Visitor OBSERVATION STUDY RESULTS

STRATEGY FOR ENVIRONMENTAL SURVEYING AND MONITORING

FOR THE

WILD ATLANTIC WAY OPERATIONAL PROGRAMME

December 2016

for: **Fáilte Ireland**

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Section 1 Introduction

This document details the results of the Visitor Observation Study carried out as part of the Strategy for Environmental Surveying and Monitoring for the Wild Atlantic Way Operational Programme. It has been undertaken by CAAS Ltd. on behalf of Fáilte Ireland. The Strategy for Environmental Surveying and Monitoring was carried out as part of Fáilte Ireland's commitments in the Wild Atlantic Way Operational Programme 2015-2019. A copy of the Operational Programme and associated documents are available on the Fáilte Ireland website www.failteireland.ie/wildatlanticway. The purpose of the monitoring strategy is to ensure that the effects of the implementation of the Operational Programme are understood and acted upon to ensure that there will be no delays in identifying existing or emerging activities that could threaten the environment. The Strategy for Environmental Surveying and Monitoring for the Wild Atlantic Way is intended to describe the existing conditions of sites with a view to:

- Contributing to Visitor Management Strategies;
- Contributing to future editions of Fáilte Ireland's Wild Atlantic Way operational Programmes and Guidelines;
- Identifying remedial action/works required;
- Assessing the capacity for future loadings;
- Integrating site management with future European Site Management Plans

The monitoring strategy consists of three separate components;

- The first stage of monitoring examines individual sites as well as larger-scale and regional indicators. The monitoring also serves a purpose to establish baseline data.
- This report forms the second stage of monitoring, the observational element, it examines the types, spatial patterns and intensity of existing visitor activities at the 15 discovery points.
- Stage three involves monitoring ecologists being directed to areas known to receive maximum, moderate, minimum and no loading. A detailed ecological survey was carried out at the sites and control areas having particular regard to the specific conservation objectives of relevant European Sites.

The results of Wild Atlantic Way monitoring activities - including the results detailed in this document - will be collated and presented to a Monitoring Group twice each year. Relevant members of the Monitoring Group to identify protective, remedial or improvement actions within their own areas of responsibility during the following year can use this information. An annual summary of the results of monitoring will be published on the Fáilte Ireland website

Table 1.1 Observation Study sites including Natura 2000 Data

Nr*	Name	County	GPS Coordinate	Survey Date (2016)	Relevant cSAC	Distance (km)	Relevant SPA	Distance (km)
9	Lisfannon Beach	Donegal	55.098802-7.4785137	15th August	Lough Swilly	Within	Castlemaine Harbour	Within
15	Ros Guill	Donegal	55.227669-7.8449062	14th August	Tranarossan and Melmore Lough	Within	Horn Head to Fanad Head	Within
23	Gabhla	Donegal	55.091043-80.58707	16th August	Gweedore Bay and Islands	Within	West Donegal Islands	Within
29	Málainn Bhig	Donegal	54.665303-8.7776417	17th August	Slieve League	Within	West Donegal Coast	Within
53	Trá Oiligh	Mayo	54.162316-10.086517	29th July	Mullet/Blacksod Bay	0.03km	Broadhaven SPA	Adjacent
55	Inis Gé Theas	Mayo	54.118845-10.20729	30th July	Inishkea Islands	Within	Inishkea Islands SPA	Within
111	Scattery Island	Clare	52.614448-9.514275	21st July	Lower River Shannon	Within	River Shannon and River Fergus Estuaries	0.5km
120	Castlegregory Beach	Kerry	52.260314-10.013826	18th July	Tralee Bay	Within	Dingle Peninsula	Within
121	Srón Bhroin	Kerry	52.287794-10.160739	16th July	Mount Brandon	Within	Dingle Peninsula	Within
125	An Blascaod Mór	Kerry	52.133076-10.461775	15th July	Blasket Islands	Within	Blasket Islands	Within
127	Rossbeigh Strand	Kerry	52.054229-9.9766052	3rd July	Castlemaine Harbour	Within	Iveragh Peninsula	Within
128	Mountain Stage	Kerry	52.035924-10.034603	2nd July	Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment	Within	Iveragh Peninsula	Within
138	Dooneen	Cork	51.648764-10.055502	8th July	Kenmare River	0.5km	Beara Peninsula	Within
148	Barley Cove	Cork	51.472624-9.767999	9th July	Ballyrisode Point	Within	Sheeps head to Toe Head	Within
EP16	Garnish Point	Cork	51.610024-10.155077	7th July	Kenmare River	0.1km	Beara Peninsula	0.8km

*Discovery Point Number

Section 2 Methodology

The implementation of the Visitor Observation Survey methodology allows for the examination of patterns of visitor behaviour at sites along the Wild Atlantic Way. A visitor observation study is a tool used to collect systematic data about visitor behaviour at a site of interest. The methodology involves watching visitors and collecting information on how they are interacting with the site, as well as studying their activities and the flow of movement throughout the site. The purpose is to identify visitor use without interacting with the user or influencing behaviour in a systematic format that is suitable for use in a wide range of conditions and sites. The survey will identify patterns of visitor activity, movement and behaviour.

The aim of the Visitor Observation Survey is to collect evidence of stay duration, activities undertaken, location and direction of excursions from vehicles. The methodology is reinforced using an evidence-based model to identify the current state of the site and existing contributing factors before establishing the likely behaviour of visitors and the likely nature of impacts at key sites.

Effective methods for visitor observation have been designed and tested using Pilot Visitor Observation Studies at the Burren and Cliffs of Moher Geopark in Co. Clare. The studies were carried out at full spectrum of types of circumstances that range from small spatially-concentrated areas to large diffuse sites. The study sites had a range of existing management regimes that range from those that are complex and highly structured, private enterprises to the simpler smaller sites.

The method is designed to have a simple, replicable template that allows easy identification patterns of visitor activity, movement and behaviour using a standardised visitor observation and tracking methodology for a range of site types (See Appendix I). The collation of the data including the tracking of onsite movement by visitors will result in the identification of core and secondary movement zones. The sites chosen for monitoring are fifteen Discovery Points along the Wild Atlantic Way. The Discovery Points range from having complex and highly structured existing management regimes to existing roadside laybys with little or no management. The candidate Signature Discovery Points and Control Sites represent the following habitats/landscape types:

1. Rocky shores

2. Soft shores/beaches/dunes

3. Montane/upland/peat

4. Marine areas (sea, estuaries, salt marsh)

5. Improved Grasslands (farm land)

The second round of monitoring focuses on fifteen Candidate Discovery Points which have been prioritised in order of sensitivity and significance as directed by the monitoring group The monitoring will target the conservation objectives of European sites, and will monitor, identify and highlight effects arising from the Wild Atlantic Way on its own and in combination with other plans and projects, taking existing uses, pressures and loadings into account.

2.1.1 Development of Activities, effects and their categories

A list of general activities and effects was developed to assist in the categorisation of visitor behaviour (See Appendix III). While these are generic to all sites, the list is non-exhaustive and can be expanded depending on the individual site or emerging trends. Activities and effects are categorised depending on their severity to guide accurate reporting in an effective, efficient and easily replicated manner (See Table 2.1 and Table 2.2).

Table 2.1 Description of Activity Categorisation

Activities	
Low Level	Activity for which the site is intended
Medium Level	Activities, often incidental, depending on site management whereby the visitor engages in behaviour that may result in an effect
High Level	Activity where visitors engage in behaviour that is likely to have an effect on the site but may not be directly linked to a high impact

Table 2.2 Description of Effects Categorisation

Effects	
Low Impact	No impact or a discernible impact i.e. no significant, lasting damage is identified
Medium Impact	A short term, reversible effect that is intermittent but will have no significant, long term impact
High/Severe Impact	Severe effect that has potential to have a significant, long-term, irreversible or permanent impact

2.1.2 Methodology for Visitor Observation Survey

The following outlines the methodology for undertaking the visitor observation survey at sites along the Wild Atlantic Way.

1. Prepare survey materials to include standardised observation sheets, maps and a briefing document.
2. Carry out a pre-planning site visit using the guidance included in Section 2.1.3 below.
3. Provide surveyors with materials in advance of survey date.
4. Carry out a site visit on the day of the survey to ensure familiarity and note any change in conditions or health and safety issues.
5. Provide surveyors with a health and safety briefing, high-visibility vests, name tags and in depth briefing on objectives and methods.
6. Carry out a site-specific briefing to highlight individual site complexities before commencement of survey.
7. Commence survey and record the nature, duration and extent of activities by visitors for at least eight hours.
8. Present results of the surveys in report format detailing the methodology applied, the results of the survey in a tabulated format by site, maps showing core movement areas and the breakdown of activities and impacts recorded onsite. Include a brief overview of each

site and present a summary of the results including a comparison between the core, secondary and control areas.

2.1.3 Guidelines for undertaking Visitor Observation Survey

The recommended time of year to undertake visitor observational surveys is from the beginning of tourist season to the end of July to allow sufficient time for undertaking of subsequent ecological surveys. Preparation of survey materials and site visits should be undertaken well in advance to increase efficiency of the monitoring programme during the tourist season.

2.1.3.1 Survey Planning

In advance of undertaking a Visitor Observation Study, an initial desk based study is required to assess available baseline information of the site and to compile maps, plans and other available documentation. Where the land is privately owned consent from the landowner is also necessary. Survey materials include standardised observation sheets (See Appendix II – sheets are adjustable to each site), maps and a briefing document should be compiled in advance of the study. The survey materials are designed to be iterative while allowing for the individual site complexities to be integrated. The optimum onsite location to undertake the survey work should also be established employing local knowledge where available and aerial photography. The optimum route to the site should be identified in advance. In the case of numerous sites being surveyed simultaneously, establish the time needed to travel between sites in advance of the survey. At this stage, it is important to establish whether additional cars are required surveyors drop offs/checks/in the event of an emergency, etc. The suitability of positioning the surveyor in a fixed position should also be confirmed. The survey location is not fixed. The surveyor may be required to move around the site when observing visitor behaviour to ensure all activities are recorded in full.

Surveyor details should also be obtained in advance of the survey date to include emergency contacts and details of health issues. Surveyors should be briefed and provided with:

- Briefing documents;
- Lists of essentials to bring;
- Equipment required/provided;
- Examples of completed survey materials (See Appendix II);
- Details on how to use survey materials (See Appendix III);
- Timeline of events to include start time, when Surveyors will take up observer positions; checks in times, lunch breaks, finish times, etc.;
- Health and Safety Plan;
- Location of toilets and shelter. The preparation of a preliminary set of maps and survey sheets for each site in advance of the survey is advised to allow for the undertaking of a short pilot survey during site visits.

2.1.3.2 Pre-planning Site

Visit A pre-planning site visit in advance of survey date is recommended. The visit in advance of the survey date should include the following:

- Identification of observer position(s);
- Identification of key site sensitivities (where applicable);
- Identification/installation of key distance measurement points (coloured stakes may be required if there are no existing features to use as markers);
- Collect baseline data for development of survey materials where relevant;

- Identification of potential Health and Safety issues for inclusion in a Health and Safety Plan and identification of locations for toilets and shelter;
- Identification of number of surveyors required for the site;
- Identification of 'relief' surveyor(s) for rest/break periods;
- Assignment of surveyors to individual sites (for multiple surveys at numerous sites only);
- Transport arrangements.

2.1.3.4 Survey Recommendations

The following includes a number of recommendations for the survey:

- The surveyor should record the time of arrival and departure at observation post.
- The surveyor should not depart from site until the final visitor being monitored has left the site unless the visitor has not returned after at least one hour. It should be noted if the departure of the visitor has not been observed.
- At very busy sites, it is recommended that surveyors take note of defining visitor features for example the vehicle make, model, colour or a brief description of the visitors clothing etc. This assists in monitoring visitor activities in busy locations.
- For sites that experience high volumes of visitors, it is recommended to choose and observe the activity of a random group of visitors and record their activities from arrival until departure. On departure, the next group of visitors entering the site should be selected for observation.
- The survey should be abandoned if a significant amount of inactivity is observed or if adverse weather or other intervening factors make is unsafe for the surveyor to complete the survey. If it is not possible to achieve the specified amount of surveying time (recommended minimum of eight hours), the time spent on site and the reason for survey abandonment should be reported. The survey may need to be repeated on another date.
- Supervisors should check each site intermittingly to discuss progress and issues in addition to requesting a 'check in' at regular intervals from surveyors.
- A debriefing session with surveyors after each day is recommended to finalise and adjust methods and collect survey sheets, notes and feedback from the survey.
- Before the next survey, a re-evaluation of the numbers of surveyors required per site.
- Prepare survey sheets in advance of subsequent survey dates (if required).

2.1.4 Assessment of Movement Patterns Observed on Sites

The pattern of movement of each visitor is observed and recorded on a sketch plan during the observation survey. (Figure 2.1) The maps are then combined to note the intensity of movement patterns that recurred at the same locations. Generally, two levels of activity are noted, a 'Core Area' where the majority of visitors moved and a 'Secondary Area' where occasional movement is observed by a very small proportion of visitors. A record of furthers levels of activity by a tiny proportion of visitors was also be recorded for completeness (tertiary areas).

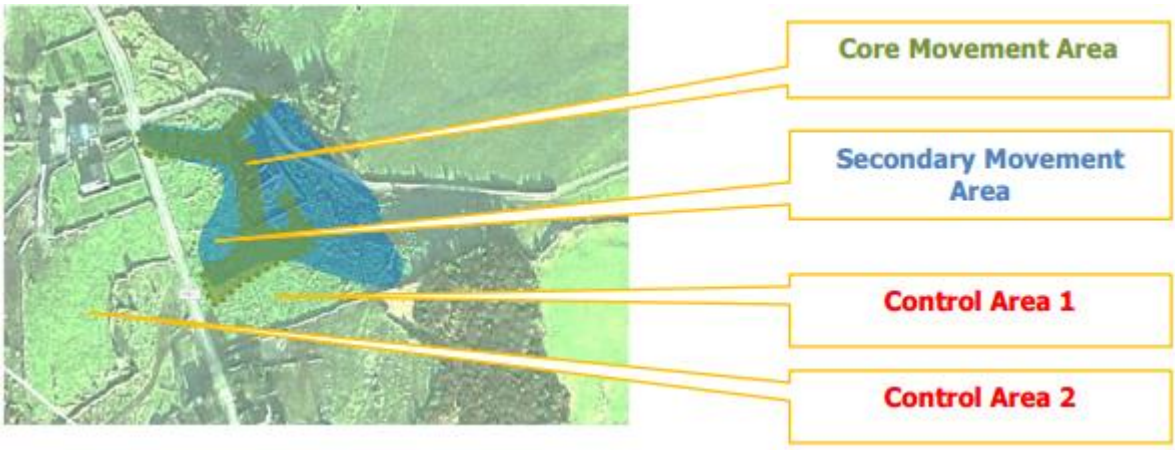


Figure 2.1 Sample of Observed Visitor Movement

The shading is then superimposed over the aerial photographs to illustrate where patterns of movement occurred. The areas of movement are colour coded as per the table below. These results are then used to direct the detailed ecological assessment which examines the effects on vegetation in core and secondary areas as well as in 'control areas' where no visitor movement was recorded on site (Control Area 1) and nearby areas with similar conditions but with no potential visitor access (Control Area 2).

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.
Tertiary Zone	Areas where no car park, paved areas, marked pathways, trails, tracks and managed grassland are identifiable and beyond the immediate boundaries of the site.

Table 2.3 Visitor Movement Zones

2.1.5 Habitat Type Control Sites

The Wild Atlantic Way passes through a relatively narrow range of types of habitats. Surveying and monitoring will be undertaken on five areas within the candidate Discovery Points and Control Areas as follows.

1. **Habitat Control Sites**

These will consist of off-site locations in similar areas that are unaffected by current, recent or regular human activity. This may include small lake islands, sea stacks or other remote uninhabited areas. This element of the survey will consist of a literature review carried out by the ecologist for each Discovery Point.

2. **Off-site Control Areas**

These will consist of areas of similar general vegetation, topography and land-use immediately adjacent to the Discovery Points but are not accessed by visitors.

3. **On-site Control Areas**

These will consist of areas within the Discovery Points that have been identified by observational studies to be unused by visitors.

4. **Secondary Movement Areas**

These will consist of areas within the Discovery Points that have been identified by observational studies to be regularly, but less frequently used by visitors.

5. **Core Movement Areas**

These will consist of areas within the Discovery Points that have been identified by observational studies to be regularly used by almost all visitors.

Section 3 Presentation of Results and Analysis

This section of the report is an account of the site visits to each of the Discovery Points selected for 2016. The survey was carried out from a period between the 2nd of July and the 17th of August 2016. For optimum results, each site was observed at the same time on every survey day. Surveyors were on site at 08:30 and concluded observations at 17:30, spending a duration of approximately 9 hours at each site.

3.1.1 Mountain Stage

Landscape Type: Mountain/upland/Coastal

Dates Surveyed: 2nd July 2016

Weather: Mostly overcast and wet

Site Description:

Mountain Stage is comprised of two laybys along the Ring of Kerry way located approximately 6.6km from Glenbeigh. The site overlooks Dingle Bay over to the Dingle peninsula and Rossbeigh beach, Inch beach can also be seen jutting into Dingle Bay from the right-hand side of the layby. Behind the site there are the remains of the old Great Southern and Western Rail lines which travelled that way in the 1900's.

Mountain stage is located within Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment and the Iveragh Peninsula SPA. The site is an SAC for a number of habitats and species listed on Annex I and II of the Habitats Directive.

The Great Southern and Western Railway was an Irish gauge railway from 1844 up until 1924. Both railway lines grew by building lines and making a series of takeovers, it was the largest of Ireland's railway networks in the late 19th and early 20th century. The railways had a 1,800km network of which 390km where double track at its peak.

There is a proposed Greenway from Glenbeigh to Cahersiveen and Valentia Island, the route will be a 30km stretch that will hug the side of Drung Hill which is over 100m above sea level and will cut into the mountain along the Wild Atlantic Way.

The site previously hosted three laybys but on arrival to only two were evident. Visitors where observed from both laybys, one being the main Wild Atlantic Way site and the other being the secondary site. There is also a small layby roughly 50m down in the direction if Cahersiveen which was also used as a viewing point by visitors. There are no visitor facilities at the Mountain Stage site.

Mountain Stage Observation Study Results

Site	Male	Female	Total No. of people	No. of groups	Average site duration
Mountain Stage	169	172	341	115	00:04 minutes

