
NATIONAL TOURISM MONITORING PROGRAMME 2021-2025

ANNUAL RESULTS FOR 2021

ACRES LAKE FLOATING BOARDWALK

for:

Fáilte Ireland

88 – 95 Amiens Street
Dublin 1
D01 WR86



by:

CAAS Ltd.

1st Floor,
24-26 Ormond Quay Upper
Dublin 7



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	Author/Reviewer	Date
Prepared by	Andrew Torsney & Callum O'Regan	Various dates to 31 July 2022
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Acres Lake Floating Boardwalk – Interesting Finds

HIGH LEVELS OF BAT FORAGING ACTIVITY

Daubenton’s bat – often referred to as the water bat has a high abundance at the site. This species is a trawling species which scoops floating insects from the surface of the water with their hind legs, and acrobatically throw them into their mouth mid-flight. All species of bats are protected and rely on healthy invertebrate populations to thrive.

All bat species in Ireland are protected under the Irish Wildlife Act.

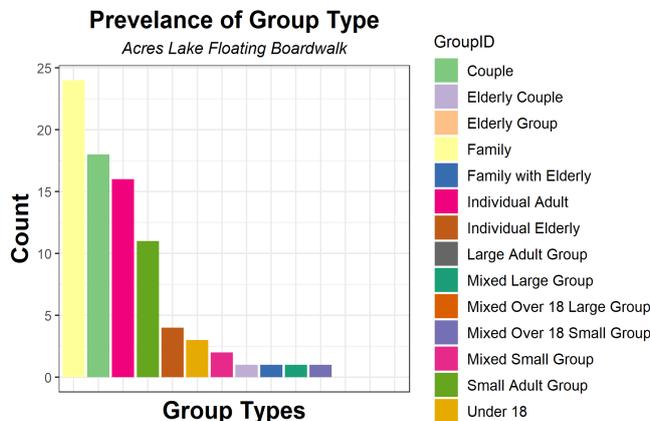


KEY RECOMMENDATIONS

- Maintain the existing features and ensure there is no degradation of existing habitats particularly the reed beds and aquatic habitats.
- Lighting features should not be erected on site
- Carpark capacity an issue. Efforts should be made to explore options for increasing the capacity.
- Engaging interpretive material should be provided across the site to activate an interactive and educational experience.

VISITOR NUMBERS AND DWELL TIME

- 222 people visited the site over 8 hours
- Average dwell time of 40 minutes



VISITOR INTERACTION & MANAGEMENT

- Visitor interactions on site well controlled with strong management practices in place.
- Boardwalk means there were few activities undertaken on site.
- Netting activities were observed on site which can have detrimental effects if not controlled
- Most of the visitors to the site stayed for at least 40 minutes – given the nature of the site being a long straight walkway.
- Site signage is limited – missed opportunity for wildlife

Highlights:

- High levels of bat foraging activity
- Strong breeding bird populations
- Important callow and reed bank areas
- Netting and capture of aquatic species may be an issue if unrestricted long term
- No wading species food provided – thus bread is fed to the local populations
- Long site dwell time of at least 40 minutes
- Site signage is limited – missed opportunity for wildlife



1 Acres Lake Floating Boardwalk

1.1 Purpose & Outputs of the Programme

Building on the success of the Wild Atlantic Way (WAW) environmental monitoring programme which ran from 2015-2019 – Fáilte Ireland has decided to expand the programme to a national level. The programme will monitor 19 individual sites located in all of Fáilte Ireland's regional areas; The Wild Atlantic Way, Ireland's Hidden Heartlands, Ireland's Ancient East and Dublin. The programme will run for 5 years from 2021-2025.

The sites that are included in the programme vary in type from inland forest parks, to coastal sites, to privately owned attractions and diverse urban locations - can be seen below.



The purpose of the programme is as follows:

- To gain more insight from an environmental perspective as to what is happening at a variety of sites where we encourage visitors to frequent,
- To gather information (visitor behaviour, movement, path and trail conditions, surveys for birds, flora etc) for each site over the course of 5 years,
- To understand if there are observable trends and/or observable variations amongst site types over a 5-year period,
- To note good & bad practice at sites in order to;

- Make recommendations where appropriate for site management which is intended will have sustainable benefits for the site, the visitor and the natural environment.

To date, the Wild Atlantic Way Environmental Monitoring Programme has allowed us to sample and monitor the behaviour & movement of over 26,000 visitors, identify where there were stresses on the environment or potential future risks as well as good and bad practice.

This culminated in our ability to make useful recommendations to site owners and managers and ultimately to develop a practical set of Guidelines for Visitor management (from Planning thorough to Site Operation).

It is hoped that we can build on the learnings of this previous programme and by engaging with site managers, to knowledge share, can enhance the information that we gather for each site chosen nationally for this new programme.

The key areas of focus within the data being gathered is to answer the following questions:

- How do the learning outcomes from the WAW monitoring compare when using repeat measures at fixed locations over a long period? Hence, what are the predictors of impact occurrence and severity?
- Following on from the WAW monitoring data – with the refined methods we aim to understand what activities cause which impact; and what are the factors which influence these activity choices in visitors?
- Understanding visitor movement patterns with respect to ranging behaviours – i.e., is there a distance threshold where impacts are less severe or negligible?
- Undertake pathway condition assessments to understand the relative sensitivities or tolerances of path types to visitor movements – taking note of habitat type and visitor numbers/load capacity.

These questions will be answered upon completion of the full suite of surveys and data collected annually over the course of the monitoring programme. However, each year will have annual interim reports to enable emerging findings and management recommendation to be identified and shared with the relevant stakeholders to support progressive management practices.

1.2 Methods & Surveys

The following surveys were undertaken at Acres Lake Floating Boardwalk:

1.2.1 Visitor Characterisation Survey

Visitor characterisation surveys were undertaken at each of the monitoring sites during the weekend period between June-August. The survey at Acres Lake Floating Boardwalk was undertaken on the 10th of July 2021, with max temperatures reaching approximately 29.8° C, no rainfall and low levels of wind on the day¹. These surveys followed an 8-hour time period recording samples of visitor behaviour of as many visitors on site as possible. Visitor movement patterns, demographic data and activities undertaken were recorded for all sampled visitors. Where activities had associated impacts, these were also recorded and the relevant severity was recorded using the same coding system as with the WAW monitoring (see Appendix I for details). It is important to note that the visitor characterisation surveys are indiscriminate between visitors and local amenity use.

1.2.2 Ecological & Path Assessments

In addition to the visitor movement and behavioural records an ecological assessment and path network assessment was undertaken at each site. This consisted of mapping all tracks and trails – with records of hazards, notable damage etc. In addition to this, all habitats were mapped according to the Fossitt Habitat coding system while information on bird populations was gathered from National Biodiversity Centre Data.

¹ Weather data gathered from: <https://www.met.ie/climate/available-data/historical-data>

1.2.3 Other Surveys

Additional surveys were undertaken at Acres Lake Floating Board Walk to identify the species presence of breeding birds, mammals and bats. This information can inform potential management actions related to amenity services such as lighting which could conflict with sensitive species on site.

