerick. The Shannon also observed catastrophic decline in the salmon population over decades, due to the diversion of waters to the Ardnacrusha Power Station; the erection of weirs and dams; siltation; eutrophication and decline of natural habitats. The CFA applies a holistic approach, focused on practical restorative measures to restore habitat quality for fish, insects and invertebrates. They have also restored salmon spawning beds, by constructing deflectors to create pools and eddies, and physical raking of gravels along the main river channel²⁴. The work is conducted by local environmental and angling activists, with support of LAWPRO, Tidy Towns and schools.

²³ Catchment Case Study: The River Loobagh <https://www.catchments.ie/catchment-case-studyriver-loobagh/>

²⁴ Raking gravels is a labour intensive activity, but is supported by a local Community Employment (CE) scheme.

Similarly, a local community is addressing river habitat restoration on the **Black River at Bridgetown, Co. Clare**. There, environmental issues that had built up over years were identified (siltation, collapse of riverbanks, tunnelling by vegetation, sewage) and solutions activated to address them. These included installation of deflectors; narrowing of channels with rocks; insertion of random boulders; pruning of vegetation; installation of fish hides; and improved construction of fording points along the river. A simple but effective community website was developed to promote the project and engage with local schools and activists successfully. www.blackrivercatchment.info.



This includes useful facts, with *Do's & Don'ts* to enhance the river environment. The project is supported by LAWPRO; the local Tidy Towns committee and Castleconnell Fishery Association. The latter gave voluntary time and training to the Black River on how to deliver the physical measures.

Such **community-based restoration projects** could be emulated on the Maigue River catchment and some proposals are included in the proposals below.

Getting young people involved in river habitat restoration and water quality 'citizen science' initiatives to enhance riverine habitats is critical to the future success of these projects, while also encouraging both local angling and tourism in the catchment.

While physical measures to restore salmon habitats are excellent, improved **water quality** is the key issue for healthy fisheries across the Maigue catchments. Community-led initiatives to reduce diffuse pollution could be coordinated by the MRT, engaging with LCCC, LAWPRO, IFI, OPW, Coillte, NPWS, farmers/ landowners and farming organisations, to address sewage, forestry and agricultural waste management, to ensure nitrate and phosphate loads are reduced urgently.

Inland Fisheries Ireland conducts a significant amount of angling training and engagement with young people, largely through '**Go Fishing**' (with Foróige) and its '**Something Fishy**' www.somethingfishy.ie programme. It would be advantageous for MRT to combine with IFI and local Angling Clubs to engage with schools in the Catchment through this programme.

3.6.4 Proposals for Angling Development

This section presents a series of angling opportunities for development, colour coded in **pale blue**.

Many of these proposals dovetail with the recommendations in the Maigue Rivers Trust fisheries research report of 2017 (Harrington, 2017).

PROPOSALS FOR ANGLING DEVELOPMENT					
No.	River	Access	Potential Opportunity	Issues/ Comment	Development Considerations
A1	All Rivers	Non-specific	Establish Maigue Rivers Angling Forum to include all stakeholders in holistic restoration of habitats and water quality, including IFI & state agencies, angling clubs, farmers and communities.	Establish a Working Group under auspices of the MRT structure to focus specifically on in-river measures to enhance the physical habitats of the river for angling, as well as addressing issues of diffuse water pollution. Work needs to be applied steadily over a medium to longer term, versus a 'stop-start' approach, hence state agencies, LEADER and Community Employment (CE) schemes can provide excellent supports. The Forum could consider potential for establishment of a <i>Salmon Hatchery</i> for the Maigue River catchment, working to highest conservation standards & research.	Each of these proposed measures will require consultation, research and if given the go ahead, an integrated package of measures to improve water quality, physical enhancement of habitats (see below) under the direction of IFI. All measures will require a holistic focus on total aspects of riparian conservation >> ecological appraisal of fish, invertebrates, plants >> physical assessment to identify where the problems lie (what's wrong and where; what can we work on?); where lie issues with water quality; Identify natural & physical solutions >> engage with communities to garner interest, understanding and support >> employ a cohort of skilled crews who can work well and finish projects out to highest standards >> training of new community crews.
A2	Maigue	Trout streams	Trout Population Survey	Conduct a catchment-wide trout population survey to identify areas of high and low productivity, to identify priority measures to improve the overall trout fishery.	Synergies <ul style="list-style-type: none"> Integration of applied research & conservation of fisheries; LAWPRO efforts on water quality; farming and angling interests Community engagement on issues of key interest Strategic Fit <ul style="list-style-type: none"> Informs national strategies on fisheries restoration as well as community activism and angling tourism Physical Requirements: emplacement of in-river physical works (rocks, gravels, riffles) along the rivers at identified locations to enhance spawning beds; bank stability, reduction of siltation. Costs: significant volunteer time; IFI supports for materials
A3	Maigue	Non-specific	Community based habitat restoration programme	Based on Castleconnell/ Black River models, engage local communities / Tidy Towns to become involved in practical restorative measures.	
A4	Maigue Camoge Loobagh	Non-specific	Day-Ticket Scheme for local and visiting anglers	Develop select Maigue Rivers as a trout angling destination, offering a fly-fishing-only, catch-and-release trout fisheries. Consultation would be required with IFI and the Local Clubs about the potential and challenges/risks of offering such a system to bona fide anglers.	
A5	Maigue	Croom Bruree Kilmallock	Establish Angling Training Zones/ River Clubs at Croom Town Park / Bruree Town Park / Kilmallock River Park	To replenish the angling clubs on Maigue Rivers, provide angling training for young people, using the town parks network as easily accessible bases. This could be a fixture on the Summer Camp schedule for the region, or at key periods through the year. Liaise with IFI's ' <i>Something Fishy</i> ' / ' <i>Go Fishing</i> ' programmes, working with Angling Clubs to engage.	

3.7 Proposals for Nature & Wildlife Observation

From its source in montane streams, via the central spine and tributaries to its mature estuarine reaches, the Maigue catchment provides an excellent setting for viewing of a wide range of riverine habitats and species. All such opportunities may be enhanced through public engagement and citizen science programmes, activated by the Maigue Rivers Trust.

The Maigue Rivers catchment is home to a range of settings that are suited to viewing riverine, estuarine, lacustrine and wetland botany, ecology, geology and astronomy, as well as forest and bog habitats.

The Phase 1 report identified existing 'gateway' facilities (Section 3.1 above) that provide significant nature viewing opportunities as well as recreation and environmental education.

There is scope to build on these and to develop a new suite of nature viewing opportunities.

"People are a part of nature, not separate from it, and are related to all other beings in fundamental ways"

3.7.1 Proposals for Nature Viewing

Development of Biodiversity Zones in Town Parks

The development of local **Biodiversity Zones** to promote learning and understanding of riverine ecology and habitats would be accessible and beneficial at local level. The Biodiversity Zones would host outdoor environmental education areas, site-specific storyboards, viewing points and bird hides (see below). The zones could be used by local people to experience bird life, fish, insects, macroinvertebrates and potentially night-viewing of bats and owls.

The small town parks at Bruree (upstream of the bridge) and Bruff (downstream of the bridge) would be ideal for such zones, with zones also at Croom Town Park, linked to the proposal for an Activity Hub there (see Section 3.3.2 above), and Kilmallock River Park. There is potential to enhance the local ecology by planting of riparian zones with native species, control of invasive species and emplacement of observation points to view river life in action. These would form excellent hubs for citizen science observation programmes (see Section 3.7.3 below).

Community Photo Posts / Cameras

Photo posts are used to engage people to observe seasonal changes in habitats, species or landscapes. Across the Maigue Rivers catchment, the Town Parks network could be used to emplace these posts in safe areas, where local schoolchildren and citizens would be encouraged to take a photo, upload it to a nominated cloud-based site, to provide a running record of seasonal variations of the exact same location through time.

There may be scope to link this to revitalisation of the **Maigue Poets** tradition, inviting community poetry submissions with each photo upload.

Live stream camera footage to capture details of the rivers' natural life (e.g. swans nests and hatching of cygnets; bird activity; fish jumping etc) throughout the seasons, could be considered, subject to security issues.

Birdwatching

In the lower tidal reaches of the Maigue and along the Shannon Estuary shoreline, there are excellent opportunities for birdwatching on the shoreline at *Ringmoylan Quay*, Mellon Point to Ferrybridge, and at

Newtown wetlands, which welcome migratory geese, ducks and a range of other wildfowl. Elsewhere along the rivers, kingfishers, herons, dippers, grey wagtails, swallows, swans etc. can be seen in action along the waters.

Emplacement of bird hides at key sites along the Mague Estuary could provide excellent viewing points in key zones, subject to environmental considerations and access permission.

The development of **The Bank Walk proposal** (Section 3.3 above) or **hides at Newton Flats** would enhance access. Birdwatch Ireland could advise in locating these optimally, in consultation with local landowners. Additional benefits include the opportunity to observe the beautiful traditional flowering callows during summer time and related butterflies, insects and wildlife.