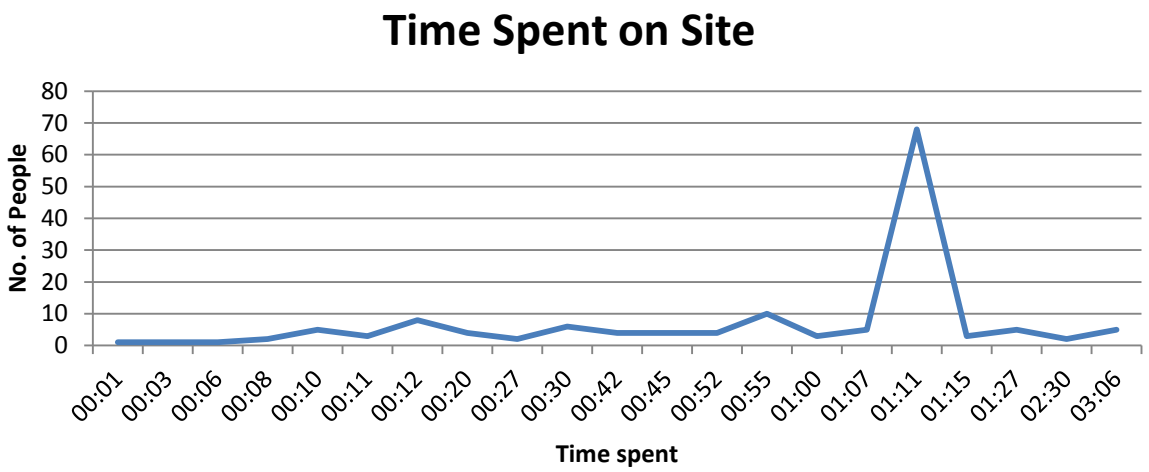


Figure 3.1 Time Spent on Site at Mountain Stage

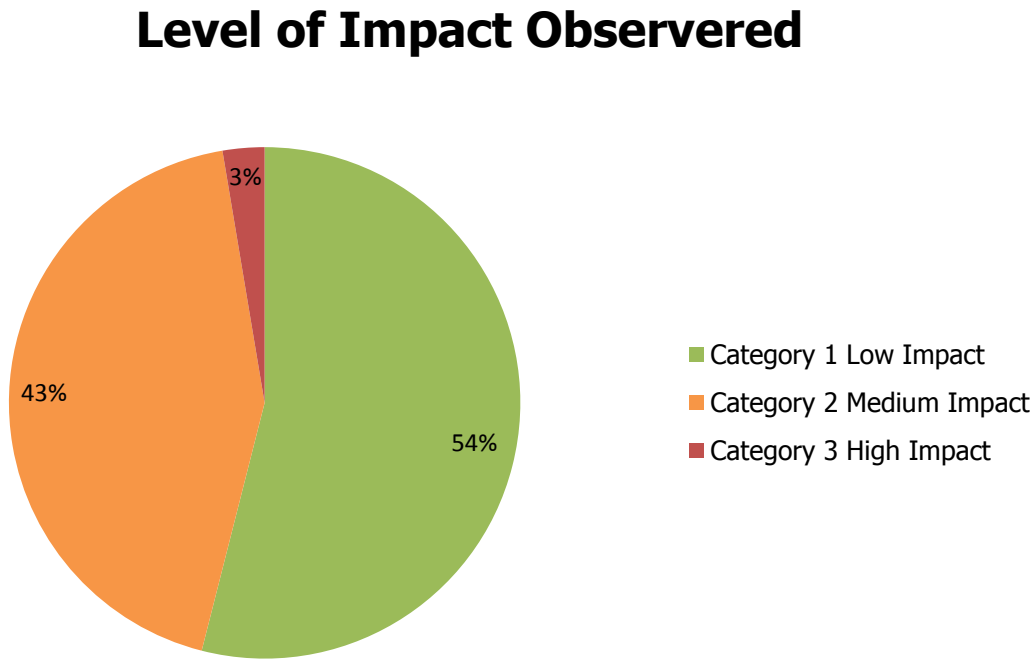


Figure 3.2 Level of Impact Observed at Mountain Stage

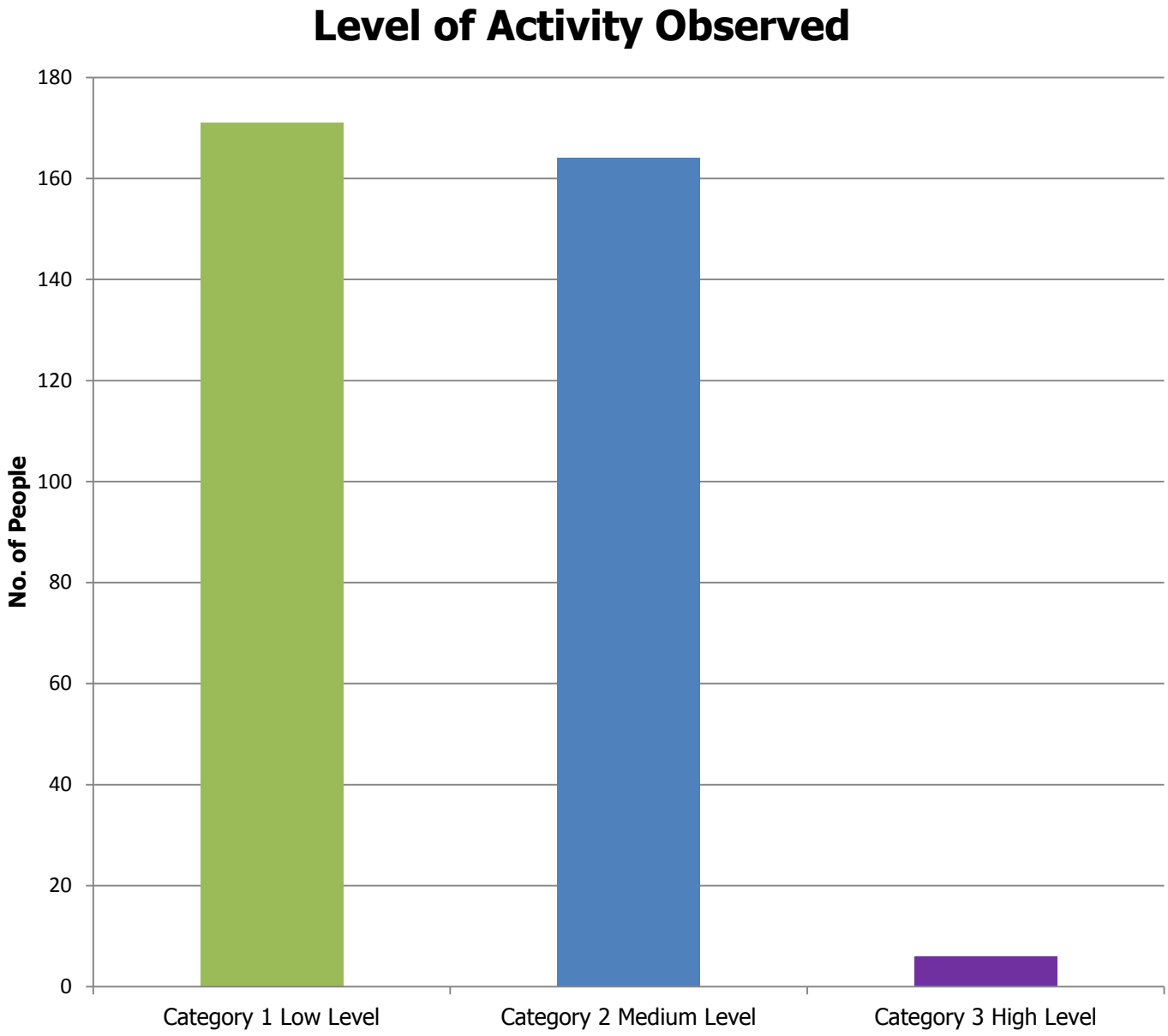


Figure 3.3 Level of activity observed at Mountain Stage

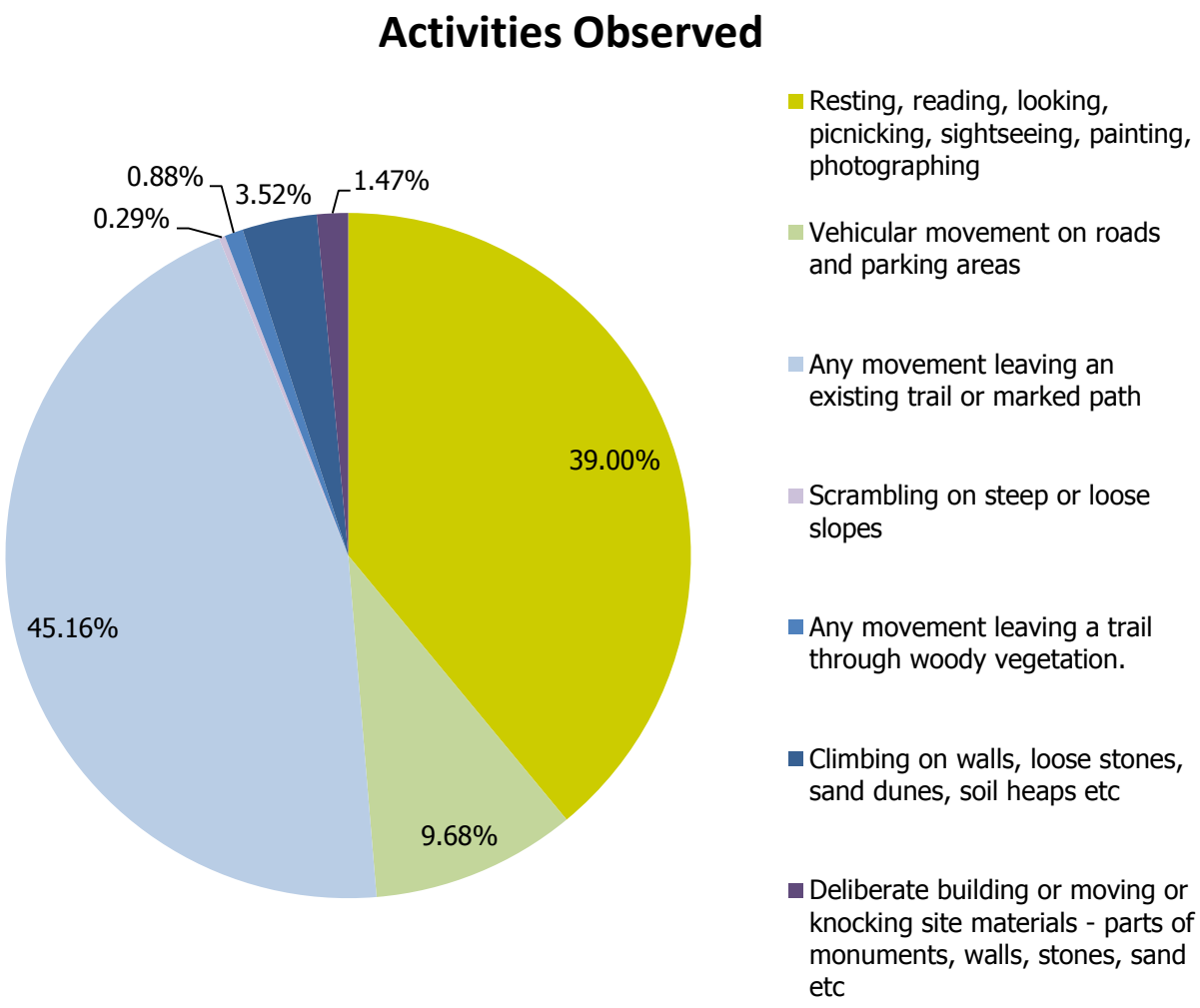


Figure 3.4 Range of Activities recorded at Mountain Stage

Table 3.1 Breakdown of activities observed at Mountain Stage

Activities observed	No. of People	% of People
Any movement leaving an existing trail or marked path	154	45.16%
Resting, reading, looking, picnicking, sightseeing, painting, photographing	133	39.00%
Vehicular movement on roads and parking areas	33	9.68%
Climbing on walls, loose stones, sand dunes, soil heaps etc	12	3.52%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc	5	1.47%
Any movement leaving a trail through woody vegetation	3	0.88%
Scrambling on steep or loose slopes	1	0.29%
Grand Total	**341**	**100%**

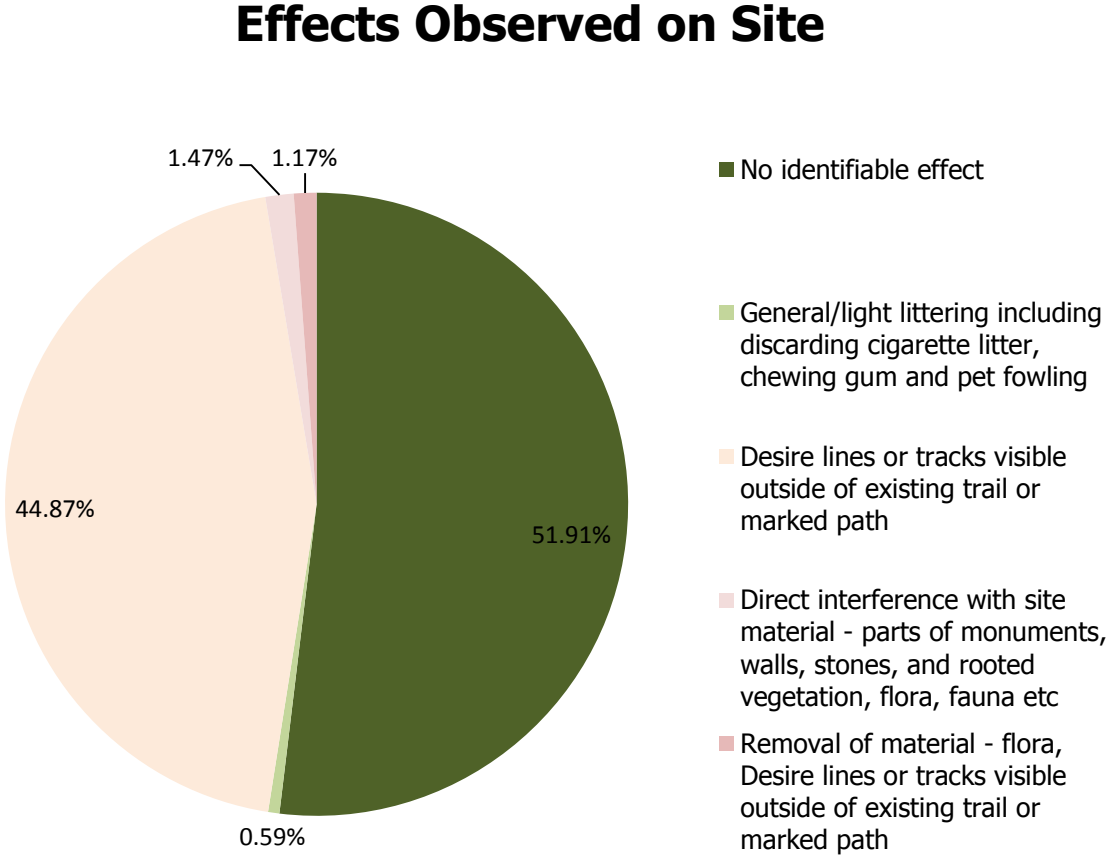


Figure 3.5 Range of activities recorded at Mountain Stage

Table 3.2 Breakdown of effects observed at Mountain Stage

Effects observed	No. of People	% of People
No identifiable effect	177	51.91%
Desire lines or tracks visible outside of existing trail or marked path	153	44.87%
Direct interference with site material – parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc	5	1.47%
Removal of material – parts of monuments, walls, stones, sand rooted vegetation, flora fauna etc	4	1.17%
General/light littering including discarding cigarette litter, chewing gum and pet fouling	2	0.59%
Grand Total	**341**	**100%**

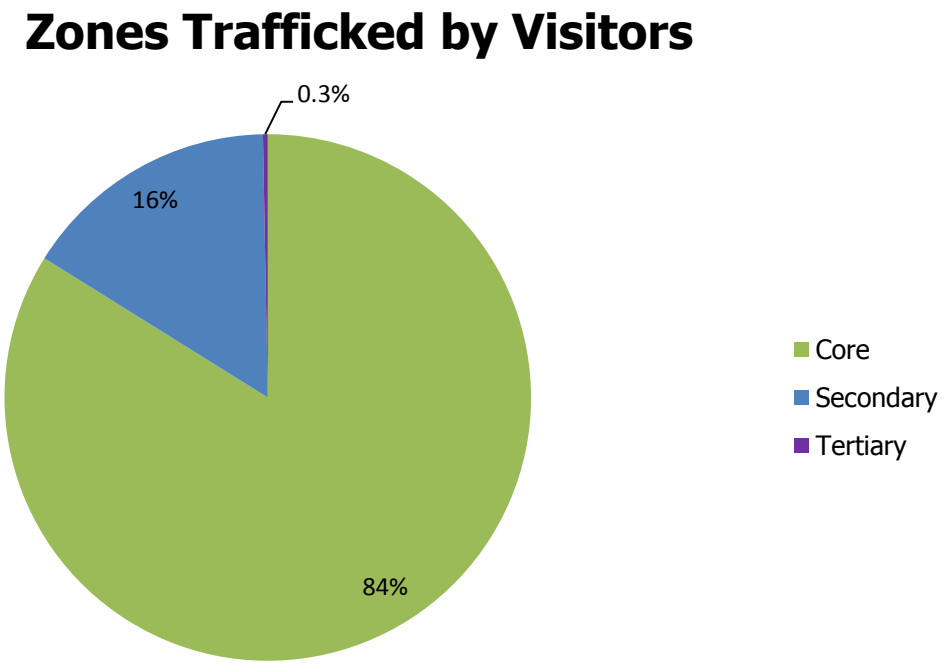


Figure 3.6 Zones Trafficked by visitors at Mountain Stage

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.
Tertiary Zone	Areas where no car park, paved areas, marked pathways, trails, tracks and managed grassland are identifiable and beyond the immediate boundaries of the site.

Movement Patterns Observed

On the day of the survey, The Ring of Kerry Cycle passed through the site area from 9:00 until 14:00, when the cyclist groups began to dwindle. Poor weather of overcast and scattered showers in the morning may have also deterred early visitors.

50% of visitors got out of their cars and crossed the small wall to get a better view, most would then either walk alongside the layby or move closer to the edge to try and see the cliff face below. The other 50 visitors stayed in the car park area, of which approximately 10% Stayed in their cars (weather dependent). One visitor in the secondary layby was observed to cross the road and scale a small section of cliff face, roughly 7 meters, to stand beside the old rail way track.

Mountain Stage Analysis of Results

As noted above in the movement patterns, many visitors would hop over the shin high wall to better observe the view and cliff side. Most stuck to the eroded trails past the wall, though 3 visitors were observed to venture further onto what little grass remains and through the ankle high gorse. Cigarette butts were the most common litter, with one case of a few banana peels being thrown from a car window. The single visitor who scaled the cliff had no immediate impact as there was no loose/falling debris, nor did he interact with the old railway, but merely observed it. The primary layby experiences as much visitor traffic as the secondary layby, as the secondary layby would be the first visitors would see driving from Glenbeigh. Similarly, the small dug out layby in the direction of Cahersiveen also took on a large proportion of visitors as it would be the first layby visitors would see traveling from that direction. A danger noted at both sites is the speed at which cars pull into the laybys.

Overall the activities carried out by visitors to Mountain Stage had no significant or lasting effects on the site.

Figure 3.7 Visitor Movement Patterns at Mountain Stage

3.1.2 Rossbeigh Strand

Landscape type: Beach/Soft Shores/Dune

Dates Surveyed 03/07/2016

Weather: Sunny

Site Description

Rossbeigh is a Blue flag beach located about 1.6km from Glenbeigh on the Ring of Kerry, it is situated directly opposite Inch beach on the Dingle peninsula. As this is a popular beach it is lifeguard patrolled. The area surrounding Rossbeigh is part of the Castlemaine Harbour Special Area of Conservation (SAC), Special Protected Area (SPA) and proposed Natural Heritage Site (pNHA) with important habitats, flora and fauna present.

Rossbeigh has ample parking for visitors. From each parking area visitors can walk down to the beach via the individual walkways. There are shower facilities at the end of the walk ways for visitor use. The sand dunes at Rossbeigh are prone to damage due the large footfall that occurs. The beach itself is also used for horse riding on a regular basis.

The main Wild Atlantic Way stop is situated at the first car park, here there are toilet facilities present for public use.

Rossbeigh Observation Study Results

Site	Male	Female	Total No. of people	No. of groups	Average site duration
Rossbeigh Strand	259	258	488	169	00:43 minutes