1.3 Site Description of Acres Lake Floating Board Walk

Acres Lake is home to Ireland's first floating boardwalk just outside Drumshanbo in Co. Leitrim. This boardwalk connects to a 6.5km linear walking and cycling trail along the Shannon Blueway from Acres Lake to Battlebridge Lock, near Leitrim Village. The lake itself is used for recreation and amenity and has a range of habitats present including riparian woodland patches and shallow reed beds. The site has an existing small-scale carpark with space for 15-20 cars and an existing jetty (Figure 1.1). The EPA water quality data for the Battle bridge station (downstream of the site) has a Q-value of 4.

The site is host to leisure facilities such as tennis courts, a visitor centre and an outdoor pool. There are a number of jetties and mooring features on the site.



Figure 1.1 Montage of some of the features at Acres Lake Floating Boardwalk

1.4 Pathways and Features Condition Results

1.4.1 Pathway Condition

The path is perfectly maintained – the full site is a guarded boardwalk which is all hard infrastructure. The material and dimensions are consistent throughout (Figure 1.2 & Figure 1.3).

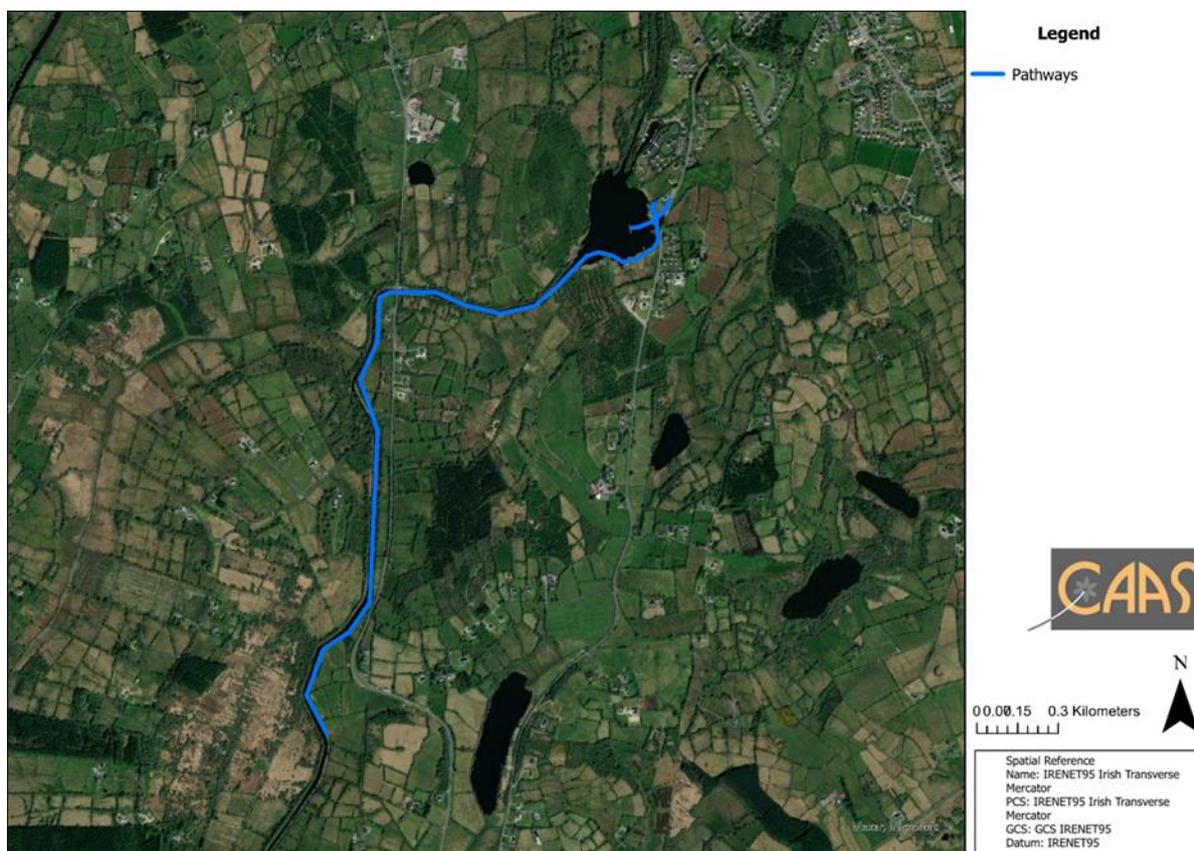


Figure 1.2 Pathways identified at Acres Lake Floating Boardwalk



Figure 1.3 Pathways at Acres Lake Floating Boardwalk

1.4.2 Features Condition

There are many signs and tourism features on site (Figure 1.4). There is an on-site visitor centre and playground with an associated outdoor swimming pool and toilet facilities. The main attractions are the jetty pier and the boardwalk itself. The signage mainly related to safety warnings, but there are signs identifying features of the Shannon Blueway, as well as a sign detailing information about Drumshambo and a wider trail map (Figure 1.5). There is minimal information about the wildlife or biodiversity of the area – mainly focusing on common duck species.



Figure 1.4 Features recorded at Acres Lake



Figure 1.5 Features at Acres Lake Floating Boardwalk

1.4.3 Hazards

The hazards identified on site (Figure 1.6) relate to slippery surfaces which are accompanied throughout the site with signs alerting visitors to the potential for hazards such as slippery surfaces.