Undisturbed flowering callows and orange-tip butterfly along the Mague Estuary at Faha, May 2021

Emplacement of **site-specific Birding information signage** at key sites could be implemented as a 'quick win', with support of LCCC and BWI, at key points along the rivers.

Community Pollinator Planning

The **All-Ireland Pollinator Plan 2021-2025**²⁵, published by the national Biodiversity Data Centre, is a five-year road map that aims to support bees, other pollinating insects and wider biodiversity through enhanced management of our landscapes. The AIPP identified six strategic objectives for focal attention, with multiple actions to be delivered across farms, public and private lands, working with state agencies, local authorities and communities.

Objective 2 'Making Public Lands Pollinator Friendly' actions will focus on bringing more land into friendly status; providing training and technical advice; establishment of **Pollinator Trails** across Ireland; and monitoring of changes. As a partner in delivering the AIPP, the NPWS has agreed to support a **Communities Pollinator Officer**, to provide advice on developing pollinator plans at local level.



²⁵ <https://pollinators.ie/aipp-2021-2025/>

The previous AIPP developed a useful guide for Local Communities to develop their own site-specific pollinator actions, many of which are still valid.

There may also be scope to expand nature watching through habitat creation along the Maigue rivers and flood plains to address climate change, linked to Office of Public Works (OPW) statutory efforts to adopt **nature-based catchment management** to mitigate flooding events. Engagement with communities to develop these solutions is central to the OPW's approach²⁶, creating opportunities for communities to work with the agency to develop local solutions.

The establishment of a **Maigue Rivers Community Pollinator Network** would provide a catchment-wide entity for participating communities and Tidy Towns groups to liaise with OPW and the Communities Pollinator Officer to develop complementary pollinator plans along the rivers. Working together as a network would provide invaluable training, learning and funding opportunities (see Chapter 5.0 below).

Nocturnal Wildlife Walks

Curraghchase Forest Park, in the upper Clonshire catchment, provides a range of nature viewing opportunities. Significantly, Curraghchase House is a designated SAC as an internationally important conservation site for the *Lesser Horseshoe Bat*, as well as providing habitats for other bat species.

Organised bat walks are held by the **Limerick Bat Group**²⁷ and other experts to view the resident Lesser Horseshoe and other species at Curraghchase; there is potential for MRT to collaborate with them to organise bat walks at key points along the Maigue Rivers.



Bats (including pipistrelles, Daubentons, long eared, and other species) can be seen seasonally at dusk at key points along the rivers, particularly close to the medieval stone bridges and older structures. There is scope to develop a regular calendar of expert-led bat-walks through the Maigue Rivers Trust, with its nocturnal appeal for families and nature lovers. These could be facilitated at Adare or Bruree, where bats are frequently to be observed at dusk.

There is also scope to develop nocturnal walks at seasonally suitable viewing / listening times to hear owls and other nocturnal wildlife in action. Working with local landowners to emplace owl nesting boxes in derelict buildings, would increase the chances of observers of seeing/ hearing these beautiful creatures in scheduled evening walks.

3.7.2 Proposals for Outdoor Education

Griston Bog is a beautiful blanket bog located in the head waters of the Morningstar River near Ballylanders. It is leased from the local Gun & Conservation Club by Ballyhoura Heritage & Environment, which offers a series of bog walks and an outdoor classroom experience to explore its niche habitats and species.

Ballyhoura Development already has a Green Cert curriculum for primary school students, which could be expanded for older / second level students.

The **Leaving Cert Physical Geography** course requires a defined field studies component. There is potential to establish an integrated 'Rivers' module suited to student needs, based on field observations, testing and measuring. This could equally apply to the *Leaving Cert Biology* course, where field studies modules focused on River Biodiversity could be developed. Co-development with Kilfinane OETC would be advantageous.

²⁶ OPW presentation at LAWPRO *Reimagining Irish Rivers - Working with Nature* webinar, 22 March 2021

²⁷ <https://www.facebook.com/limerickbatgroup/>

Options to include specific activities for Transition Year students within a 2-hour radius of Ballylanders, to promote appreciation of bog habitats, could also be developed.

In general, wider promotion of Griston Bog and its nature viewing potential would be advantageous.

Lough Gur, renowned as a cultural site, is working to develop an **International Dark Skies Park**. This will provide opportunities for understanding of archaeo-astronomical relationships and alignments of monuments at Lough Gur, Grange Stone Circle and other sites. Management are also working to promote understanding of the *environmental history*, through the palynological (pollen) records in lake sediments that chart climate change since the end of the last Ice Age c. 13,000 years ago. There is also a Birdwatch Ireland *Nature Reserve* in the western end of the lake, where nature viewing is excellent.

There is scope to develop **Forest Therapy** and a Forest School in some of the forests throughout the Maigue catchments. These could include Knockfierna, Liskennett, Curraghchase and woodlands in the Ballyhoura Forest Park.

Forest Therapy is inspired by the Japanese practice of Shinrin-Yoku, which translates to “forest bathing.” Studies have demonstrated a wide array of health benefits, especially in the cardiovascular and immune systems, and for stabilizing and improving mood and cognition.

<https://www.natureandforesttherapy.earth/about/the-practice-of-forest-therapy>

Forest Therapy is a growing movement in Ireland, with designated woodlands at e.g. Glengariff Nature Reserve, where trained guides provide therapeutic walks and Japanese-form of ‘forest bathing’ to enhance wellbeing and reduce stress, with guided walks for individuals or groups - see <https://glengarriffforesttherapy.ie/>



3.7.3 Citizen Science Engagement

Citizen Science may be defined as “the collection and analysis of data relating to the natural world by members of the general public, typically as part of a collaborative project with professional scientists.”

Citizen science harnesses the knowledge and enthusiasm of local communities and enables them to collect data and collaborate in the monitoring and analysis of local environmental features and can help shape solutions to environmental problems at both local and regional levels. Community-based monitoring is where communities self-organize to monitor local environments in an effort to increase or safeguard environmental quality or to encourage accountability of monitoring by official agencies. It involves citizen scientists, who work on a bottom-up basis to inform decisions and policy, from an evidenced-based approach, about environmental issues in their local area²⁸.

²⁸ Hegarty, S., Slaimi, A., O'Connor, N., Regan, F. (2021) Citizen Science and Water Quality Monitoring: Evidence from Dublin and Beyond.

There are various levels of Citizen Science from (i) initial engagement and getting people interested in their local waterbodies, followed by (ii) active engagement in data collection, reporting and (iii) longer term monitoring.

This requires coordination by a project manager, contribution of time and effort; collaboration in larger projects; and with increasing knowledge and experience, co-creation in the design of larger scale projects.

Citizen Science Ireland <http://citizen-science.ie/> is an initiative to harness the knowledge gained by researchers and to involve citizens across a range of scientific disciplines in Ireland. CSI is member of the European Citizens Science Association and the aim is to build collaboration, community and communication about citizen science.

The Phase 1 Baseline study (Annex 1) reviewed a number of Citizen Science projects. Any member of the public may volunteer to collect scientific data to monitor biodiversity, invasive species and water quality. The widespread use of smartphones means that scientific data can now be very easily shared and mapped, resulting in a rapid increase in the number and type of citizen science research projects.

The Maigne Rivers Trust is working with LAWPRO to build a Citizen Science programme with local communities to become involved with the longer term management of their local waterways. Additionally, research is being actively undertaken at the Mary Immaculate College, University of Limerick to work with Limerick communities to develop awareness of citizen science potential and initiatives.

The MRT already coordinates opportunities to become engaged with and to enhance knowledge of the natural history along the rivers. Celebrating high profile international events such as World Earth Day and using creative approaches to arts and science, these initiatives are suited to participants of all ages and abilities.



World Earth Day 2021



Citizen Science Blog –
Why Volunteer to Help
Our Rivers?



Autumn Event Series –
Working with an artist



Discovering and
sharing the heritage of
the Maigne rivers
through photography

<https://maiguerverstrust.ie/2021/04/27/stories-from-the-catchment-knocklong/>

Example: The MRT participated in the international **citizen science Water Blitz** in early May 2021, an initiative undertaken over a single weekend, to encourage citizens to sample the water quality of their local waterways (<https://freshwaterwatch.thewaterhub.org/>). Water samples were collected at selected points along the Maigne rivers using standardised kit. Each sample was measured for levels of phosphates and nitrates using a simple colour coded reference chart. Geolocated results were recorded by smartphone and submitted online to a central spatial database, providing citizen samplers with a glimpse of both Irish and international results, and comparisons with other waterways. This effort can be repeated annually to provide a citizen-based monitoring system, linked to central coordination.

There is an opportunity to engage citizens as **River Guardians** in long term monitoring (similar to the Water Blitz above or national BioBlitz²⁹) to become involved in longer term monitoring of their local streams, using Freshwater Watch kits and the Citizen Science Stream Index (CSSI - traffic light system) for invertebrate

²⁹ <https://biodiversityweek.ie/backyard-bioblitz-2021/>

monitoring. These foundational schemes could form a foundation to subsequently move to the more advanced macroinvertebrate sampling Small Stream Impact Score (SSIS) system.

