NATIONAL TOURISM MONITORING PROGRAMME 2021-2025

ANNUAL RESULTS FOR 2022

MOUNT CONGREVE

for: **Fáilte Ireland**

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Mount Congreve – Interesting Finds[1]

ECOLOGICAL HIGHLIGHTS

The site is largely managed habitats, as such there are a high abundance of pollination resources. There are large expanses of mature treelines and the site is adjoined by the Suir River. Therefore, the site has high potential to support diverse and abundant mammal populations including bat species.

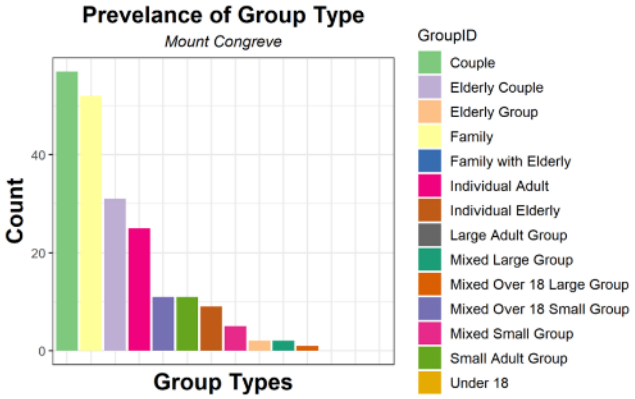
Red squirrels are resident within the site and there appears to be a healthy population around the site.

KEY RECOMMENDATIONS

- An invasive mammal survey should be conducted for the site as there are four invasive species suspected of being present; namely American Mink, Bank Vole, Grey Squirrel and Greater White-toothed Shrew.
- Invertebrate resources such as dead wood piles and standing deadwood should be implemented to support invertebrate populations as a resource for mammals such as bats and hedgehogs.

VISITOR NUMBERS AND DWELL TIME

- 494 people visited the site over 8 hours
- Average dwell time of 22 minutes



VISITOR INTERACTION & MANAGEMENT

- Visitor interactions on site well controlled with strong management practices in place.
- All activities recorded by visitors were deemed to be of low level such as Plant IDing and exploring off trail.
- The only impact observed on site was trampling of vegetation by visitors.
- Most of the visitors to the site stayed for at least 22 minutes –given the nature of the site itself as a managed garden area.
- Majority of visitors traversed along the designated pathways on site.




[1] Based on 2021 findings

1 Mount Congreve

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 Irelands regional areas; The Wild Atlantic Way, Irelands Hidden Heartlands, Irelands 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, identifying where there were stresses on the environment or potential future risks as well as good and bad practices.

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). Following on from the WAW monitoring data and in refining the methodology as a result, we aim to: understand what activities cause which impact; and, what are the factors which influence these activity choices by visitors?

The aim is to build on the knowledge gathered by the 2015-2019 programme. This will be used in combination with a continued engagement and exchange of knowledge with site managers, to tailor monitoring requirements, and enhance the programme outcomes, for each site chosen nationally for the new 2021-2025 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.

1.1.1 Looking Ahead

The National Tourism Monitoring Programme aims to assess and characterise visitor movements and impacts in 19 popular Failte Ireland tourism sites across Ireland within a 5-year period. This will be achieved through building on the methodologies and findings of the Wild Atlantic Way Environmental Monitoring Programme (2015-2019), by monitoring yearly trends in visitor numbers and movements during the high tourism season at each site. In addition to the annual visitor trend monitoring; visitor impact assessments, which examine visitor activity levels relative to condition assessments, will also be taken every two years for each site. At the end of the 5-year period, the resultant extensive data set will be analysed for long term trends and correlations between visitor numbers, visitor activity, and site condition assessments, at each site across the 5 years of the programme.

This monitoring programme will allow an examination of year-on-year shifts in visitor impact and trends, across each of Fáilte Ireland's regional areas; The Wild Atlantic Way, Irelands Hidden Heartlands, Irelands Ancient East and Dublin, resulting in an annual interim report for each year - while also assessing visitors trends, and changes in the condition of the each of the sites' habitats in relation to visitor trends, over a the entire 5-year period of the programme.