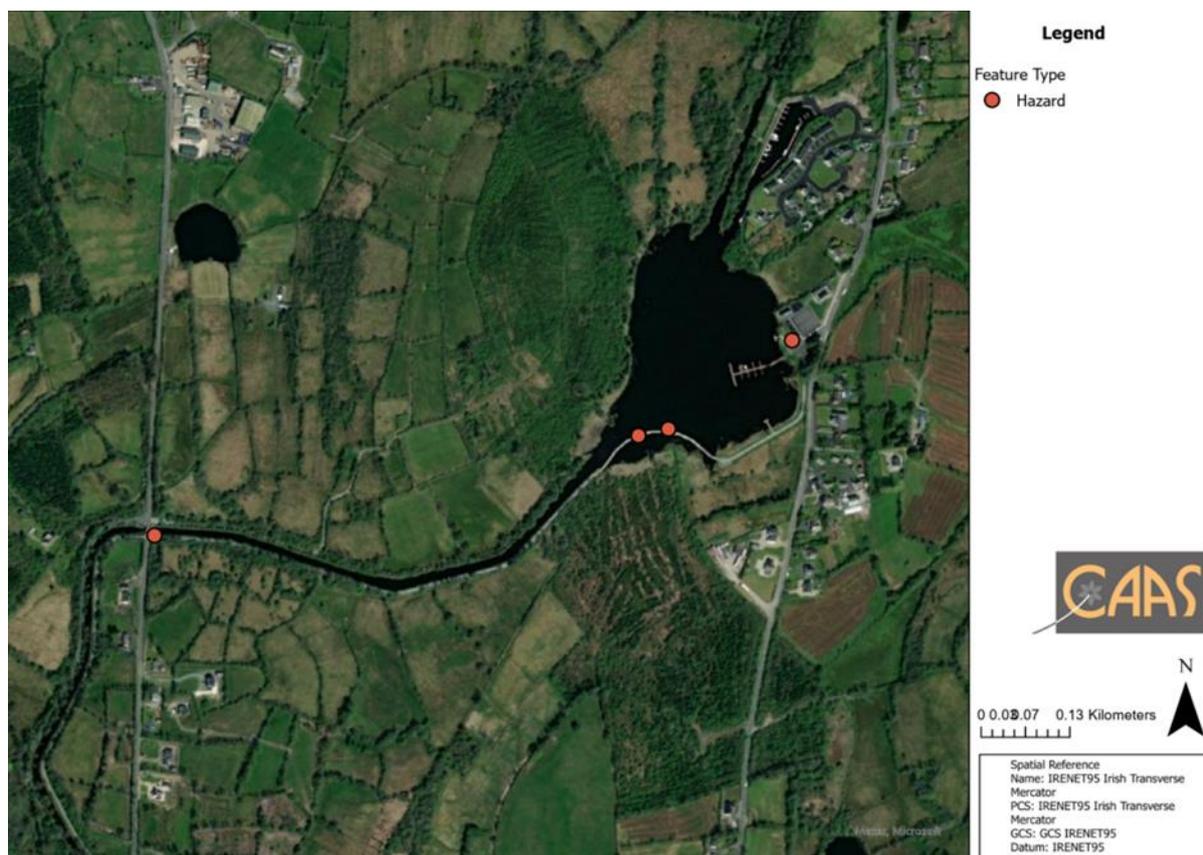


Figure 1.6 Hazards recorded at Acres Lake

1.5 Visitor Characterisation Survey

The visitor monitoring surveys resulted in a total of 222 visitors² (which represent 82 group observations). The site is most popular amongst the Family group with the dominant mode of transport being car. The average dwell time for the site was 40 minutes; with the following activities undertaken during the survey (listed in order of occurrence rate):

Activity Type
Dog walking (on lead)
Cycling
Playing in playground
Powered Movement Through Water (Boat, Jetski etc)
Fishing
Sitting
Kayaking
Picnicking
Swimming
Jogging
Exploring off trail
Feeding ducks
Flying drone
Running boat engine at Dock

² It is important to note that the visitor characterisation surveys are indiscriminate between visitors and local amenity use.

