

SOURCE - Swellan Lough Feasibility Study

Final Draft 16 November 2024



Swellan Lough

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Study

The Design Team was assembled specifically for this feasibility study. The team committed to gather relevant data that already exists in the form of reports, planning applications, maps and other studies, maps etc. The team reached out to various stakeholders including the local authority to garner all necessary data that would inform the study.

While the initial study recommended a single-phase consultancy, this was upgraded to a two-phase process. This report will be used to conduct a broader 2nd phase to involve a greater number of the town's stakeholders.

A limited field study was undertaken to gather specific data on Biodiversity and Water quality.

Based on this analytical foundation the team developed an appropriate response to the condition of Swellan Lough and interrogated the opportunities for an active or passive amenity while protecting and enhancing the biodiversity of the place. A key aspect of this approach was finding a sustainable response with the aim of returning a net benefit to the Landscape and the People of the town.

Introduction

Swellan Lough is a spring fed freshwater lake set into a Drumlin landscape just out of sight of the town centre. For the casual visitor it is an invisible entity. For the local it is a place of serenity, calm and peace. The lough has a long and storied history with townspeople interacting with the place through boating, fishing, swimming and walking. These activities varied depending on the season.

The lough is surrounded by private land, so access is facilitated by various local agreements. A right of way, which until recently was vested with the Catholic Bishop, facilitated access for the 2nd Boy Scouts and the local De La Salle Boys (primary) School for camping and swimming. Despite restricted access the lough attracts all sorts of activities some of which have been identified in the consultation process.

Research

The team engaged actively with **Cavan County Council**, who were generous in their support and provision of data.

Inland Fisheries provided important information on the nature of the sub surface biology of the lough.

The **EPA** provided reporting on the quality of the river catchment (Kinnypottle/Cavan River)

The **Water Company** provided the chemical analysis of the water.

Consultancy Process

When analysing the needs of this study it was considered that a single-phase consultancy was considered appropriate due to the shortness of the programme. When the biodiversity interrogation was delayed the team decided to move to a two-phase process. The first phase was conducted with a focus on the immediate stakeholders (along the lough edge), which consisted mainly of the principle landowners. Three of the closest housing estates on the western and northern boundary were also canvassed for their input. The questionnaire was purposefully open ended and contained no reference to any particular proposal so that the widest response was possible. The team were keen to have an open transparent process.

A mail drop, by hand, took place in early August with about 100 brochures having been distributed. The brochure set out the context of the survey and avoided any suggestion or proposal to encourage engagement and to avoid conflict at this early stage. The brochure also provided information on the Biodiversity Study which was to be conducted in part by drone.

The team was conscious of the particular sensitivities some people might have to any proposal that did not fit their expectations to avoid conflicts. To ensure the widest response, respondents were afforded the opportunity to reply using the stamped address envelope included in the mail drop or email their response.

Questionnaire

The questionnaire outlined six questions and provided additional space for respondents to add further notes. These were;

Q1 How often do you visit Swellan Lough?

Q2 Why do you visit Swellan Lough?

Q3 What do you like most about Swellan Lough?

Q4 What do you dislike most about Swellan Lough?

Q5 What do you think would improve your experience to Swellan Lough?

Q6 Do you have other suggestions of how Swellan Lough can be improved for all?

Stakeholder Response

The survey was a qualified success with 29 respondents, including 8 by email representing approximately a 30% response rate. The key words, terms or concepts that arose from the survey were the following, in order of priority;

- Boardwalk/Footpath
- Wildlife
- Better Access
- Inaccessible
- Peaceful
- Safety (concerns)
- Fishing
- View
- Beauty
- Boating
- Swimming
- Footpaths
- Jetty
- Public Seating
- Anti-social behaviour
- Walking
- Litter

Though there was no mention of a Boardwalk in the brochure there seemed to be a strong level of support for this type of initiative. The more active elements of Boating, Fishing and Swimming did make an appearance but were not as strongly held as that of walking or having an appreciation for the natural environment and the peaceful nature of the lough. Another feature that was not evident prior to this study was the importance that respondents gave to seeing the lough even if they did not visit the lough. It is a feature that dominates the landscape from many vantage points.

Quotes from Respondents to; Q2 Why do you visit Swellan Lough?

'Really nice peaceful place'

Very relaxing and peaceful'

'Fishing and wildlife. fresh air, peacefulness'

'Grew up at the lake as a child so it holds fond memories'

'Nearby and somewhat inaccessible'

'I love the peace and quiet, the look of the lake'

'I just enjoy the peace and tranquillity of swimming, fishing and just sitting watching the resident of family Swans raising their young cygnets every year'

Quotes from Respondents to; Q3 What do you like most about Swellan Lough?

'It's a very relaxing and pretty place. The swans and ducks are my favourite'

'The swans, waterhens and ducks that come to the lake every year.'

'The beauty of the lake'

'It's a beautiful lake with green surrounds'

'The view, how peaceful and perfect it is and in its unspoiled state.'

'It's beautiful and if developed would provide a healthy and serene amenity within walking distance to Cavan Town'

'View looking onto water gives a peaceful setting'

'The calm while being near the centre of town'

'The fishing experience and its tranquillity'

Quotes from Respondents to; Q4 What do you dislike most about Swellan Lough?

'The lack of amenities around the lake.'

'Not enough safety for children'

'It isn't accessible conventionally'

'No safe access to lake and very overgrown and not kept well'

'No access to the lough'

'Supposedly dangerous, for swimming.'

'Don't have any real dislikes. No walkway around it.'

'People outside the estate take up resident parking to walk to the lake'

'How inaccessible it is for the public, with only access through private property and fields.'

'Occasional anti-social behaviour.'

'The litter and rubbish and broken glass bottles along the stone shore and in the lake itself.'

'It is dangerous for swimming if you are not a strong swimmer'

'Lack of accessibility, lack of utilities for fishing and boating'

'We would not like to make the lake public. Its not good idea.'

'We would like to leave this lake untouched.'

'The rubbish people leave behind.'

Quotes from Respondents to; Q5 What do you think would improve your experience ...?

A boardwalk around the lake linking up all the housing estates in the area. It would give a very safe walkway to all the families in the area.

'As long as it is kept clean That's what I am concerned about'

'It need(s) to be well lit to avoid it becoming an anti-social hotspot, CCTV also.'

'Wild flowers supply walk area'

'Maybe a jetty or path, boardwalk just to be able to get closer and see more of the lake.'

'A path around it would be great with sitting areas.'

'Jetties for launching boats, water-skis and walkway. Nature information made available.'

'A walkway around the perimeter of the lake.'

'Development of community centre.'

'No further development, Perfect as it is'

'To have a lake so central in Cavan Town of this size brings fantastic potential if it were to be made accessible for the public. It would provide a peaceful and safe place for members of the public to visit, exercise and in particular be beneficial for those who may not have the means to visit places with similar amenities outside of the urban region, for example Killykeen Forest Park.'

'No need to improve it'

'Having inland fisheries patrol the lake for illegal fishing activities and to make sure the place is kept clean.'

'More boats on it'

'It is ok as it is. This development (note; none proposed) would only bring in anti-social behaviour, dog walkers, who do not pick up after their dog(s), drug users etc..'

'Leave in natural state of surroundings'

'Proper access to lake and a boardwalk, Worries about anti-social behaviour - so well-lit and CCTV. Dog park suitable for walkers. Jetty and access for kayak/small boats. Nature signs info about habitat Wild life that live there.'

Planning History

Swellan Lough itself has no specific planning history though the surrounding lands are dotted with plans for residential development ranging from years between 1990 and 2005. To the east of Swellan Lough, Cavan County Council applied for a regional sports campus in March 2024 (as highlighted in red below, Fig 1). It is this development that has raised the prospect of connecting the lough into a wider environmental and nature led amenity strategy.



Fig 1 Swellan Lough, County Cavan with planned Regional Sports Campus marked in red.

Regional Sports Campus (ABP Reg. Ref. 319306)

Planning application documentation submitted notes that the application provides connections to Swellan Lough as far as possible within the site boundary. There is a proposed self-closing pedestrian access gate along to the northwest of the site connecting onto Kilnavara Lane.

Policy Context

Cavan Development Plan 2022 – 2028

The Cavan Development Plan 2022-2028 came into effect on 11th July 2022. The Cavan Town Local Area Plan 2022-2028 is merged with the new Cavan County Development Plan 2022-2028. The visions, policies, objectives standards and guidance contained within the Development Plan and associated appendices and maps, apply to the Cavan Town Local Area Plan 2022-2028.