The long-term aim of the Monitoring Programme will be to inform local authorities and stakeholders to help in the design and implementation of methods that will encourage the sustainable management of

visitor numbers and tourism activities, while also aiming to protect vulnerabilities of the local area's habitats in order to reduce environmental impact and enable more effective local conservation of each site.

1.2 Methods & Surveys

The following surveys were undertaken at Mount Congreve:

1.2.1 Visitor Characterisation Survey

During the tourist season in 2022, Mount Congreve was closed to visitors due to renovations and upgrades to the site itself. Thus, the visitor characterisation survey was not able to be completed in 2022 and will continue in 2023.

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.

1.3 Site Description of Mount Congreve

Mount Congreve Estate and Gardens is situated in Kilmeaden, County Waterford, along the river Suir and such, the Lower River Suir SAC. It is a notable garden that offers 16km, of pathways around the estate, which is used for leisure activities. The habitats within Mount Congreve consists of range of horticultural land and marshes along with other habitats.

Figure 1.1 Mount Congreve

1.3.1 Critical Infrastructure

Table 1.1 Summary of Wastewater infrastructure at Mount Congreve

Wastewater Treatment Plant (WWTP)	Irish Water Indication of Capacity	Comment
Toilet facilities are available on site No current WWTP on site at Mount Congreve Nearest settlement with WWTP in Waterford City (WWTP Reg #D0022 (Belview WWTP))	Potential spare capacity to be considered on case-by-case basis[2].	Current wastewater facilities are sufficient

Table 1.2 Summary of Drinking Water infrastructure at Mount Congreve

Drinking Water	Water Resource Name (WRZ)	Irish Water Indication of Capacity	Comment
Nearest serviced settlement to Mount Congreve is Waterford City & Suburbs	South Kilkenny WRZ and East Waterford Water Supply Scheme	Capacity available – Level of service (LoS) improvement required[3]	Current water supply is sufficient Capacity is available as per the Waterford CDP 2022-2028[4]

Table 1.3 Summary of Transport infrastructure at Mount Congreve

Nearest Settlement	Current Transport Infrastructure	Comment
Waterford City	Accessible by the L4410 from Waterford City Parking facilities are available on site	Current transport infrastructure is sufficient

[2] https://www.water.ie/connections/developer-services/capacity-registers/wastewater-treatment-capacity-register/waterford/
[3] https://www.water.ie/connections/developer-services/capacity-registers/wastewater-treatment-capacity-register/waterford/
[4] https://consult.waterfordcouncil.ie/en/consultation/waterford-city-county-development-plan-2022-%E2%80%93-2028/chapter/chapter-6-utilities-infrastructure-energy-communication