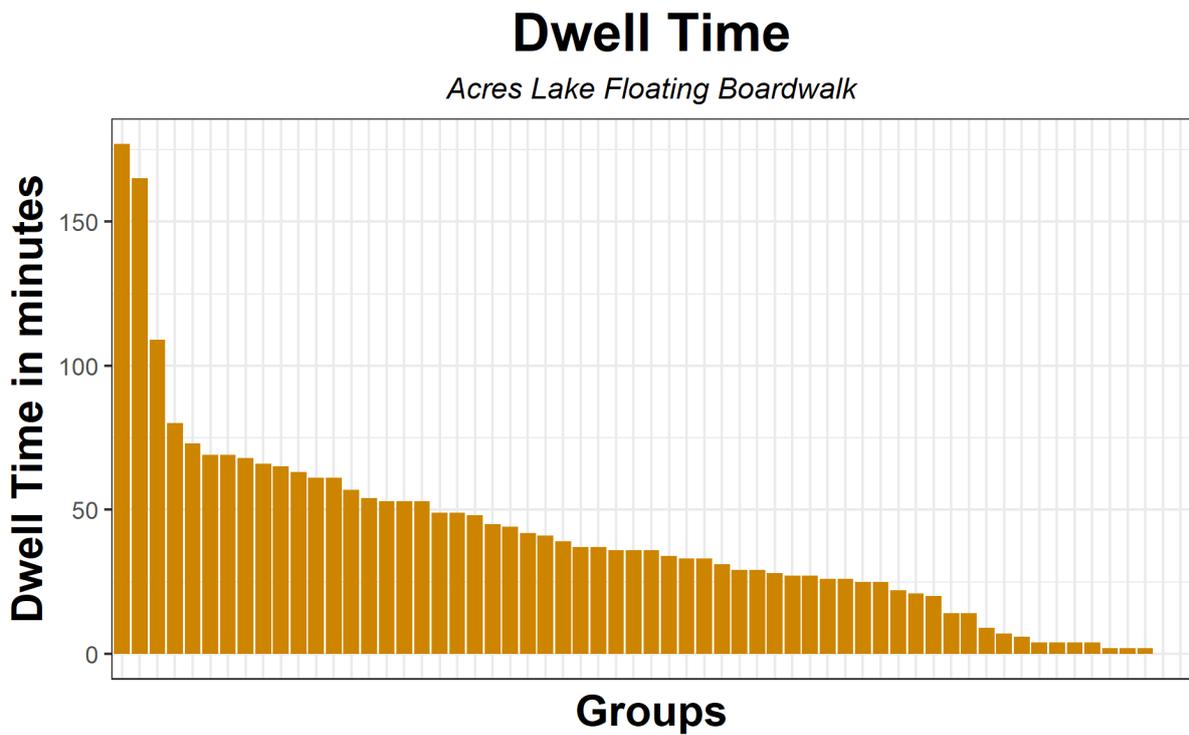


Figure 1.7 Duration of Time Spent at Acres Lake Floating Boardwalk

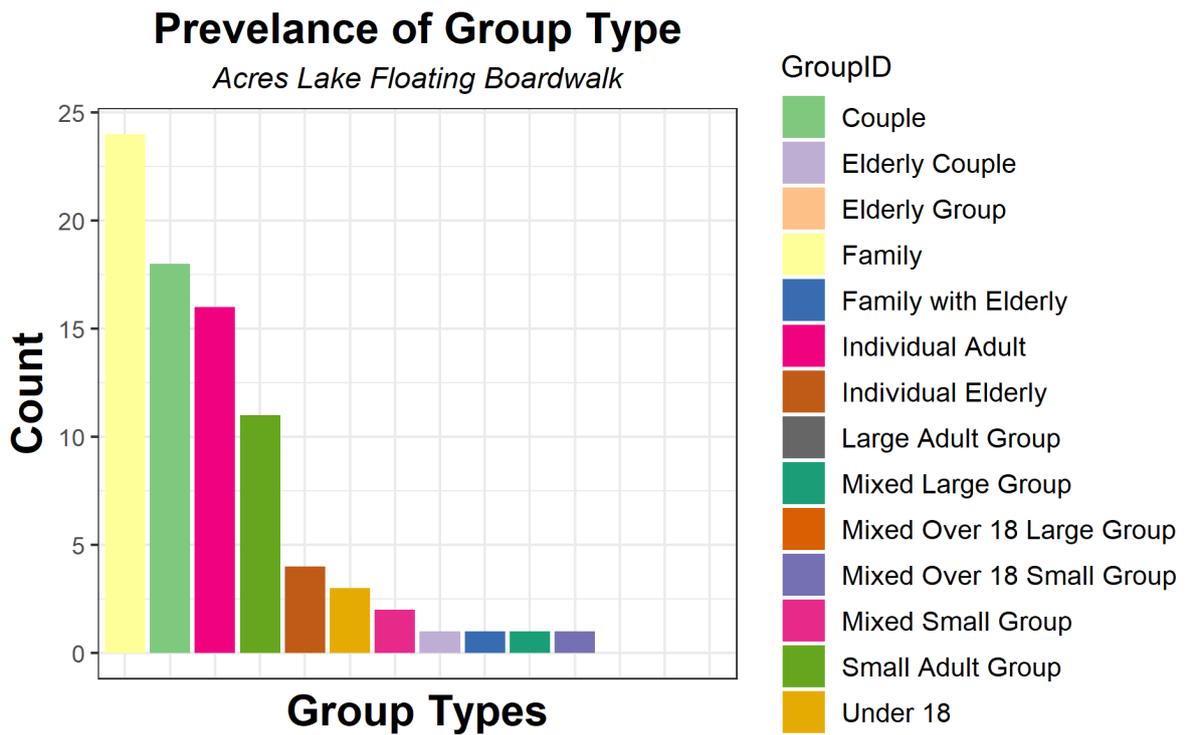


Figure 1.8 Groups of visitors that visited Acres Lake Floating Boardwalk

Prevalence of Transport Type

Acres Lake Floating Boardwalk

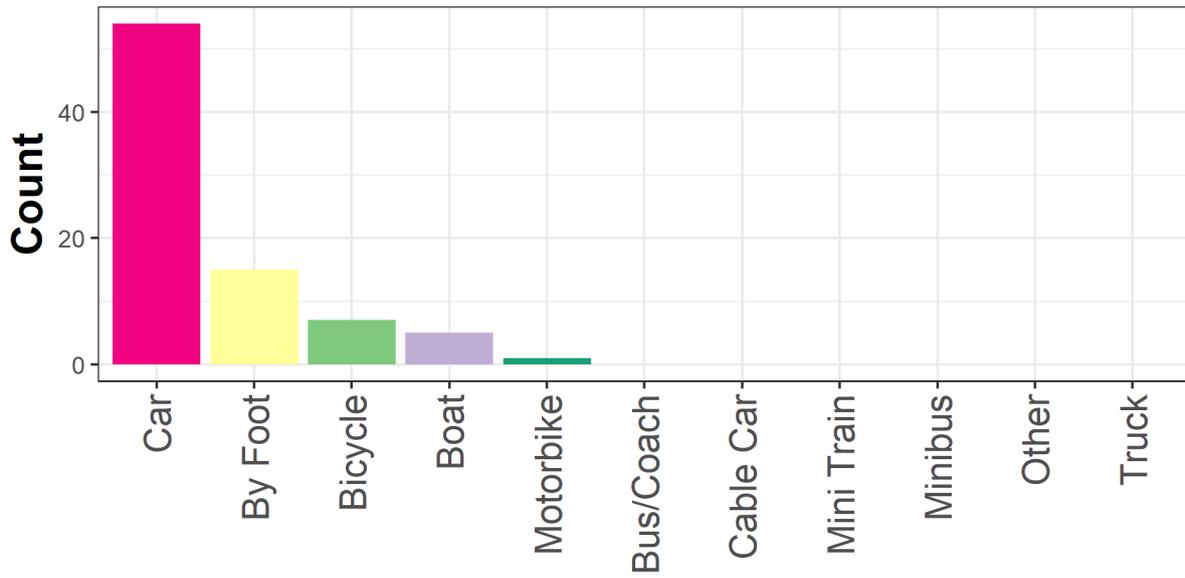


Figure 1.9 Mode of transport used to visit Acres Lake Floating Boardwalk

Read Available Signage

Acres Lake Floating Boardwalk

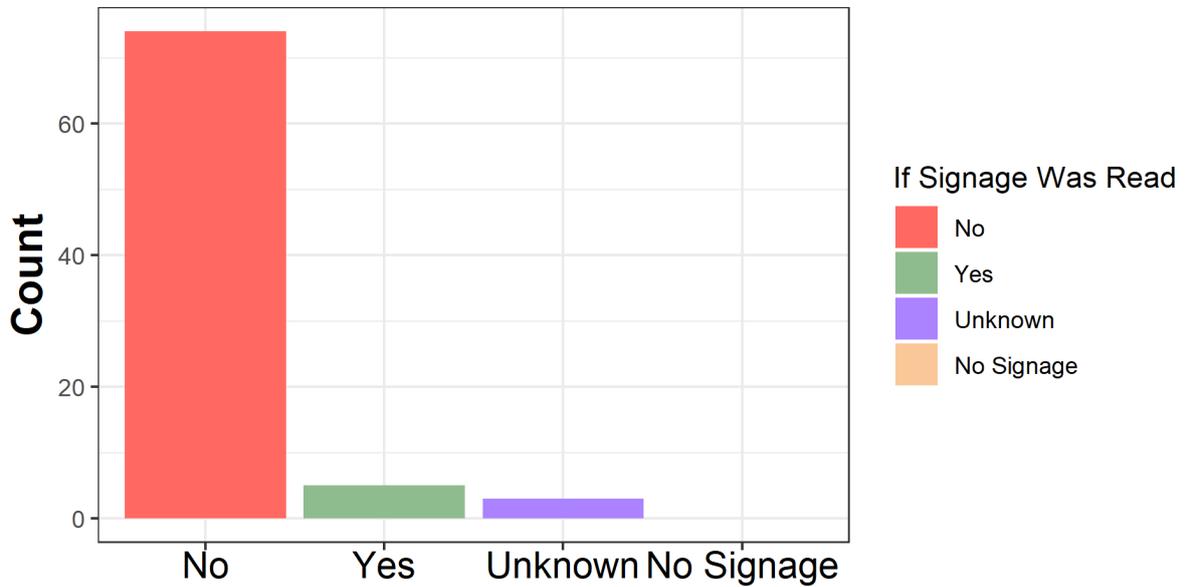


Figure 1.10 Use of Interpretive Material at Acres Lake Floating Boardwalk

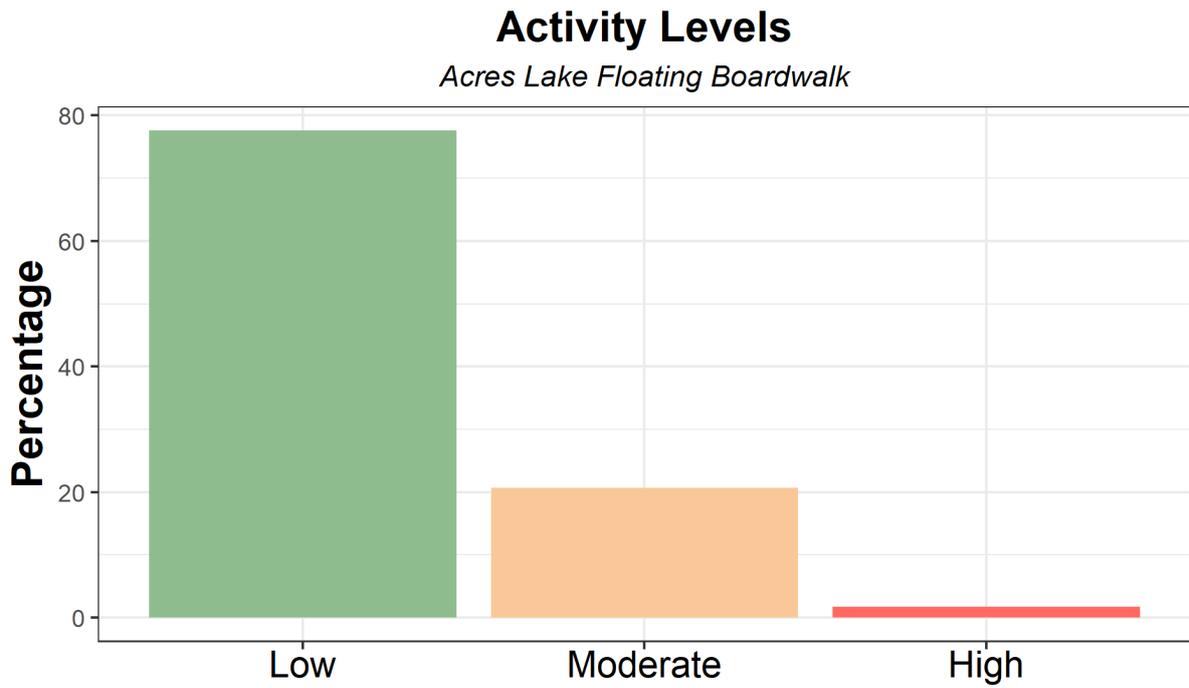


Figure 1.11 Categories of Activity Levels Observed at Acres Lake Floating Boardwalk