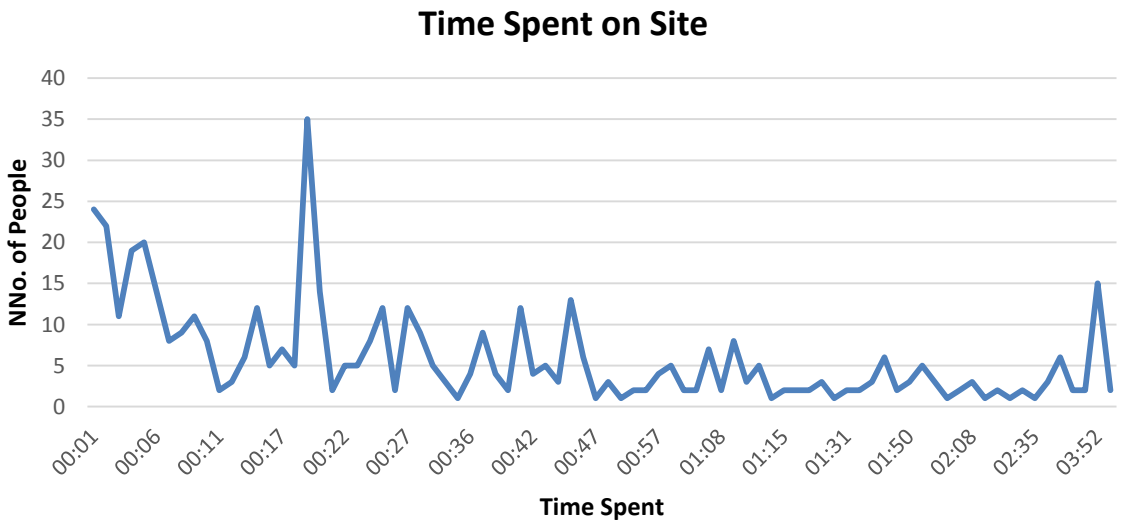


Figure 3.8 Duration of time spent on site by visitors at Rossbeigh Strand

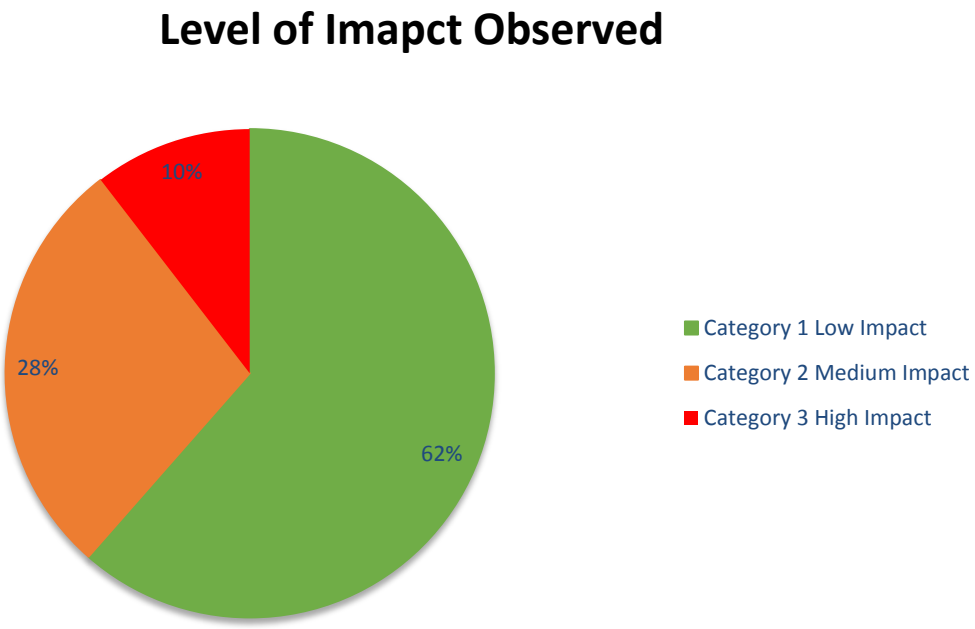


Figure 3.9 Level of impact Observed at Rossbeigh Strand

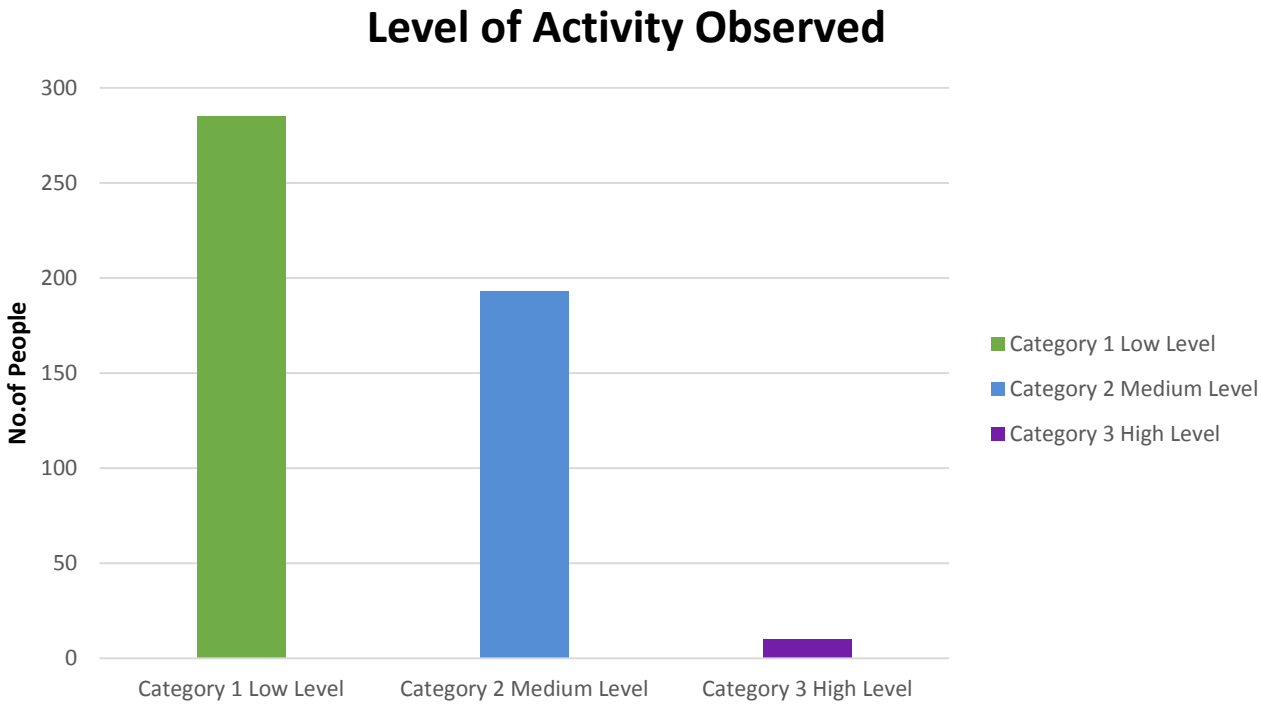


Figure 3.10 Level of activity observed at Rossbeigh Strand

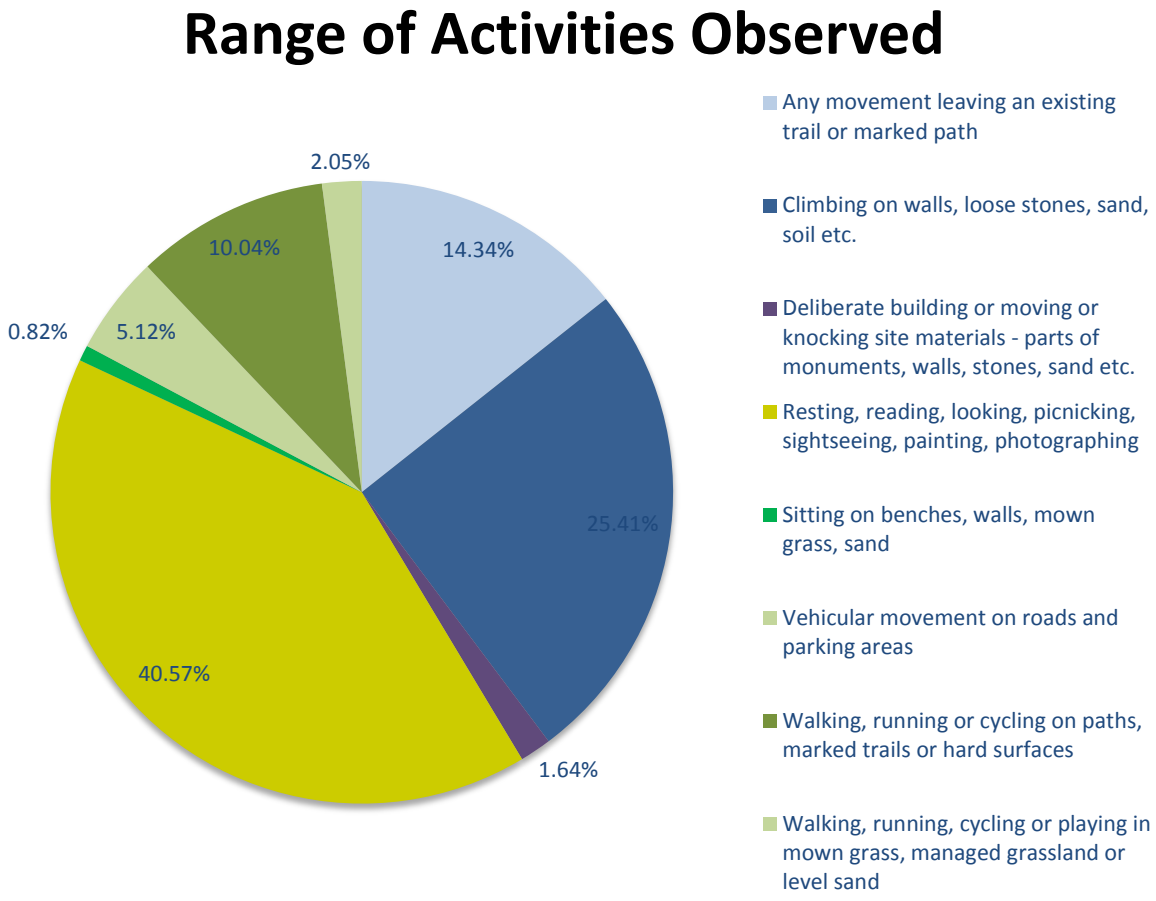


Figure 3.11 Range of Activities observed at Rossbeigh Strand

Table 3.3 Breakdown of activities observed at Rossbeigh Strand

Activities observed	No. of People	% of People
Any movement leaving an existing trail or marked path	70	14.34%
Climbing on walls, loose stones and dunes, soil heaps	124	25.41%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc	8	1.64%
Resting, reading, looking, picnicking, sightseeing, painting, photographing	198	40.57%
Sitting on benches, walls, mown grass, sand	4	0.82%
Vehicular movement on roads and parking areas	25	5.12%
Walking, running, cycling on paths, marked trails or hard surfaces	49	10.04%
Walking, running, cycling or playing in mown grass, managed grassland or level sand	10	2.05%
Grand Total	**488**	**100%**

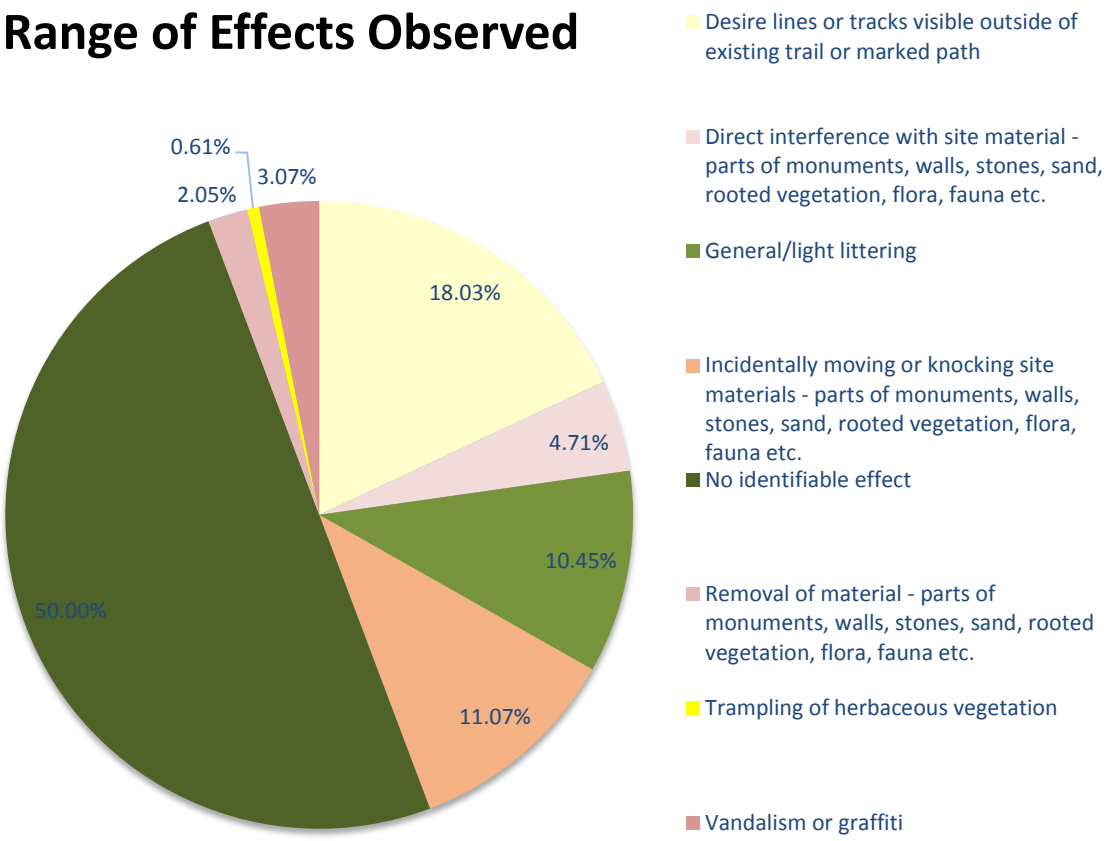


Figure 3.12 Range of effects observed at Rossbeigh Strand

Effects observed	No. of People	% of People
No identifiable effect	244	50.00%
Desire lines or tracks visible outside of existing trail or marked path	88	18.03%
Direct interference with site material – parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc	23	4.71%
Removal of material – parts of monuments, walls, stones, sand rooted vegetation, flora fauna etc	10	2.05%
General/light littering including discarding cigarette litter, chewing gum and pet fouling	51	1045%
Vandalism or Graffiti	15	**3.07%**
Incidentally knocking or moving site materials	54	11.07%
Trampling of herbaceous vegetation	3	0.61%
Grand Total	**488**	**100%**

Table 3.4 Breakdown of effects observed at Rossbeigh Strand

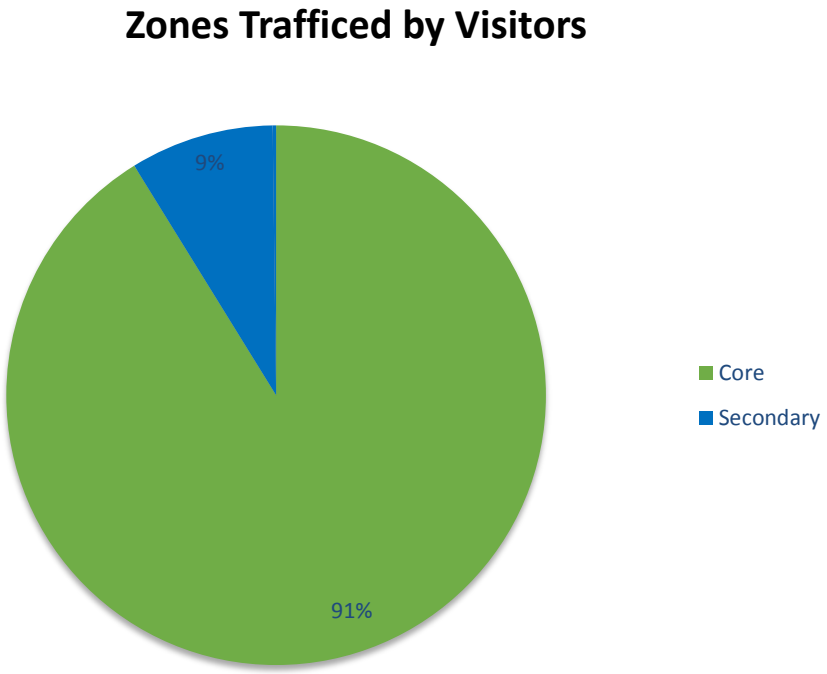


Figure 3.13 Zones Trafficked by visitors at Rossbeigh

Zones trafficked by visitors at Rossbeigh Strand

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.

Movement Pattern Observed

This site was surveyed on a warm clear day in July which resulted in high volumes of visitors. The majority of visitors to the site parked in the first car park or proceeded further down to the car park at the beginning of the dunes. Visitors used the marked paths that lie between the large stone walls to access the beach.

A large group of 15 or more people were observed at the first car park, children and teenagers were noted to vandalise several signs, the public bathroom and the height gauge that is situated near to the Wild Atlantic Way sign. A van was observed to have parked on the wetlands leaving distinct desire tracks.

Rossbeigh Strand Analysis of results

51% of visitors to Rossbeigh strand resulted in no identifiable effects to the site. Lifeguards are present on this beach during summer months, which contributes to good visitor behaviour on the strand which results in fewer effects.

3% of visitors resulted in High impact this was caused by the graffiti; this was noted to result in an unsightly welcome for visitors to the beach but the effects are readily reversible.

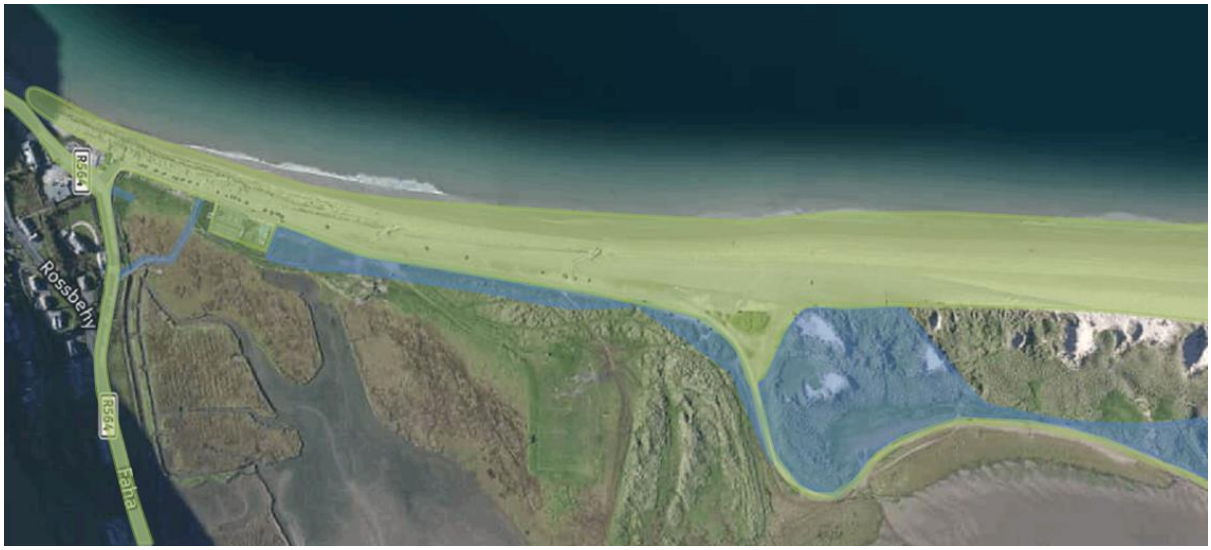


Figure 3.14 Visitor Movement Patterns at Rossbeigh Strand

3.1.3 Dooneen

Landscape type: Mountainous/Upland

Dates surveyed: 08/07/2016

Weather conditions: Sunny

Site Description

Dooneen is located on the Wild Atlantic Way about 1.3km northwest of Allihies village. In 1812 mining began at Dooneen. The exposed lode is a 23-metre-high and 9-metre-wide quartz vein which forms a narrow promontory that goes around 83 metre into the ocean. There is a narrow path that runs along the top of the cliff. The mine was finally abandoned in 1878 after an attempt to improve the development.

The site is located within the Beara Peninsula SPA.The site has a number of species listed on Annex I of the E.U Birds Directive.

There is little parking space available for visitors, enough space for around 6 cars. There are no facilities at the site but the village is only a short walk or drive away.

Dooneen Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Dooneen	62	50	111	45	00.08 minutes

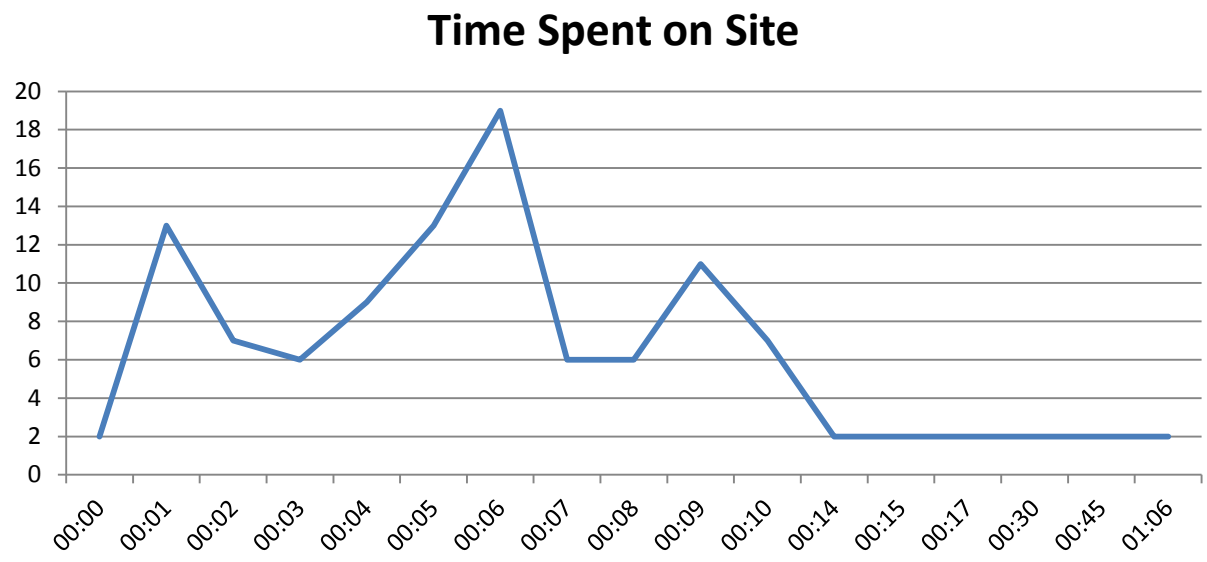


Figure 3.15 Duration of time spent by visitors at Dooneen

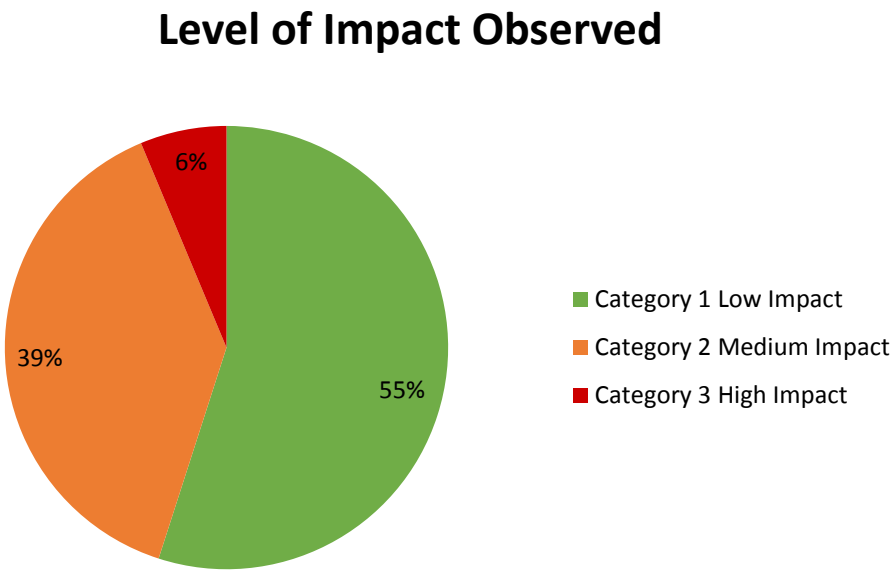


Figure 3.16 Level of Impact observed at Dooneen

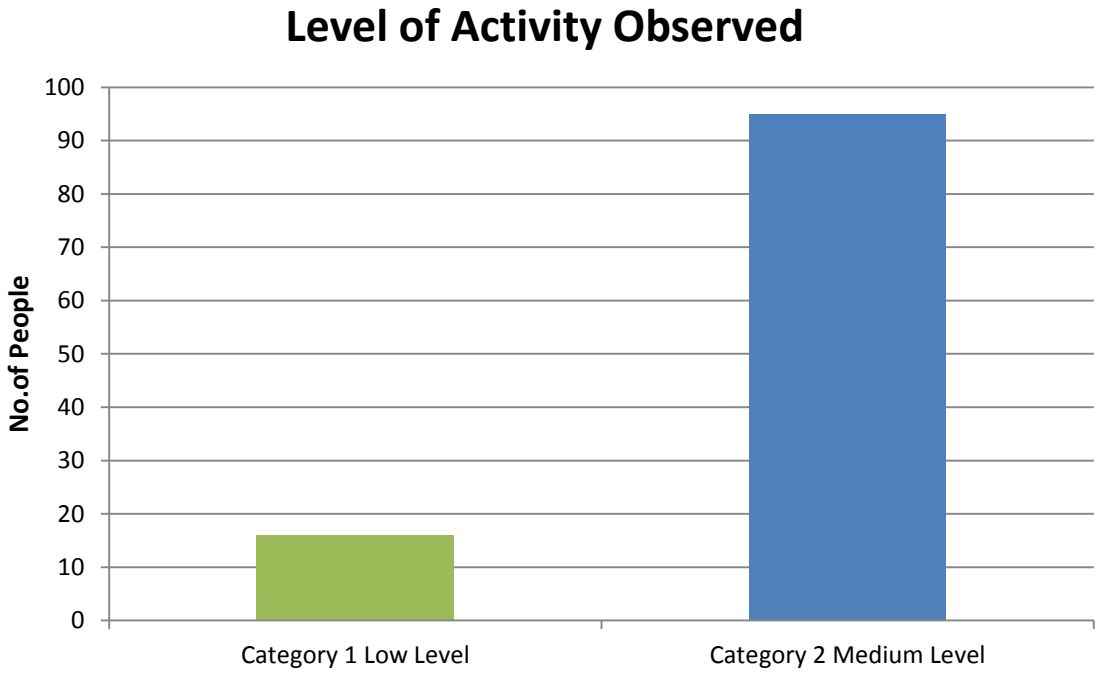


Figure 3.17 Level of activity observed at Dooneen

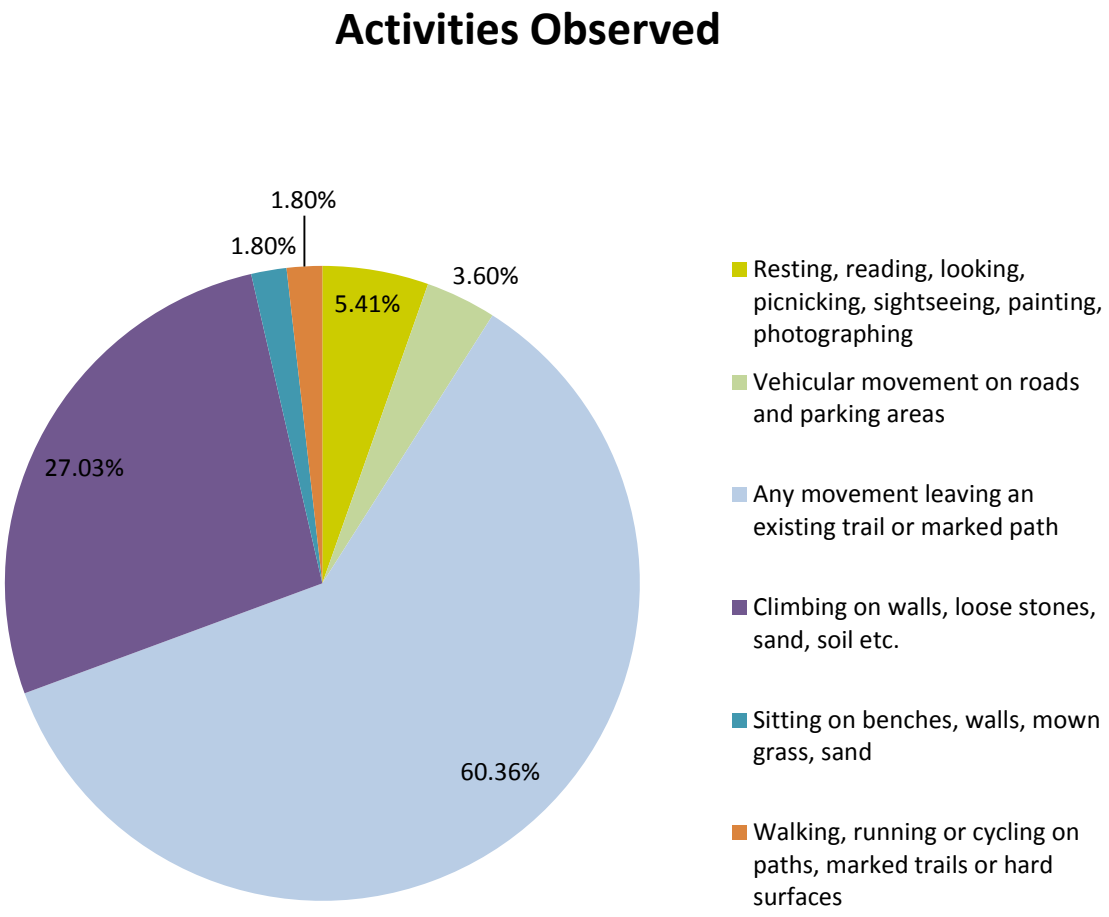


Figure 3.18 Range of activities observed at Dooneen

Table 3.5 Breakdown of Activities observed at Dooneen

Activities observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	6	5.41%
Vehicular movement on roads and parking areas	4	3.60%
Any movement leaving an existing trail or marked path	67	60.36%
Climbing on walls, loose stones, sand, soil etc.	30	27.03%
Sitting on benches, walls, mown grass, sand	2	1.80%
Walking, running or cycling on paths, marked trails or hard surfaces	2	1.80%
Grand Total	**111**	**100%**