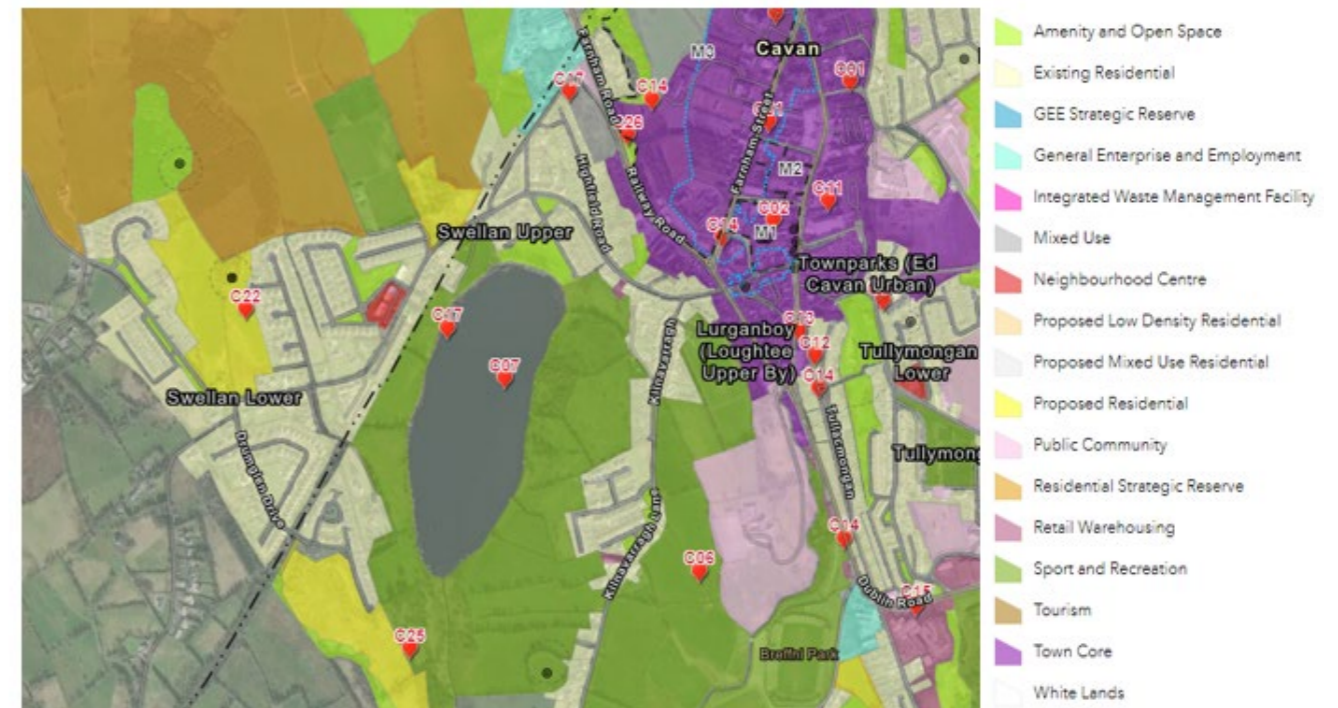


Fig 2 Cavan Development Plan Land Use Map.

Land-use Zoning

Lands surrounding Swellan Lough are zoned under the Cavan Development Plan 2022-2028, as Sport and Recreation. The objective of these lands is to 'protect and provide for sporting and recreational areas'.

The Development Plan notes that only sporting and recreational type facilities will be permitted on these surrounding lands. The permitted uses include allotments, playground, golf course/ pitch and putt, open space/ park, sports facility, and tourism-recreational complex.

Under the Cavan Local Area Plan 2022-2028, Swellan Lough is identified as rivers & lakes, as per map Cavan Town Local Area Plan map below, **Fig 3**.

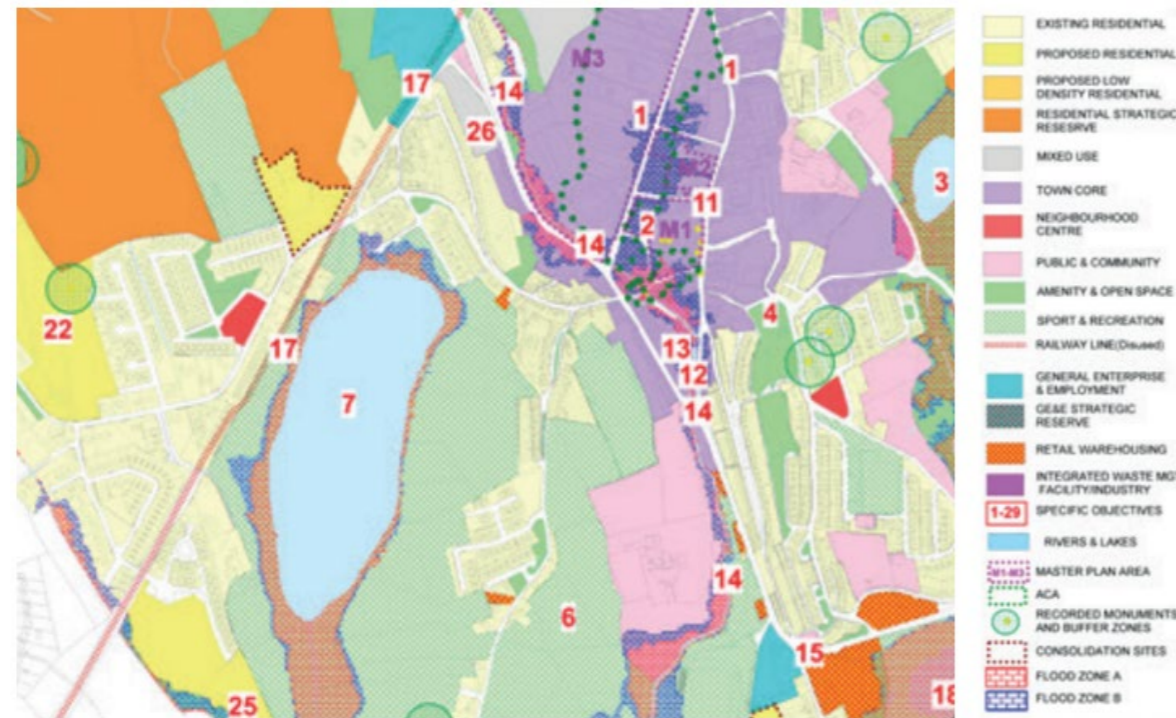


Fig 3 Cavan Town & Environs Local Area Plan Map.

Policies and Objectives

The Development Plan notes that “Swellan Lough has appropriate development opportunities, especially having regard to its close proximity to the proposed Sports Campus” (pg 53).

The Development Plan sets out various objectives with regard to the potential use of Swellan Lough:

Specific Map Based Objectives

Swellan Lough has 2 no. specific map-based objectives, Objective C07 and Objective C17 as set out below:

Map Based Objective C07 : “Support the increased usage of Swellan Lough – linkages to the central town core, appropriate development opportunities & creation of a modern visitor attraction

- Creation of permeability/linkages to the central town core and Railway road, creating pedestrian and cycle friendly dedicated routes
- Consideration of appropriate development opportunities
- Creation of an amenity site and walking, cycling routes around the Swellan Lough
- Provision and protection of biodiversity/ wildlife with local and national initiatives/ education opportunities
- Creation of a modern visitor attraction
- Linkages to old railway line/greenway and Dublin Road”

Map Based Objective C17: “Promote and support the expansion of the development of a greenway in Cavan town.”

Regional Sports Facility / Centre

With regard to providing a regional sports facility, section 2.2.9.1 of the Development Plan states the following:

“Securing the preferred option will require partnerships with the Cavan County GAA Board and the Royal School regarding the transfer or purchase of lands to Cavan County Council and the integration with the existing capital plans at Kingspan Breffni Park. The development seeks the provision of a link road between the existing Kingspan Breffni Park stadium and the Royal School, connecting Dublin Road to Kilnavara Lane. This opens up access to Swellan and the potential for future development of outdoor activity and lakeside activity. In addition, the link road should be developed to alleviate traffic congestion into the Town Centre on the Dublin Road.”

Open Space and Amenity

Development Plan Objective CSC 09: “Promote appropriate development opportunities in the vicinity of Swellan Lough, Green Lough and Killymooney Lough to create an amenity site that could provide for a walking cycling route around the loughs”

Development Plan Objective CSC 10: *“Protect the biodiversity and education opportunities that exists in Green Lough, Swellan Lough and Killymooney Lough.”*

Biodiversity

Development Plan Objective CSC 10: *“Protect the biodiversity and education opportunities that exists in Green Lough, Swellan Lough and Killymooney Lough.”*

Use of Waterways

Development Plan Objective LW04: *“Facilitate increased access to Cavan’s waterways, from towns and villages where visitor services are located, with an emphasis on providing a strong visitor experience associated with the lakes and waterways and their heritage and amenity value, including trails, bird hides, and water sports facilities, subject to the protection of environmentally sensitive areas and the requirements of the Habitats Directive.”*

Development Plan Objective IW1: *“Protect and enhance the natural heritage and landscape character of the County’s Waterways and maintain them free from inappropriate development and provide for public access, where feasible, acknowledging the existence of contiguous Natura 2000 sites.”*

Development Plan Objective IW6: *“Support the development of blueways in County Cavan.”*

Summary

- Swellan Lough is located within the Hidden Heartlands Area (Failte Ireland Location)
- The Development Plan notes that Swellan Lough has appropriate development opportunities, especially having regard to its close proximity to proposed Sports Campus (pg 53)
- Emphasis on biodiversity and green infrastructure with the promotion of green way/ cycling routes.

The Cavan County Development Plan establishes the context for Swellan Lough to contribute to the leisure and amenity asset base of Cavan Town, linking with the potential future recreational facility to the east of the lough. Clearly sensitivities arise in relation to protecting the natural environment at Swellan Lough, in addition to protecting residential amenity for existing residents around the lough, however, the Development Plan is clear in its objective to develop Swellan Lough as a location for outdoor activities and lakeside amenity in the heart of Cavan Town. It is considered that through appropriate planning, Swellan Lough can become an attractive amenity area for Cavan Town.