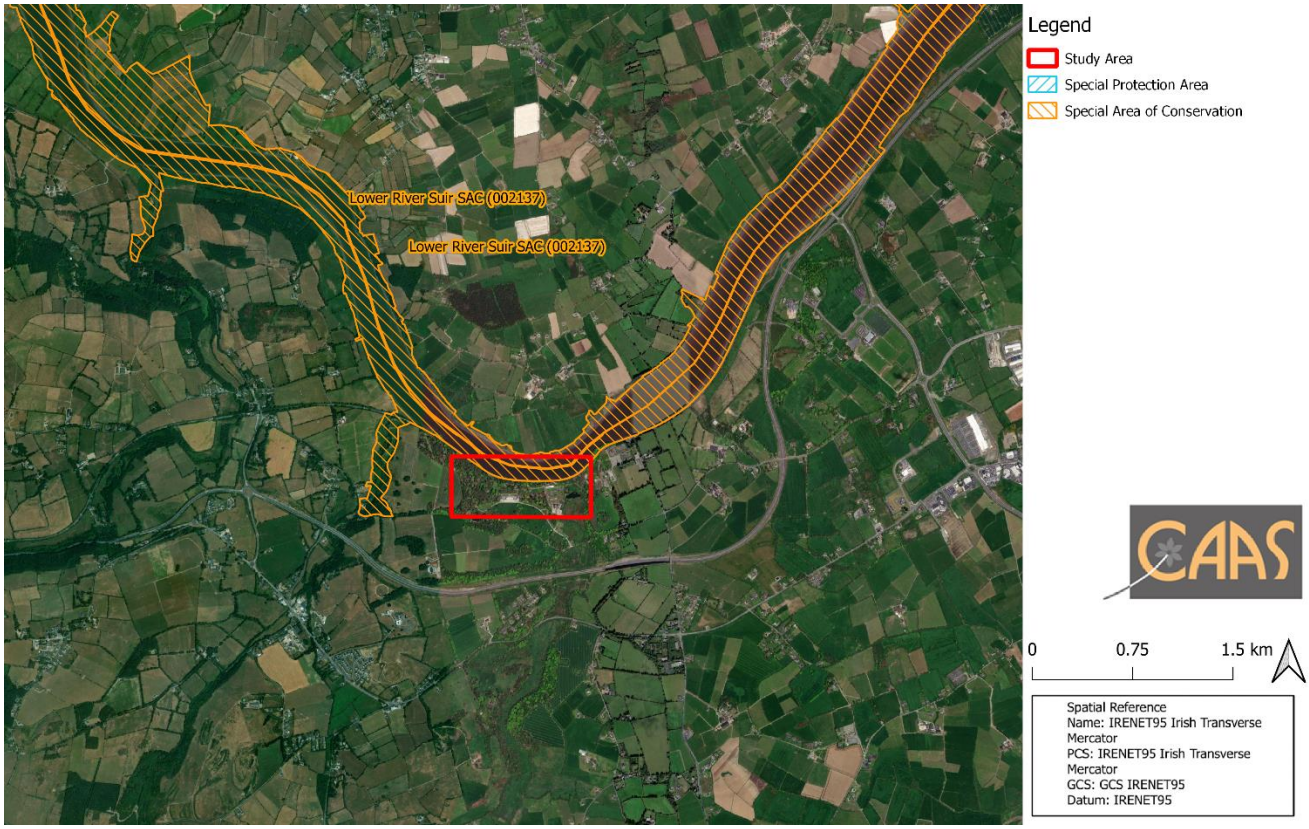


Figure 1.2 Study Area within Lower River Suir SAC

1.4 Pathways and Features Condition Results

1.4.1 Pathway Condition

Mount Congreve, is a heavily managed area with paths that consist of managed and soft infrastructure pathways. The pathways of that make up the trails at Mount Congreve are of similar width and composition. There is little evidence of damage or erosion along the pathways.