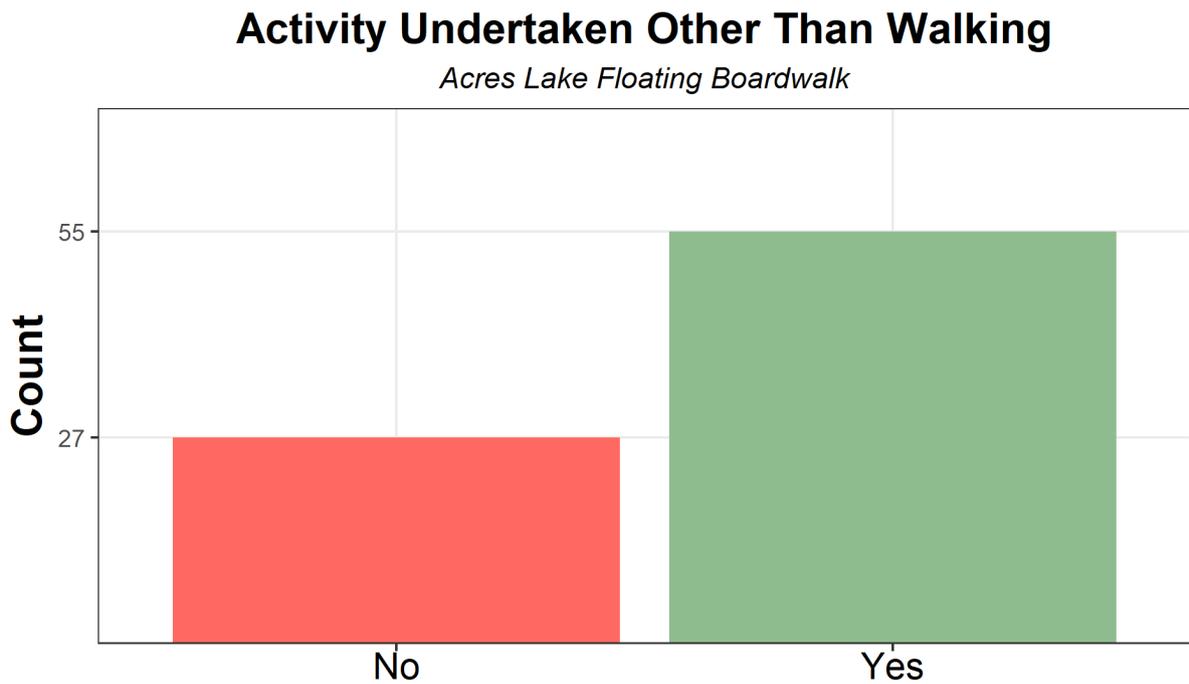


Figure 1.12 Activities undertaken other than walking

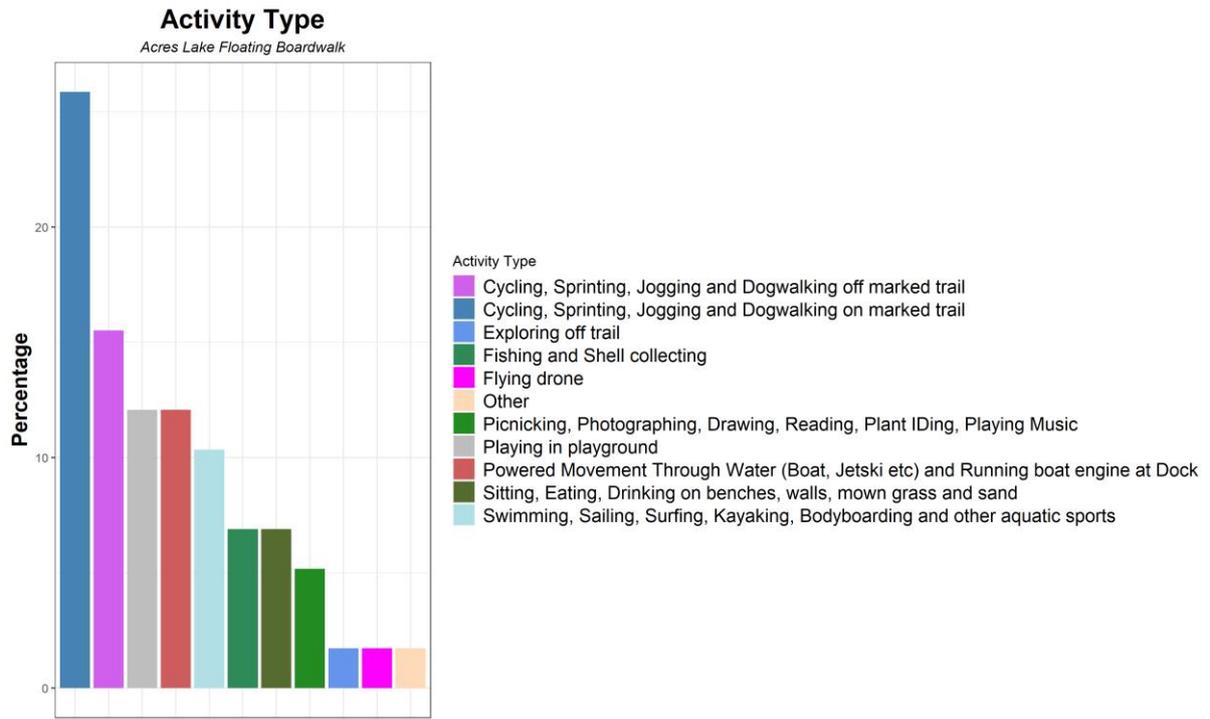


Figure 1.13 Range of Visitor Activities Observed at Acres Lake Floating Boardwalk



Figure 1.14 Categories of Environmental Impact Levels Observed at Acres Lake Floating Boardwalk as a result of Visitor Activities³

³ Impact severity was measured as a categorical variable which has a range of impact factors that are pre-determined; such as injuring, killing or taking wildlife as a severe impact (high) and temporary disturbance of wildlife being a low impact. These are explained fully in the method section above.