Biodiversity Overview

Swellan Lough is a freshwater lake, approximately 16ha in area, located close to the centre of Cavan town. It is surrounded, more-or-less, by agricultural fields. The fields on the eastern side of the lake rise steeply, creating a ridge (Kilnavara) that effectively separates the lake from the town. A considerable proportion of the lake, though not all of it, is surrounded by a narrow band of fringing vegetation (primarily reeds). Much of the shoreline of the lake is in private ownership, and the lakeshore is not readily accessible to visitors, with the exception of a section of the northern side, which can be accessed from the Glenlara Estate. At this location there is a gap in the reeds allowing visitors to directly access the shore. It appears that the lake is spring-fed. A stream, known from the EPA database¹ as the Swellan Lower, flows out of the lake from its southern-most point. This stream joins the Cavan River and flows through Cavan Town, providing a direct connection, via the Cavan River, to Lough Oughter and Associated Loughs SAC and Lough Oughter SPA (approximately 10km downstream (but 3km as the crow flies)). These European sites are designated for nature conservation under the EU Habitats and Birds Directives. As such they have a high degree of legal protection. Any works proposed upstream (such as at Swellan Lough) must have regard to the downstream designations (**Fig.s 4 - 6**).

Water Catchment

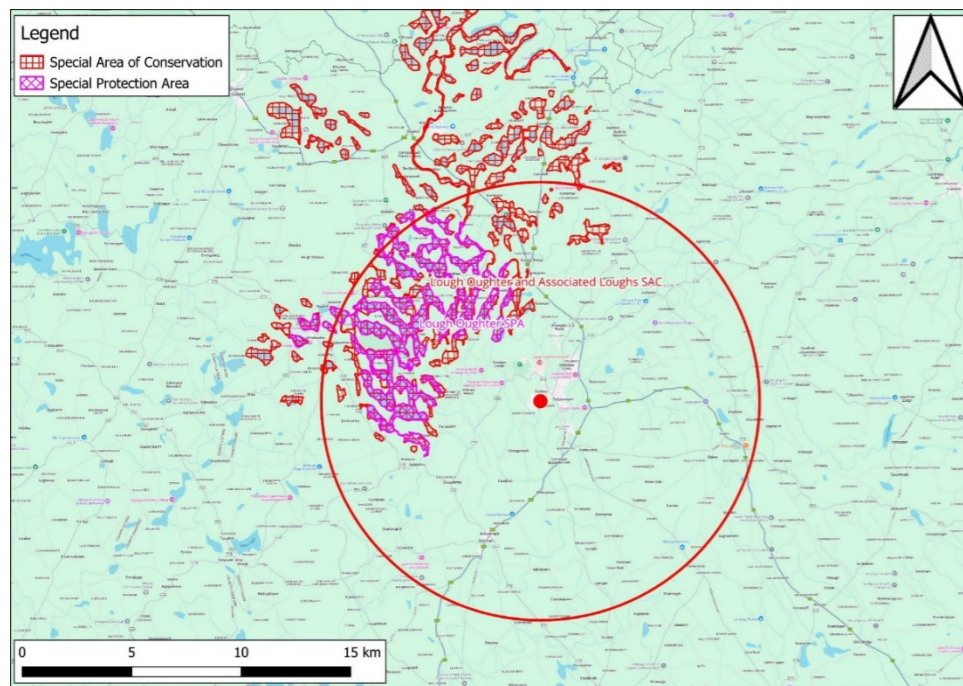


Fig. 4 European sites within the vicinity of Swellan Lough. A circle of 10km radius is included to provide context

Water Catchment

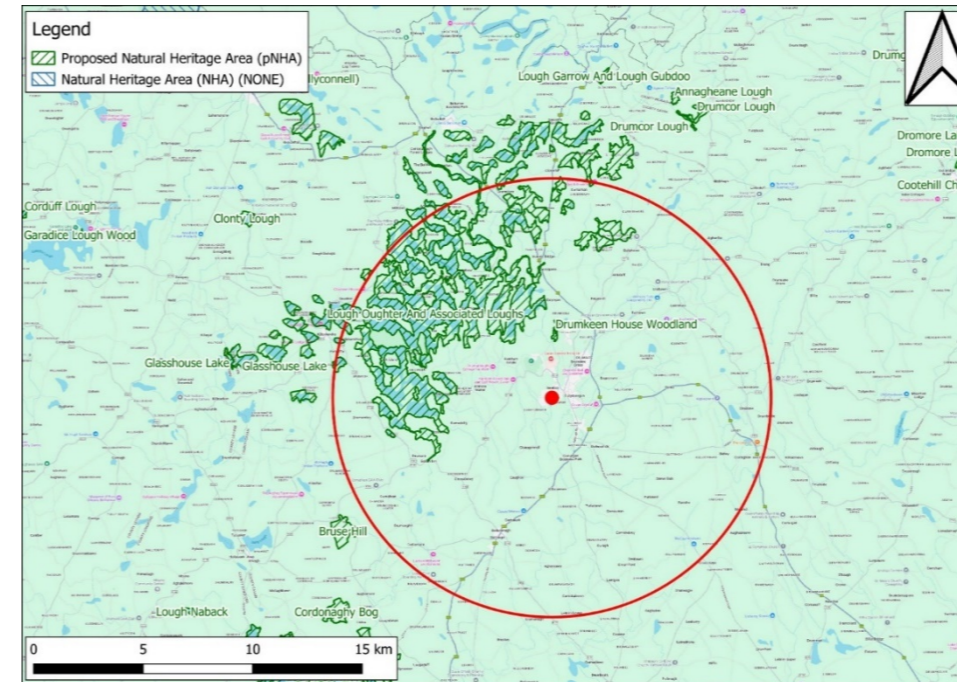


Fig. 5 Nationally designated sites within the vicinity of Swellan Lough. A circle of 10km radius is included to provide context

Lough Oughter SPA

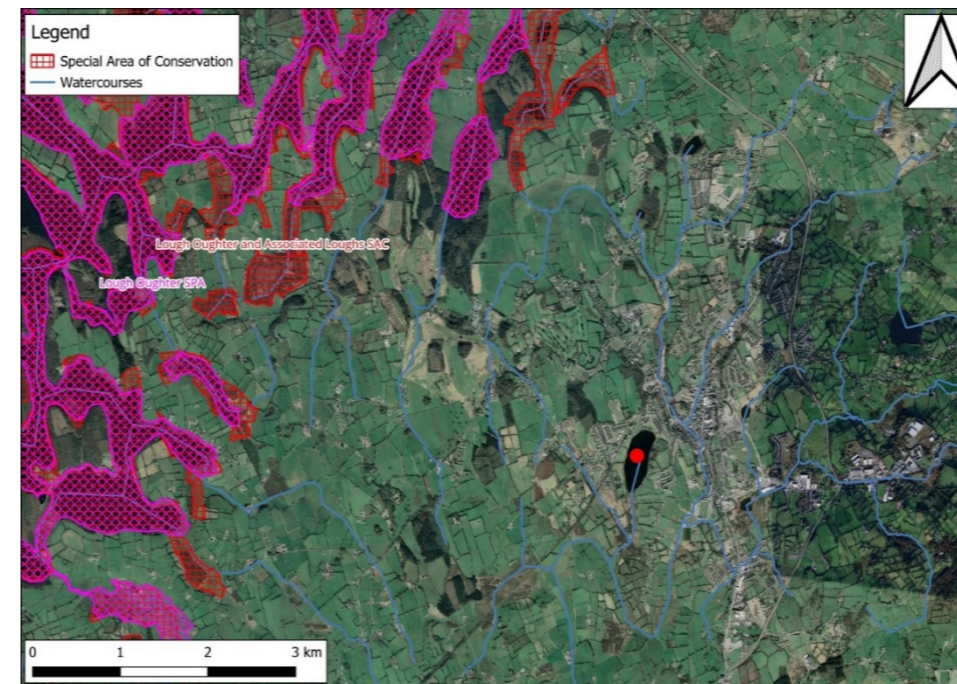


Fig. 6 Connectivity via water to Lough Oughter SPA and Lough Oughter and Associated Loughs SAC

¹ <https://gis.epa.ie/EPAMaps/AAGeoTool>

One of the key habitats in the drumlin lakes of Lough Oughter and Associated Loughs SAC is *natural eutrophic lakes with Magnopotamion or Hydrocharition – type vegetation*. These lake habitats are characterised by high abundance and diversity of pondweeds and relatively high levels of (naturally-occurring) phosphorous and chlorophyll. The preliminary indications are that Swellan Lough may have similar characteristics to the lakes included within the SAC. It appears to have reasonable amounts of macrophyte vegetation, such as pondweed, and it is likely to be subject to similar pressures, threats and vulnerabilities, such as water pollution from man-made sources, and increased turbidity caused by disturbance to the water column.

Perhaps because of the topography and general land use, the fringing band of reed-dominated vegetation around much of the lake is fairly narrow – confined to a strip no more than a few metres wide. Beyond this the land rises steeply (to the east) or more gently (to the west) into agricultural fields (none of which appear to be subject to significant management or intervention). In places however, pockets of marsh or swamp communities have developed on the lake edge, particularly in areas where the gradient is shallower.

The steep hill on the eastern side of the lake is divided by mature tree lines and hedgerows into agricultural grassland fields, currently grazed by cattle. The fields on the western boundary are similarly vegetated (agricultural grassland, with marshy, wet areas), but are narrower and less steep. They are divided by hedgerows and, on the day of the survey in August 2024, either empty or being used for grazing by horses. Given the low level of management it is apparent that the fields are seeing an expansion of scrub in places.

Apart from the habitats that are present, preliminary indications are that the lake is of significant (county level or higher) value for a range of protected species. A large flock of little grebe was present on the lake on the day of the site visit, and a wide range of other species was recorded in passing². It is likely that white-clawed crayfish is present in the lake, and otters are certain to use the lake and stream for hunting and commuting.