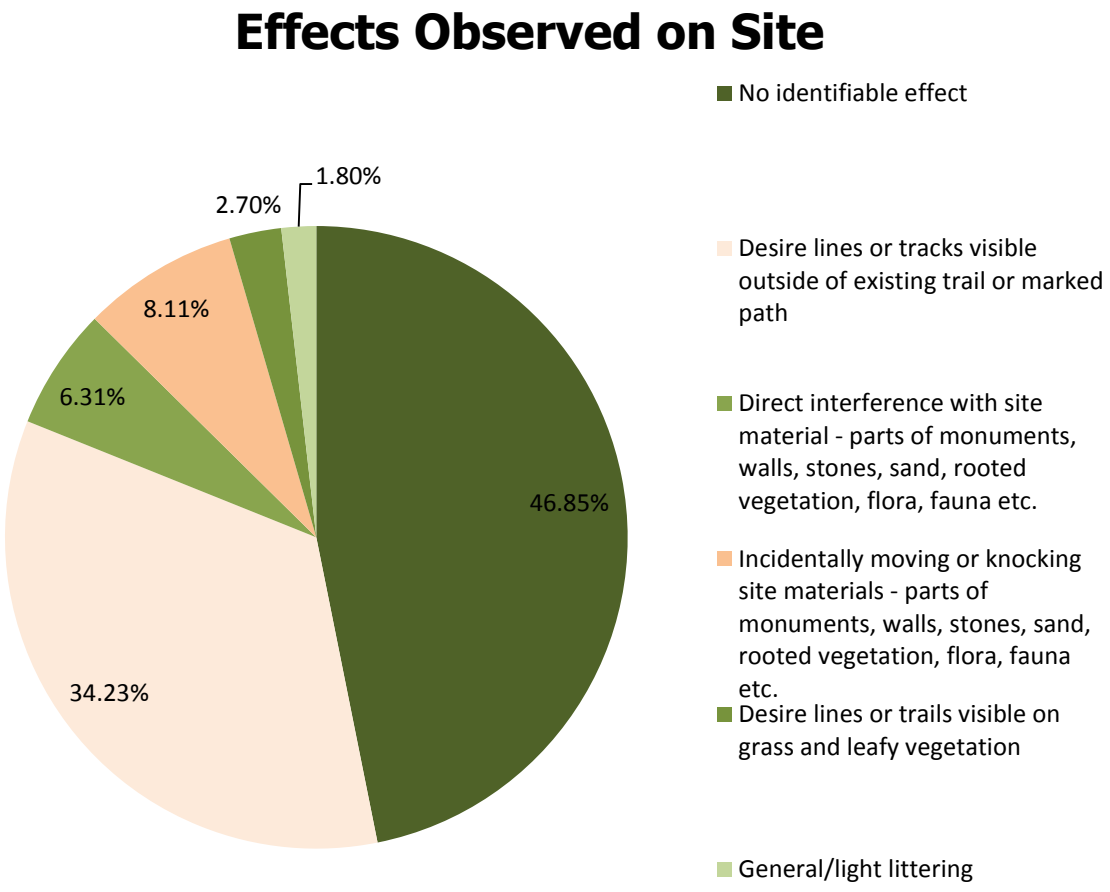


Figure 3.19 Range of effects observed at Dooneen

Effects observed	No. of People	% of People
No identifiable effect	52	46.85%
Desire lines or tracks visible outside of existing trail or marked path	38	34.23%
Direct interference with site material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	7	6.31%
Incidentally moving or knocking site materials - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	9	8.11%
Desire lines or trails visible on grass and leafy vegetation	3	2.70%
General/light littering	2	1.80%
Grand Total	**111**	**100%**

Table 3.6 Breakdown of effects recorded at Dooneen

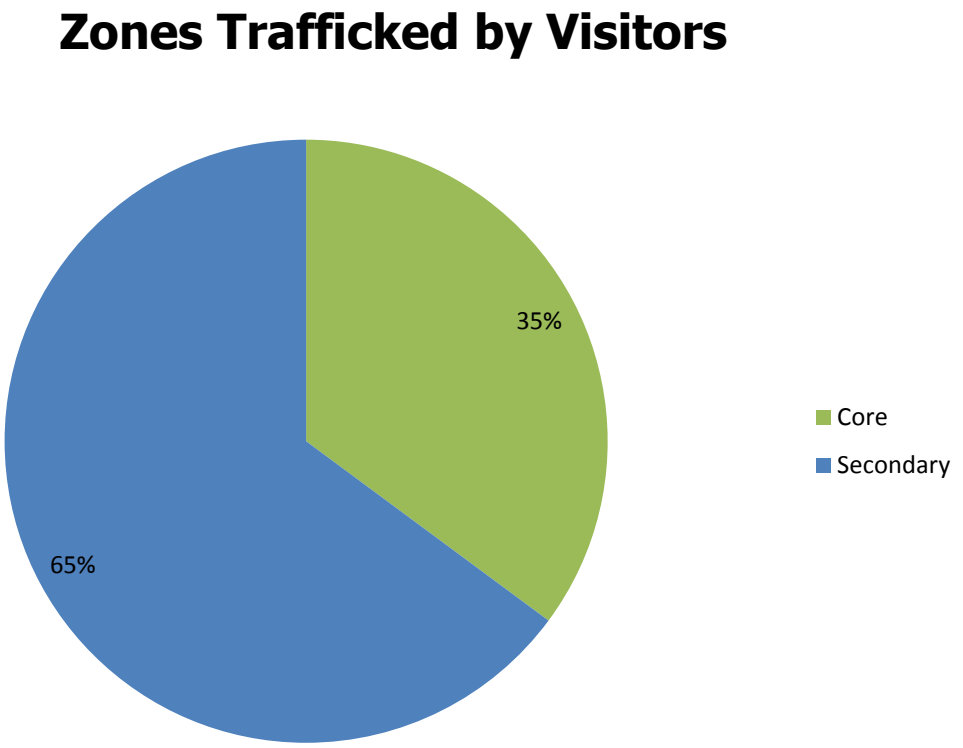


Figure 3.20 Zones trafficked by visitors at Dooneen

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, and tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.

Movement pattern observed

This site was observed on a warm clear day which resulted in the site being relatively busy.

A low level of activity was observed (35%) of visitors staying within the boundary of the car park area. On observation one car left banana peels hidden behind the boundary wall.

A largely medium level of activity was also recorded (65%) with most visitors climbing over the knee-high wall to walk down towards the cliff edge to take photographs and to gain a better look at the now abandoned mine shaft. To view these areas visitors moved across areas of grass and exposed vegetation.

A high level of activity was also observed with one family carrying rocks to the cliff edge to through them into the water below.

Figure 3.21 Visitor Movement Pattern at Dooneen

Dooneen Analysis of Results

As noted in the movement pattern observed, only 35% of visitors stayed with the boundaries of the parking and paved areas. Desire lines were apparent across the wall and along the secondary zones (totalling 65% of all visitors) to look get a closer look at the cliff edge and to get better photographs of the view.

Overall visitors didn't engage in any activities that would result in any adverse effects.

3.1.4 Garnish Point

Landscape type: Rocky Shore/Peat/grassland in a peninsular context

Dates surveyed: 07/07/2016

Weather conditions: Overcast/wet

Site Description

Garnish point is located opposite the famous Dursey Island; it is situated about 35 metres above sea level. Garnish point is separated from Dursey Island by a narrow sound known for its strong tides. Dursey Island is accessed by Irelands only cable car, it runs about 250m above sea level. The cable car can only carry 6 people at a time, and locals get first preference.

Garnish Point is located within the Kenmare River SAC and the Beara Peninsula SPA. The site is an SAC for a number of habitats and species listed on Annex I and II of the Habitats Directive.

The gate for the cable car opens at 9.30 and only allows 100 people a day. There is ample parking for visitors, with on-site facilities such as bathrooms and a food van which sells hot food and teas/coffees.

There is also a walking trail known as the Garnish Loop, this walk starts from the cable car station, walkers are advised to follow the purple arrows which brings you over the open hillside above Garnish Point, were views of Dursey Island, Cods Head and Ballydonegan Bay are plenty. The route passes Garnish and Long Islands and takes laneways and minor roads back to Garnish point.

Visitors are strongly advised to not bring any dogs on the walk or to the Island because of the large volume of sheep and wildlife.

Site	Male	Female	No. of People	No. of Groups	Average Duration on Site
Garnish Point	149	157	306	116	01:30 minutes

Garnish Point observation of Results

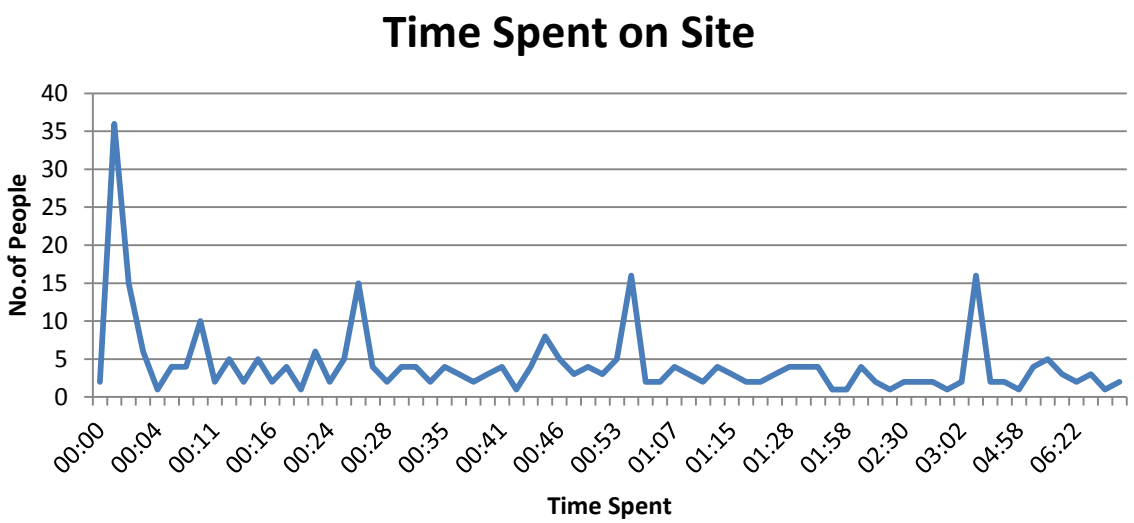


Figure 3.22 Duration of time spent by visitors at Garnish Point

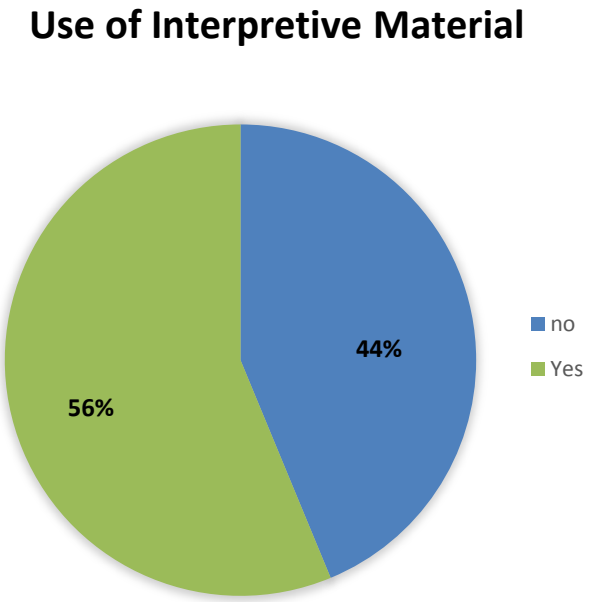


Figure 3.23 Use of Interpretive Material at Garnish Point

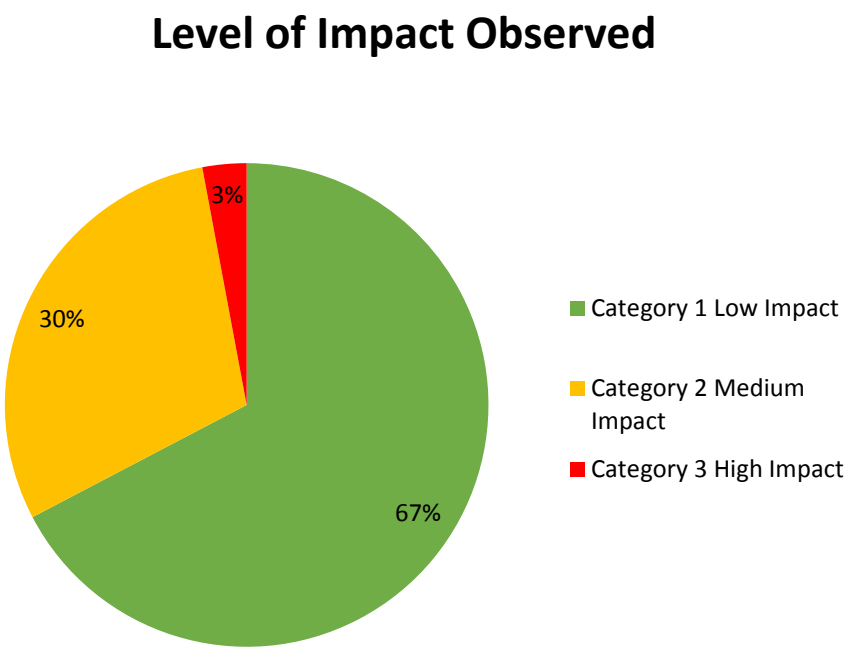


Figure 3.24 Level of Impact observed at Garnish Point

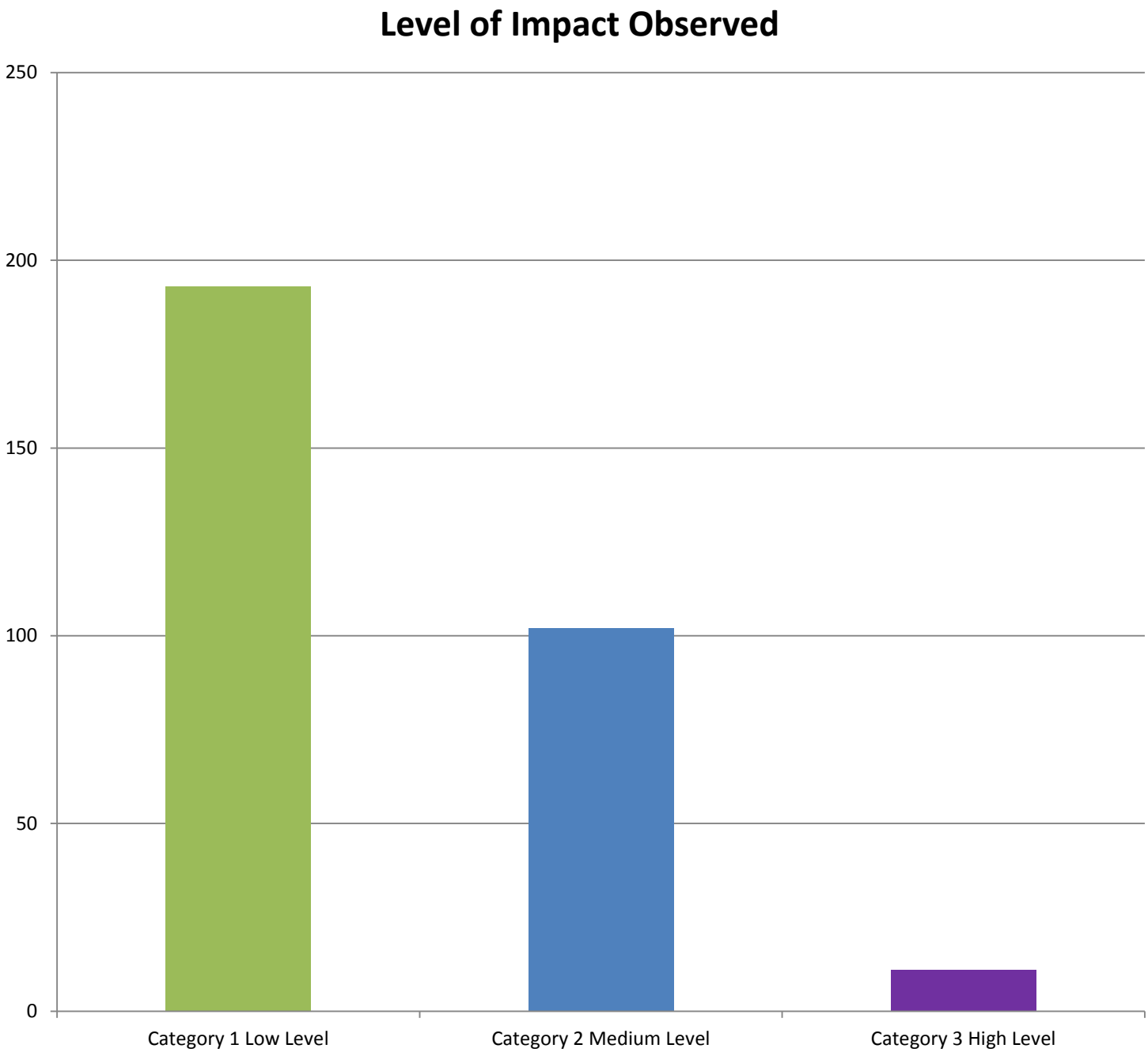


Figure 3.25 Level of Impact Observed at Garnish Point

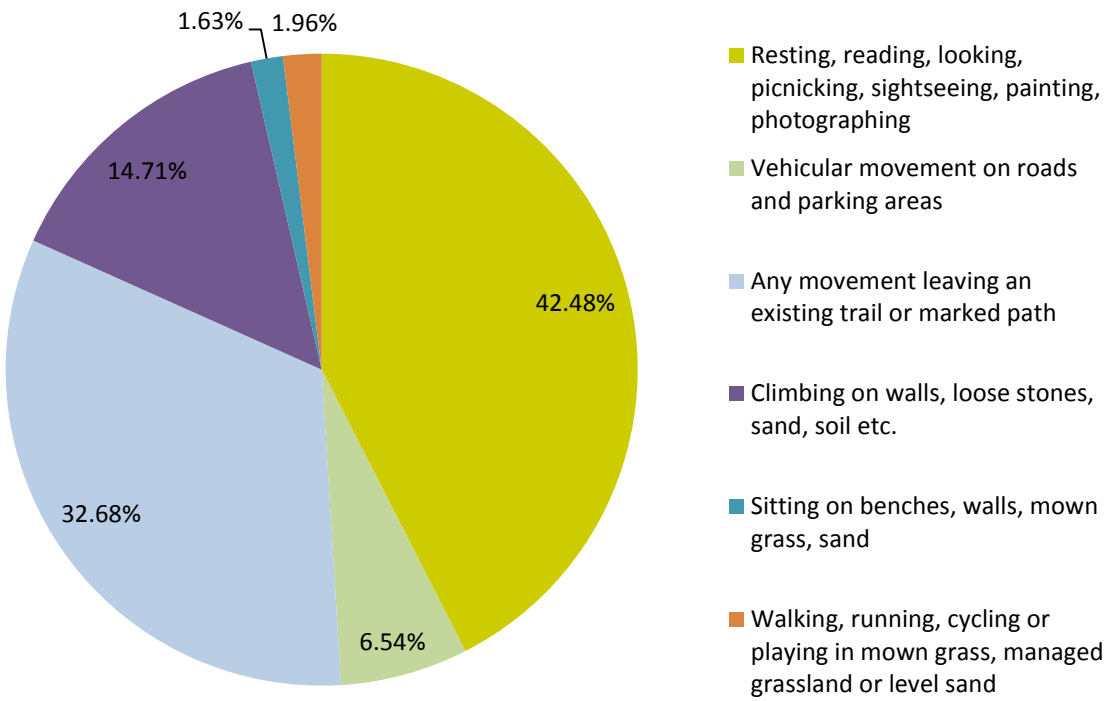


Figure 3.26 Range of Activities Observed at Garnish Point

Table 3.7 Breakdown of Activities observed at Garnish Point

Activities Observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	130	42.48%
Vehicular movement on roads and parking areas	20	6.54%
Any movement leaving an existing trail or marked path	100	32.68%
Climbing on walls, loose stones, sand, soil etc.	45	14.71%
Sitting on benches, walls, mown grass, sand	5	1.63%
Walking, running, cycling or playing in mown grass, managed grassland or level sand	6	1.96%
Grand Total	**306**	**100%**