Potential initiatives include a **Citizen Science Phenology³⁰ Programme for the Maigue Rivers**, to make and record local seasonal observations of nature. These could include records of first arrivals of spring buds, birds, fish etc; dawn chorus walks or species counts, in association with research institutes. Observations by anglers of the first arrival of a spring salmon or grilse, or the annual hatch of Mayfly, could also inform the observational record.

Citizen Science projects could be linked to a **Calendar of Events for the Maigue Rivers Catchment** (see Section 3.8.1 below on Festivals & Events). Projects will require additional supports and funding for sustained efforts, and to develop a programme of annual activities.

3.7.4 Other Nature-based Activities

Community Gardens

The most recent Draft Limerick County Development Plan 2022-2028, as part of sound planning and flood alleviation, aspires to utilise riverine open spaces for non-residential developments, particularly along flood prone plains. This poses great scope to use these open spaces for development of community allotments and gardens, which have been implemented by many local authorities.



Dublin City Council: Community Allotments on 'open space' flood plain of the River Liffey, March 2021

LCCC has committed to providing spaces for community allotments and gardens in open spaces within the smaller towns and villages within the Maigue Catchment. This could be a very positive means of engaging active citizens to work with nature in growing vegetables and flowers. Experience elsewhere suggests enormous interest in community gardening (and even more so since the covid-19 pandemic restrictions).

Working with the considerable Tidy Towns network in the Maigue catchment, community allotments and gardens could be used to provide training on e.g. gardening without pesticides; how to develop a local Pollinator Plan and gardening for biodiversity. Such initiatives would complement national and local biodiversity targets.

³⁰ **Phenology:** the study of cyclic and seasonal natural phenomena, especially in relation to climate, plant and animal life. (Oxford English Dictionary).

Farming and Wildlife

Increasingly the farming and food production community is open to welcoming visitors to experience the wildlife to be seen on active farms and demonstrate small scale rewilding measures.

There is an emerging opportunity to view wildlife, growing of organic flowers and restoration of biodiversity at **Dunnaman Organic Farm** just west of Croom, as well as nature viewing at **Stonehall**. The increasing move to agri-environmental measures is positive for the environment, but it is critical that food consumers understand how this is happening and the positive impacts it induces for water quality. The MRT could support farmers in promoting such initiatives through partnership-based submissions for funding supports for farm-based educational visits.


There is a vibrant market collective offering locally grown foods at *Urban Food Co-Op* (Ballysimon Road, Limerick City) and *Farmers' Markets* from Charleville to Patrickswell, as well as *Neighbourfood* initiatives across the catchment. All such initiatives reach the public and incur a more sustainable way of living and thinking among the wider population.


3.7.5 Proposals for Nature Viewing & Observation

The following presents a series of nature viewing proposals for development, colour coded in **green**





PROPOSALS FOR NATURE VIEWING

No	River	Access	Proposal	Issues/ Comment	Development Considerations
Nature Viewing & Observation					
N1	All: Mague Morningstar Camoge Clonshire Loobagh Glenduff	Town Parks Croom Bruree Bruff Ballingarry Kilmallock Kilfinane	Development of local Biodiversity Zones in the Town Parks network	<p>Provide accessible opportunities to learn and understand more of riverine ecology and habitats at local level – make it easy to engage.</p> <p>Biodiversity Zones can host educational and outreach activities, photo posts and be a centre for citizen science projects.</p>	<ul style="list-style-type: none"> LCCC planning and environmental guidance Discreet demarcation of Biodiversity Zones in Town Parks Emplacement (subject to LCCC/ BWI/ IFI guidance) of story boards, photo posts etc . <p>Synergies</p> <ul style="list-style-type: none"> Town Parks to become key zones for citizens engagement and education all along the Rivers network Community engagement in citizen science projects <p>Strategic Fit</p> <ul style="list-style-type: none"> Conforms with national planning strategies on alternative use of riverine open spaces <p>Costs: Significant engagement and volunteer time Equipment: allow €10,000 per Nature Zone Storyboards: allow €10,000 per town park Photo Posts: allow €300 each/ Camera €300 each Post Emplacement costs (CE Scheme to support?)</p>
N2	All Rivers	Town Parks	<p>Emplace photo-posts in Biodiversity Zones within Town Parks along the Mague rivers to allow the public to record and upload their river observations in all seasons....</p> <p>Emplacement of live streaming cameras in secure location(s)</p>	<p>Potential for collaboration with Limerick City & County Council, LAWPRO and Inland Fisheries of Ireland to develop innovative citizen science project to have continuous monitoring of nature along riparian habitats</p> <p><i>Photo posts provide year-round engagement with nature viewers, while monitoring changes in the landscape. Upload the photos to a cloud based website and watch the seasonal effects</i></p> <p>Revitalise the Mague Poets tradition, inviting community poetry submissions with each photo upload.....</p> <p>Live stream camera footage of the river's natural life in all its richness could be considered, subject to security of the camera.</p>	

	River	Access	Proposal	Issues/ Comment	Development Considerations
N3	Maigue Estuary Newtown Flats	Ringmoylan Ferrybridge Newtown	<p>Birdwatching along lower tidal reaches of the Maigue Estuary and wetlands.</p> <p>Bird viewing points along the rivers, in proposed Town Parks Biodiversity Zones</p>	<p>Birdwatching potential along shore & estuary from <i>Ringmoylan Quay</i> to Mellon Point and Ferrybridge, and at <i>Newtown wetlands</i>, to view migratory geese, ducks, teal & other wildfowl.</p> <ul style="list-style-type: none"> • Emplace bird hides at key sites along the Maigue Estuary, subject to BWI advice • Development of <i>The Bank Walk proposal</i> (Section 3.3) or <i>hides at Newton Flats</i> would enhance access. Birdwatch Ireland could advise in locating these optimally, in consultation with local landowners. • Emplacement of discrete <i>site-specific Birds information signage</i> could be implemented as a 'quick win', with support of LCCC and BWI, at key points along the rivers to see kingfishers, herons, dippers, grey wagtails, swallows, swans etc. can be seen. 	<ul style="list-style-type: none"> • LCCC planning and environmental guidance • subject to expert guidance, environmental considerations and access permission, emplacement of bird hides may require Notifiable Action to NPWS if site hides in Lower Shannon Estuary SAC <p>Synergies</p> <ul style="list-style-type: none"> • Enhancing existing BWI / volunteer efforts to engage schools in observation of birds <p>Strategic Fit</p> <ul style="list-style-type: none"> • Provides activities along the Shannon Estuary Way to entice visitors to stay longer <p>Costs: Significant engagement and volunteer time Purchase & Emplacement costs (CE Scheme to support?) <i>Bird Hides:</i> €15,000 each <i>Signs:</i> €300 each</p>  <p><i>Discreet bird hides along rivers provide excellent nature viewing points</i></p>

N4	All Rivers	Multiple Locations	<p>Establish a Maigue Rivers Communities Pollinator Network</p> <p>The All Ireland Pollinator Plan 2021-2025 commits to provision of enhanced habitats for pollinators, supported by a Communities Pollinator Officer</p>	<p>Engage the National Communities Pollinator Officer to work with Maigue River Communities Network</p> <ul style="list-style-type: none"> Establish a series of 'Pollinator Trails' at Town Parks at Kilmallock, Kilfinane, Croom, Bruree, Bruff, Ballingarry and Adare on the Loobagh, Maigue, Camoge, Clonshire and Morningstar Rivers to create extended pollinator habitats along the entire catchment from south to north Track changes; monitor pollinators on public lands beside the Maigue Rivers Develop community-based citizen science observation programmes. <p>The Network would provide a catchment-wide entity for participating communities and Tidy Towns groups and Limerick PPN to liaise with the Communities Pollinator Officer to develop complementary pollinator plans, as well as training, learning and funding opportunities</p>	<p>Synergies</p> <ul style="list-style-type: none"> Liaise with Tidy Towns network to coordinate community actions Liaise with Limerick PPN <i>Climate, Biodiversity & Environment Linkage Group</i> to coordinate community actions <p>Strategic Fit</p> <ul style="list-style-type: none"> Community initiative supporting AIPP roll-out <p>Costs: Significant engagement and volunteer time</p> 
N5	Maigue Clonshire Loobagh	Adare Croom Bruree Kilmallock Curraghchase	<p>Organise seasonal Nocturnal Wildlife Walks at suitable locations, linked to Maigue Rivers Calendar of Events</p>	<p>Engage with Curraghchase Forest Park to participate in bat walks to view the resident Lesser Horseshoe and other species.</p> <p>Develop a regular calendar of expert-led bat walks at key locations such as bridges, castles etc close to the rivers where bats are frequently to be observed at dusk.</p> <p>Develop seasonally appropriate nocturnal Owl & Wildlife Walks, working with local landowners to emplace barn owl nest boxes in disused buildings, enhancing the observer's chances of seeing/ hearing these creatures.</p>	<p>Engage with Coillte and NPWS prior to Bat Walks, to ensure avoidance of any form of disturbance to bat roosts / introduction of artificial light or too many people</p> <p>Engage with IFI and angling clubs to plan & secure guides for public viewing of fish migrations at suitable locations & times.</p> <p>Synergies</p> <ul style="list-style-type: none"> Integration of public engagement measures among agencies <p>Costs: Engagement and volunteer time</p>