The habitats (eutrophic/mesotrophic lake, fringing reeds/swamp/marsh, agricultural fields/hedges/trees/woodland and scrub) are common in County Cavan, but are relatively unique in a setting so close to a busy town. Similarly the species that are likely to be present (a wide assemblage of birds as well as otter, bats and other mammals and, in all likelihood other protected species such as white-clawed crayfish and numerous fish species).

² A bird survey was not carried out, but numerous common birds, typical of agricultural land were recorded, in addition to kestrel, heron and others.

Biodiversity Study - Drone Views



Fig. 7 View north along eastern lake side – see mature hedgerows and tree lines dividing the agricultural fields (from drone survey 28 August 2024).



Fig. 8 View of the western side of the lake – the relatively narrow band of fringing vegetation is visible in the image (from drone survey 28 August 2024).

Biodiversity Study - Drone Views



Fig. 9 View of the southern part of the lake – the point where the Swellan Lower stream flows out of the lake (from drone survey 28 August 2024).



Fig. 11 The northern part of the lake. Note the line of poplars – the lake shore is most easily accessible to the right of this tree line. Note also the cattle grazing the fringing vegetation, and the marked poaching by cattle along the shore. (from drone survey 28 August 2024).



Fig. 10 View north from the southern-most part of the lake – note the contrasting characteristics of the eastern and western banks (from drone survey 28 August 2024).



Fig. 12 Macrophytes (aquatic vegetation) in the shallows near the south eastern lake shore . (from drone survey 28 August 2024).

Potential Development Opportunities

Swellan Lough, given its location and the difficulties associated with direct access, is fairly undisturbed and, on the day of the survey at least, peaceful. Although detailed ecological surveys have yet to be carried out there is no doubt that the lake and its surroundings are of high ecological value. As such, any interventions or developments proposed on or close to the water should take the ecological setting into account.

That being said, there are opportunities for sensitive development, to encourage more use of the lake and to connect it to Cavan town without compromising its ecological integrity. Ecological tourism (for example bird watching or environmental education) may be facilitated, and it may be possible to develop features such as boardwalks/pontoons (parallel or perpendicular to the shore, floating or stationary) or bird hides, along or close to the shoreline. A separate strategy for a Biodiversity Centre is identified below; **SOURCE**, see page 20.

While it is less likely that high impact activities would be feasible, it may also be possible to carry out low impact activities such as kayaking.

All development proposals will need to avoid any significant ecological impacts and should contribute to the overall enhancement of local biodiversity, for example; reducing inputs from agricultural sources.

Pre-development Requirements

Given the sensitive nature of the receiving environment all development proposals should be accompanied by comprehensive ecological survey reports and ecological mitigation and enhancement proposals, as well as screening for Appropriate Assessment. The ecological surveys will be essential in informing the design of any proposed development. They will also be required so that a long-term visitor management strategy for Swellan Lough can be developed.

As noted, any application for development will require a suitable level of up-to-date ecological survey and assessment. In order to develop a high-quality development masterplan for the lake, it is recommended that comprehensive biodiversity surveys are undertaken as early as possible. The surveys should be used to inform the masterplan proposals and development options as well as providing the baseline for any planning applications

Additional Detailed Surveys

The following is a suggested list of detailed surveys that would be helpful (if not essential):

- Bird surveys: summer, winter, waterfowl.
- Bat survey (using hand-held and static bat detectors).
- Habitat/botanical surveys, of both the lake itself (including macrophytes), the lake margins/shore and the surrounding fields. To include rare plants and invasive alien plants.
- Large mammal surveys (primarily badger and otter, but records/sightings of pine marten and red squirrel should be included).
- White-clawed crayfish.
- Surveys of fish species within Swellan Lough.

EPA Monitoring

Reporting from the EPA and Inland Fisheries confirm that though the Kinnypottle/Cavan River is a valuable Trout River it is considered at risk. The two monitored river segments, 010 and 020 are not reaching the environmental objective of *Good*. The significant issues are *Nutrients and Organic pollution and the significant pressures are Agriculture and Urban Runoff*. As Swellan Lough is one of the sources of this catchment its role in contributing to a healthy river profile cannot be underestimated. Under the Local Authority Waters Programme (LAWPRO) the Cavan River 010 and 020 waterbodies are both included in the Cavan River Priority Area for Action.

Summary

From a biodiversity perspective Swellan Lough is undisturbed and not subject to significant biodiversity pressure. There are opportunities to connect the lough to Cavan town and to open it up to limited increases in visitor numbers – provided this is done in a sustainable manner. It may be possible to develop ecotourism infrastructure at the lake, including boardwalks and kayaking infrastructure for example.

However, prior to any development, and in order to fully inform a development strategy, habitat/botanical and fauna surveys are required so that the overall ecological value of the lake and its surroundings can be fully understood. The survey results will inform the design of any proposed interventions/developments and will also be required in order to enable a comprehensive management plan/visitor management strategy for the lake to be prepared. *See Environmental Management Strategy below.*

Comparative Analysis

Acres Lake has been cited by the authors and the Town Team as a possible case study example. Acres Lake on the outskirts of Drumshambo is a destination layover for water cruisers on the Lough Erne Waterway. It has a number of key conditions that makes it an attractive destination for those on the water and those visiting the waterways. It differs substantially from Swellan comparatively. This table outlines the key dimensions which offer clarity to the comparison.

	Acres Lake (Drumshambo)	Swellan Lough (Cavan)
Access (road)	Is readily accessible by road	The Lough is landlocked and has limited access via Glenlara Estate.
Access (parking)	A small amount of parking next to the lake and has additional road frontage parking which is often oversubscribed.	No accessible parking near the lough, except for parking in the Glenlara Estate.
Access (water)	Has a berthage for visiting water cruisers.	Is not navigable from outside the Lough.
Pedestrian Access	A floating boardwalk provides access to boats. A walkway along the shoreline links to another floating boardwalk that provides access to a Greenway	Currently there is no formal access. A gap from the greenspace in Glenlara Estate provides a difficult transition in levels. Informal access is possible via a field on the Eastern boundary. An old right of way from the Glenside Road is overgrown and inaccessible.
Supporting Activities	Acres Lake benefits from having supporting ancillary functions such as the playground, visitor building (including toilets) and a municipal outdoor swimming pool.	Swellan Lough has no ancillary functions as it is dominated by private landholdings of one-off houses, some multi-unit housing developments and low intensity farmland, mainly used for grazing.
Activities	The lake supports a wide range of activities including boating, sailing, fishing, swimming, and leisure. It is a clearly publicly accessible and highly visible amenity on the edge of an established town. It is deemed successful which can be easily measured by its popularity.	Despite the significant restrictions, Swellan Lough has and continues to support various activities including boating, fishing and swimming. These are possible where owners have direct access to the water or via private lands and Glenlara Estate.
Biodiversity	The lake appears to have a rich variety of habitats and species. The floating boardwalk has been used to isolate a shallow area for reed bed area for habitat protection and regeneration. This area appears to have had considerable success providing support for fish stock and a wide variety of insects.	The biodiversity study though limited points to Swellan Lough having a good level of Biodiverse elements but these can be improved upon. The function of Swellan Lough as a headwater to Kinnypottle should not be underestimated in terms of importance.
Topography	Acres lake is at a level not much lower than the surrounding access roads and pathways making access relatively easy.	The only at grade access for Swellan Lough is available from Glenlara Estate. A new pathway, proposed from St, Phelim's place will still have topographical challenges.

Table 1 Comparative study of Acres lake and Swellan Lough

Development Commentary

Table 1 shows clear differences between the two cases. **Fig. 13** below illustrates the scale of the two lakes and despite the larger profile of Swellan Lough it has not been subject to the same intensity of use as Acres Lake due in large part to limited access and its steep topography. Acres Lake could be considered in danger of being damaged from over use. However, it would appear that the lake has not suffered from intensification and this may be attributed to the lack of parking close to the lake. When the parking is over subscribed and visitors take to illegally parking along the narrow approach roads it would appear that this is a natural deterrent to those visiting, choosing instead to go elsewhere. It is also clear that this intensity is largely a weekend and holiday phenomena and the use of the lake returns to a lower intensity of use by the locals who ultimately benefit from the investment. It does not follow that Swellan Lough, which is about three times larger than Acres Lake, could support three times the amount of activities. A commensurate amount of investment in infrastructure, ancillary activities and in particular improved access would need to follow. One of the particular challenges is easing access across the challenging topography through lands that adjoin Swellan Lough. It should be noted that Leitrim County Council are planning to add 70 additional car spaces on land close to the newly protected reed beds at Acres Lake.