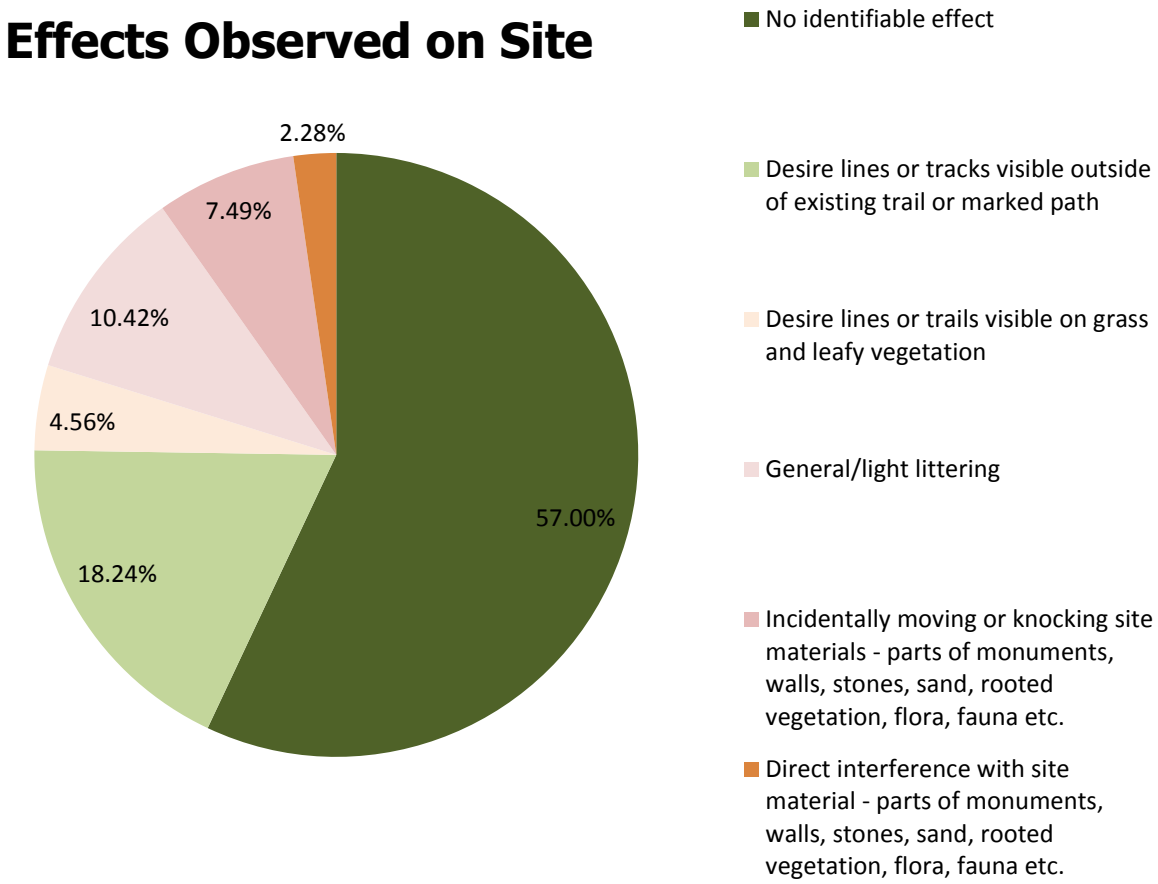


Figure 3.27 Range of Effects observed at Garnish Point

Table 3.8 Breakdown of Effects observed at Garnish Point

Effects Observed	No. of People	% of People
No identifiable effect	172	57.00%
Desire lines or tracks visible outside of existing trail or marked path	56	18.24%
Desire lines or trails visible on grass and leafy vegetation	14	4.56%
General/light littering	32	10.42%
Incidentally moving or knocking site materials - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	23	7.49%
Trampling of herbaceous vegetation	2	1%
Direct interference with site material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	7	2%
Temporary disturbance (including chasing and feeding) of insects, fish, amphibian, reptiles insects, birds and mammals	4	1%
Grand Total	**306**	**100%**

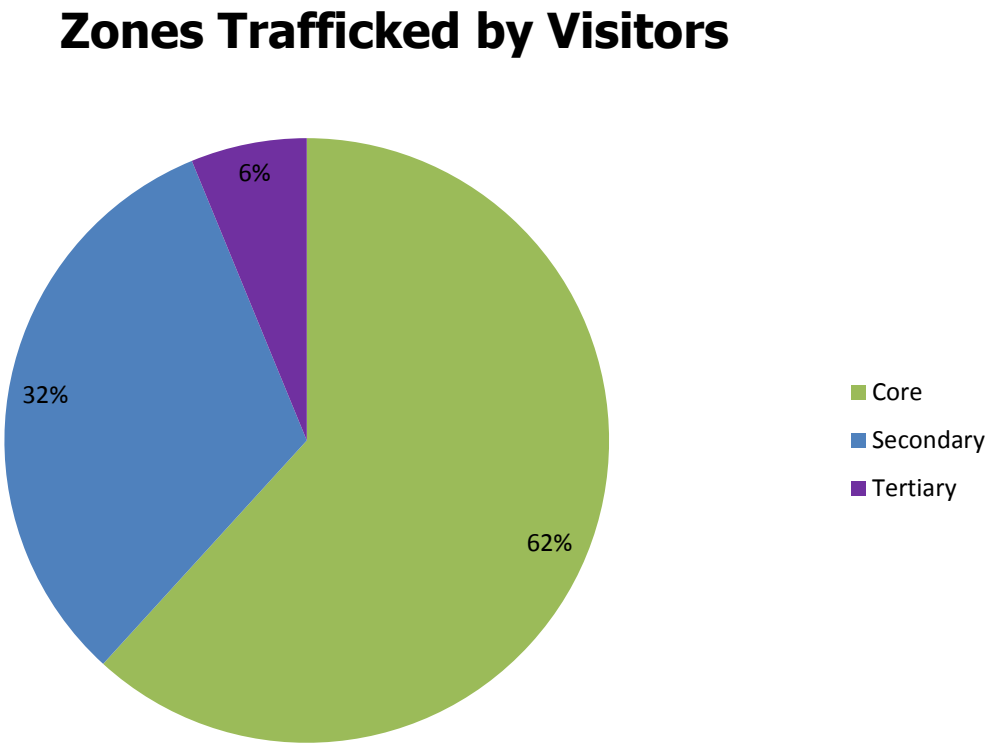


Figure 3.28 Zones Trafficked by visitors at Garnish Point

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.
Tertiary Zone	Areas where no car park, paved areas, marked pathways, trails, tracks and managed grassland are identifiable and beyond the immediate boundaries of the site.

Movement Patterns Observed

At Garnish Point the Majority of visitors to the site remained on the paved areas of the car park and look out areas. Some visitors were observed to step off the paved areas and onto grazed land to get a better look across to Dursey Island and to take photograph, and to cross the step over the trail. The site was noted to be popular for hikers as several followed that waymarked path.

Figure 3.29 Visitor Movement Pattern at Garnish Point

Garnish Point Analysis of Results

The majority of visitors (56%) to Garnish Point had no identifiable effect on the site. The remaining visitors had a medium level of impact. These visitors where observed to make their way off the marked trails and path to walk across bare rock and vegetation to take photographs or to sit and look at the views. Overall the activities carried out at Garnish Point were not thought to have any lasting or significant impact on the site.

3.1.5 Barley Cove

Dates surveyed 06/07/2016

Landscape Type: Soft shore/Beaches/Dunes

Weather conditions: Overcast/wet

Site Description

Barley Cove is a remote beach, located between two headlands on the Mizen Peninsula. It comprises of and extensive dune system, which has been particularly eroded. There is a floating pontoon in place to manage visitor access and reduce impact on the natural surroundings. Barley Cove is a proposed Special Area of Conservation and Natural Heritage Area. This is a Blue Flag beach.

Barley Cove is located within Ballyrisode Point SAC and the Sheeps head to Toes head SPA. The site is an SAC for a number of habitats and species listed on Annex I and II of the Habitats Directive.

There is a wooden walkway in place from the car park to the pontoon to ease the impact on the dunes.

There is a large car park with enough space for 20+ cars; toilet facilities and a shower are also in place for public use.

Barley Cove Observation of Results

Site	Male	Female	Total No.of People	No.of Groups	Average Duration on Site
Barley Cove	75	75	150	62	00:38 minutes

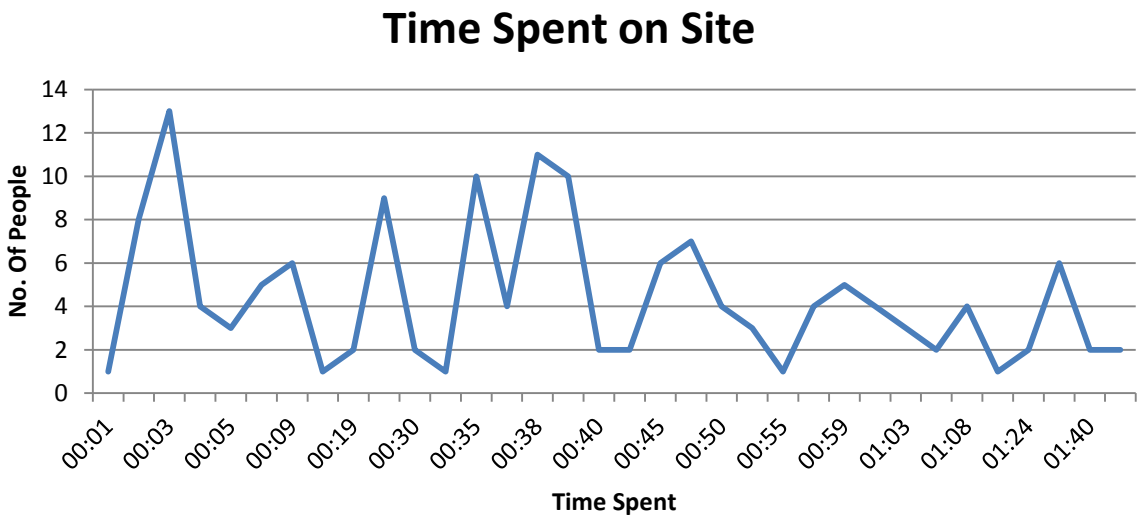


Figure 3.30 Duration of Time spent on site at Barley Cove

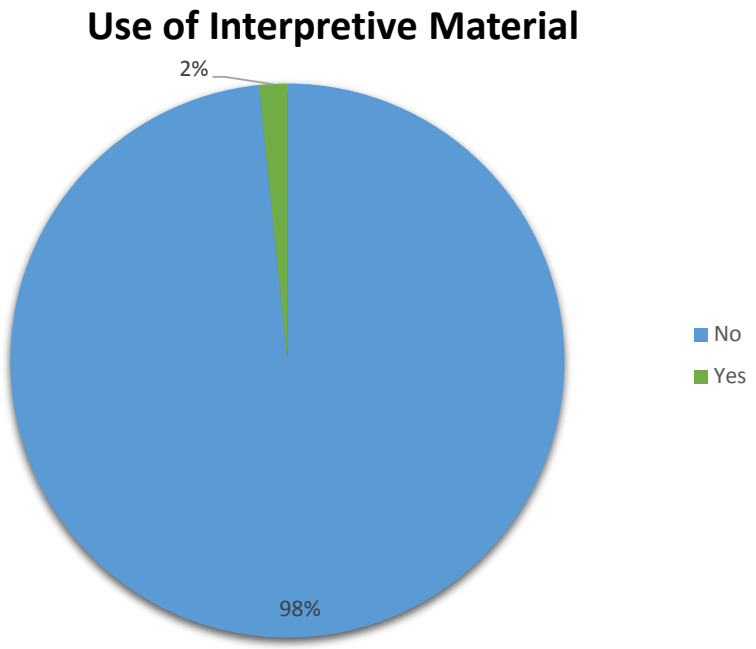


Figure 3.31 Use of Interpretive Material at Barley Cove

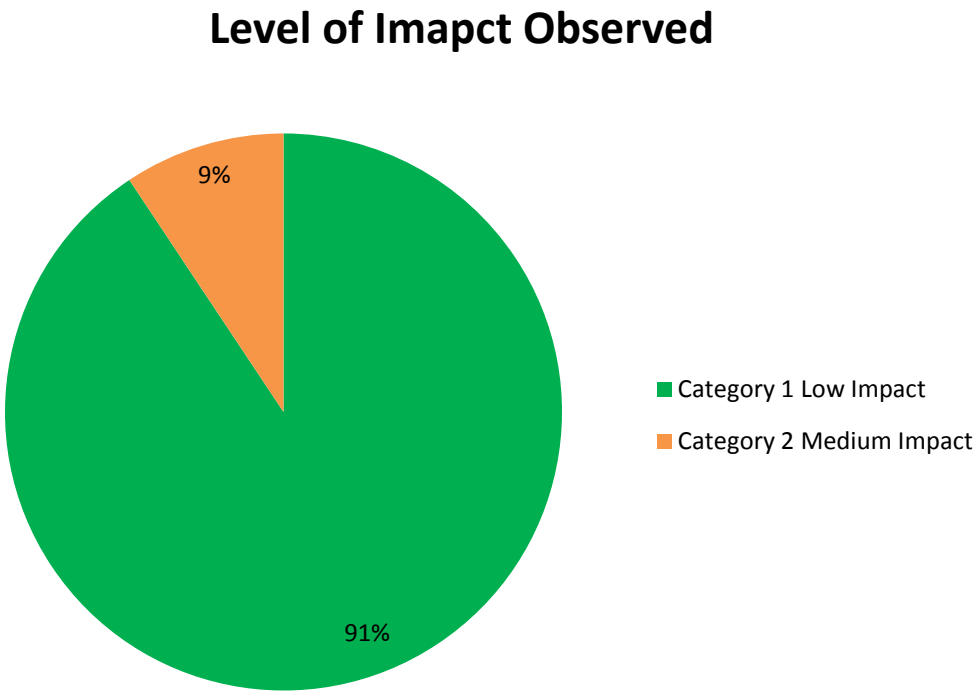


Figure 3.32 Level of Impact observed at Barley Cove

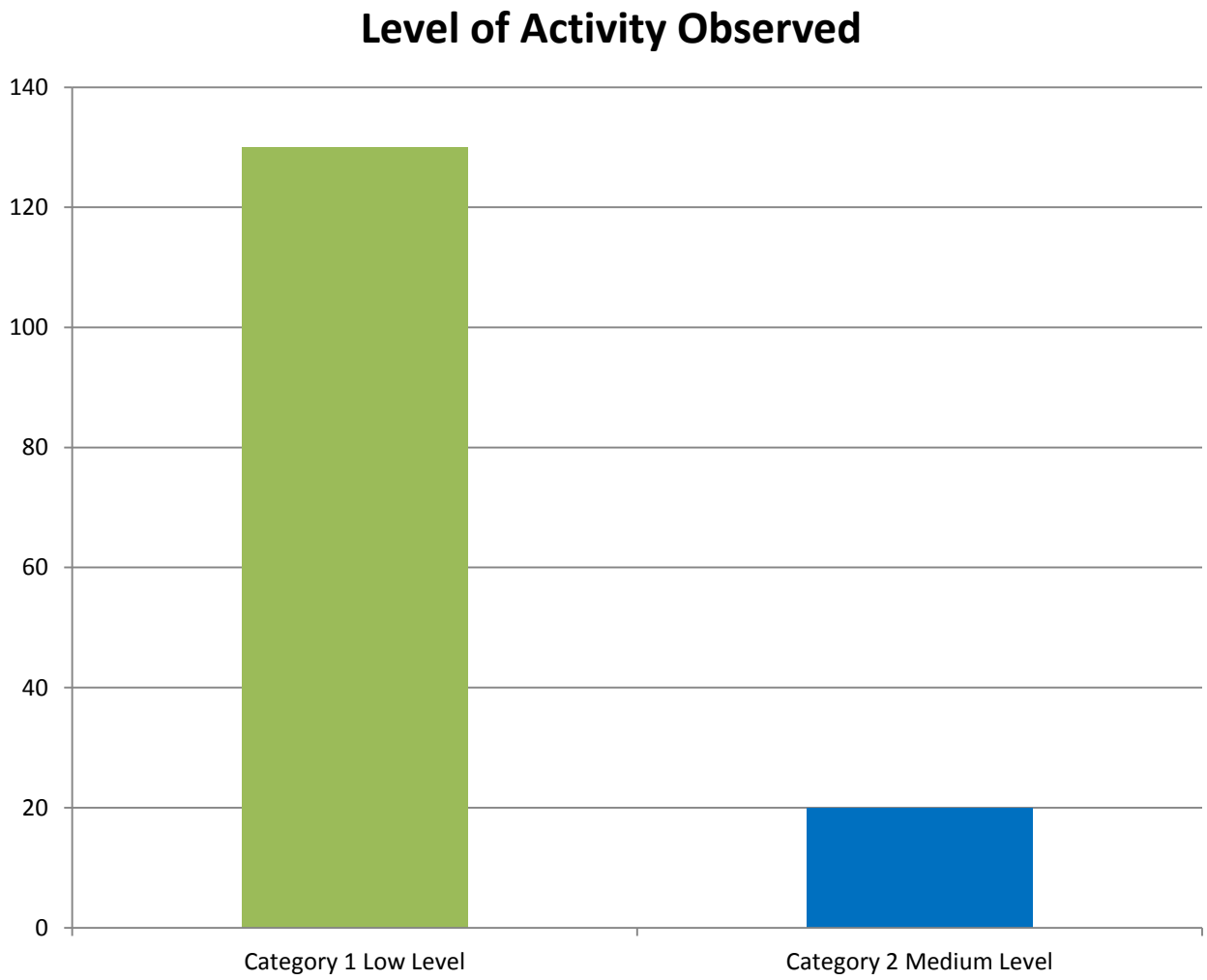


Figure 3.33 Level of Activity observed at Barley Cove

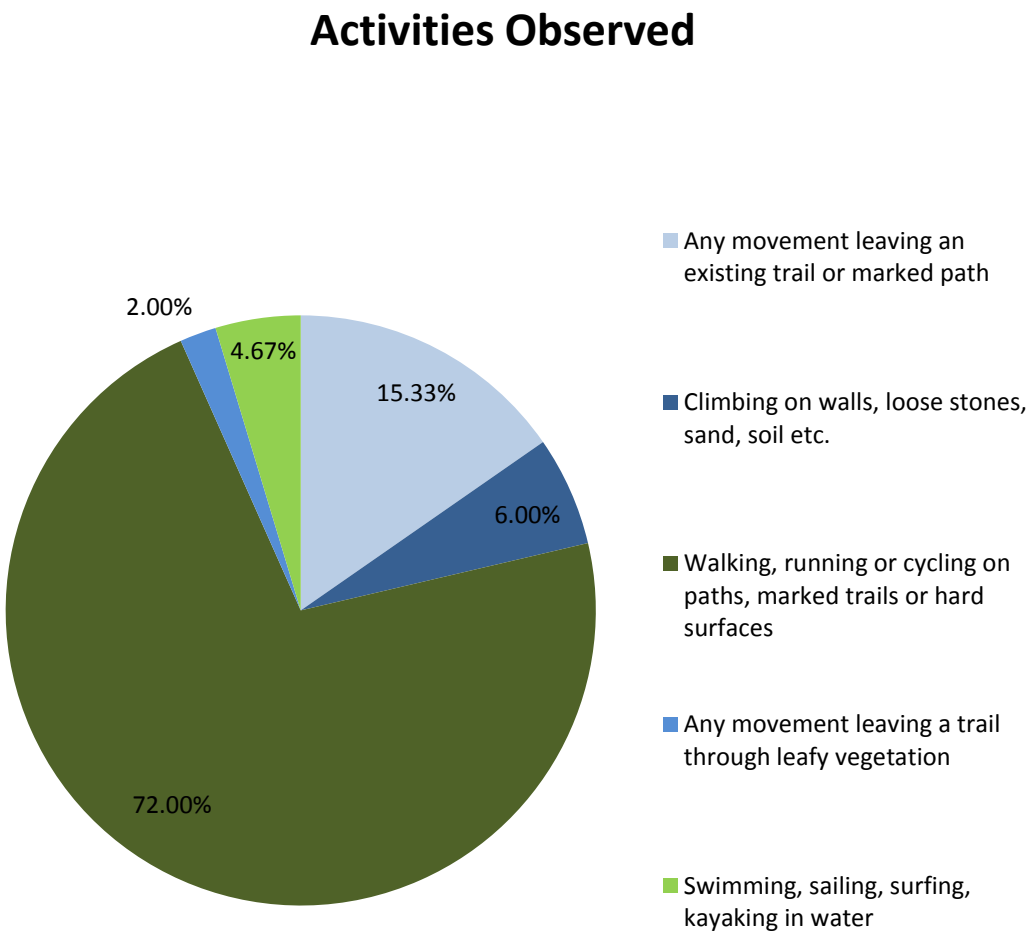


Figure 3.34 Range of Activities observed at Barley Cove

Table 3.9 Breakdown of activities observed at Barley Cove

Activities Observed	No. of People	% of people
Any movement leaving an existing trail or marked path	23	15.33%
Climbing on walls, loose stones, sand, soil etc.	9	6.00%
Walking, running or cycling on paths, marked trails or hard surfaces	108	72.00%
Any movement leaving a trail through leafy vegetation	3	2.00%
Swimming, sailing, surfing, kayaking in water	7	4.67%
Grand Total	**150**	**100%**