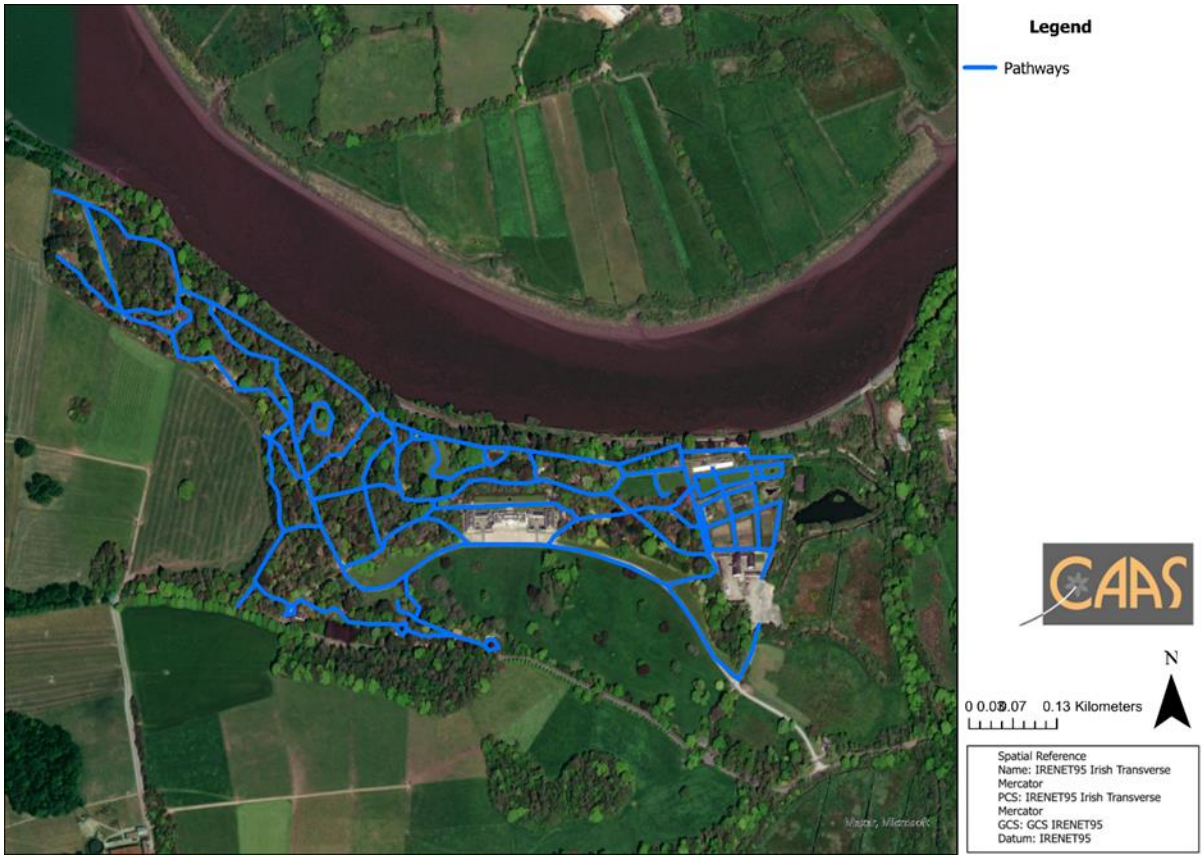


Figure 1.3 Pathways identified at Mount Congreve

Figure 1.4 Pathways at Mount Congreve

1.4.2 Features Condition

As a managed garden estate, Mount Congreve contains a large number of features unique to the area. These include Mount Congreve house, a glasshouse, various buildings (Figure 1.6) used for the maintenance and upkeep of the site and a number of garden and stone features which are placed along Mount Congreve and its paths. Along with this, there are also a number of benches and similar sit-down areas within Mount Congreve (Figure 1.6). There's also a number of signs and signage which

show trail maps and provide directions to different areas of Mount Congreve itself (Figure 1.6).

Figure 1.5 Features recorded at Mount Congreve

Figure 1.6 Features at Mount Congreve

1.4.3 Hazards

Only one hazard was identified during the hazard mapping at Mount Congreve, a broken fence was noted which would potentially lead visitors to an unsafe area of the site (Figure 1.8).

Figure 1.7 Hazards recorded at Mount Congreve

Figure 1.8 Broken fence at Mount Congreve

1.5 Ecological Monitoring Results

1.5.1 Ecological Constraints

The habitats and species 2km around Mount Congreve are sensitive to land use management, hydrological changes, pollution and invasive species.

Table 1.4 Designated sites within 2km of Mount Congreve and relevant ecological receptors

Site Code	Site Name	Distance (km)	Site Type	Qualifying Feature
[002137]	Lower River Suir SAC	0.28	SAC	Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260], Brook lamprey *(Lampetra planeri)* [1096], *Taxus baccata* woods of the British Isles [91J0], Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430], Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* [91E0], River lamprey *(Lampetra fluviatilis)* [1099], Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)* [1330], Mediterranean salt meadows *(Juncetalia maritimi)* [1410], Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0], White-clawed crayfish *(Austropotamobius pallipes)* [1092], Atlantic salmon *(Salmo salar)* [1106], Otter *(Lutra lutra)* [1355], Sea lamprey *(Petromyzon marinus)* [1095], Twaite shad *(Alosa fallax)* [1103], Freshwater pearl mussel *(Margaritifera margaritifera)* [1029]

1.5.2 Habitat Descriptions

Mount Congreve is heavily managed and thus the habitats at Mount Congreve represent this. The majority of Mount Congreve is made up of horticultural land (Fossitt Code BC2) with sections of other managed habitats such as amenity grassland (Fossitt Code GA2) and flower beds and borders (Fossitt Code BC4). Mount Congreve is situated on the River Suir, which is designated as an SAC, and has habitats such as marsh (Fossitt Code GM1) which represent this.