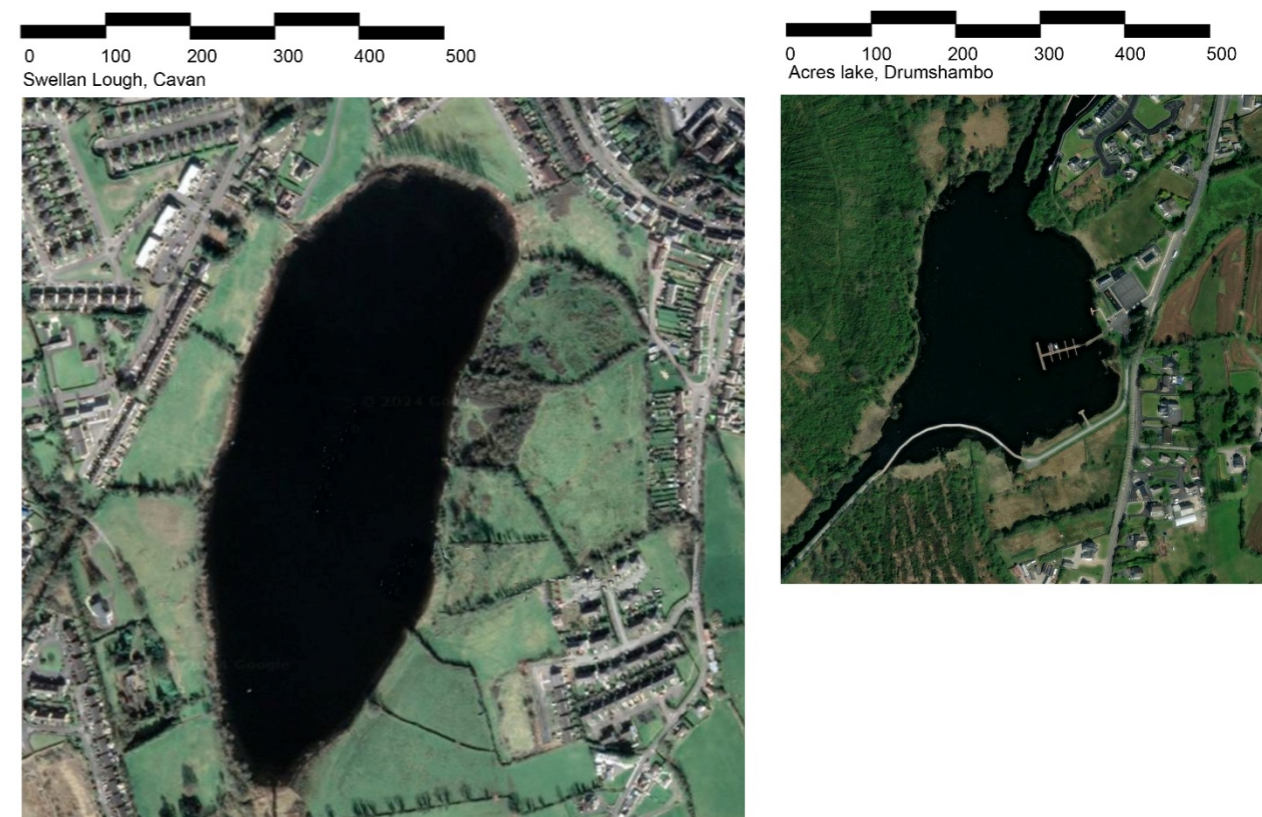


Fig. 13 Swellan Lough (left) is considerably larger than Acres Lake (right). Despite this scale difference Acres Lake offers and supports a much larger range of activities.

Design Approach

The town of Cavan has the good fortune of having a wonderful lough on its doorstep. It is essential to consider how well the citizens of the town can engage with and respect this valuable environmental resource as a source of health and wellbeing. It has been documented that even gentle walking brings about better physical health outcomes and contact with nature de-stresses and calms the mind. With increased digital use and screen time, younger people in particular benefit the most from a break from a sedentary indoor life.

Swellan Lough has the potential to be that place where nature, water and wildlife are close at hand. The opportunity to appreciate these fundamental attributes can be increased through measured techniques to facilitate access.

There is the matter of the approach as to how the pathways and associated areas are executed. The work requires a degree of subtlety in its details, in the positioning of carefully calibrated moves that ensures the enhancement and augmentation of the existing habitats. The facilitation of new pedestrian experiences requires careful modification of the existing site conditions which impacts private and assumed common property rights. This can only be undertaken with negotiation and agreement. With additional care in how these rights are enjoyed, it is possible to extend access to and around the lough's shoreline pleasures without compromising these rights.



Fig 14 Sketch concept outlining the possible boardwalk and access

Masterplan

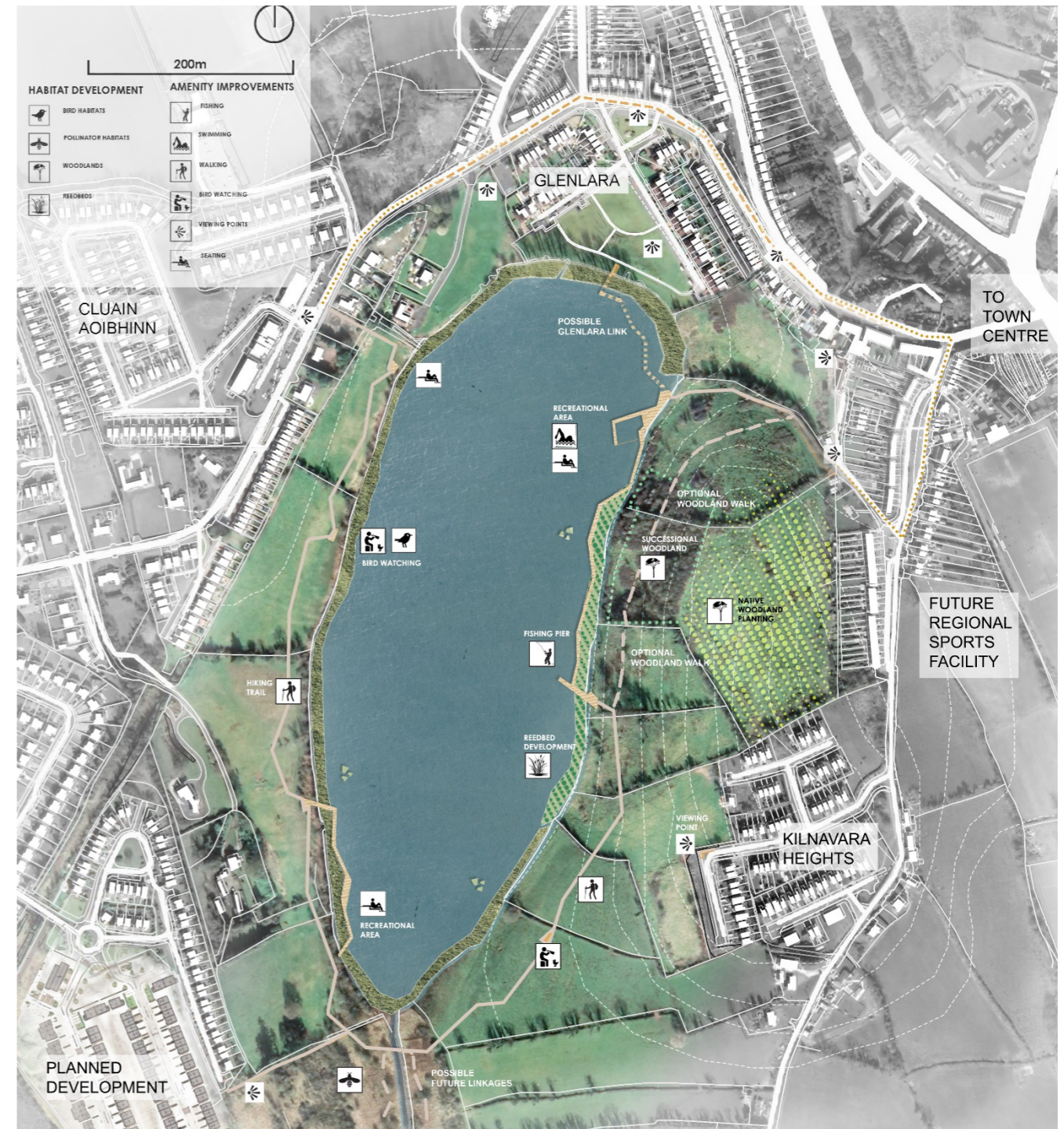


Fig 15 Overview of Masterplan

This project contributes to the strategies being implemented in towns and cities all across Ireland that promote a shift away from car usage, in favour of cycling and walking. This proposal connects the Regional Sport Centre, to Kilnavara Lane, to St. Phelim's Place, to pathways that link and edge field boundaries that connect to existing appropriated pathways (eastern shore), and proposed developments (western shoreline), bridging and connecting, linking and opening towards Lower Swellan Road. This does not offer a short cut, more an extended wander that offers the citizens and locals an opportunity to engage with the local topography and wildlife. It provides a sure footing for the pedestrian experience along the lough, through reed beds, under tree canopies, close to and out on the water that allows for protected marginal planting and wildlife. Low key, unostentatious and considerate of detail informed by a reticence to intrude in those zones that support and enhance biodiversity is an ethical and more reflective way to move forward.

This way of accommodating something noteworthy while communicating that we can assure the visitor is life affirming and worthwhile. Our proposal allows nature to dominate to a degree that the new access arrangements will seem effortless, where Patrick Kavanagh might have said that here is somewhere *"where no one will speak in prose who finds his way to these Parnassian islands"*. This project will show how other benefits accrue environmentally, socially and culturally while exemplifying town fringe renewal and civic resilience.

The work seeks to minimise conflict between the often competing and conflicting values

- Access to water's edge versus undisturbed nature
- Discrete lighting versus disturbance to bats and nesting birds
- Intimate nature paths versus universal access
- Speed walking versus languid strollers

The reconciliation of these potential conflicts, and the responding design elements beyond what is strictly necessary or envisaged has the potential for trialling, upscaling and replication elsewhere, along other stretches of the shoreline and by extension to a network of extended greenways around the town.