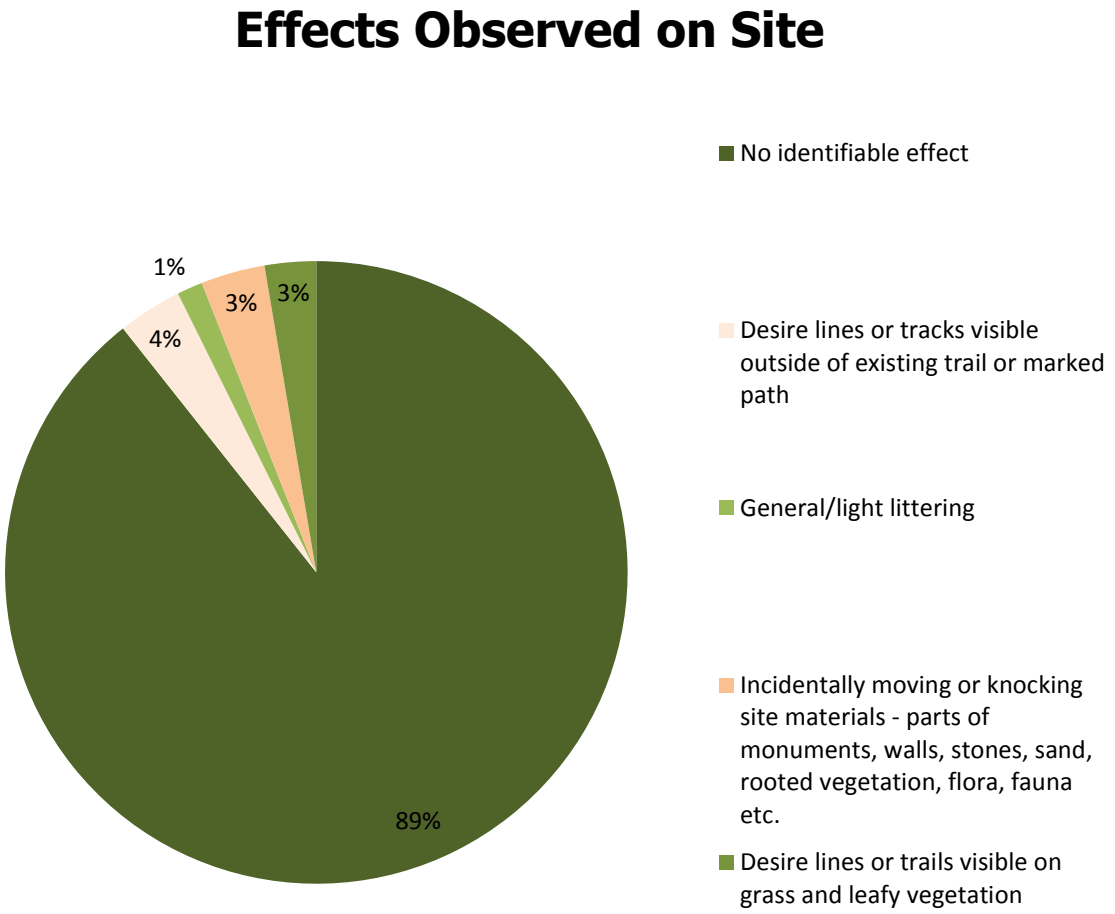


Figure 3.35 Range of Effects observed at Barley Cove

Table 3.10 Breakdown of Effects Observed at Barley Cove

Effects Observed	No of People	% of people
No identifiable effect	134	89.33%
Desire lines or tracks visible outside of existing trail or marked path	5	3.33%
General/light littering	2	1.33%
Incidentally moving or knocking site materials - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	5	3.33%
Desire lines or trails visible on grass and leafy vegetation	4	2.67%
Grand Total	**150**	**100%**

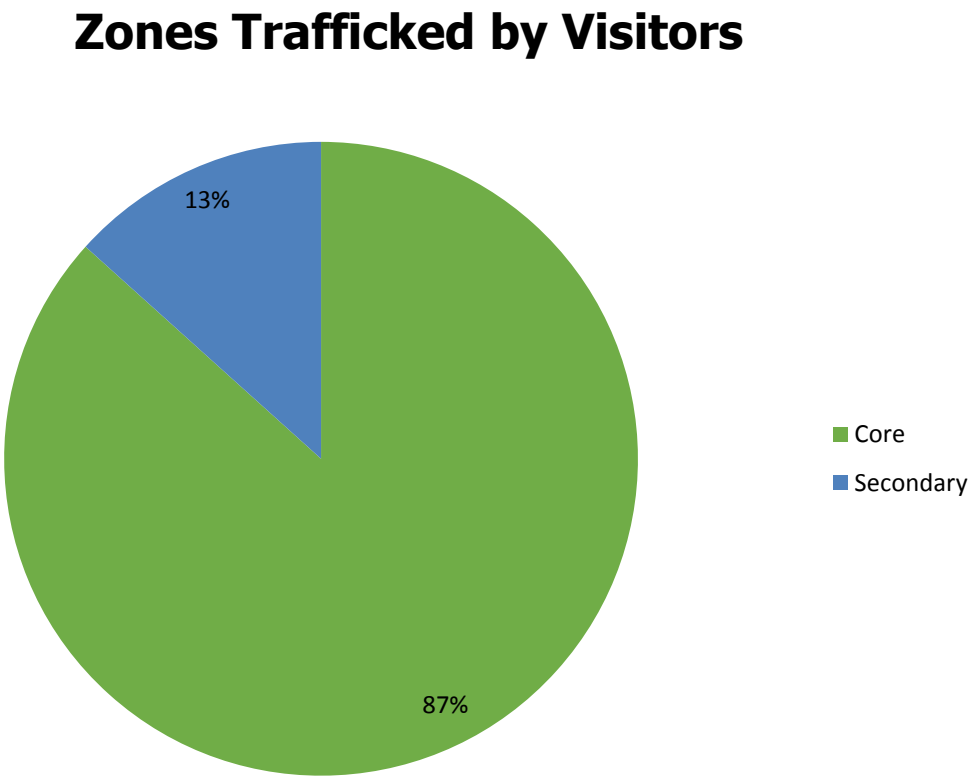


Figure 3.36 Zones Trafficked by visitors at Barley Cove

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.

Movement Pattern Observed

87% of visitors to Barley cove remained in the core zones of the car park and the beach. 72% of visitors were observed to use the wooden walkway, which leads from the car park to a plastic pontoon, leading to the beach. Of the 15% that did not stick to the marked pathway it was observed that the reason for this was because after the heavy rainfall visitors had become cautious of their stability on the wet walkway. The average duration of time spent on site was 38 minutes. It was predominantly surfers and locals visiting the site as the weather remained wet and overcast for the duration of the survey.

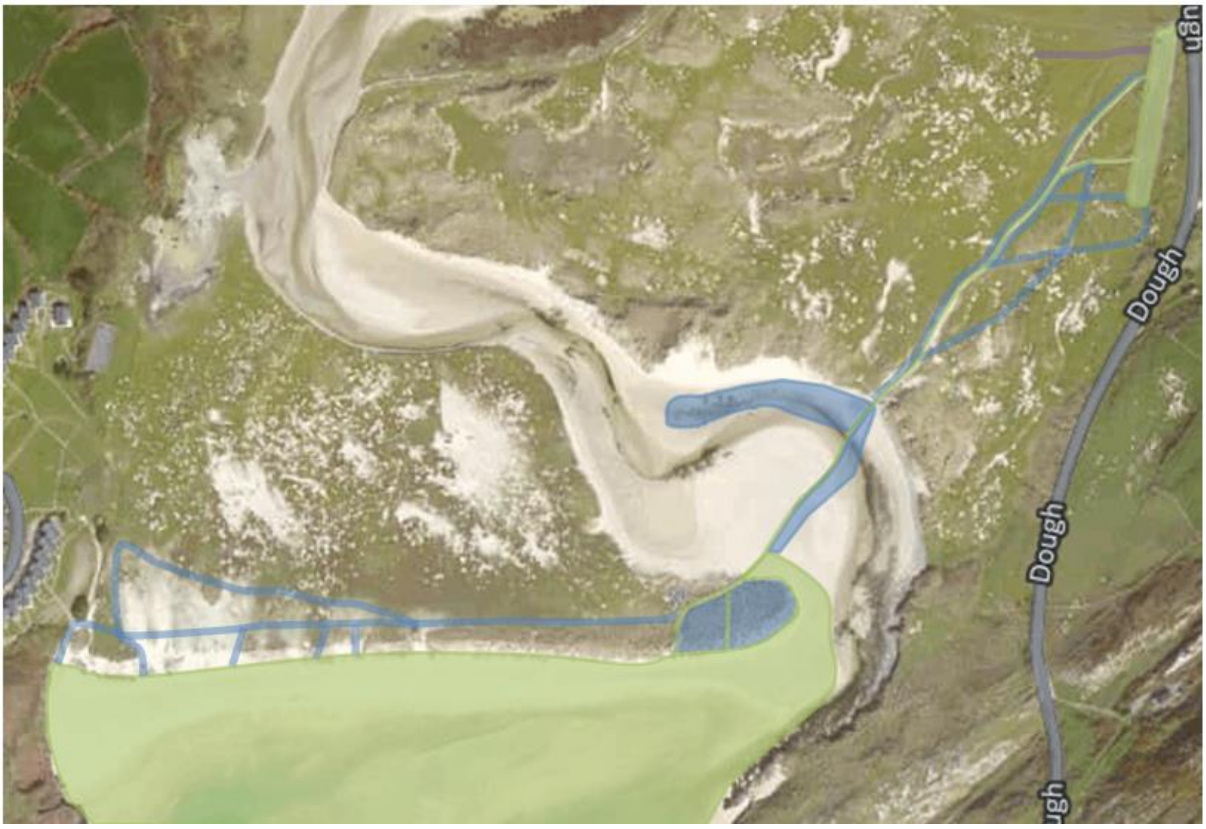


Figure 3.37 Barley Cove Visitor Movement pattern

Barley Cove Analysis of Results

89% of visitors to the site engaged in activities that did not result in any impact. Effects that were observed as being of medium effect included visitors going off the wooden pathway, this accounted for only 4% of all visitors and is likely to have no lasting effect on the site. Overall the effects and activities observed at Barley cove were not reported to cause any significant, long term effects to the site.

3.1.6 Mount Brandon

Mount Brandon

Landscape Type: Montane/Upland

Date Surveyed: 15/07/2016

Weather Conditions: Overcast

Site Description

Mount Brandon is located within The Blascket SAC. This site is SAC for a number of habitats or species listed on Annex I or Annex II of the E.U Habitats Directive.

Mount Brandon stands at 952m on the Dingle Peninsula, it's the highest peak of the unnamed mountain range of the Dingle Peninsula and it is the ninth highest peak on the Island. Mount Brandon is at the centre of the mountain ridge known as the Brandon Group. Brandon got its rocky formation from ice glaciers. On the North side of the mountain lies the small village of Brandon.

Mount Brandon which is the English for Cnoc Bhránainn meaning 'Brendan's hill' came about as a result of Brendan the navigator, it is thought that Brendan found America 1000 years previous to Columbus.

During World War two between 1940 and 1943 four planes crashed on the Brandon Range, wreckages from the planes can still be seen in between the rocks.

This mountain is very popular with walkers. People visit all year and on Good Friday each year pilgrims walk the route marked with white crosses which is known as The Saints Road.

The car park has enough room for 10+ cars to parkthere are no facilities at the site, but a toilet and pub can be found in the village. This area is used by locals for dolphin and whale watching.

Mount Brandon Observation Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Mount Brandon	60	65	125	57	00:11

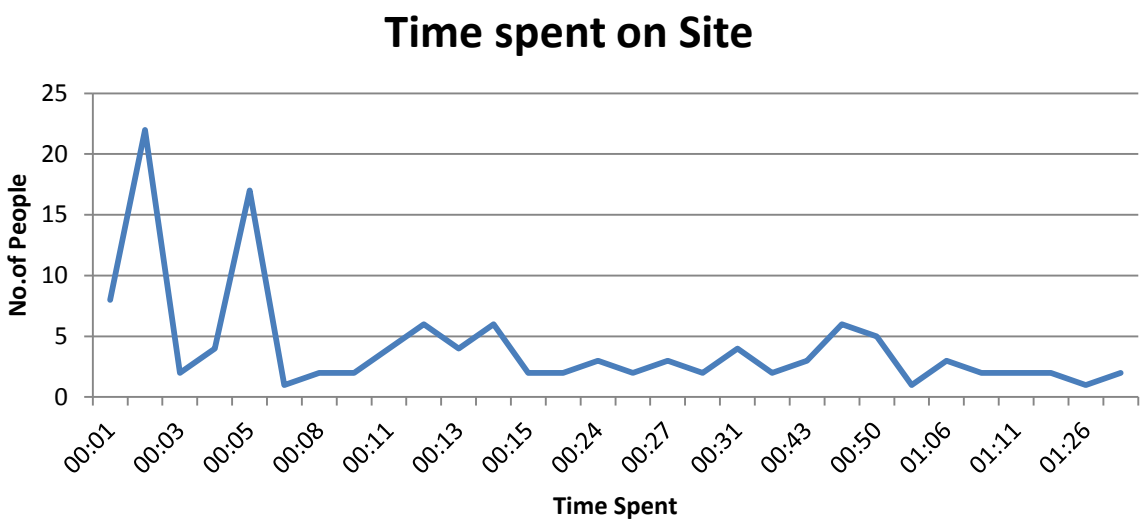


Figure 3.38 Duration of time spent by visitors at Mount Brandon

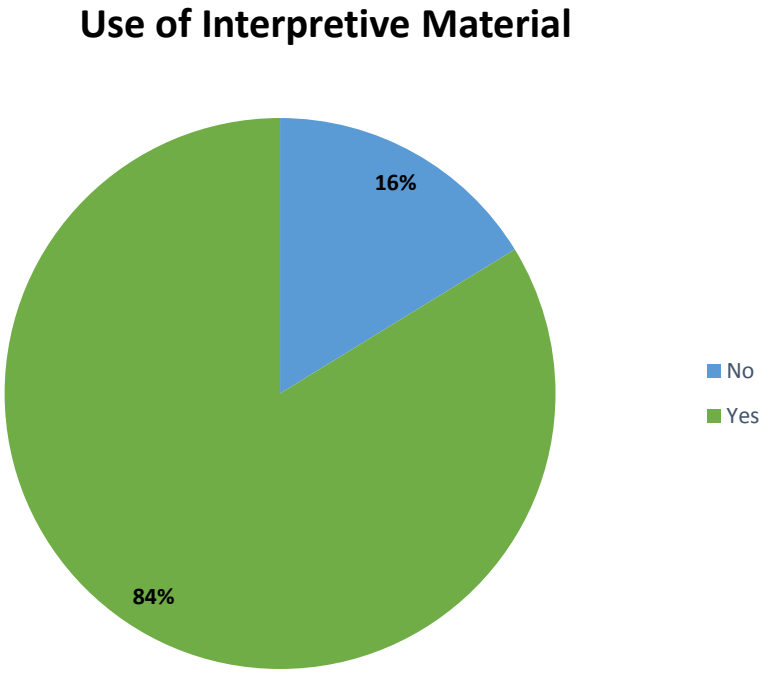


Figure 3.39 Use of interpretive material by visitors at Mount Brandon

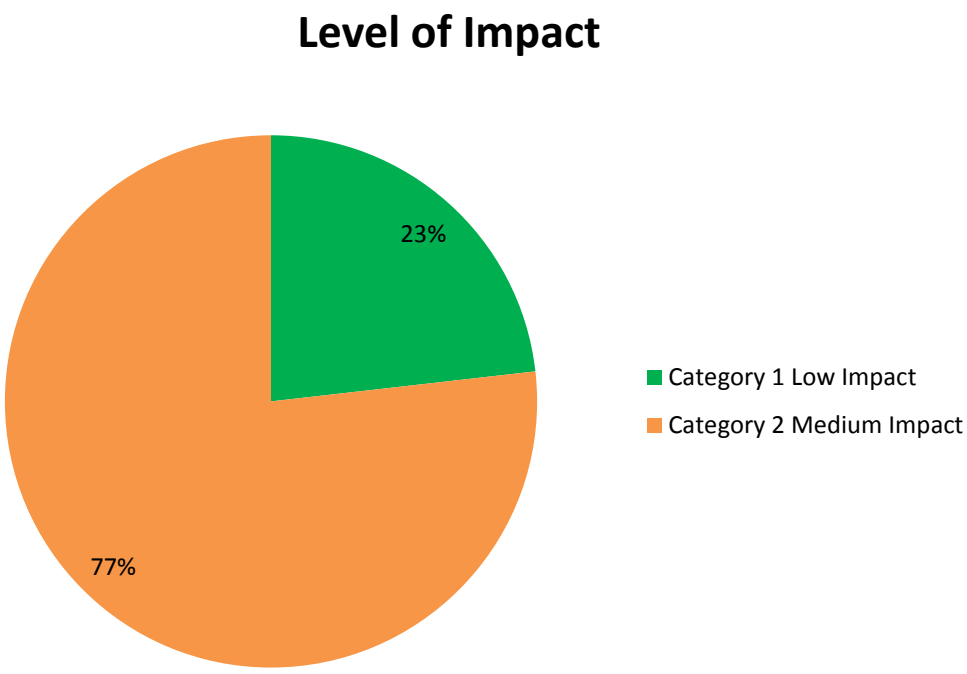


Figure 3.40 Level of Impact observed at Mount Brandon

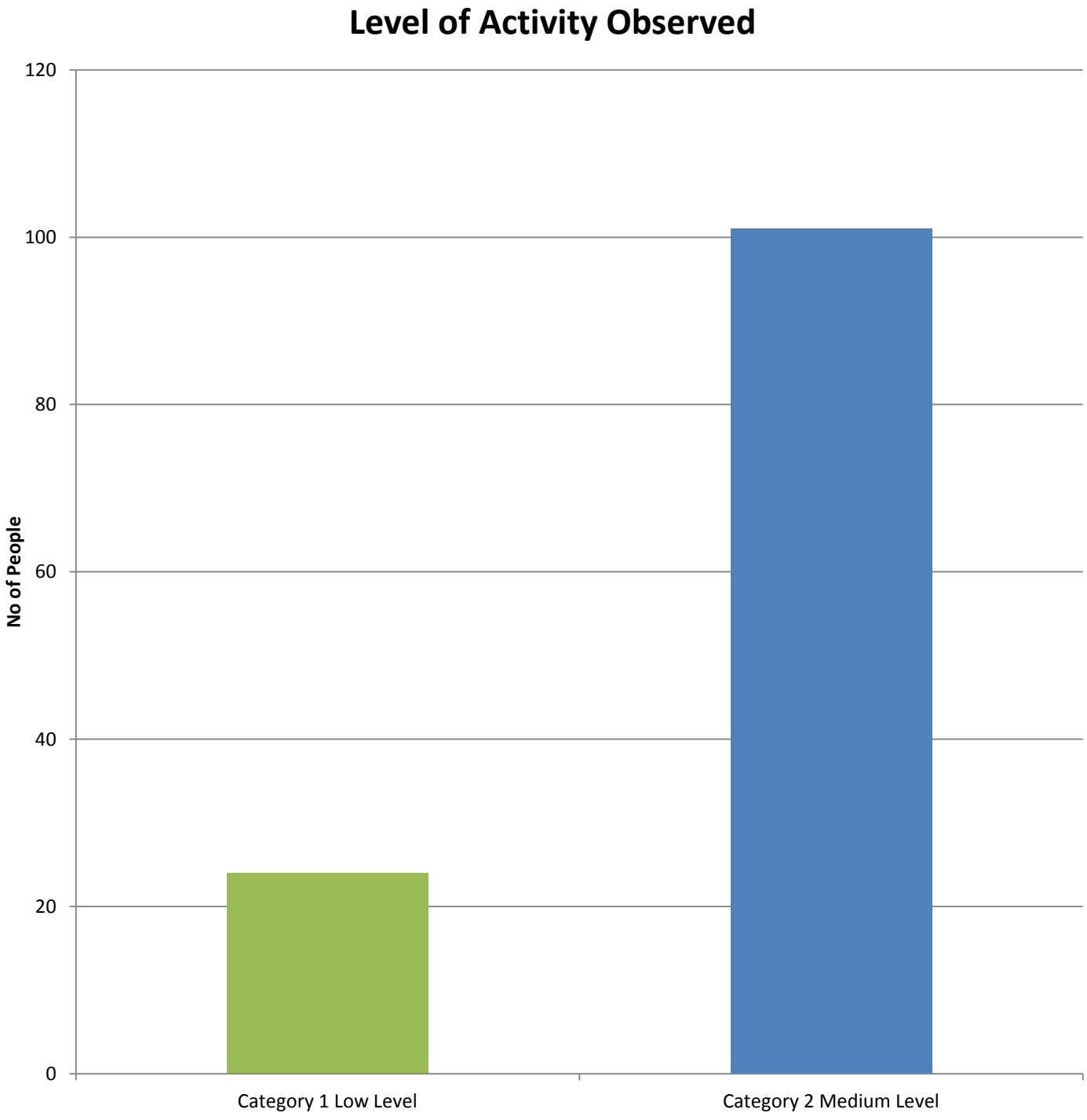


Figure 3.41 Level of Activity observed at Mount Brandon

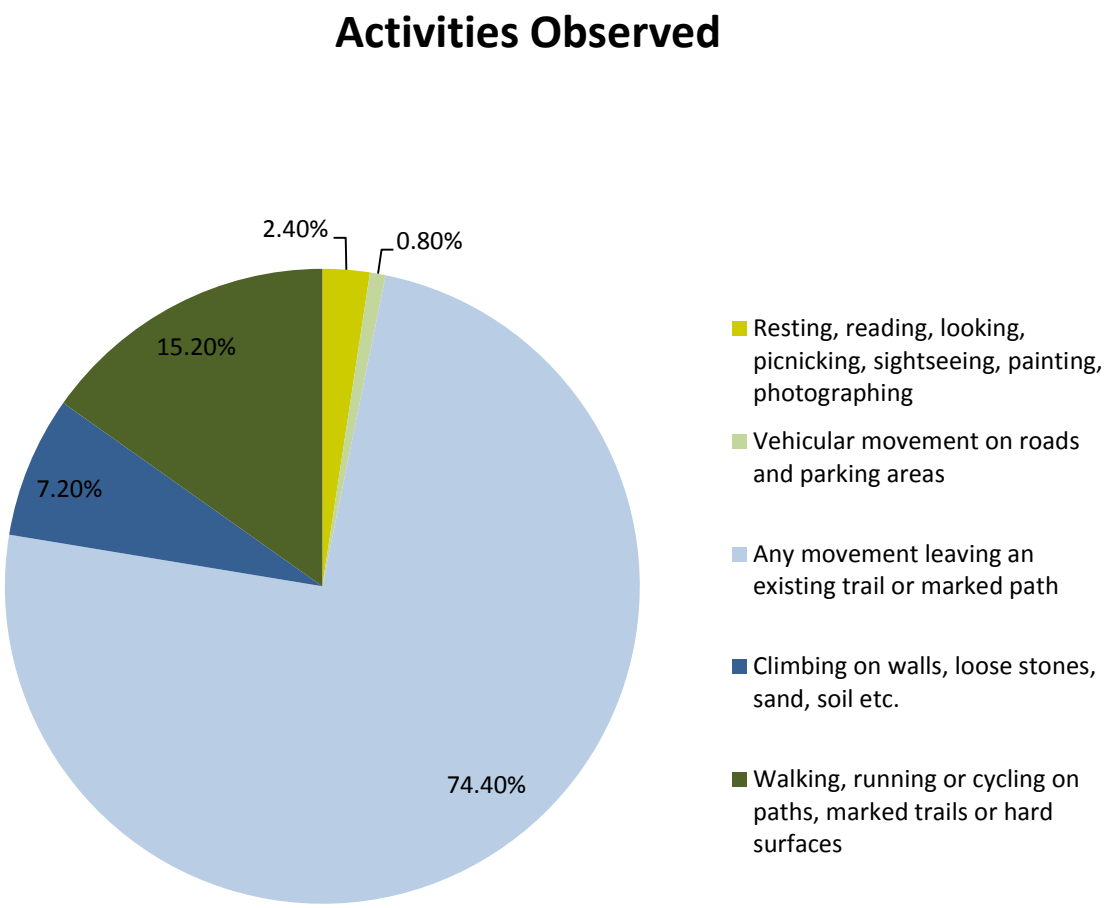


Figure 3.42 Range of Activities observed at Mount Brandon

Table 3.11 Breakdown of activities observed at Mount Brandon

Activities Observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	3	2.40%
Vehicular movement on roads and parking areas	1	0.80%
Any movement leaving an existing trail or marked path	93	74.40%
Climbing on walls, loose stones, sand, soil etc.	9	7.20%
Walking, running or cycling on paths, marked trails or hard surfaces	19	15.20%
Grand Total	**125**	**100%**