This is a well-managed site that has permanent on-site staff ensuring the grounds are well maintained.

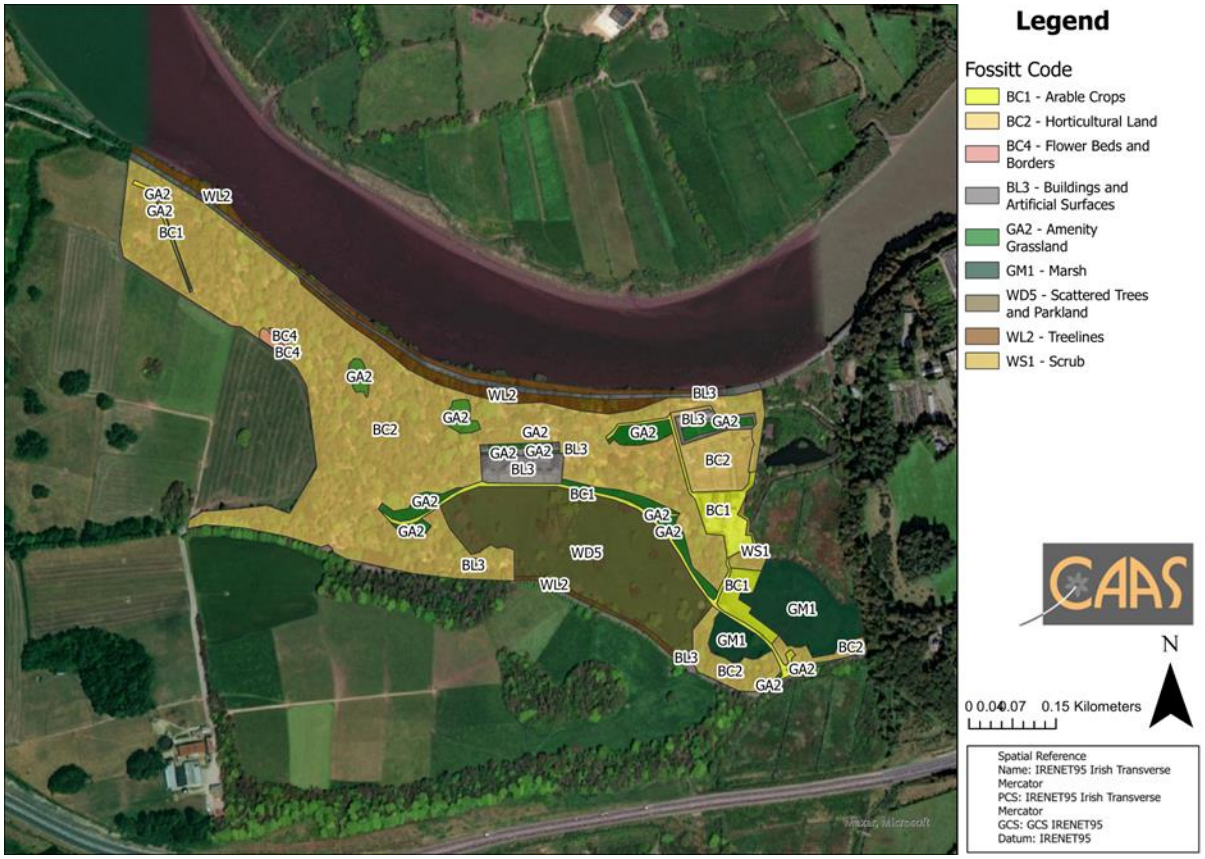


Figure 1.9 Habitats present at Mount Congreve

1.5.3 Condition Assessment

Habitat condition assessments are an integral part of the National Tourism Monitoring Programme. They will allow an assessment of how habitat degradation due to human disturbance may relate to visitor monitoring data gathered at each of the 19 Failte Ireland sites for the duration of the programme.