The Swellan Lough network of board, loops and trails would retain that sense of being in an overwhelmingly green space where the directional thrust of the loops and circuits envisaged are modified by high quality details that encourage one to linger rather than march along. New interventions (hides and platforms) and seats correctly positioned offer overlooking points can be sheltered and integrated within the terrain. At key locations around the lough other viewing points are encouraged to connect to the extended landscape. At entry points and along the route, the positioning of discrete information/interpretation panels provide an opportunity to observe nature without disturbing the wildlife, can contribute to the attraction of the lough as a place of calm.

Blind or partially sighted people can be catered for allowing them to feel the cooler air under tree canopies and the change in soundscape when near water. Prams and wheelchairs will have to be catered for to allow for an integrated mobility plan that is safe. The design of paths, ramps and slopes will need to take heed of the challenging topography. The proposed routes follow the least challenging context. Entry points at St. Phelim's Place and Lower Swellan Road may require more dramatic interventions.

A carefully considered construction approach will need to take cognisance of the environmentally shoreline. The best practice would be to use only native plant materials and those sourced or seed propagated from local sources to protect and enhance the existing biodiversity. This nature-based approach will quickly heal any superficial scars in the landscape that even minor construction might occasion allowing those plants that are present to repopulate and regain their primacy.

Primary Access

For those who live adjacent to the Lough it is an amenity without measure. Public access is not possible without crossing private land. Even the apparent public access afforded via Glenlara Estate amounts to a form of trespass. The estate has not been *'taken in charge'*. This does not prevent members of the public accessing the northern edge of the lough where there is a mature reed bed. To take advantage of the proposed regional sports centre and to form connections to the public realm of streets, lanes and roads surrounding the Lough it is proposed to formalise an entrance from St. Phelim's Place. Due to the challenging topography of the environs this affords the easiest transition to the lough shoreline. The area marked in yellow in **Fig 16**, is a confluence of pedestrian and vehicular activity. With the proposed connection to the Sports Centre this will require traffic calming measures. This is a challenge and an opportunity. It will require a reconfiguration the current public realm, the car parking provision and improved public space.

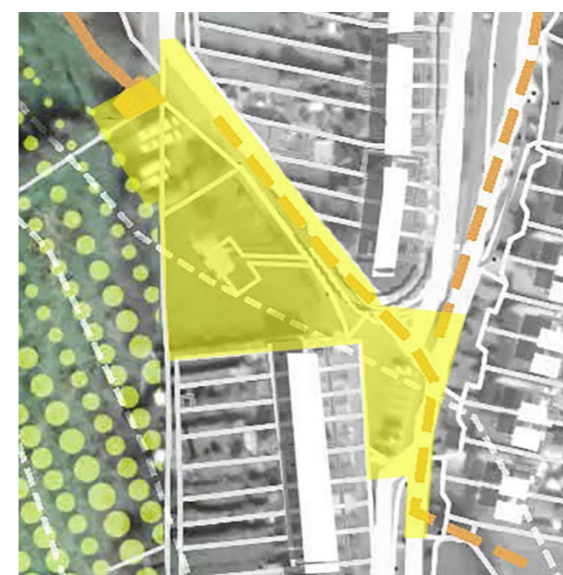


Fig 16 St. Phelim's Place



Fig 17 Pathway to Shore

From the rear of St. Phelim’s Place the path to the lough shoreline follows the existing hedge and tree line. This extended pathway follows the least challenging topography. **Fig 19** shows the path circling the hill that dominates the view of the lough on the Eastern shore. Optional pathways should be open for consideration subject to landowner agreement.

Specific Strategic Moves

The strategy for this masterplan is based on a biodiversity first principle, *see design statement above*. Access to the lough is part of a series of controlled and protected landings. These are located where the impact on existing mature reed beds and shoreline biology is less critical. At Glenlara Estate a connection, subject to local agreement, could provide an access to a boardwalk anchored to the existing break in the reed bed. This could link up to the pathway that enters from St. Phelim’s Place. At the intersection of these two paths is where we have located a protected recreational and swimming area.



Fig 18 Access from Glenlara Estate

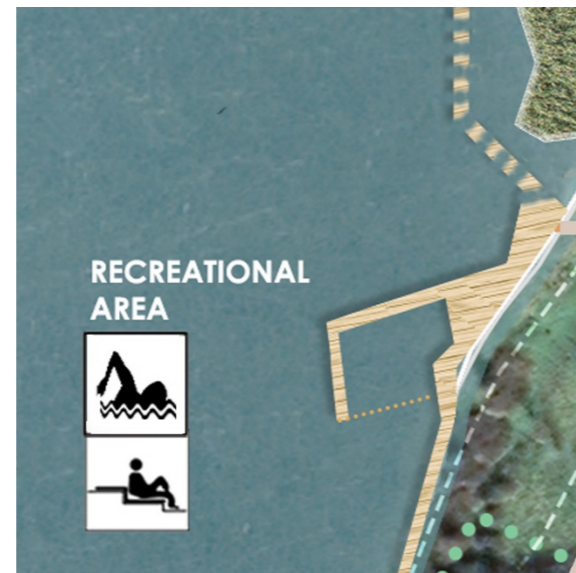


Fig 19 Arrival from St. Phelim's PLace



Fig 20 Landing Point and Proposed Area for Protected Swimming Area



Fig 21 Reed Bed Protective Boardwalks



Fig 22 Example of a Protected Swimming Area

Biodiversity Protection

The Biodiversity report emphasises how important the lough is to its immediate ecosystem and to the ecosystem of the Kinnypottle River (Cavan River). While the river is considered ‘at risk’ it is a valuable nursery river for freshwater trout. Without protecting the source waters of Swellan Lough any river improvements may prove futile.



Fig 23 Biodiversity Protection



Fig 24 Biodiversity Protection

In order to provide access to the lough the team are aware of the potential impacts on the ecosystem and rather than adopt a mitigation strategy, this proposal protects and enhances the existing. The proposed pathways are designed as low impact through the fields or on a floating boardwalk. In both instances the pathway is located away from the reed beds.

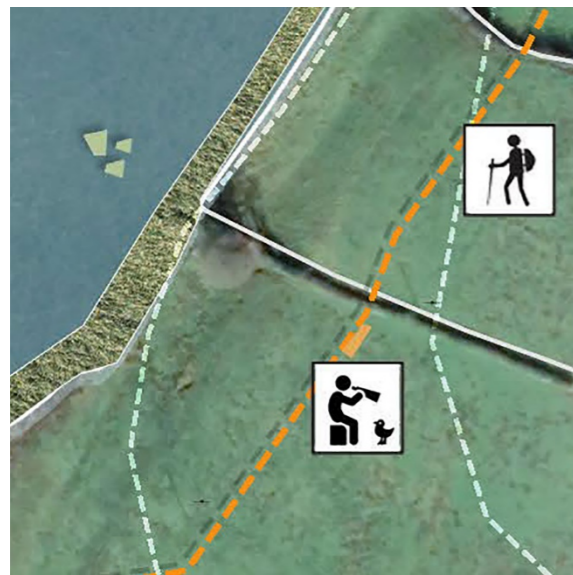


Fig 25 Eco Trails



Fig 26 Sculptural Bird Hides

Fishing platforms are provided on jetties that take the activity away from sensitive fish nursery areas.



Fig 29 Birdwatching



Fig 30 Fishing

Wildlife Protection

In particular areas where there is highly sensitive conditions the proviso of a walkway has been avoided. In other places the boardwalk extends out into the lough and similarly the pathways avoid the sensitive landscapes. Along these Eco Trails the visitor encounters various places of interest that are marked by viewing platforms or hides. Floating islands can be added to provide additional nesting habitats. This facilitates the development of the ecosystem in deeper waters expanding the natural profile and creating the potential for a significant wildfowl and wild bird population which in turn will attract people to the lough.



Fig 27 Artificial (floating) Islands for Wildlife



Fig 28 Native Woodland Development

View Corridors

A significant finding in the consultancy was the value given to views of the lough even when access was not commonplace. The team proposes further enhancement of this recognising critical locations on Highfield Road, Lower Swellan Road, and Kilnavara Heights to provide people with a vantage point, a seat and possibly shelter to engage the observer. Similar further developments along Lower Swellan Road should consider view corridors to ensure that the lough does not become ‘walled off’.



Fig 31 Viewpoint - Kilnavara Heights



Fig 32 Viewpoints - Glenlara & Highfield Road

Where there are sufficient native tree occurrences it is proposed to further enhance these with additional native planting in particular along the eastern shoreline.



Fig 33 View Corridors – Kilnavara Heights



Fig 36 Viewing Corridor Lower Swellan Road



Fig 37 Viewing Platform (amusementlogic.com)

Since one of our significant findings is the role the Swellan Lough plays in the lives of those who live around the lough these view corridors offer important opportunities for residents and visitors alike who can partake in the enjoyment of the surrounding natural features. Views from Kilnavara Heights or Highfield Road can be further enhanced by small public interventions that bring attention to the views, and encourage a greater awareness among those who pass by.



Fig 34 Viewing Corridors



Fig 35 Viewing Platforms at strategic locations

Simple platforms, seating and frames can attune the viewer to particular components of this landscape. Providing a place to rest may be sufficient to draw attention to the place. They should not be mere random placements, rather considered devices that carry information and meaning to those who live and visit the area.

The examples shown here vary in terms of the landscape they sit and according to their materials. In each case the intervention is scaled to the event, to the potential for engagement.



Fig 38 Viewing Platform
(The Wild Deck Company)



Fig 39 Viewing Platforms
(www.icelandthebeautiful.com)

Other ways in which people may engage with the surroundings might include artistic interventions that border on Land Art. Perhaps not as dramatic as the immersive experience in Austria below, but worth considering when moving to the commissioning stage of this project.