Outdoor Education					
N6	Loobagh Glenduff	Kilfinane	<p>Griston Bog – design and develop specific Leaving Cert Physical Geography and Biology modules, working with Kilfinane OETC*</p> <p>Enhanced promotion of the amenities available at Griston Bog to the wider public</p>	<p>Develop Leaving Certificate field study modules on:</p> <ul style="list-style-type: none"> Physical Geography of rivers River Biodiversity <p>The <i>Leaving Cert Physical Geography</i> course requires 20% field studies component – potential to establish a fully integrated '<i>Rivers</i>' module with field observations, testing and measuring e.g. channel morphology & migration, water flows; flood mitigation; water pollution monitoring; etc.</p> <p><i>Leaving Cert Biology</i> field studies component could address <i>River Biodiversity</i> module to study e.g. invertebrate ecology; surveys of fish stocks (with MRT, angling clubs and IFI) and similar eco-issues.</p> <p>Develop as 1-2 day modules, with overnight stays in Kilfinane.</p> <p><i>*MRT has begun collaboration with Scoil Pól in Kilfinane as part of the Leaving Cert. Agri Science curriculum, to monitor water quality, chemistry and fly populations, which could be used as a model.</i></p>	<ul style="list-style-type: none"> 'All-In' courses to be designed to suit the Leaving Cert curriculum requirements (& TY) to address the field studies Requires permissive access and demonstration sites along the Mague Rivers Confer with Dept. Education, MI (UL) and National Associations of Geography & Biology Teachers, to design appropriate modules <p>Synergies</p> <ul style="list-style-type: none"> Kilfinane Outdoor Education & Training Centre Accommodation & Food suppliers in Kilfinane <p>Strategic Fit</p> <ul style="list-style-type: none"> Meeting the need for national field studies centres for schools <p>Costs: Engagement of educational experts Module development time; materials; workbooks</p>
N7	Morningstar Camoge	Lough Gur	<p>Engage with Lough Gur to promote wide public engagement with Astronomy and Environmental History of East Limerick</p>	<p>Engagement with Lough Gur's management to promote archaeo-astronomical and Dark Skies projects for enhanced understanding of astronomy and its role in shaping the archaeological landscape</p> <p>Promote Limerick's <i>environmental history</i> through Lough Gur lake sediments that chart continual climate change over thousands of years</p>	<p>Engagement with Lough Gur management</p> <p>Synergies</p> <ul style="list-style-type: none"> Lough Gur Heritage Park discovery programme <p>Strategic Fit</p> <ul style="list-style-type: none"> Strengthening of 'gateway' amenities at Lough Gur <p>Costs: Engagement & time</p>
N8	Clonshire Mague	Curraghchase Liskennett Ballingarry	<p>Forest Therapy and Forest School in</p>	<p>Develop 'Forest Therapy' and/or Forest School in designated woodlands at Curraghchase, Liskennett,</p>	<p>Discussions with Coillte will be required to gain permission and to identify suitable zones of the forests to undertake Forest Therapy</p>

		Kilmeedy	designated woodlands	<p>Knockfierna, Ballinruane and Ballyhoura Forest woodlands.</p> <ul style="list-style-type: none"> Explore options for development of Forest Therapy programme Examine potential for cohort of volunteers to undertake training in delivery of Forest Therapy 	<p>Training will be required to upskill Therapy practitioners</p> <p>Synergies</p> <ul style="list-style-type: none"> Link with Kilfinane Outdoor Education & Training Centre Link with Active Retirement Clubs in east Limerick who are seeking new experiences. <p>Strategic Fit</p> <ul style="list-style-type: none"> Enhancing public health and interaction with the outdoors. <p>Costs: Training of Forest Therapists to lead groups Development time; liaison with Coillte</p>
N9			Citizen Science Phenology Programme for the Mague Rivers	<p>Engage citizens as River Guardians through various long term monitoring of local stream.</p> <p>Observe & and record local phenological observations:</p> <ul style="list-style-type: none"> Spring watch with Birdwatch Ireland on arrival of first cuckoo, swallow, swift etc; record on www.springalive.net With angling clubs, herald the arrival of the Spring and early Summer salmon; annual mayfly hatch. Bud openings of native species in designated Biodiversity Zones; Arrange a series of dawn chorus walks in April / May along the rivers and forests of the Mague to enjoy the majesty of birdsong. 	<p>Planning of Mague Rivers calendar of events could be undertaken with LCCC Environmental Office</p> 
N10			Build a Calendar of Citizen Science Initiatives for the Mague Rivers	<p>Link a Citizen Science programme to a Calendar of Events for the Mague Rivers Catchment (in harmony with a series of Festivals & Events). Projects will require</p>	<p>Synergies: Engagement with BWI, Coillte, IFI and Angling Clubs, Strategic Fit: Liaison with National Biodiversity Data Centre to record systematically and upload to national databases. Costs: Time and training</p>

				additional supports and funding to develop a sustained programme of annual activities.	
N11	All	All available sites	Develop Community Gardens & Allotments on publicly owned lands	<p>Development of Community Gardens and Allotments may be developed relatively easily on publicly owned riverine / flood plains, preferably close to settlements or as fenced-off extensions of the Town Parks.</p> <p>Allotments can be developed relatively easily, with LCCC acting as management; Typically an allotment costs c.€50-100 per annum per gardener, for land, water and key rental. LCCC to complete advance preparatory work, clearance of site, water taps & topsoil supply; composting zone</p> <p>Working with the Tidy Towns network, community allotments could be used to provide training on e.g. gardening without pesticides; developing a Pollinator Plan and gardening for biodiversity.</p>	<ul style="list-style-type: none"> • Consultations with LCCC Community, Environmental & Planning sections, re Local Area Plans and designation of appropriate publicly owned lands, close to Rivers. • Liaise with Tidy Towns network to engage with initiative to develop pollinator friendly gardens & allotments • Promotion of benefits of local gardening/ vegetable growing <p>Synergies: Working with LCCC community, environmental and planning officers to develop critical community green infrastructure Working with Tidy Towns network to deliver local solutions Strategic Fit: meeting national and regional planning guidelines in use of open green spaces as community based local vegetables; carbon reduction and flood mitigation. Costs: Land preparation and removal of all invasive species; purchase & delivery of locally sourced topsoil & manures</p>
N12	All	Open Farms	Farming for Wildlife (to enhance water quality)	<p>There are a number of organic farms in East Limerick as well as excellent bottom-up food markets and cooperatives.</p> <p>Work with Dunamann Organic Farm, encourage site visits, learn about growing organic beef; practical classes in growing flowers and vegetables organically; demo site for small-scale natural filtration systems of farm wastes; etc.</p>	<p>Liaison with Dunamann Farm will be required, where these concepts are in gestation.</p> <p>Workshops could be held on-site to encourage other farmers and gardeners to become organic growers.</p> <p>Establish strategic partnerships with farmers and suppliers to target funding initiatives in support of eco-produced foods</p> <p>Strategic: work with Urban CoOp & Farmers Markets to promote expansion of organic growers's network in the Maigue Catchment which is ultimately good for water quality.</p>

3.8 Proposals for Other Actions

There are opportunities to develop 'soft' initiatives to promote the recreational and amenity benefits of the Maigue Rivers. These may include initiative involving the creative arts, festivals and related events, that promote the rivers in an interesting and fun way.

3.8.1 Festivals & Events

- The annual **Maigue River Festival**, which has been organised by MRT at Croom since 2017, could be expanded to become a 'Rolling Wave' of community festivals and events along the rivers. The current festival has expanded the use of the river by organising a 3km fun event for families (c. 50 people), with the permission of landowners. Kayaking Trails are proposed above (Section 3.5.5 above) which could be used to promote additional use of the rivers for small vessel activities such as kayaking and paddle boarding for festivals.
- Expand the *Maigue Poets* tradition by hosting an annual **Maigue Rivers Poetry Slam** as part of the Maigue River Festival.
- An enhanced **Gandelow Rowing Festival** on the Maigue Estuary at Ferrybridge could be envisaged, with the development of the proposed (i) pontoon and/or restoration of the Turf Quay at Ferrybridge.
- Launch an annual **Maigue Day "MayGUE DAY"** (play on May Day alert) in the month of May, using a series of guided walking tours to explore the Rivers and the urgency of addressing water quality, declines in salmon stocks and biodiversity, invasive species etc.
- Create a **Film of the traditional Shannon Salmon fishery** which closed in 2008 – the Newtown community wish to film a week of fishing, with IFI consent and support, to demonstrate the skills of gandelow salmon fishing, inter-generational techniques and knowledge of the tides, islands, runs and flows in catching the estuarine salmon.

3.8.2 Calendar of Events

With the various recreational proposals above, and opportunities for Festivals & Events below, it is proposed to develop an integrated, digital **Maigue Rivers Calendar of Events** that is uploaded to the website (or create an APP), where a recreational user can see at a glance what is happening, where and when across the catchment.

This will require inputs from each community within the catchment, to be updated monthly by the Maigue Rivers project officer (see Table 4).