Each habitat condition assessment will follow a rating scale, that has been designed specifically for this monitoring programme as a standardised, repeatable measurement for assessing habitat condition across all Failte Ireland sites (details on the full methodology are supplied in Appendix II of this report). In order to adequately capture possible changes to habitat condition at each site in relation to tourism activities, the habitat condition assessments will be conducted every second year of the 5-year monitoring programme. Carrying out this condition assessment every second year, creates a sufficient timescale for changes in site condition in relation to visitor movements and activities on site to become apparent, and therefore to be reflected in the resultant data.

The initial habitat condition assessments that will form the baseline for the programme's condition assessments for each of the 19 sites, were carried out in the inaugural year of this programme in 2021. The next year of habitat condition assessment will be conducted in 2023. Each assessments results will be detailed within their relevant year's interim report, with the overall analysis of trends in habitat condition in relation to visitor movements for every site reported in the final year of the monitoring programme in 2025.

1.5.4 NBDC Records of Mammals

The NBDC data shows a number of marine mammals despite Mount Congreve not being a coastal location. This is due to one of the hectads that Mount Congreve lies in also takes up part of the coastline of Waterford County.

The terrestrial mammals observed in Mount Congreve, from the NBDC data, shows species which would be expected of areas that contain similar habitats to those of Mount Congreve. Otters, badgers, rabbits, hedgehogs and pipistrelles were all recorded in high numbers.

Table 1.5 List of terrestrial mammals that have been recorded at NBDC Hectads[5] S51 & S50

Group	Common name	Scientific name	Number Recorded
Terrestrial mammal	American Mink	*Mustela vison*	8
Terrestrial mammal	Bank Vole	*Myodes glareolus*	12
Terrestrial mammal	Brown Long-eared Bat	*Plecotus auritus*	22
Terrestrial mammal	Brown Rat	*Rattus norvegicus*	36
Terrestrial mammal	Daubenton's Bat	*Myotis daubentonii*	34
Terrestrial mammal	Eastern Grey Squirrel	*Sciurus carolinensis*	11
Terrestrial mammal	Eurasian Badger	*Meles meles*	168
Terrestrial mammal	Eurasian Pygmy Shrew	*Sorex minutus*	3
Terrestrial mammal	Eurasian Red Squirrel	*Sciurus vulgaris*	64
Terrestrial mammal	European Otter	*Lutra lutra*	121
Terrestrial mammal	European Rabbit	*Oryctolagus cuniculus*	111
Terrestrial mammal	Fallow Deer	*Dama dama*	1
Terrestrial mammal	Feral Ferret	*Mustela furo*	2
Terrestrial mammal	Feral Goat	*Capra hircus*	2
Terrestrial mammal	Greater White-toothed Shrew	*Crocidura russula*	5
Terrestrial mammal	Irish Hare	*Lepus timidus subsp. hibernicus*	16
Terrestrial mammal	Irish Stoat	*Mustela erminea subsp. hibernica*	11
Terrestrial mammal	Lesser Noctule	*Nyctalus leisleri*	20
Terrestrial mammal	Natterer's Bat	*Myotis nattereri*	7
Terrestrial mammal	Pine Marten	*Martes martes*	8
Terrestrial mammal	Pipistrelle	*Pipistrellus pipistrellus*	62
Terrestrial mammal	Red Fox	*Vulpes vulpes*	50
Terrestrial mammal	Soprano Pipistrelle	*Pipistrellus pygmaeus*	25
Terrestrial mammal	West European Hedgehog	*Erinaceus europaeus*	74
Terrestrial mammal	Whiskered Bat	*Myotis mystacinus*	3

1.6 Recommendations

- An invasive mammal survey should be conducted for the site as there are four invasive species suspected of being present; namely American Mink, Bank Vole, Grey Squirrel and Greater White-toothed Shrew. However, live capture techniques should be used for any control measures to avoid the use of rodenticides which could result in bioaccumulation.
- Invertebrate resources such as dead wood piles and standing deadwood should be implemented to support invertebrate populations as a resource for mammals such as bats and hedgehogs.
- Bat boxes should be installed to increase the site usage by bats and all lighting should be kept to a minimum.

[5] 10km^2 grid

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 sites[6]. 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.