Fig 40 Immersive Viewing in Lake
(www.simplicitylove.com/2013/07/underwater-observation-platform-austria.html)



Fig 41 Immersive Viewing in Lake
(www.simplicitylove.com/2013/07/underwater-observation-platform-austria.html)

Eco Trails

The pathway strategy is the most critical to the success of the plan. It follows a simple principle of avoidance. A buffer zone along the lakeshore is to be maintained throughout. Where pathways follow the land, the surface is to be a low impact gravel type surface, easy to maintain and with few barriers. Where the pathway around the lake necessitates a boardwalk, it is proposed to be floated, offset from the shallow shoreline to allow reed beds to flourish in turn providing a nursery habitat for aquatic species and insects. This is especially appropriate along the eastern shoreline where there is limited space. On the western shoreline it is proposed to carry out the same strategy but the field pathways may be incorporated into further developments subject to planning permission. It would be appropriate to require suitability assessments along with conditioning access routes and view corridors as above ensuring public access.

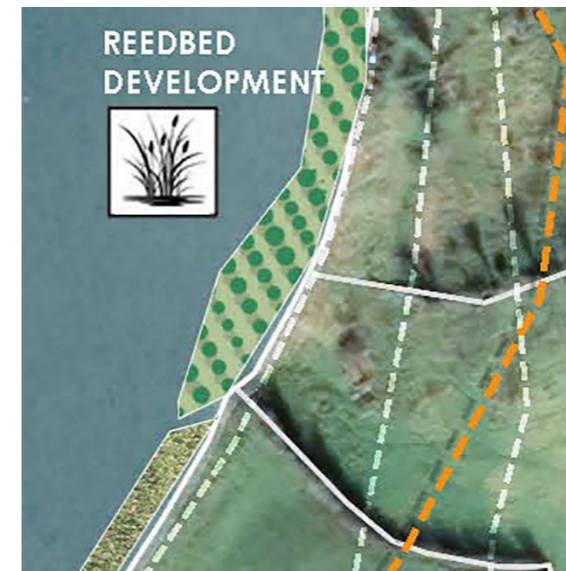


Fig 42 Reed bed protection and Eco Trails



Fig 43 Unbound low impact Eco Trails

The specific topography in some areas is challenging and while the effort has been to select pathways that can facilitate universal access it may not be possible in all cases. Similarly, the proposed pathway design is for multimodal access with a priority shown to pedestrians. This is due to the projected density of users which would not support the development of a separate bike trail.

One particularly sensitive area is the marsh to the southern part of the lough where it exits into a stream that connects to the Kinnypottle/Cavan River. In this instance it is proposed to utilise a bridge like causeway to link the two sides joining the Eco Trails to form a loop from Kilnavara to Swellan Lower. It is noted that this adjoins a housing development which is under construction. Meetings and consultations with the landowners on the southern and eastern boundary appear to favour a semi-public engagement. It is clear that this amenity would bring benefits to these landowners and the eventual residents of these new communities.

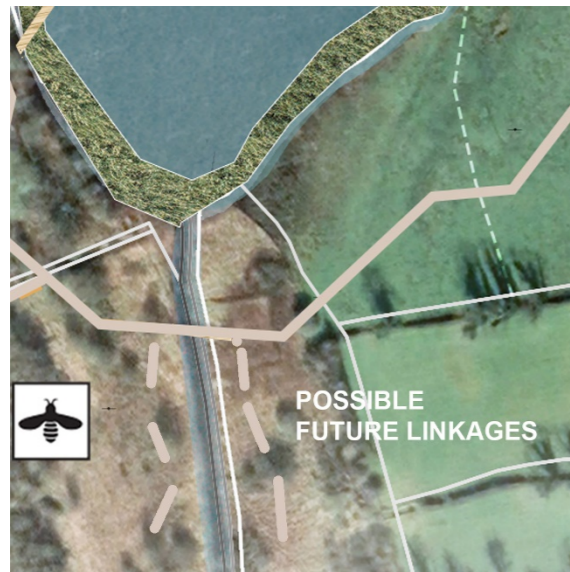


Fig 44 Sensitive outflow marsh



Fig 45 Low impact wetland bridging / walkway
(www.ingersolllandcare.com)

Greenways

In 2000 the **Lille Declaration** declared a commitment to a “European Greenway Network”, to work towards the development of a network of greenways. The signatories requested that *The European Union* consider the European Greenway Network as one of the EU’s priority objectives. Aside from targeting necessary funding it also set to develop the framework, and guidance on the development of a trans-European routes. This has led to significant initiatives across the continent and in Ireland which has seen successful take up in various communities. For Regional and Local Authorities this has meant a commitment to the development of greenway networks by integrating greenways as structural elements into their development plans for urban and rural areas etc. This particular greenway component, can be further enhanced by connection to the old railway line and to connect to the existing greenway that links Cavan General Hospital to Loreto. It can also be a model where the advantages of Greenway infrastructures can be shared with landowners and with their cooperation develop stronger community bonds between place and use.

According to the Department of Transport, Tourism and Sport’s *Greenways and Cycle Routes Ancillary Infrastructure Guidelines* Greenways are predominantly defined by their cycling capability. The Ancillary Infrastructure Level of Service (LoS) analysis of this scenario suggests a mixed mode of related elements. Since the character of this location is more a local phenomenon it is appropriately based on lower density projections. A more nuanced approach is taken in delivering a combined cycle/pedestrian approach that follows on from our biodiversity approach. Pedestrian activity is to be prioritised over cycling. In keeping with the low impact infrastructure that a maximum pavement type to be used for the eco trails is Type C1, (see TFI Rural Cycleway Design 2022).

Environmental Management Strategy

Landscape projects inherently do not manage themselves. We propose that a three-part system of management is required based in part on a Greenway Management Structure suggested by the *Greenway Management Handbook* (Sustrans Design Manual, 2016).

Understand

In order to bring about a deeper engagement with this and other green areas it is proposed to establish an environmental management system that would undertake biodiversity surveys on a regular basis, throughout the year. This will provide the necessary data to guide ongoing restorative actions and to establish early warning reports to avoid problems spiralling out of control. This may require the appointment of a sustainability environmental officer who can take ownership over the condition, maintenance and improvement of the town’s green assets. It also suggests the need for a Biodiversity Centre, see the SOURCE proposal below.

Manage

Management means taking control of the calendar, bringing local landowners, and the local authority into a coordinated framework. This management system will need to agree principle lines of responsibility and remediation in all circumstances. This assumes that everyone buys into the value of this coordinated project. It will also require cooperation with local stakeholders, citizens and policing, bottom up rather than top down

Monitor

Monitoring is the bookend to understanding, a feedback loop that returns to the start to ensure that the impact of any change can be measured. Should remediation be necessary this feeds back into the system of management. Similarly, other monitoring will need to be included for density and type of traffic to economic impacts, and qualitative surveys that celebrate wins while watching out for problems.

An example of a management framework is outlined in **Table 2** below.

Objective	Understanding (Context)	Manage	Monitor	Communicate
Water Health	Water chemical and quality survey Biodiversity survey above and below water	Actions required to address shortcomings	Reporting on impact of actions	Celebrate Success Target poor outcomes by engaging community and landowners
Shoreline Biodiversity	Litter survey in water Biodiversity survey above and below water Litter survey Plant and Habitat Health Survey	Actions to address damage/erosion Restorative actions	Reporting on impact of actions	Celebrate Success Target poor outcomes by engaging community and landowners

Table 2 Example of a management system might look like this.
(Note more dimensions and characteristics would be used than these two examples)

It is recognised that it is important to clearly identify goals but take a long-term view. Just as this study required a multi-disciplinary team so to does the deployment of this strategy. It will require joined up thinking between multiple local authority departments and local assets as well as involving local groups of volunteers and interested parties. The Town Team offers a valuable resource in bringing this about. This partnership is the link between ambition and what gets done.

SOURCE – Centre for Biodiversity

We have labelled our study ‘SOURCE’ to emphasise the importance of Swellan Lough as a source of predominantly valuable experiences, historic and contemporary. It is also recognised as one of the source waters of the Kinnypottle and thus contributes to the health and wellbeing of that ecosystem and the ecosystem of the local lakes of Lough Oughter and Killykeen. With that in mind, though not central to the feasibility study, we are also proposing the consideration of a Biodiversity Visitor Centre or management facility. This could provide an important gateway experience to the lough from St. Phelims Place. Aside from permanent council staffing whose remit is explored above in managing this and other green assets, it could also provide a valuable educational resource for the schools in Cavan, using Swellan Lough as its central case study. As a balancing initiative to the Regional Sports Centre it would provide evidence of important reinvestment in the environment that sustains all of us. It may itself become a visitor attraction in its own right. Coupled with other co-developed opportunities this project could sustain a reinvention of Swellan Lough and provide a guide to a future Green Cavan.



Fig 46 Example of a sustainable visitors centre – Carlton Marshes Visitor Centre
www.cowpergriffith.co.uk/carlton-marshes-visitor-centre

Simulation



Fig 47 View of Existing Shoreline conditions along the Eastern shore



Fig 48 Suggested treatment of boardwalk along the lough protecting nascent Reed Beds on the left.