Table 4 Sample Calendar of Events, Maigue Rivers

CALENDAR OF EVENTS 2021 : MAIGUE RIVERS CATCHMENT, CO LIMERICK												
Village/Town	January	February	March	April	May	June	July	August	September	October	November	December
Adere							Village Festival					
Croom						Maigue River Festival						
Bruree/ Bruff/										Cross Country Ride		
Dromin-Athlaca/ Monaster								Dromin-Athlaca Garden Fete		Horses for Courses Festival		
Patrickswell / Mungret/ Clarina/ Ballybrown			17th March St. Patrick's									
Kildimo/ Pallaskey/ Ferrybridge/ Curraghchase						Curraghchase 10K Run/Walk						
Herbertstown/ Hospital/ Knockainy												
Kilmallock												
Kilfinane / Ardpatrick								Beast of Ballyhoura				
Galbally/ Ballylanders								The Ramble @ Galbally				
Fedamore												

3.8.3 Environmental Summer School

There is scope to develop a **Maigue Rivers Summer School** that will combine many aspects of the environment, history, biodiversity and heritage of the rivers. This could be developed with guest speakers and educators living in the catchment, addressing specific elements of the River: history, environmental heritage, salmon fishing and gandelow tradition, etc.

The festival could be modelled on the long-established 4-day *Lough Ree Summer School* at Lanesborough, Co. Longford, sponsored by the ESB. This takes the form of bat walks, boat trips and classes on various aspects of the Shannon's river and lake environments. It focuses on providing hands-on environmental education in an outdoor setting, imparting practical advice for inclusion in everyday life. Participants may attend all four days of the summer school or just a half-day field trip which interests them.

3.8.4 Creative Events

- Develop with the LCCC Arts Officer a series of **Recreational and Pop-Up Arts** events in the Town Parks network – encourage musical, artistic and photographic exploration of the Maigue Rivers in a contemporary context.
- Develop a **"Second Saturday"** suite of events (copying an initiative from Sacramento, California (<http://www.2ndsaturdaysacramento.com/>)). Select a few different locations along the rivers and invite artists to display river-related murals or other works at monthly events.

3.8.5 Proposals for Other Opportunities

The following presents a series of nature viewing proposals for development, colour coded in **PINK**.

PROPOSALS FOR OTHER/ 'SOFT' DEVELOPMENTS

No	Access	Potential Opportunity	Issues/ Comment	Development Consideration
Festivals & Events				
O1	All	Expand annual Mague River Festival, to a 'Rolling Wave' of community festivals and events	<p>Host a 'rolling wave' of annual community festivals along the Rivers to celebrate all aspects of natural and cultural history of the catchments.</p> <p>Expand the <i>Mague Poets</i> tradition by hosting an annual Mague Rivers Poetry Slam as part of the Mague River Festival.</p>	<p>Festivals will require significant volunteer time; engagement with local communities up and down the Rivers, including LCCC and the key statutory authorities IFI, Coillte, NPWS</p> <p>Allow €5,000-10,000 per festival</p>
O2	All	Annual Gandelow Rowing Festival on the Mague Estuary at Ferrybridge	Support the voluntary efforts to restore traditions of gandelow rowing at Ferrybridge..	
O3	All	Launch an annual Mague Day "MayGUE DAY" (play on May Day alert) in the month of May,	Using a series of walking tours to explore the Rivers and the urgency of addressing water quality, declines in salmon stocks and biodiversity, invasive species etc.	
O4	Newtown	Filming of traditional salmon fishing on the Shannon at mouth of River Mague	Local Newtown fishing community effort to capture the essence of the Salmon fishery which closed in 2008 – wish to film over one week, with IFI support, working gandelows and inter-generational techniques and knowledge of the tides, islands, runs and flows in catching the estuarine salmon.	<p>Requirements: Agreement of IFI/ NPWS to film</p> <p>Strategic Fit: Complement the promotional stories of the Shannon Estuary Way</p> <p>Costs: €5,000 filming & €2,000 editing</p>
O5	All	Create an integrated, digital Mague Rivers Calendar of Events	Upload events digitally to website /App, for an 'at a glance' to see what is happening, where and when across the catchment.	€5,000
O6	All communities	Mague Rivers Environmental Summer School	School of the environment, history, biodiversity and heritage of Mague rivers.	€20,000
O7	All	Recreational and Pop-Up Arts events	With LCCC Arts Officer – encourage musical, artistic and photographic exploration of the rivers	€10,000 per annum

3.9 Promotion of Recreation along the Maigue Rivers

The Phase 1 Baseline Report (Annex 1) provided background research on current trends and growth in popularity of recreational tourism and experiential contact with the outdoors in Ireland.

The following presents a short overview of what is unique about the Maigue Rivers, which could be promoted to position the Maigue Rivers within the context of strategic tourism planning for Limerick and the Ballyhoura Country brands.

What is Unique about the Maigue Rivers?

The Maigue Rivers³¹ of County Limerick meander across the landscapes of the Golden Vale, rising in the Ballyhoura and Slieve Felim Hills, flowing through pastoral farmlands, to extensive wetlands bordering the Shannon Estuary.

The Maigue Rivers encompass a mosaic of upland, terrestrial, riverine, lacustrine and estuarine environments, supporting a variety of habitats and species that are significant on a national as well as European level. They inform the vibrancy and socio-economic base of the many towns and villages in the catchment.

The Maigue Rivers have influenced and sustained human settlement for thousands of years, from the Neolithic through the Bronze and Iron ages to the early Christian and later medieval periods, leaving a unique imprint on the landscape and heritage of East Limerick. This historic interplay between the rivers and their communities will inform the recreational amenities that will evolve in the coming decades.

Unique experiences to be had on the Maigue Rivers

- ✓ **Walk or cycle along the Great Southern Greenway³²**
- ✓ **Row a traditional gandelow from Ferrybridge on the Maigue to the Shannon Estuary;**
- ✓ **Catch a wild brown trout on the rivers of the Maigue catchment;**
- ✓ **Spot a late evening bat foraging along the Maigue's ancient bridges;**
- ✓ **Explore the mythical Lough Gur/ Grange archaeological and astronomical complex;**
- ✓ **Kayak from Bruree along the Maigue to Croom and Adare;**
- ✓ **Explore the natural and cultural history of Curraghchase Forest Park – walk or cycle the trails and meet the resident inhabitants, the Lesser Horseshoe Bats on a bat walk;**
- ✓ **Walk the river path in the classic estate town of Adare with its thatched streetscape and ecclesiastical heritage of three medieval abbeys;**
- ✓ **Walk the Priory Walk along the Loobagh to explore the medieval heritage of Kilmallock Walled Town;**
- ✓ **Explore the cycle trails to visit Dysert Aonghusa at Carrigeen or Grange Stone Circle;**
- ✓ **View the superb birdwatching along The Bank and the Maigue Estuary wetlands;**
- ✓ **Hike along the Ballyhoura Uplands and visit Árd Pádraig monastic site; or**
- ✓ **Experience the thrill of Mountain Biking over 94km of trails in the Ardpatrick Hills.**
- ✓ **Kayak the river or enter the Poetry Slam as part the Maigue River Festival!**

³¹ Incorporating the Maigue, Loobagh, Camoge, Clonshire and Barnakyle rivers and a mosaic of smaller streams, draining an area of over 1300 km².

³² Note: the Great Southern Greenway may be rebranded in the future.

4.0 Summary of Proposals for Maigue Rivers Catchment

The proposals for recreational and amenity development in the Maigue Rivers are presented in summary in this section, with outline costs and proposed funding sources.

Based on extensive consultations with a wide range of stakeholders, a number of proposals across five recreational domains were proposed in the previous chapters, highlighting development considerations, potential synergies and strategic linkages. The proposals aim to integrate the existing recreational infrastructure (Figure 7) with new proposed amenities, to address gaps defined in the SCOT Analysis (Table 3 above).

The key elements of the new proposals are presented in Figure 8 above and summarised with outline costs as relevant in Table 5 below. The combined current and proposed recreational infrastructure is shown below in **Figure 15**, for ease of reference and also to present the 'joined up thinking' that informs the spatial proposals.

Each recreational activity has a series of numbered and colour-coded proposals as follows, for ease of reference:

Recreational Activity	Sequence	No. Proposals
Walking	W1 – W8	8
Cycling	C1 – C2	2
Boating	B1 – B7	7
Angling	A1 – A5	5
Nature Viewing & Observation	N1 - N12	12
Other Activities/ Arts	O1 -O7	7
Total No. of Proposals		41

Given the core constraint of lack of access to the riverbanks for walking, angling, nature watching etc, the proposals aim to optimise those areas that are accessible, including the excellent network of riverine town parks in East Limerick.

The proposals also aim to facilitate more on-water activities and opportunities for local people to become more engaged in nature viewing and learning about the rivers in interesting and fun ways.

These proposed projects will require review and discussion with key stakeholders, as well as a range of consents for infrastructure, prior to advancing to detailed proposals for development.

Outline high order costs for key projects are presented for guidance only; many will require detailed individual feasibility studies for detailed costings.