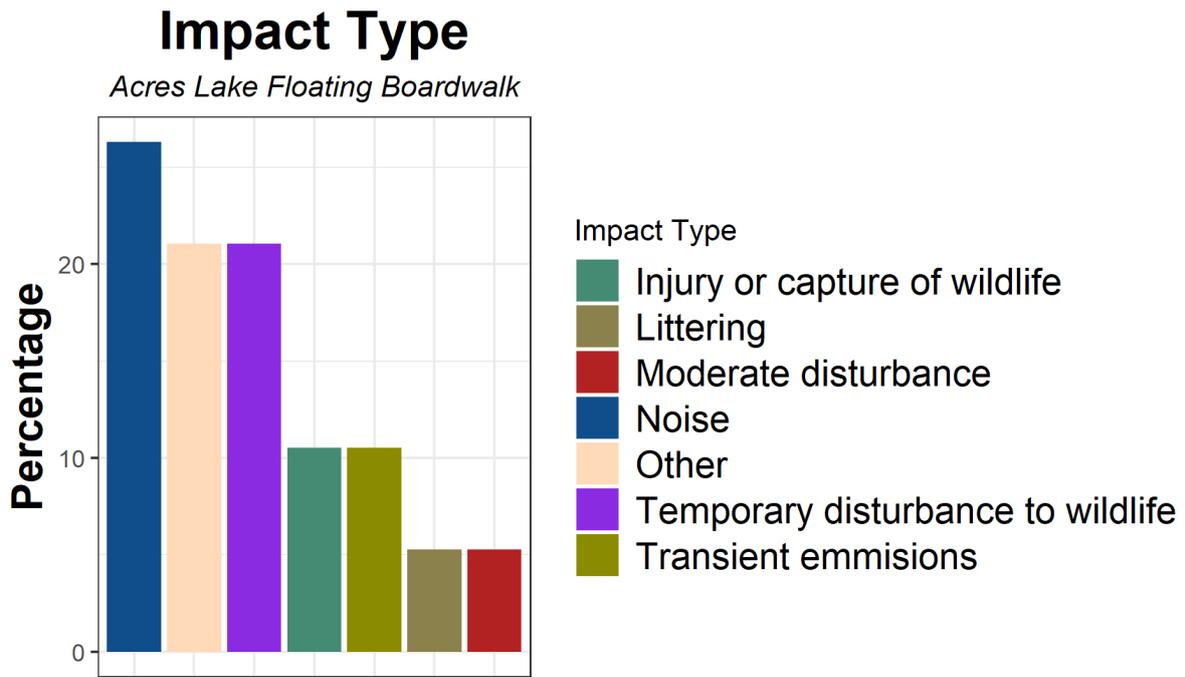


Figure 1.15 Range of Environmental Impacts Observed at Acres Lake Floating Boardwalk

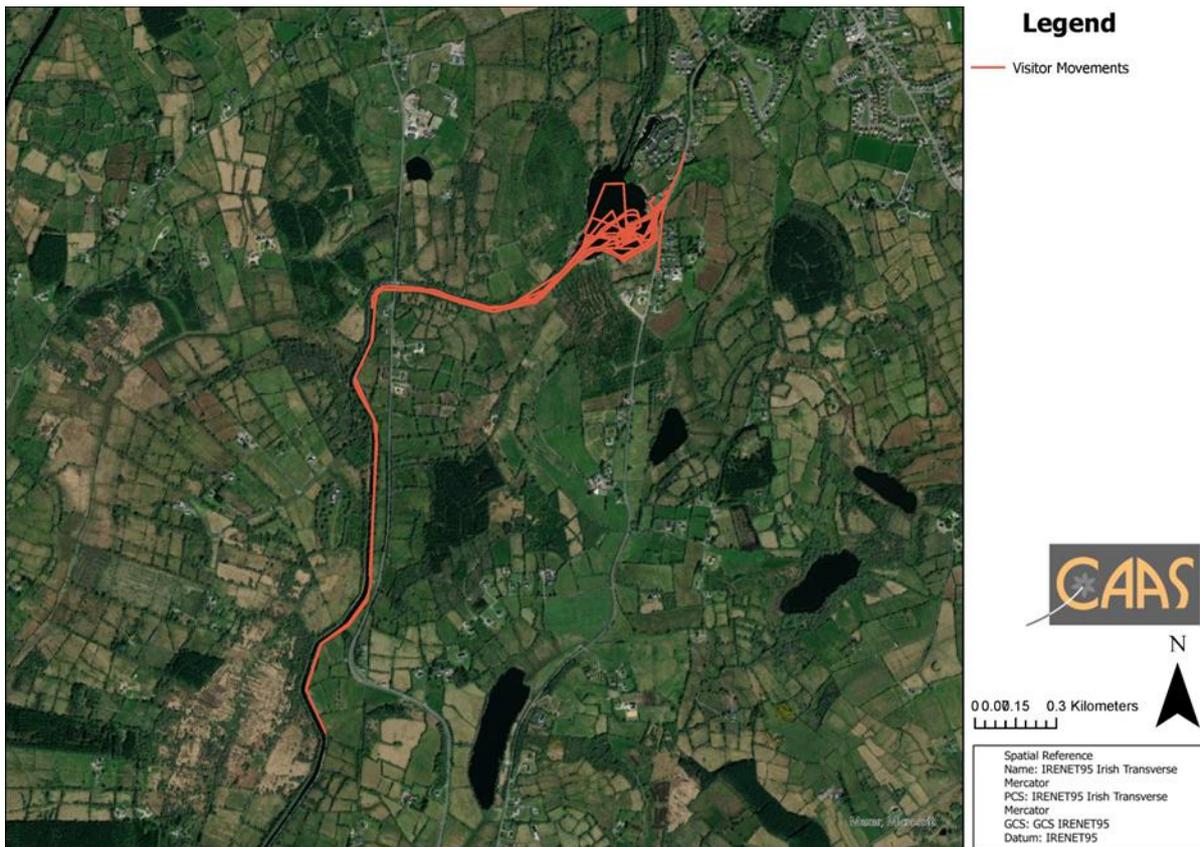


Figure 1.16 Visitor movement patterns at Acres Lake Floating Boardwalk

Of the 82 sample groups recorded on site 67% of them undertook activities other than walking. These activities (identified above) resulted in 19 impacts being observed on site during the survey. Thus, 33% of activities on site resulted in impacts on the environment. The impact severity levels varied with 63% of the impacts being low, 37% of impacts being moderate, and 0% of impacts being high severity. The impacts identified for the site were:

Impact Type	Count
Injury or capture of wildlife	2
Littering	1
Moderate disturbance	1
Noise Pollution	5
Other	4
Temporary disturbance to wildlife	4
Transient emissions	2

1.6 Ecological Monitoring Results

1.6.1 Ecological Constraints

There are no designated sites within 2km of Acres Lake Floating Boardwalk.

1.6.2 Habitat Descriptions

Acres lake is a small lake system with existing recreation amenity usage on site. The trees on the westside of the lake are characterised as a narrow riparian woodland which are backed by a coniferous plantation. The tall reed beds around the lake itself provide ecological resources for invertebrate species and provide refugia for breeding wading birds. These areas are the key resources for the site.