Business Case

Taking Acres Lake as a precedent study the development of Swellan Lough outlined above would not be significantly different. Leaving aside the considerable ancillary investment that predates the more recent Acres Lake upgrades (municipal swimming pool, playground and roadside parking) there is enough to sue as a comparative investment framework. The Irish Times (05 Sep 2017) reported that the Minister for Rural Development, Michael Ring, said that on the occasion of the boardwalk opening that the €500,000 cost was “an excellent investment”. The newspaper further reported an additional allocation of €1.1 million for a walkway and cycleway “from Carrick-on-Shannon to Leitrim village, and from Acres Lake to the Lough Allen Hotel.” This would mean that a similar strategy would cost in the region of €1.8 million (for the boardwalk part of this initiative). The Acres Lake Boardwalk project attracted 120,000 visitors in its first year with a per person spend of just over €4 euro per person. Considering that visitors are also likely to avail of local services this represents a potential contribution to the local economy of over €1 million per year. It is interesting to note that the Acres Lake investment also concentrated on low impact, low cost infrastructures which emphasised the importance of nature and the protection of the biodiversity resource.

What does Success Look like

The recent Cavan town travel survey indicates active pedestrian engagement with the existing greenway between Loreto and Cavan General Hospital. Peak travel has been measured with peak activity of 30 during lunchtime (1.00pm) midweek and 10 at teatime (6.00pm). Total travel records show a max of 96 for midweek activity and 116 for weekend activity. It is believed that Swellan Lough would attract greater engagement, mainly due to its proximity to the town.

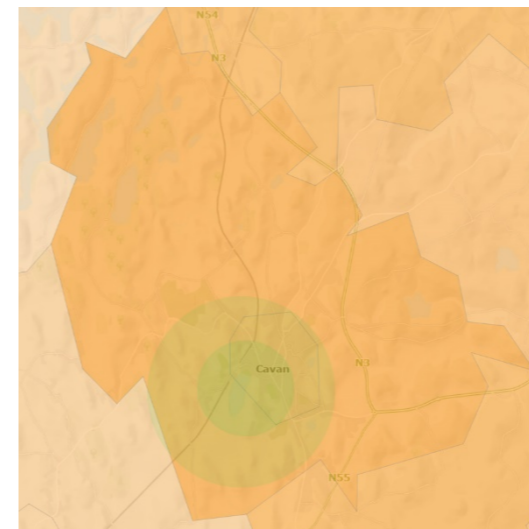


Fig 49 Population Density Cavan Town Census 2022 Approximately 12,615 live within the urban core of Cavan town.

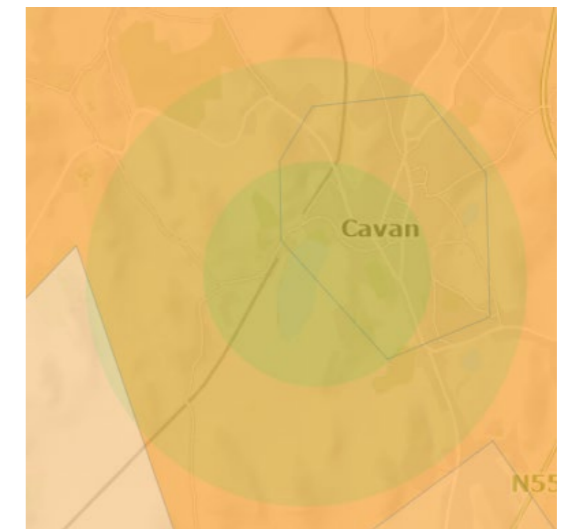


Fig 50 Population close to the lake 750 live within 10 minutes of the lough while a further 2,500 live within 20 minutes of the lough.

The proposed infrastructure can easily support a low to medium density pedestrian population of 3 pp/min which gives rise to a density of around 180 people per hour. This can easily double to 360 people per hour when traffic in both directions is considered. Traffic means surveillance and the more activities that are supported the less anti-social behaviour will take place. The CSO (Central Statistics Office) Census reports that in 2022 the population of the urban core of Cavan was 3,868 with a further 8,747 in the immediate suburban area, 12,615 in total. It is estimated that a population of about 750 people live within a 10 minute walk of the lough and a further 2,500 within a 20 minute walk of the lough. The National Travel Survey in 2019 reported that for 'those who take a journey by foot more frequently, 38.5% of persons aged 18 years and over take a journey by foot at least 5 times a week, one in six (16.8%) do so 3 to 4 times a week and 13.2% 1 to 2 times a week,' and that the 'average distance that one walked on a typical journey by foot was 3.3km'. It is noted that if the Greenway was considered a loop as shown in the image below, it would be around 3.5km in length. If 40% of the immediate population partook in the walk 5 times a week (1300 pedestrians (40%) = 1 person every 2.7 metres, evenly distributed across 8 hours = 1 person every 21.6 metres) it would represent approximately 325,000 pedestrian trips per year. This would be a conservative assessment below a pedestrian density of 360 persons per hour. This level of activity is just short of three times the Acres Lake density, without including other visitors within the Urban catchment or outside of the town centre. It remains a significant number that can support ancillary functions and uses. Using the Acres Lake example with an average spend on €4 euro per person this could represent a net inflow of €1.3 million per year. It suggests that funding of this project could be indirectly recompensed through financial inflows into the local economy. A more direct relationship might be forged through licencing of retail activities associated with the scheme. Success, of course, can also be measured in other ways such as improved health outcomes, an increase in environmental appreciation, stewardship and social engagement. We see both the economic contribution and the health contributions as being equally important.

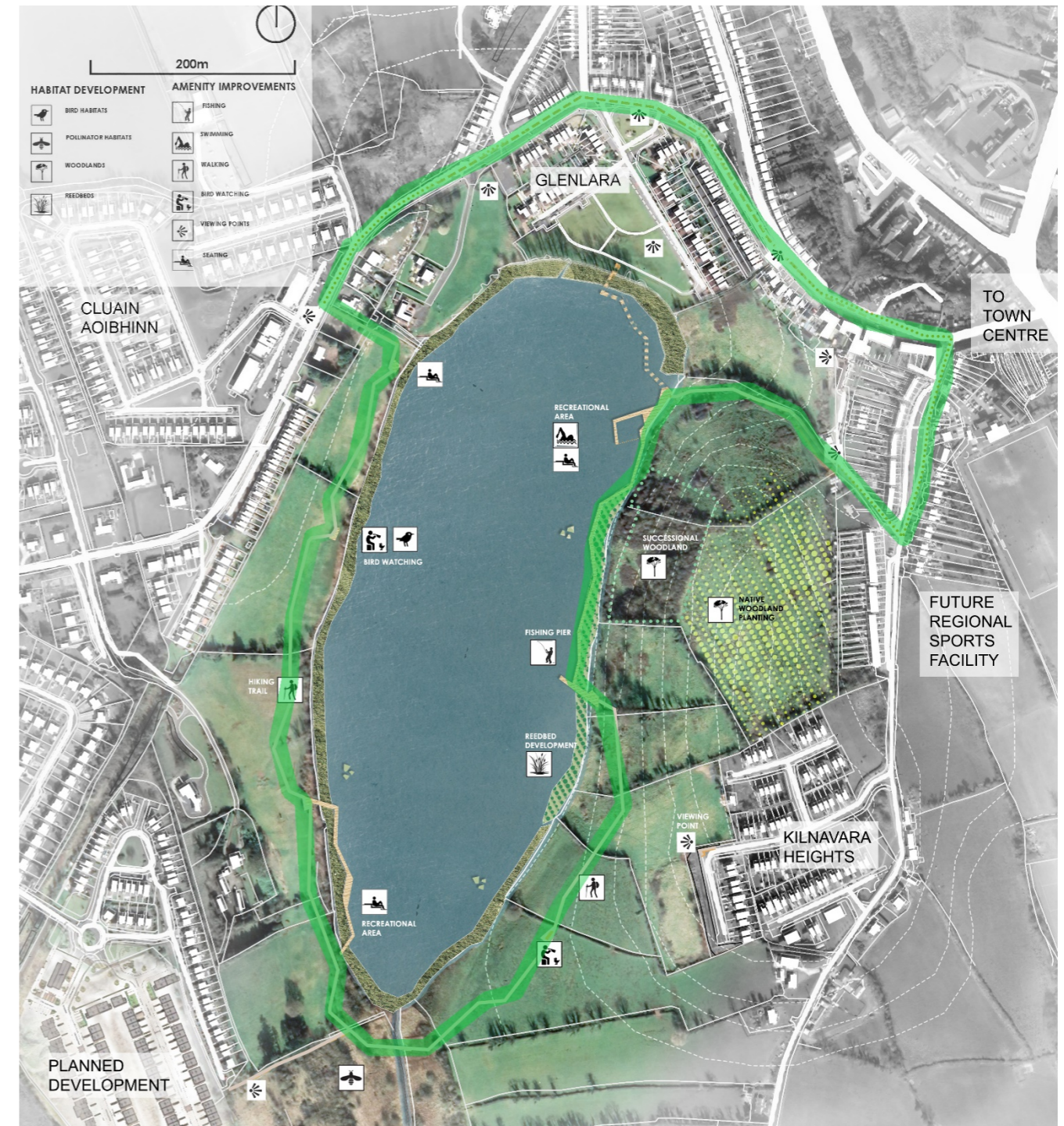


Fig 51 3.5 km route

Caveat

The ideas and plans contained in this study are preliminary and remain the copyright of the design team. These cannot be translated directly into tender or contract drawings without due cognisance taken of the realities of the ground conditions and the need for due diligence in regard to the principals and strategies mentioned above. Examples shown are from publicly available resources and are not mean to be taken literally but point of the character of the intention.

Source Design Team 16 November 2024



Fig 50 Suggested treatment of boardwalk along the lough protecting nascent Reed Beds on the left.