Figure 15 Map of Combined Current and Proposed Recreational Infrastructure, Mague Rivers

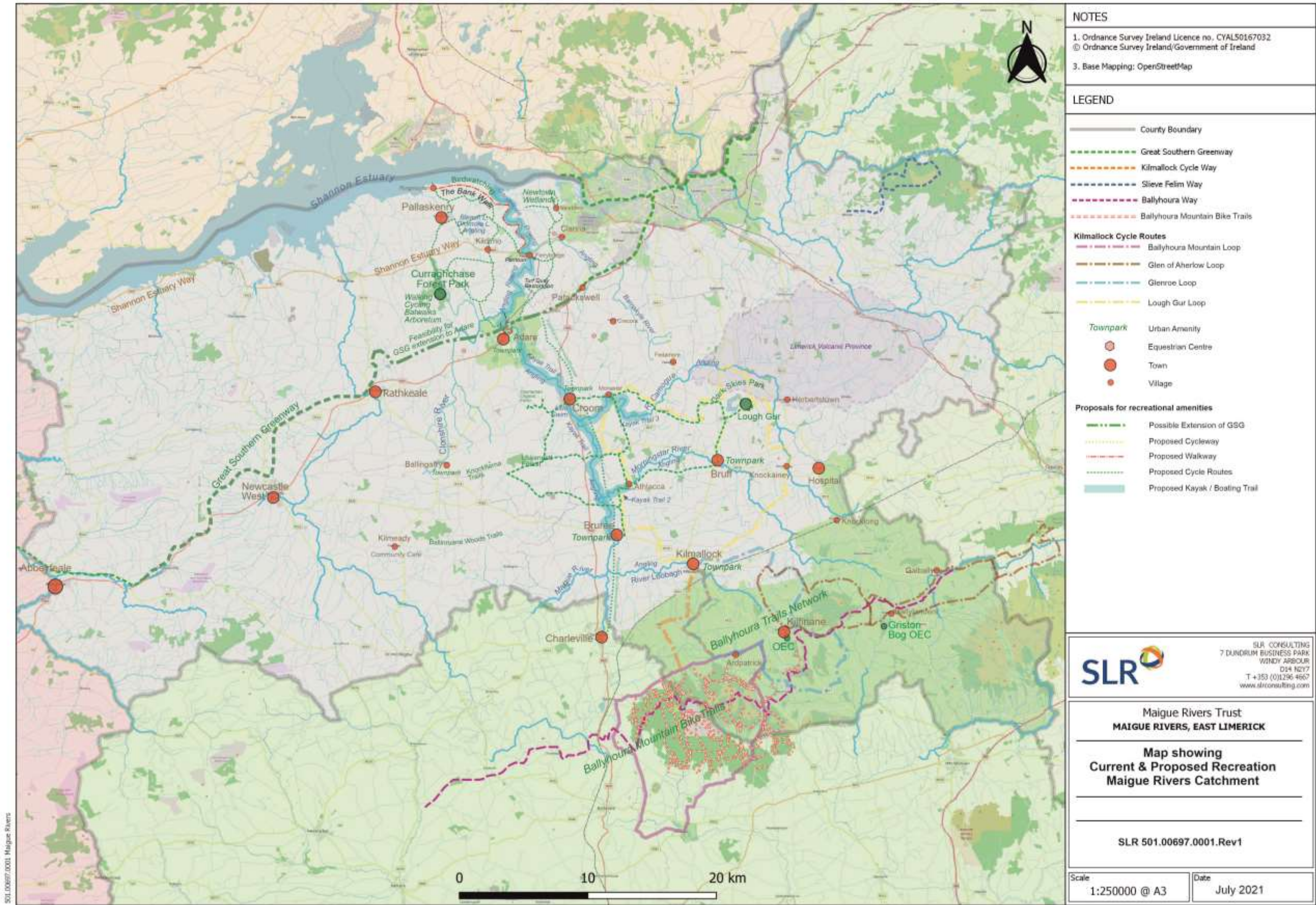


Table 5 Conceptual Proposals: Recreation & Amenity, Mague Rivers

PROPOSALS FOR WALKING INFRASTRUCTURE				
ACTION	Access Point	Potential for Development	Comment	Outline Costs Estimates (ex. VAT estimates only)
W1	Ferrybridge - Ringmoylan Quay	Development of The Bank Walk (14.7km) in 4 stages from Ferrybridge along raised bank to Ringmoylan along the Mague Estuary	Negotiation for permissive access with up to 40 landowners required	Trail infrastructure & furniture – est. €55,000
W2	Adare Patrickswell Rathkeale	Great Southern Greenway extension eastwards to Adare and Patrickswell	Plans afoot by Limerick City & County Council to extend the GS Greenway	20km (Rathkeale to Patrickswell) –est. €8.7 million
W3	Requires feasibility study	Explore potential for a Greenway/Blueway along the Mague River valley – to create an integrated Mague Blueway of walking-cycling-water trails	Proposition to link Ballyhoura Hills through East Limerick to Great Southern Greenway	Requires Feasibility Study to determine possibilities and likely costs.
W4	Croom Town Park	Enhanced links from Croom Town Park to the walking trail upstream of the Bridge	Develop safe walk from Town Park to trail upstream of Castle	Trail signage Crossing point at Bridge
W5	Croom Ballingarry Kilmeedy	Promote Forest walking trails in Liskennett, Knockfierna and Ballinruane Woods in upper Clonshire catchment	Optimise usage of existing amenities and use for Forest Therapy	Time Training
W6	Ardpatrick Kilfinane	Walking trail at Ardpatrick along the track to the monastic heritage site of <i>Árd Phádraig</i>, to view the entire Mague catchment	Spectacular views of Mague Catchment from monastic hilltop	Signage
W7	Knockainy Hospital	Knockainy Hill and Knocklong Hill walking amenities & viewing points	walking amenities in the eastern catchments	Signage
W8	Adare Croom Bruree Bruff Kilmallock Ballingarry Kilfinane	Town Parks Network : build awareness of safe walking and wellness. Link by proposed cycle and kayaking trails. Create nature viewing zones (Biodiversity Zones – see below)	Build awareness of Town Parks recreational opportunities and biodiversity / education	Time
PROPOSALS FOR CYCLING				
River	Access Point	Potential Opportunity	Issues/ Comment	Development Considerations
C1.1	Adare Heritage Centre (carpark)	CYCLE TRAIL 1 (NORTH) - Circuit 1: (28 – 32km return) Depart from Adare -Cloonana - Doon Cross - Ballybrown - Newtown - Carrigogunnel; back by Ferrybridge to Adare	These cycling routes would provide access to the estuarine reaches of the Mague, Barnakyle & Clonshire; they traverse the Shannon Estuary Way and complement current	All Cycling Routes: Directional signage €40-50,000;
C1.2	Adare	CYCLE TRAIL 1 (NORTH) - Circuit 2: (40-50km)		

	Ferrybridge Ringmoylan Curraghchase	Depart from Adare / Ferrybridge via Faha, Ballynacarriga and Mellon to Ringmoylan Quay (20km) Cycle to Pallaskenry, visit Dromore or Bleach Lough, to Curraghchase Forest Park; home to Adare.	tourism measures to develop driving route, with ‘reasons to stop’.	Emplacement of bike racks by LCCC at key locations for all cycle routes.
C2.1	Croom Town Lough Gur Bruree	CYCLE TRAIL (MID) : Circuit 1 (35-49km in total)* Depart Croom Town Park to Monaster to Grange Stone Circle and Lough Gur; south to Bruff by Athlaccra to Bruree. From Bruree, option to return to Croom (+14km) via Monaster .	Routes provide direct access to the Maigue Rivers in the central zone of the catchment and many charming villages and wealth of heritage (Lough Gur, Monaster, Grange, Dysert Aonghasa, De Valera Museum & Cottage) as well as many nature viewing opportunities.	
C2.2	Croom Dysert Aonghasa Banoge Monaster	CYCLE TRAIL (MID) : Circuit 2 (24.5km / 49km)* Depart Croom Town Park west to Dysert Aonghasa to Dunamann Organic Farm; onwards to Liskennett Forest; return by Banoge, to Monaster and back to Croom. <i>*with options for shorter routes within suggested circuit</i>		
PROPOSALS FOR BOATING INFRASTRUCTURE				
Proposal	Access	PROPOSAL	Development Issues	Costs Estimate
B1	Ferrybridge	Floating Pontoon for Maigue Rowing Club on west bank at De Bucket – on the lower tidal reaches of the Maigue, to provide infrastructure for safe access and egress	Maigue Rowing Club (MRC) are attempting to restore tradition of gandelows of the Lower Maigue; through rowing and boat building.	Feasibility Study €7,500 to determine EIA/ Construction Costs – assume €50-75,000+ EIA
B2	Ferrybridge	Restoration of Turf Quay on east bank of Maigue at Ferrybridge	Quay to provide safe landing for craft entering the Maigue from Shannon Estuary, or downstream from Adare.	Feasibility Study €7,500 & €50-75,000 construction & EIA costs
B3	Adare	Restoration of Turf Quay on west bank of Maigue at Adare, just downstream of railway bridge.	Formal ownership requires to be established; currently Quay is overlain by a modern carpark (managed by LCCC)	Costs • Feasibility Study €7,500 to determine • Construction & EIA costs – assume €50-100,000
B4	Adare	Development of Floating Pontoon at Adare Turf Quay	To provide flexible & safe landing solutions along tidal Maigue.	
B5	Croom	Create an Activity Zone at Croom Town Park to provide a hub for water-based recreational activity for Maigue River; with paddle, kayak and bike hire; a proactive recreation zone for water sports	An Activity Zone at Croom Town Park would create a defined water-base for the catchment	LCCC /IFI authorisations Costs: €20,000 estimate
B6	Croom Town Park	Emplace a seasonal ‘Lido’ swimming amenity at Croom Town park	Provide a family friendly safe swimming zone on the Maigue river.	€15,000