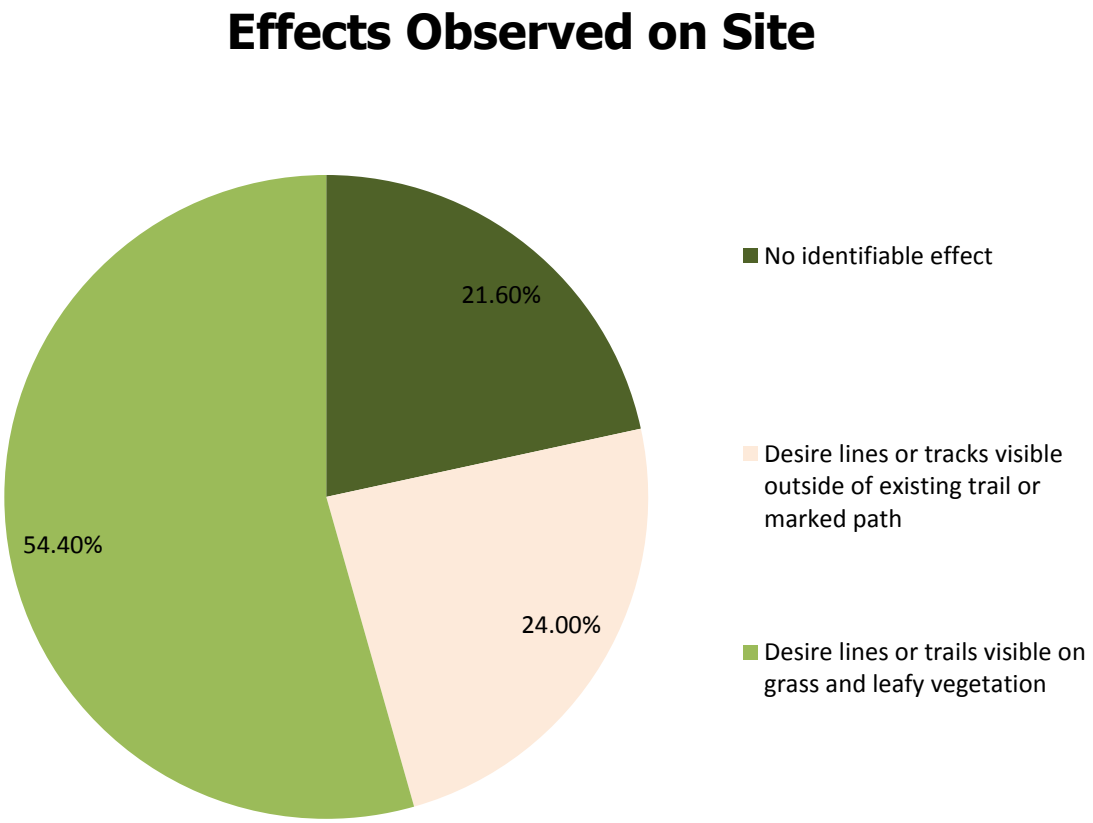


Figure 3.43 Range of effects observed at Mount Brandon

Table 3.12 Breakdown of effects observed at Mount Brandon

Effects Observed	No. of People	% of people
No identifiable effect	27	21.60%
Desire lines or tracks visible outside of existing trail or marked path	30	24.00%
Desire lines or trails visible on grass and leafy vegetation	68	54.40%
Grand Total	**125**	**100%**

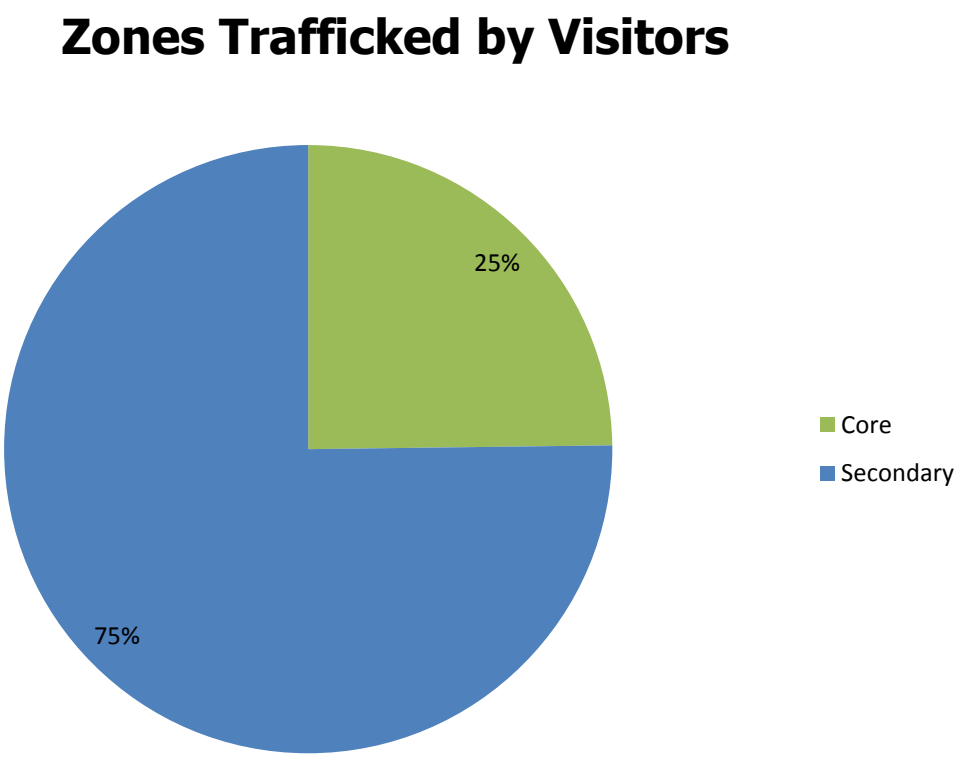


Figure 3.44 Zones trafficked by visitors at Mount Brandon

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.

Movement Pattern Observed

On arrival to this site it was slightly overcast but brightened up which resulted in a moderate level of visitors. Low and medium level activity was recorded with the majority of the visitors going into the secondary zone to take photographs and to sit and enjoy the scenery. Observation showed that several visitors explored the walking trail that leads to the lookout tower. To view these areas visitors had to walk across vegetation which resulted in desire lines being visible, however being such a dry day, no adverse effects would be caused by visitor behaviour.

Mount Brandon Analysis of Results

The majority of visitors (75%) that left the boundaries of the car park and the designated trail were shown to leave no lasting effects on soil or vegetation. 54% of visitors who left the boundary area left desire lines in the grass. This was shown to have no lasting effects or major impact on the site.

Figure 3.45 Mount Brandon visitor movement pattern

3.1.7 Blasket Interpretation Centre

Landscape Type: Improved Grassland

Date Surveyed: 18/07/2016

Weather Conditions: overcast/wet

Site Description:

The Blasket Interpretation Centre is located within The Blascket SAC. This site is SAC for a number of habitats or species listed on Annex I or Annex II of the E.U Habitats Directive.

The Blasket interpretation centre is located on the mainland in Dún Chaoin which lies at the tip of the Dingle Peninsula. The centre honours the unique community who lived on the island until it became abandoned in 1953.

The centre tells the story of Island life, including the struggles for existence, their language and culture.

There is a designated walk available to visitors and this remains part of the Wild Atlantic Way route, although on the day of surveying many of the visitors only stayed at the centre itself due to the nature of the weather

Car parking facilities at the Blasket centre comprises of five large areas with ample room for both cars and tour buses.

Blasket Interpretation Centre Observation Results

Site	Male	Female	No. of People	No. of Groups	Average time spent on site
Blaskets	144	146	310	82	00:33

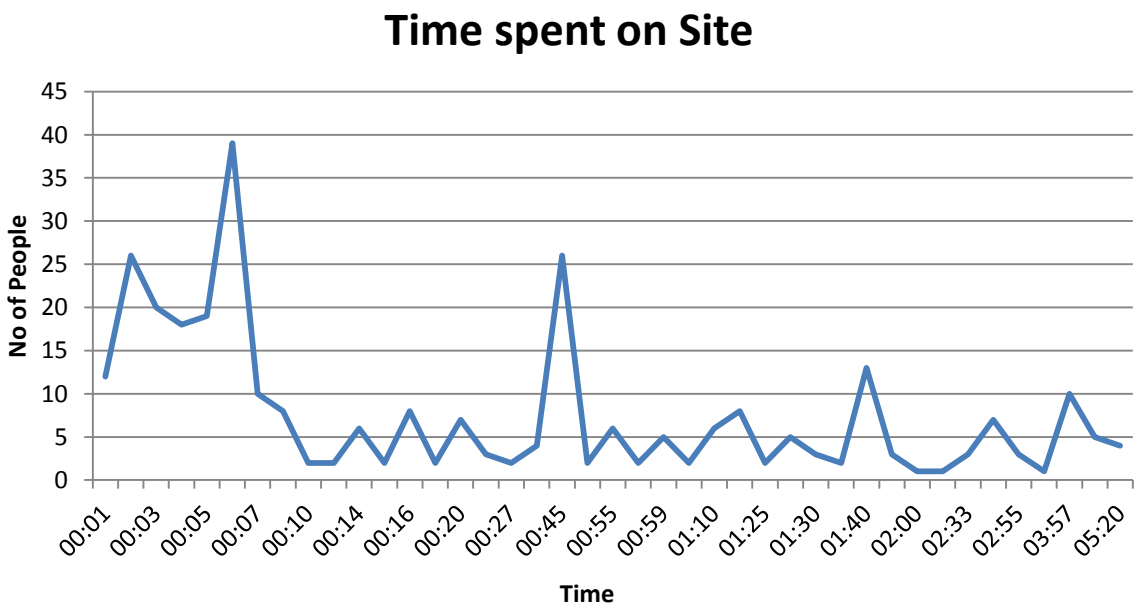


Figure 3.46 Duration of time spent by visitors at Blasket Interpretation Centre

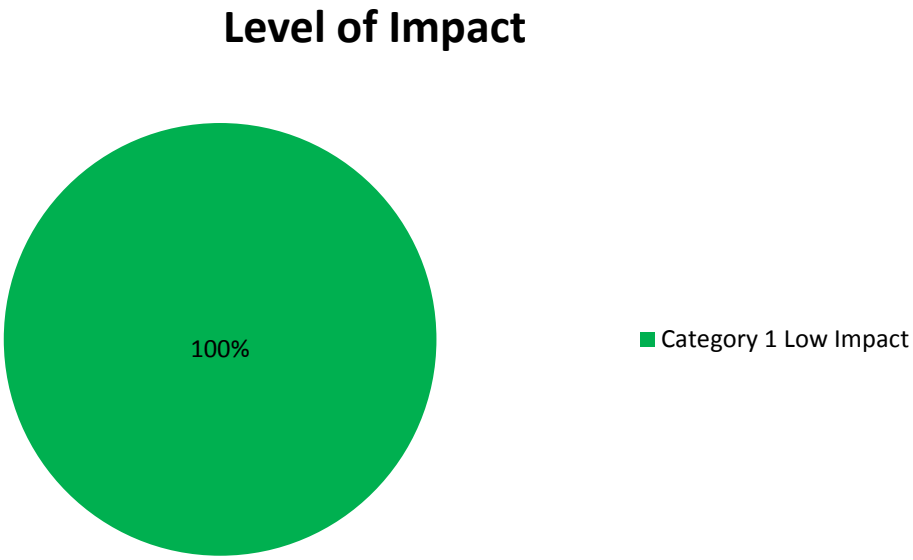


Figure 3.47 Level of Impact observed at Blasket Centre

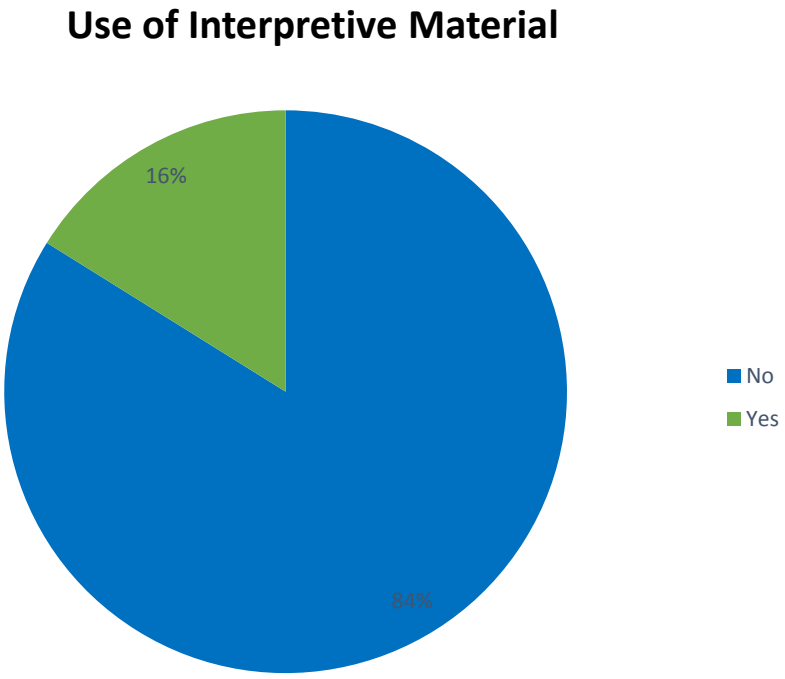


Figure 3.48 Use of interpretive material by visitors at Blasket centre

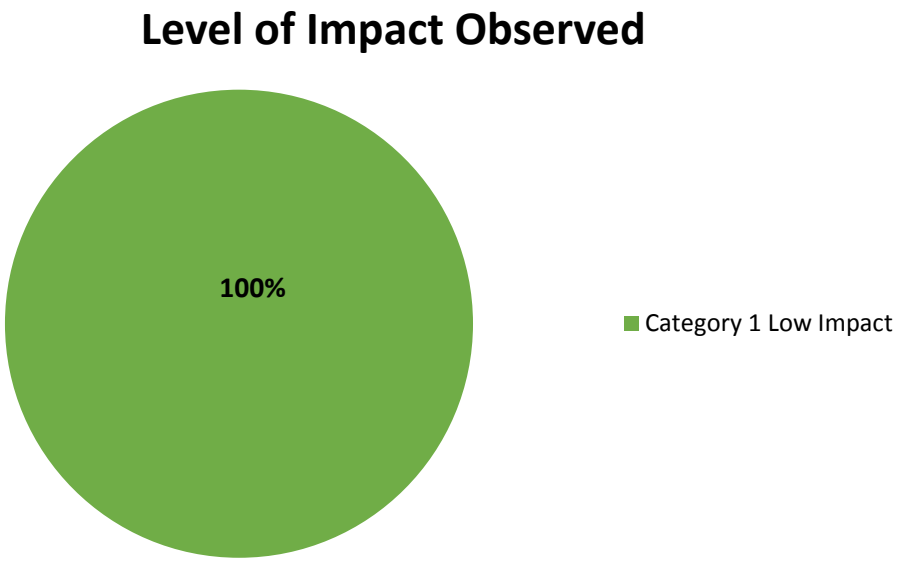


Figure 3.49 Level of Impact observed at Blasket Centre

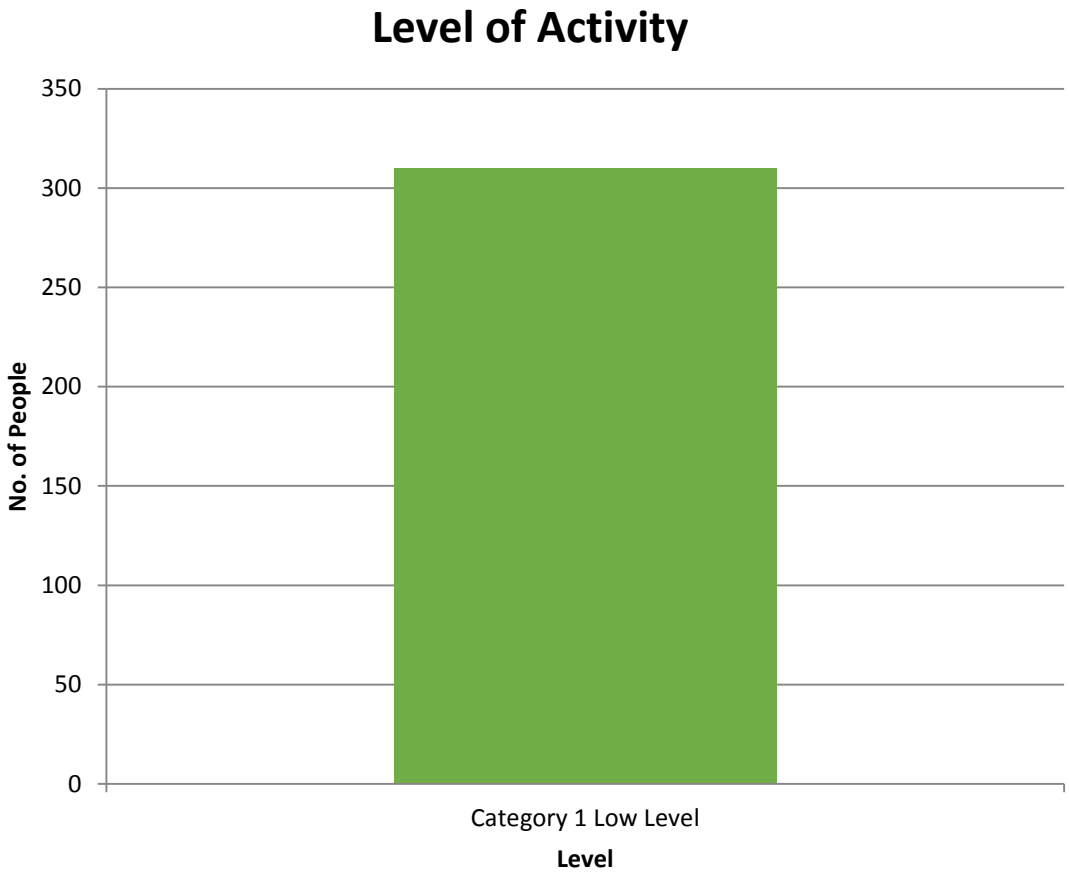


Figure 3.50 Level of Activity observed at Blasket Centre

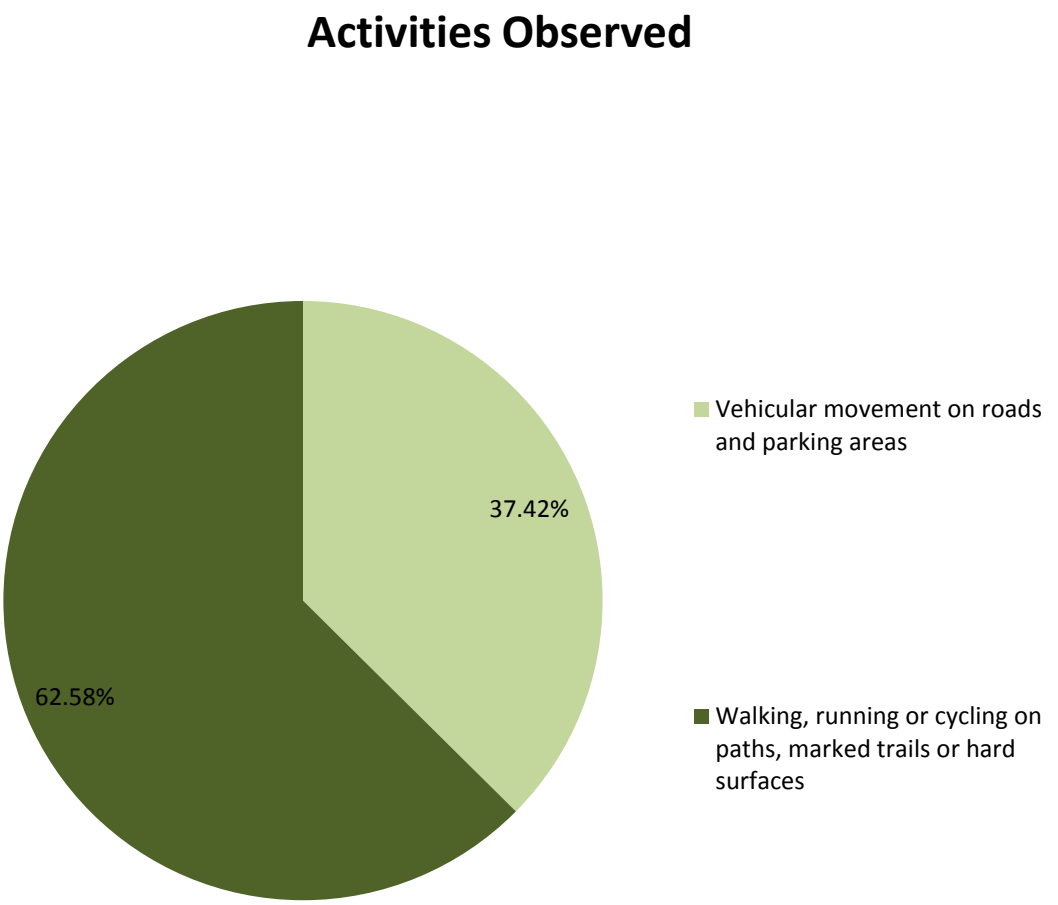


Figure 3.51 Range of Activities observed at Blasket Centre

Table 3.13 Breakdown of Activities observed at Blasket Centre

Activities observed	No. of People	% of people
Vehicular movement on roads and parking areas	116	37.42%
Walking, running or cycling on paths, marked trails or hard surfaces	194	62.58%
Grand Total	**310**	**100%**

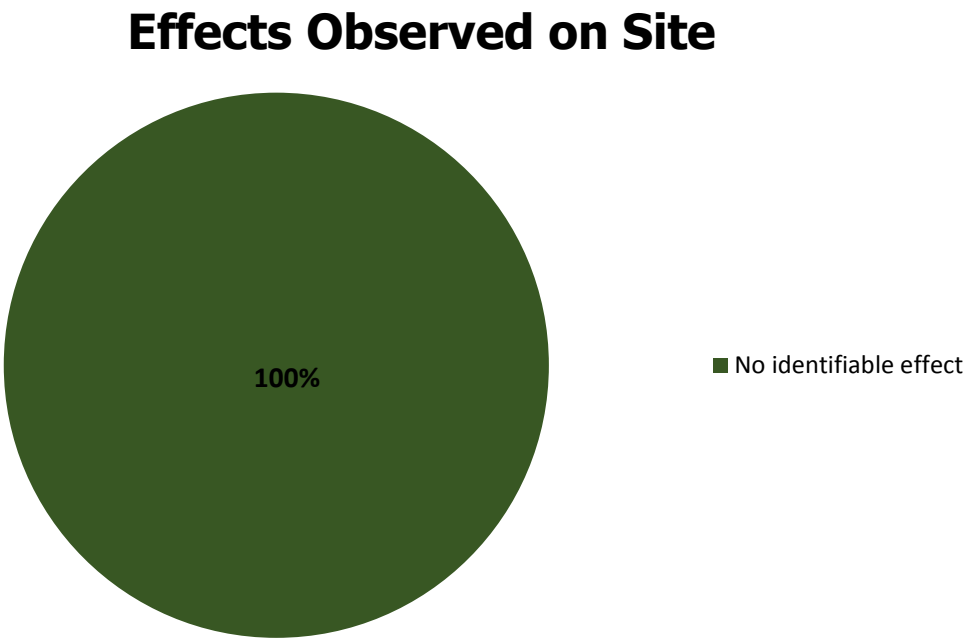


Figure 3.52 Range of Effects observed at Blasket Centre

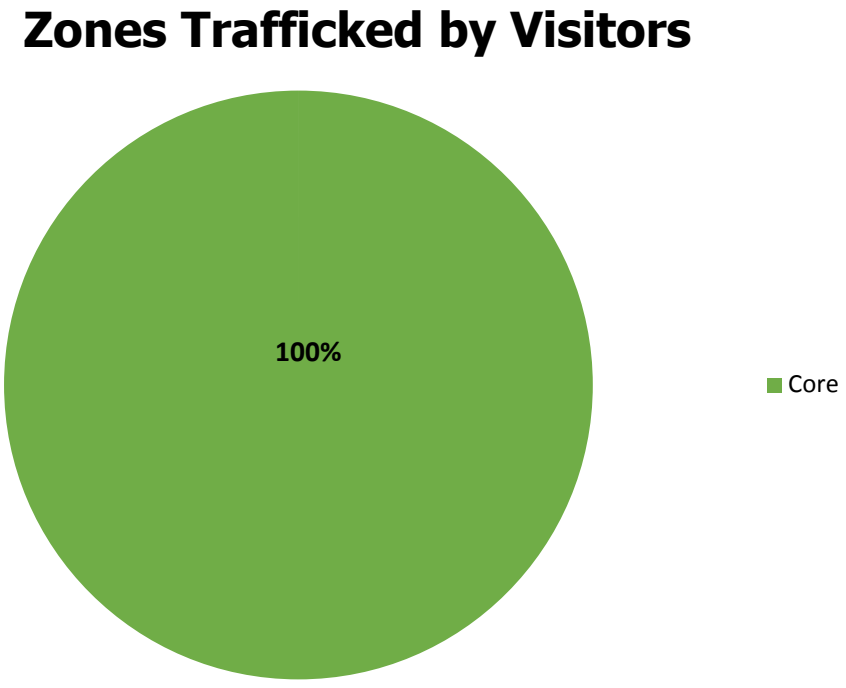


Figure 3.53 Zones Trafficked by visitors at Blasket Centre

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.