The site was investigated for bat activity and there were 5 species identified on site which use the river which extends from the site for foraging and commuting while the lake itself provides a key foraging resource. The absence of intrusive lighting structures at the area is key for the site. Visitor movements at the site are restricted to within the boardwalk itself which limits potential interactions.

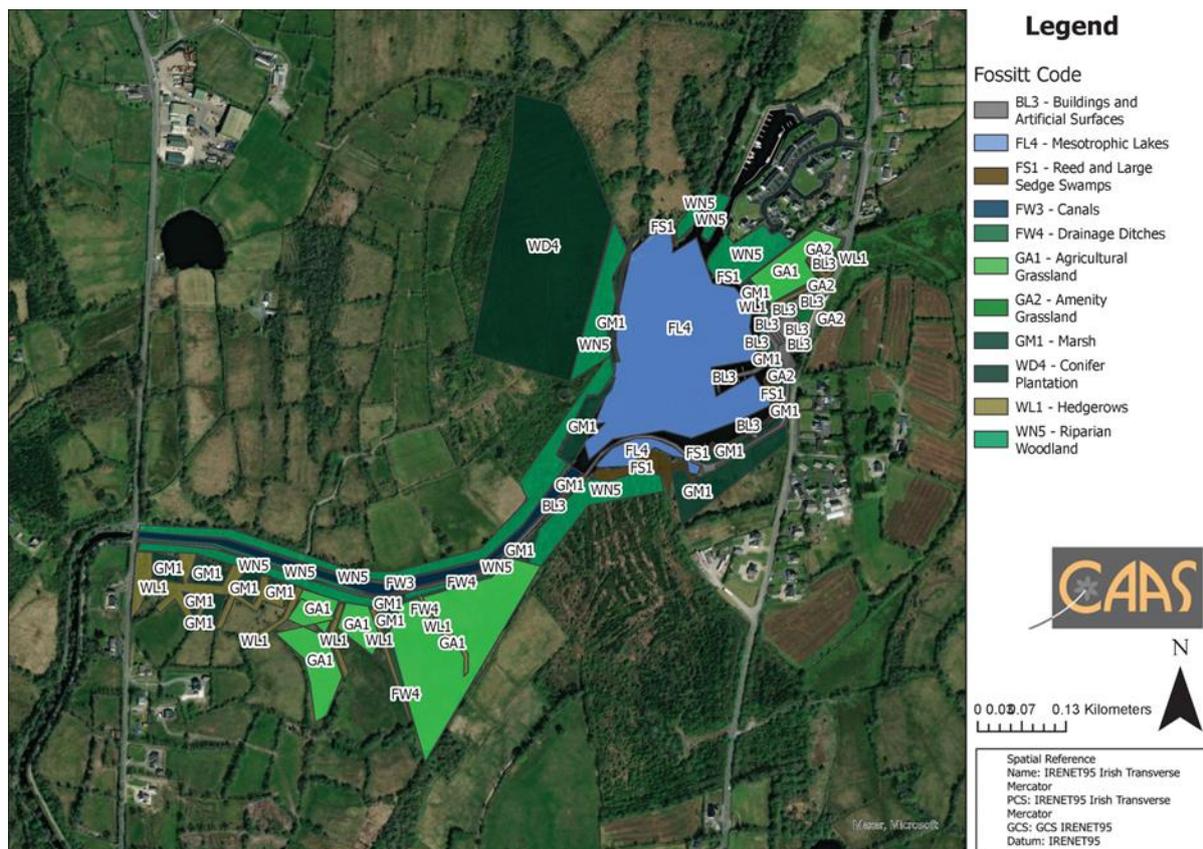


Figure 1.17 Habitats present at Acres Lake

1.6.3 Condition Assessment

There are a range of habitats present on site, the assessment of habitat condition identified that the overall habitat quality⁴ following the assessment scale was "2" which means the majority of the habitats have a localised degree of negative impact, but slight and capable of rapid recovery. There were 2 recorded incidents of damage to habitats occurring off the marked paths on site. The probable causes appear to be agriculture.

1.6.4 Breeding Bird Survey

The breeding bird survey conducted at Acres Lake Floating Boardwalk show that there are high numbers of wading species and a strong population of passerines. Of particular note are meadow pipits which were observed foraging in the fringes of the site. The site represents a stronghold for breeding birds – but there is risk from visitors to feed the wading species sub optimal food such as bread. Alternate food sources could be provided – along with signage – to raise awareness of the importance of nutrition when feeding wildlife. The trees within the riparian habitat and bankside vegetation are particularly important for the breeding bird populations.

Table 1.1 Results of the breeding bird survey conducted at Acres Lake Floating Boardwalk⁵

Common Name	Scientific Name	List Status	Number Recorded
Blackbird	<i>Turdus merula</i>	Green	4
Blackcap	<i>Sylvia atricapilla</i>	Green	2
Black-headed Gull	<i>Larus ridibundus</i>	Amber	3
Buzzard	<i>Buteo buteo</i>	Green	1
Chiffchaff	<i>Phylloscopus collybita</i>	Green	1
Cormorant	<i>Phalacrocorax carbo</i>	Amber	1
Dunlin	<i>Calidris alpina</i>	Red	1
Goldcrest	<i>Regulus regulus</i>	Amber	1
Goldfinch	<i>Carduelis carduelis</i>	Green	1
Great Tit	<i>Parus major</i>	Green	1
Hooded Crow	<i>Corvus cornix</i>	Green	2
House Martin	<i>Delichon urbicum</i>	Amber	2
Jackdaw	<i>Corvus monedula</i>	Green	4
Mallard	<i>Anas platyrhynchos</i>	Amber	9
Meadow Pipit	<i>Anthus pratensis</i>	Red	5
Moorhen	<i>Gallinula chloropus</i>	Green	1
Pied Wagtail	<i>Motacilla alba yarrelli</i>	Green	1
Redpoll	<i>Acanthis flammea</i>	Green	3
Reed Bunting	<i>Emberiza schoeniclus</i>	Green	1
Sand Martin	<i>Riparia riparia</i>	Amber	1
Song Thrush	<i>Turdus philomelos</i>	Green	2
Swallow	<i>Hirundo rustica</i>	Amber	4
Willow Warbler	<i>Phyllocopus trochilus</i>	Amber	3
Wren	<i>Troglodytes troglodytes</i>	Green	3

1.6.5 Mammals on Site

Although no otter was observed during the surveys – it is extremely likely that the site is host to a viable otter population based on the availability of high-quality suitable habitat observed during the mammal walkover survey. Several Wood Mice were recorded in the fields adjacent to the site foraging on grass seed. There were no other mammal signs recorded – it is likely that the boardwalk area itself is not used by mammals due to the enclosed yet exposed nature of the walkway – which would increase risk of predation.

Table 1.2 List of mammals that have been recorded at NBDC Hectads G90 & G91

Taxonomic group	Common name	Scientific name	Record count
Terrestrial mammal	American Mink	<i>Mustela vison</i>	7
Terrestrial mammal	Brown Rat	<i>Rattus norvegicus</i>	1
Terrestrial mammal	Daubenton's Bat	<i>Myotis daubentonii</i>	144

⁴ This value was calculated using the methods set out in Appendix II

⁵ Breeding bird surveys were undertaken in June 2022 during the dawn chorus on warm, dry and calm days.