PROPOSALS FOR KAYAKING/ SMALL VESSELS TRAILS

B7	Bruree Athlacca Grey Bridge Croom Adare	<p>Create a series of four (4) inter-linked kayak/ small vessels trails along the Mague Rivers.</p> <p>Four potential trails are proposed:</p> <ul style="list-style-type: none"> • Trail 1 (12km) starting at Bruree Town Park or Bruree Tractor crossing on the Mague (12km) • Trail 2 (2.5km) start from Athlacca Bridge to rejoin Trail 1 on Mague at Cooleen (2.5km) • Trail 3 (7.5km) start from Grey Bridge above Monaster to rejoin Trail 1 on Mague • Trail 4 (7km) start at Croom Town Park to Castleroberts and onwards to Adare Turf Quay (to be restored)*. 	<p>There is poor access to the river at all bridges, with scant space for parking. May be scope for negotiation at Cherrygrove Bridge with landowner, LCCC and IFI for access points. Biosecurity is a key issue for small vessels. Trails must be based on the national guidance for development of small vessels trails.</p>	<p>OMC Costs: planning/ environmental costs; emplacement of access / egress points along the rivers via steps/ launch pads at key points €50-100,000; Locational & safety signage €25,000</p>
-----------	---	--	--	--

PROPOSALS FOR ANGLING

Action	Access	Proposal	Issues	Costs Estimate
A1	Non-specific	Establish Mague Rivers Angling Forum to include all stakeholders in holistic restoration of habitats and water quality, including state agencies, anglers, farmers and communities.	Establish a working group under MRT to focus on measures to enhance physical habitats for angling, and issues of diffuse water pollution.	Costs: significant volunteer time; IFI supports for materials
A2	Trout streams	Trout Population Survey - Conduct a catchment-wide trout population survey to identify areas of high and low productivity	to identify priority measures to improve the overall trout fishery.	
A3	Non-specific	Community based habitat restoration programme	engage local communities / Tidy Towns in practical restorative measures.	
A4	Non-specific	Explore the possibility of developing a Day-Ticket Scheme for local and visiting anglers	Requires intensive consultations with IFI and Local Angling Clubs to identify opportunities, risks (e.g. biosecurity) and challenges.	
A5	Croom Bruree Kilmallock	<p>Establish Angling Training Zones/ River Clubs at Croom Town Park / Bruree Town Park / Kilmallock River Park</p> <p>To replenish the angling clubs on Mague Rivers, provide angling training for young people - liaise with IFI's 'Something Fishy' / 'Go Fishing' programmes.</p>	At Croom, Bruree, Kilmallock. This could be a fixture on the Summer Camp schedule for the region, or at key periods through the year.	Time & collaboration with angling clubs / experts to provide training

PROPOSALS FOR NATURE & WILDLIFE OBSERVATION				
Action	Access	Proposal	Issue	Cost Estimate (€)
N1	Town Parks Croom Bruree Bruff Ballingarry	Development of local <i>Biodiversity Zones</i> in the Town Parks network - can host educational and outreach activities, photo posts and be a centre for citizen science projects.	Provide accessible opportunities to learn and understand more of riverine ecology and habitats at local level – make it easy to engage.	Engagement and volunteer time Equipment: €10,000 per Zone Storyboards: €10,000 each Photo Posts: €300 each
N2	Kilmallock Kilfinane Town Parks	Emplace photo-posts in Nature Zones within Town Parks; opportunity to provide long term seasonal changes of habitats Consider live streaming cameras to capture key aspects of the rivers' natural life in action (in secure locations).	Collaboration with LCCC, LAWPRO and IFI to develop innovative project to have continuous monitoring of riparian habitats by Citizens	Cameras: €300 each Post Emplacement costs (CE Scheme to support?)
N3	Ringmoylan Ferrybridge Newtown	Create defined Birdwatching zones along tidal reaches of Mague Estuary and wetlands, by emplacing bird hides at key sites along the Mague Estuary, subject to BWI / NPWS advice' Create Bird viewing points in Town Parks Biodiversity Zones	Development of <i>The Bank Walk proposal or hides at Newton Flats</i> would enhance access. Emplacement of <i>site-specific Birds information signage</i>	Engagement and volunteer time Purchase & Emplacement costs (CE Scheme to support?) <i>Bird Hides</i> : €15,000 each <i>Signs</i> : €300 each
N4	Multiple Locations	Establish a Mague Rivers Communities Pollinator Network Establish 'Pollinator Trails' at Town Parks	Engage the National Communities Pollinator Officer to work with Mague River Communities Network	Significant engagement and volunteer time
N5	Adare Croom Bruree Kilmallock Curraghchase	Seasonal Nocturnal Wildlife Walks at suitable locations, linked to Calendar of Events (bats, owls, other nocturnal creatures) Engage with Curraghchase Forest Park to participate in bat walks to view the resident species.	Develop a regular calendar of expert-led bat and owl walks at key locations such as bridges, castles etc	Costs: engagement and volunteer time
PROPOSALS FOR OUTDOOR EDUCATION				
N6	Kilfinane	Griston Bog – design specific Leaving Cert Physical Geography and Biology modules for second level students, with Kilfinane OETC Enhanced promotion of the amenities available at Griston Bog to the wider public	Develop Leaving Certificate field study River modules on: <ul style="list-style-type: none"> Physical Geography of rivers River Biodiversity 	Costs: Engagement of educational experts Module development time; materials; workbooks
N7	Lough Gur	Engage with Lough Gur to promote wide public engagement with Astronomy and Environmental History of East Limerick	For enhanced understanding of landscape and environmental history of East Limerick	Costs: Engagement & time

N8	Curraghchase Liskennett Ballingarry Kilmeedy	Forest Therapy and Forest School in designated woodlands - Knockfierna, Ballinruane and Ballyhoura Forest woodlands.	Liaison with Coillte will be necessary	Costs: Training of Forest Therapists to lead groups Development time
N9	All	Citizen Science Phenology Programme for the Maigue Rivers to observe & record local seasonal observations	Link to Citizen Science programme	Time and training
N10	All	Build a Calendar of Citizen Science Initiatives for Maigue Rivers	Integrate all planned activities at community level	Time
N11	Select zones	Develop Community Gardens & Allotments on publicly owned, flood prone lands	LCCC support required to deliver on County Development Plan	LCCC to provide materials
N12	Select Farms	Farming for Wildlife (to enhance water quality)	Organise site visits, growing organic food; natural filtration systems. Support farmers in securing funding to prepare farm sites for visits.	Time
PROPOSALS FOR OTHER OPPORTUNITIES				
Action	Access	Proposal	Issues	Cost Estimate (€)
O1	All	Expand annual Maigue River Festival, to a 'Rolling Wave' of community festivals and events	Celebrate all aspects of natural and cultural history of the catchments.	significant volunteer time; engagement with communities, LCCC and the key statutory authorities IFI, Coillte, NPWS
O2	All	Annual Gandelow Rowing Festival on the Maigue Estuary at Ferrybridge	Support the voluntary efforts to restore traditions of gandelow rowing at Ferrybridge.	Allow €5,000-10,000 per festival
O3	All	Launch an annual Maigue Day "MayGUE DAY" (play on May Day alert) in the month of May,	Walking tours to explore the Rivers and urgency of declining water quality, salmon stocks, biodiversity	Costs: €5,000 filming & €2,000 editing
O4	Newtown	Filming of traditional salmon fishing on Shannon at mouth of River Maigue local knowledge of tides, islands, runs and flows	Film over one week, with IFI support, working gandelows and fishing-	€5,000
O5	All	Create an integrated, digital Maigue Rivers Calendar of Events	Upload events digitally to website /App, for 'at a glance' ease	€20,000
O6	All communities	Maigue Rivers Environmental Summer School	School of environment, history, biodiversity and heritage	€10,000 per annum
O7	All	Recreational and Pop-Up Arts events - encourage musical, artistic and photographic exploration of the rivers	With LCCC Arts Officer –	

5.0 Potential Sources of Funding

There are a number of potential sources of funding for the above initiatives. It will be necessary to work in partnership with the relevant local and statutory authorities, community groups and Tidy Towns groups to access a range of measures.

A number of public funding streams will be open for application (Table 6) in the coming years, depending on the specific recreational action to be delivered.