Taxonomic group	Common name	Scientific name	Record count
Terrestrial mammal	Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	3
Terrestrial mammal	Eurasian Badger	<i>Meles meles</i>	88
Terrestrial mammal	Eurasian Pygmy Shrew	<i>Sorex minutus</i>	1
Terrestrial mammal	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	15
Terrestrial mammal	European Otter	<i>Lutra lutra</i>	5
Terrestrial mammal	European Rabbit	<i>Oryctolagus cuniculus</i>	3
Terrestrial mammal	Fallow Deer	<i>Dama dama</i>	2
Terrestrial mammal	House Mouse	<i>Mus musculus</i>	1
Terrestrial mammal	Irish Hare	<i>Lepus timidus subsp. hibernicus</i>	8
Terrestrial mammal	Irish Stoat	<i>Mustela erminea subsp. hibernica</i>	1
Terrestrial mammal	Natterer's Bat	<i>Myotis nattereri</i>	1
Terrestrial mammal	Pine Marten	<i>Martes martes</i>	21
Terrestrial mammal	Red Deer	<i>Cervus elaphus</i>	1
Terrestrial mammal	Red Fox	<i>Vulpes vulpes</i>	7
Terrestrial mammal	West European Hedgehog	<i>Erinaceus europaeus</i>	7
Terrestrial mammal	Wood Mouse	<i>Apodemus sylvaticus</i>	1

1.6.6 Bat Survey

There were no bat potential bat roost features identified on site during the preliminary surveys for potential bat roost features.

Daubenton's bat was the most common species in number of recorded passes; which would be expected due to the high volume of freshwater habitat in the park and along the transect. Soprano and common pipistrelle were also observed on site also. 3 passes were recorded for the Leisler's bat.

Table 1.3 Bat survey results

Common name	Scientific name	# Bat passes
Daubenton's bat	<i>Myotis daubentonii</i>	51
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	37
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	27
Leisler's bat	<i>Nyctalus leisleri</i>	3

Table 1.4 List of bats that have been recorded at NBDC Hectads G90 & G91

Taxonomic group	Common name	Scientific name	Record count
Terrestrial mammal	Daubenton's Bat	<i>Myotis daubentonii</i>	144
Terrestrial mammal	Natterer's Bat	<i>Myotis nattereri</i>	1

1.7 Recommendations

Given the site context and the robust nature of the site - the main recommendation for the site is to maintain the existing features and ensure there is no degradation of existing habitats particularly the reed beds and aquatic habitats. Furthermore, lighting features should not be erected on site to maintain the existing connectivity and activity for nocturnal species.

The site has a carpark capacity issue as it has very few spaces available to ensure accessibility. Efforts should be made to explore options for increasing the capacity. Additionally, engaging interpretive material should be provided across the site to activate an interactive and educational experience.

Alternate food sources could be provided – along with signage – to raise awareness of the importance of nutrition when feeding wildlife.

Appendix I

Activities		
Category 1 Low Level		
Walking, running or cycling on paths, marked trails or hard surfaces		LA 1
Walking, running, cycling or playing in mown grass, managed grassland or level sand		LA 2
Sitting on benches, walls, mown grass, sand		LA 3
Swimming, sailing, surfing, kayaking in water		LA 4
Resting, reading, looking, picnicking, sightseeing, painting, photographing		LA 5
Vehicular movement on roads and parking areas		LA 6
Watching nature in hedges, woods, streams, pools and intertidal areas		LA 7
Category 2 Medium Level		
Powered movement through water		MA 1
Any movement leaving an existing trail or marked path		MA 2
Any movement leaving a trail through leafy vegetation		MA 3
Any movement leaving a trail through woody vegetation		MA 4
Climbing on walls, loose stones, sand, soil etc.		MA 5
Fishing		MA 6
Category 3 High Level		
Walking through wet/muddy soil		HA 1
Scrambling on steep or loose slopes		HA 2
Off road vehicular movement		HA 3
Disturbance of wildlife		HA 4
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc.		HA 5
Picking herbaceous vegetation		HA 6

Appendix I Activity and impact code index used for recording visitor behaviours on site

Category 1 Low Impact		
No identifiable effect		LIE 1
Desire lines or trails visible on grass and leafy vegetation		LIE 2
Temporary disturbance (including chasing and feeding) of insects, fish, amphibian, reptiles, insects, birds and mammals		LIE 3
Temporary change of character - due to the appearance or nature of activities (noise, crowds, etc.)		LIE 4
General/light littering		LIE 5
Category 2 Medium Impact		
Desire lines or tracks visible outside of existing trail or marked path		MIE 1
Trampling of herbaceous vegetation		MIE 2
Damage to woody vegetation		MIE 3
Incidentally moving or knocking site materials - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.		MIE 4
Addition/alteration of site features, transient emissions, noise		MIE 5
Transient disturbance, emissions, noise		MIE 6
Disturbance of wildlife		MIE 7
Category 3 Severe Impact		
Direct interference with site material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.		SIE 1
Removal of material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.		SIE 2
Vandalism or graffiti		SIE 3
Destruction of structures, vegetation or fauna		SIE 4
Heavy littering or dumping quantities of waste		SIE 5
Burning materials or lighting a fire		SIE 6
Injuring, killing or taking wildlife		SIE 7

Appendix II

Habitat Condition Assessment Methodology

A rating scale has been designed for this monitoring programme as a standardised, repeatable measurement for assessing habitat condition across all sites⁶. For the purposes of this monitoring programme, habitat condition is assessed at every site by the surveyor examining four core criteria:

1. The extent to which habitat degradation (due to human activity), if any, is observed;
2. If habitat degradation is observed, the degree to which the impact is localised or widespread;
3. The potential ability for the habitat to recover (related to scale of degradation); and,
4. The requirement for intervention (related to the degree of the previous 3 elements).

For these assessments the term ‘degradation’ is taken to mean any change that reduces the long-term viability habitats and its qualifying interests [flora and fauna]. Degradation can include readily visible evidence of factors such as surface erosion or compaction, vegetation loss, crowd disturbance [noise], disturbance by pets, littering, burning or pollution.

Based on these four criteria, each site is walked along transects established by the principal pathways that are used for visitor access and movement through each site. At 100 metres intervals along the selected pathways, an assessment of habitat condition is made, using an established rating scale of 1 to 5; 1 being no impact and 5 being high impact. Each rating is then translated into a condition assessment, as displayed in Table II - 1 below.

These ratings are gathered for each site, and are then grouped; from which the mode is taken (i.e., the rating that occurs most frequently). This then recorded and reported as the resultant overall rating of the assessed habitat condition assessment for each site.

Table II-1 Habitat rating scale and condition assessment

Scale	Condition
1	No evidence of any habitat degradation observed.
2	Localised habitat degradation, but slight and capable of rapid recovery.
3	Widespread habitat degradation, but slight and capable of rapid recovery.
4	Localised habitat degradation, requiring intervention to allow full recovery.
5	Widespread habitat degradation, requiring intervention to allow full recovery.

⁶ Note: Where possible, the same surveyor is used across multiple sites – but in some instances, different surveyors survey different sites. This can lead to a human variation in the assigning of the rating scale for impact. However, there will be sufficient repetition of the data through the several years of the monitoring programme to account for any variations in human interpretation on this scale.