Multiple funds are opened on a yearly or multi-annual basis, which could contribute to delivering specific projects, if targeted appropriately. It is recommended to utilise a mix of all available funding sources, suited to specific projects and measures (outdoor recreation, tourism, heritage, capacity building, community, networking, etc) in concert with LCCC, state agencies, local communities, Tidy Towns and clubs.

Table 6 Potential Sources of Funding for Implementation

Target of Funding	Potential Source of Funding
Recreational Infrastructure	LEADER/ Rural Development Programme 2021-2027 Outdoor Recreation Infrastructure Scheme (ORIS) – administered via Local Authority Rural Recreation Infrastructure Fund The Walks Scheme (currently being expanded)
Tourism Development	Fáilte Ireland – capital grants
Rural Regeneration/ Town & Village enhancement	Rural Regeneration Funds Town & Village Renewal Scheme Municipal grants
Heritage	Heritage Council grants Dept Culture, Heritage & the Gaeltacht Built Heritage Investment Scheme Historic Structures Fund
Co-Funding Opportunities	Coillte Aughinish IFI
Skills, Capacity Building & Training	LEADER/ Rural Development Programme 2021-2027 Education & Training Boards (ETB) Local Enterprise Offices (LEOs)
Community Development	LEADER/ Rural Development Programme 2021-2027 Dept. Rural and Community Development POBAL Limerick Public Participation Network (PPN) Limerick - Community Enhancement programmes
Marketing & Related	LEADER/ Rural Development Programme 2021-2027 Local Enterprise Offices (LEOs) Fáilte Ireland – Wild Atlantic Way
Rivers Trust / LAWPRO	For specific initiatives/ learnings

APPENDIX 01

Terms of Reference

Exploration of Recreation and Amenity potential of the Maigue Rivers

1.0 Context

The River Maigue and its principal tributaries, the rivers Loobagh, Morningstar, Clonshire, Barnakyle and Camoge, encompass a land area of 1000 km² and includes 1300 km of river channel, mainly in Co. Limerick. This lowland river supports a high level of in-stream biodiversity (fish, invertebrates, aquatic plants and algae) and riverbank biodiversity (in riparian habitats).

The Maigue Rivers Trust (MRT) was established in 2016 with the aims of protection, enhancement and promotion of use and enjoyment of the rivers of the Maigue catchment. One of the objectives of the Maigue Rivers Trust is to encourage public appreciation of the natural river environment by promoting the value of the river and tributaries for recreation and amenity purposes.

2.0 Description of the Project

The aim of this project is to conduct a river recreation and amenity survey that will document river focussed facilities and services, address information gaps, and prescribe a range of potential developments that are likely to be effective. The survey will,

- Collate focussed baseline information on the structure and composition of recreation and amenity provision in the Maigue catchment, and
- Identify potential for developing recreational and leisure activities on and around the rivers in the Maigue catchment.

This will provide required data for the future management of the development in/near the catchment rivers for the benefit of biodiversity, water quality and recreational and other uses by local communities and visitors.

3.0 Project Scope

The Maigue Rivers Trust requires a study examining the current provision and future potential for developing recreation and amenity activities in the Maigue River catchment area. These activities must be environmentally sustainable and fit with the mission and objectives of the Trust.

The study should refer to published reports (listed below) and should avoid redoing what has already been identified. The study will highlight relevant points from these reports which overlap with the interests of the River Maigue, identify areas not covered and search for additional relevant published studies.

- Ballyhoura Countryside Recreation Strategy 2007
- Ballyhoura Country 2020 – The Way Forward
- Limerick Tourism Development Strategy Action Plan 2019-2023
- Kilmallock Walled Town: Public Realm Plan 2009
- Munster Peaks: Concept Development and Feasibility Study 2014
- Coillte South Munster BAU 7 Strategic Plan 2016-2020
- Slieve Felim Concept Plan 2012
- Lough Gur Environmental Management Study 2008

The study should concentrate primarily, but not exclusively, on the following activities:

1. walking
2. cycling
3. boating
4. angling
5. nature and wildlife observation

The report should cover the following core objectives and deliverables:

Analysis of the current usage of the Mague Rivers for outdoor recreation and amenity

Objective: To provide an in-depth assessment via primary and secondary research of the existing recreational and amenity activities on and around the Mague rivers.

- Provide a breakdown of activity provision (type and scale) across the range of recreational and amenity types. Both organised and informal activities should be identified.
- Assessment of public access point/areas (and condition) to the rivers of the Mague catchment
- Highlight examples of services providers (e.g. private operators, guides)
- Identify existing relevant events (and numbers of participants) taking place in the catchment area (e.g. the Mague River Festival held in June 2019, rowing regattas at Ferry Bridge).
- Provide information on physical infrastructure for all existing recreational facilities (e.g. existing walks, cycling trails, canoe slips, car parks, signage) and detail on their condition.
- Detail all information materials available for the river areas (e.g. maps, guides, leaflets, online information, social media)

Deliverable 1: a document and presentation detailing the current recreation and amenity provision (and condition) for walking, cycling, boating, angling and nature and wildlife observation.

Identification of the potential for developing recreational and leisure activities on and around the rivers in the Mague catchment

Objective: Identify for each of the recreational activities (walking, cycling, boating, angling, nature and wildlife observation) **five** example development possibilities in order to encourage the interaction with and/or use of the river and/or river environs.

Example developments for each recreation and amenity type should ideally have synergistic linkages with other recreation/amenity activities and identify what additional works are necessary to make the activity possible along that section of the river:

- Suggested activities, location(s) and provider(s)
- Access description and required improvements
- Example event(s) and projected potential numbers
- Current facilities and potential improvements
- Interpretation material requirements
- Synergistic linkages with other recreation/amenity activities
- Strategic fit
- Potential funding opportunities to develop suggested actions

Walking

- Identify suitable stretches of the bank of the Mague that could be developed into walking routes and strategically linked to other recreation/amenity activities. These stretches should where possible avoid or bypass houses located close to the water, as well as land in private ownership where public access could be

problematic (e.g. the Adare Manor). These should link up with existing walking routes. Identify in each case what would need to be installed (e.g. fencing, fence styles, footpath surfacing) and what permissions/lease/other would be required.

Cycling

- Identify suitable stretches in the Maigue catchment area that could be (re)developed into cycling routes strategically linked with other recreation and amenity activities. These would make use of existing roads, but be selected in such a way to showcase the river as much as possible.

Boating

- Identify key kayaking/canoeing routes -, descriptions of routes, difficulties (e.g. which times of the year a particular stretch would be unsuitable for kayaking), possible access points, points where water access should be improved by means of a jetty or slipway in order to encourage more usage of that stretch of river. Other potential activities that could be developed to include, but not limited to: boating downstream of Adare and, gandelow racing at Ferrybridge.

Angling

- Identifying suitable areas for angling (in conjunction with angling clubs), improvement of access points for angling (e.g. provision of styles), local angling businesses, permit provision, sustainable ways to enhance fish stocks throughout the catchment and potential for re-opening the river to salmon fishing, if only on a catch and release basis.

Nature and wildlife observation

- Identify areas which could be suitable for observation of river and riparian biodiversity as well as birds and other wildlife. Outline potential facilities (e.g. bird hides, nature finder apps) that will enhance wildlife observation potential. Identify (with examples) other relevant activities put in place along rivers elsewhere in Ireland or Europe which could be successfully developed in the Maigue catchment.

Other

- Identify any other activities (with examples from elsewhere in Ireland or Europe) that could possibly be encouraged and developed in the area. These could include activities such as swimming and canyoning if a suitable areas could be identified for these.

Deliverable 2: a document and presentation that outlines development possibilities in the above categories in order to encourage the interaction with and/or use of the river and/or river environs.

ANNEX 01

Baseline Report

Recreation and Amenity Potential of the Mague Rivers Catchment

SLR April 2021

(attached as pdf)

EUROPEAN OFFICES

United Kingdom

AYLESBURY

T: +44 (0)1844 337380

BELFAST

belfast@slrconsulting.com

BRADFORD-ON-AVON

T: +44 (0)1225 309400

BRISTOL

T: +44 (0)117 906 4280

CARDIFF

T: +44 (0)29 2049 1010

CHELMSFORD

T: +44 (0)1245 392170

EDINBURGH

T: +44 (0)131 335 6830

EXETER

T: + 44 (0)1392 490152

GLASGOW

glasgow@slrconsulting.com

GUILDFORD

guildford@slrconsulting.com

LONDON

T: +44 (0)203 805 6418

MAIDSTONE

T: +44 (0)1622 609242

MANCHESTER (Denton)

T: +44 (0)161 549 8410

MANCHESTER (Media City)

T: +44 (0)161 872 7564

NEWCASTLE UPON TYNE

T: +44 (0)191 261 1966

NOTTINGHAM

T: +44 (0)115 964 7280

SHEFFIELD

T: +44 (0)114 245 5153

SHREWSBURY

T: +44 (0)1743 23 9250

STIRLING

T: +44 (0)1786 239900

WORCESTER

T: +44 (0)1905 751310

Ireland

DUBLIN

T: + 353 (0)1 296 4667

France

GRENOBLE

T: +33 (0)6 23 37 14 14