Movement Pattern Observed

100% of the visitors to the Blasket centre remained within the boundaries of the car park and the paved footpaths. On average visitors spent 33 minutes on site, with the majority spending their time in the centre itself.

Figure 3.54 Blasket interpretation centre visitor movement pattern

Blasket interpretation Centre Analysis of results

Overall no impacts were observed by visitors to the Blasket interpretation centre.

3.1.8 Castlegregory Beach

Landscape Type: Soft Shores/Beaches/Dunes

Date Surveyed: 18/07/2016

Weather Conditions: Clear and Sunny

Site Description:

Castlegregory is located within the Tralee Bay SAC and the Dingle Peninsula SPA. The site is designated Special Area of Conservation for a number of species and habitats listes on Annex I and Annex II of the E.U Habitats directive. Castlegregory is located on the Northern side of the Dingle Peninsula. The village was named after a local chieftain named Gregory Hoarne, who built a castle there in the 1600's. The only remnants of the castle are the arch that stands in the centre of the village.

Castlegregory Beach is a 4-5km stretch of interconnected Beaches around Tralee Bay. The car park for the beach is set within the yellow dune area and is close to the village of Castlegregory.

On arrival to Castlegregory there was a severe litter problem, resulting from a beach party that occurred the previous night. Several visitors came but left immediately after seeing the state of the area. Several locals came together to remove the debris, which included broken glass, cardboard boxes, aluminium cans and plastic.

On site, there are suitable facilities for visitors, there is ample parking at the beach, there is also parking a little further from the beach at the local GAA club.

Castlegregory observation study results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Castlegregory Beach	126	136	268	107	00:45 minutes

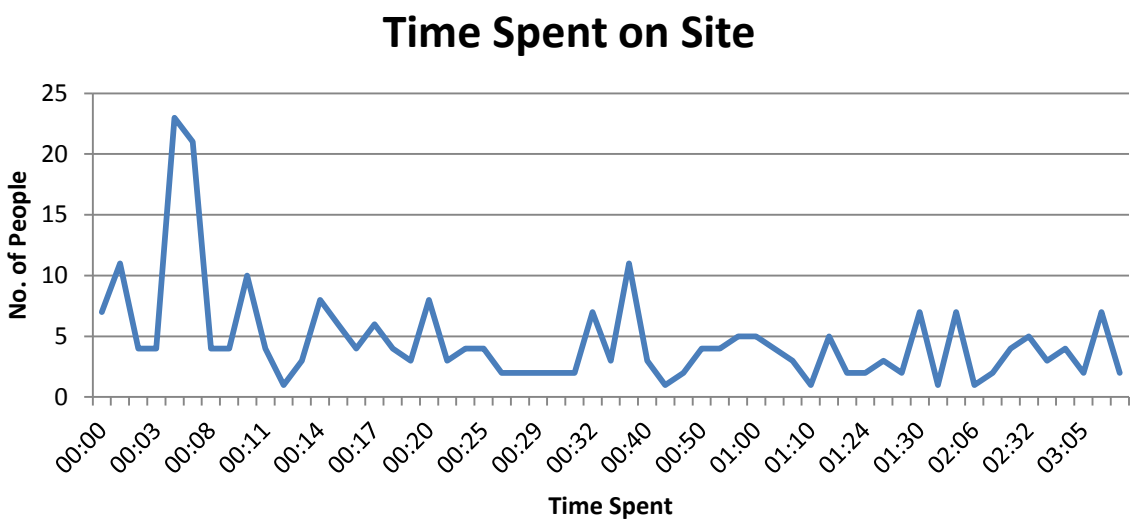


Figure 3.55 Duration of time spent by visitors at Castlegregory

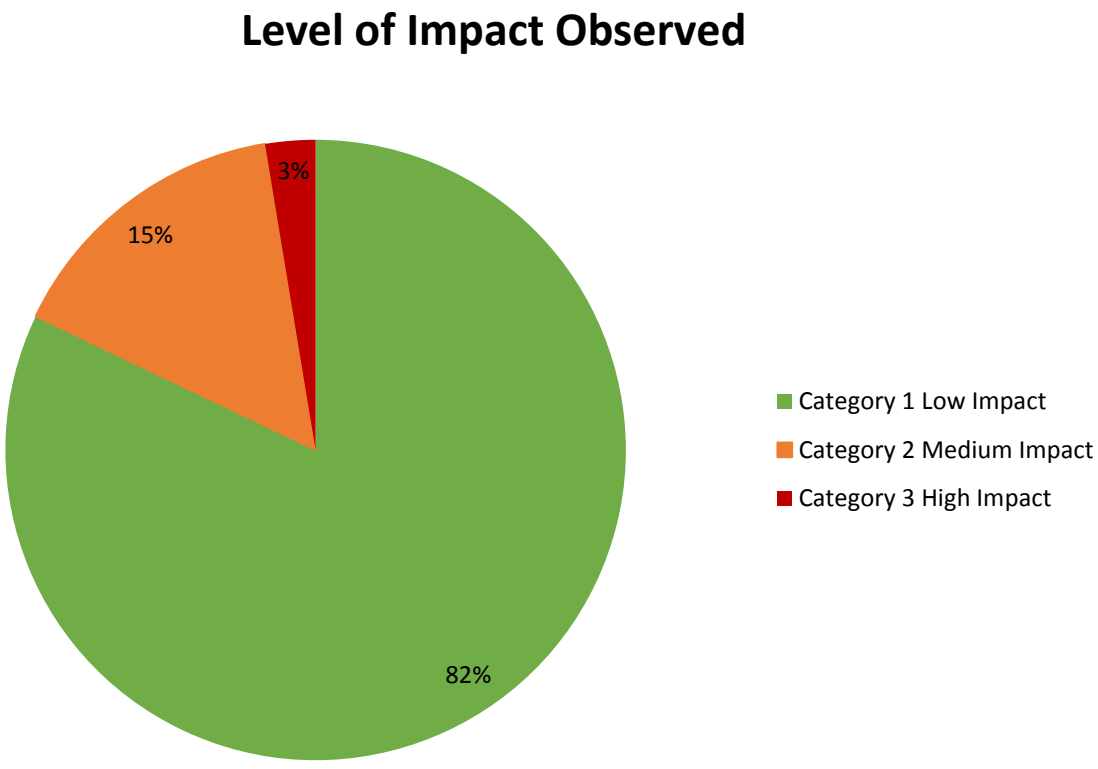


Figure 3.56 Level of Impact recorded at Castlegregory

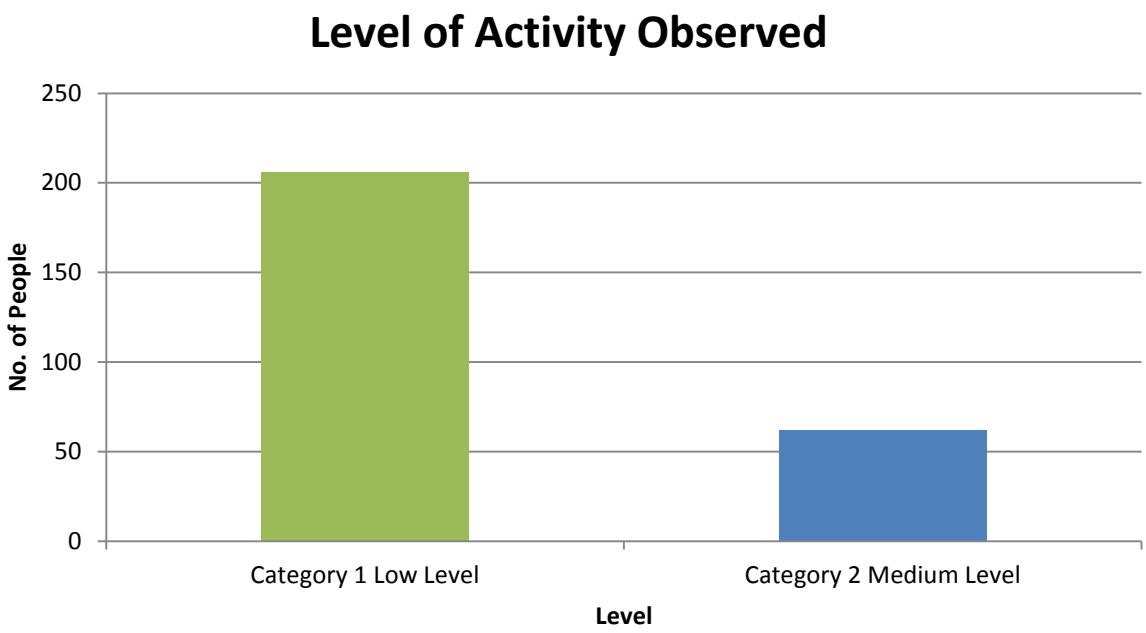


Figure 3.57 Level of Activity observed at Castlegregory

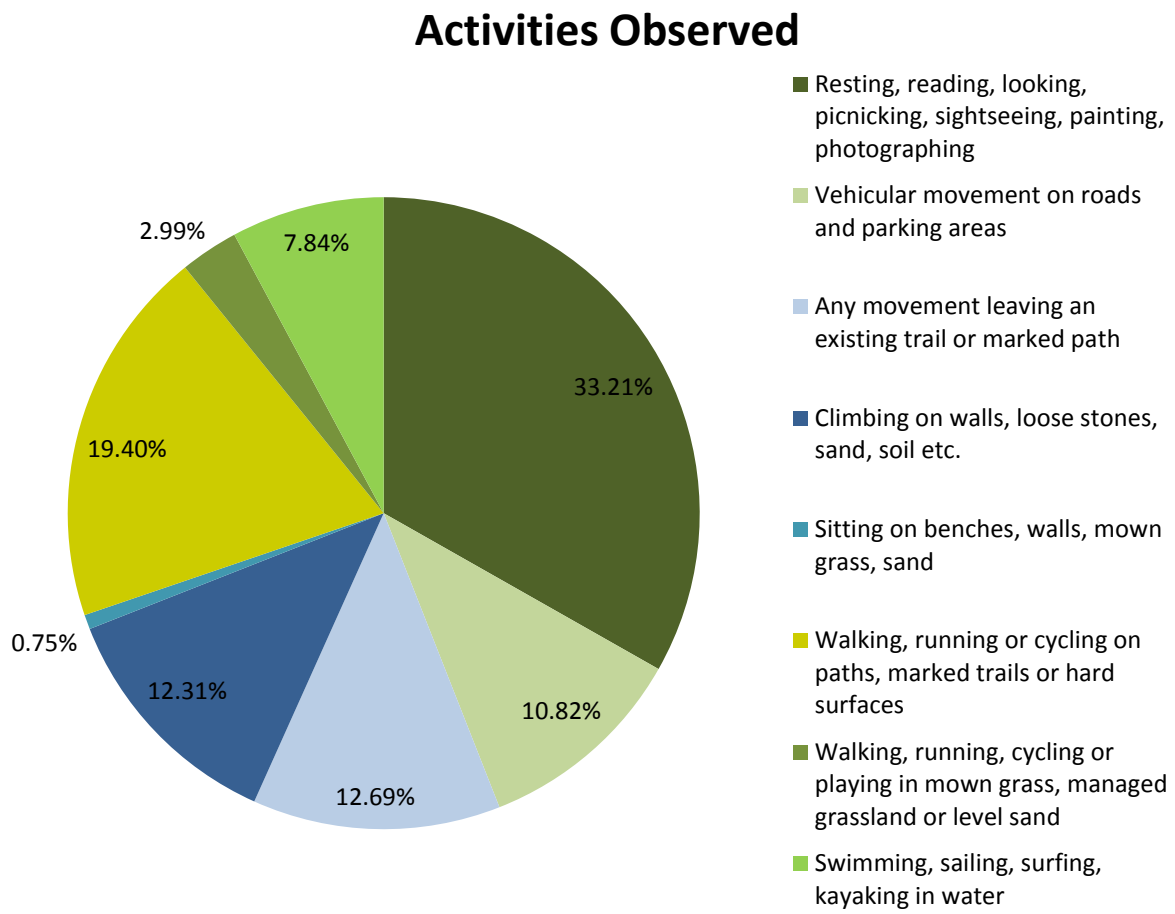


Figure 3.58 Range of activities recorded at Castlegregory

Activities Observed	Sum of Number of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	89	33.21%
Vehicular movement on roads and parking areas	29	10.82%
Any movement leaving an existing trail or marked path	34	12.63%
Climbing on walls, loose stones, sand, soil etc.	33	12.31%
Sitting on benches, walls, mown grass, sand	2	0.75%
Walking, running or cycling on paths, marked trails or hard surfaces	52	19.40%
Walking, running, cycling or playing in mown grass, managed grassland or level sand	8	2.99%
Swimming, sailing, surfing, kayaking in water	21	7.84%
Grand Total	**268**	**100%**

Table 3.14 Breakdown of activities observed at Castlegregory

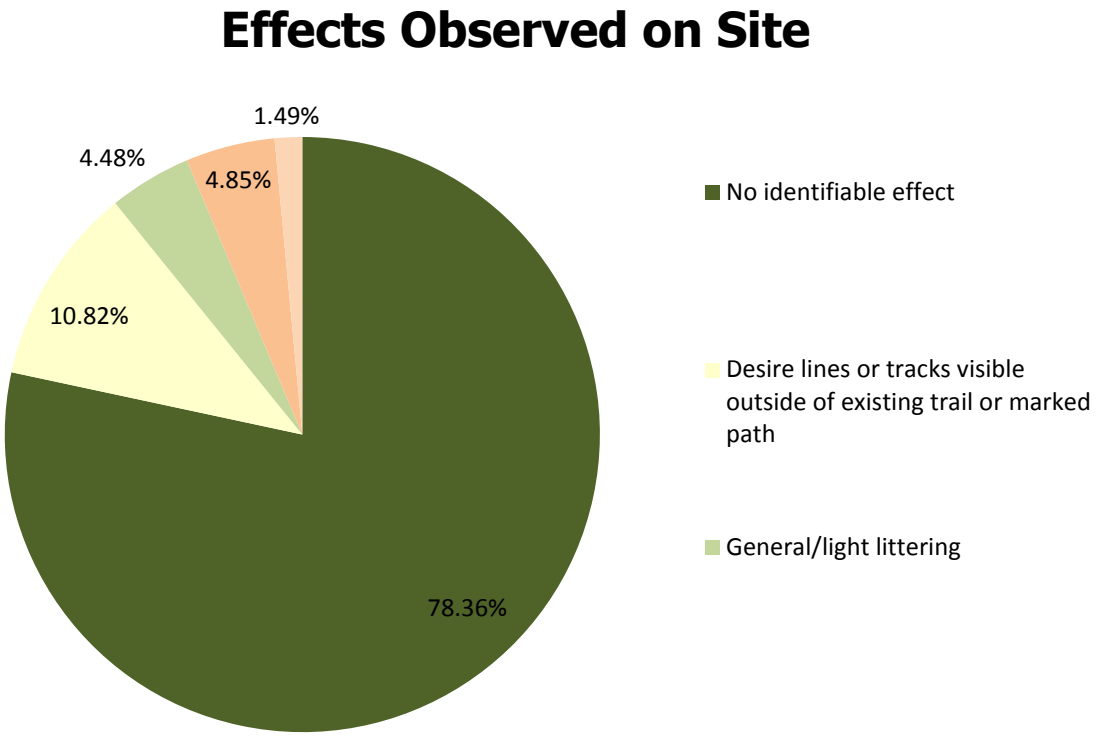


Figure 3.59 Range of effects observed at Castlegregory

Table 3.15 Breakdown of effects observed at Castlegregory

Effects Observed	Sum of Number of People	% of People
No identifiable effect	210	78.636%
Desire lines or tracks visible outside of existing trail or marked path	29	10.82%
General/light littering	12	4.48%
Incidentally moving or knocking site materials - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	12	4.48%
Desire lines or trails visible on grass and leafy vegetation	4	1.49%
Grand Total	**268**	**100%**

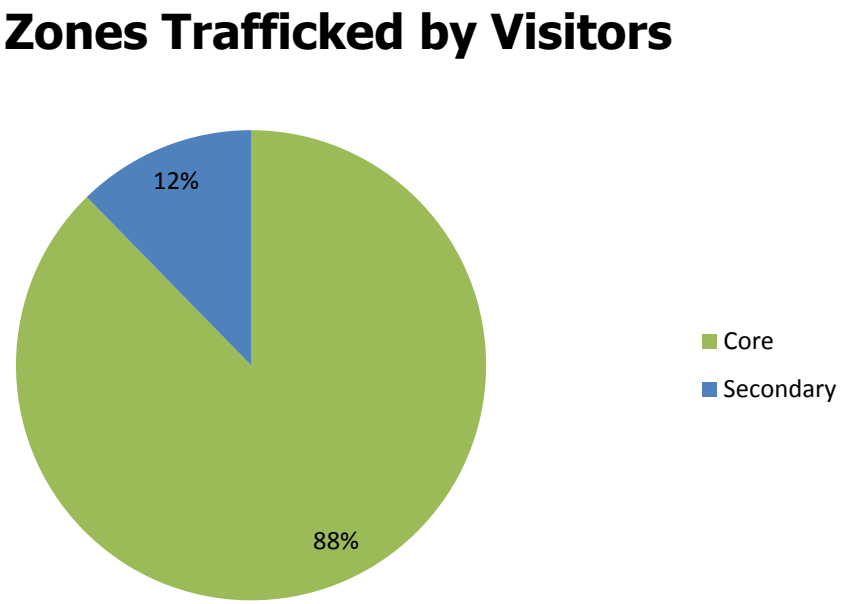


Figure 3.60 Zones trafficked by visitors at Castlegregory

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, and tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.

Movement Pattern Observed

On the day of the survey on arrival to the site, there was a high volume of litter covering the beach and parking area, this was a result of a beach party that was held by local youths the previous night. The level of litter may have deterred any early morning visitors from using the beach as many cars pulled in did a U-turn and left within a matter of minutes. Many locals came together to remove the litter and within an hour because of the hot day the beach had filled up.

The majority of visitors (88%) remained within the boundaries of the car park using the main access point to get onto the beach. A low level of activity was recorded at the car park area with many visitors, a lot with small children setting up an area on the beach for the duration of their stay.

Medium level of activity was recorded when visitors used the wall of the car park to gain access to the beach, along with some visitors walking through the small area of the dunes close to the car park. Desire lines from visitor behaviour were evident across the sand dunes.

Castlegregory Analysis of Results

As noted in the movement pattern observed (88%) remained within the boundaries of the beach and car park. Evidence of desire lines was apparent within the sand dunes where a low level of visitor's trafficked secondary zones (totalling 12% of all visitors) to gain access to other parts of the beach.

Overall visitors did not engage in any activities that would result in any adverse effects.

Figure 3.61 Visitor Movement patterns at Castlegregory Beach

3.1.9 Scattery Island

Landscape type: Island

Date Surveyed 21/07/2016

Weather Conditions: overcast/windy

Site Description:

Scattery Island lies at the mouth of the River Shannon near Kilrush. It is situated within the lower River Shannon SAC. The site is a SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive. Scattery has been an ecclesiastic centre since early times. The monastery, founded by St. Senan in the 6th century suffered under Viking attack in the 9th and 10th century and was mostly destroyed in Tudor times.

Scattery also served as a place for safe harbour for the Spanish Armada and as a defence post for the English government. The island has been abandoned since 1978.

Scattery Island is located 2.5km from Kilrush Creek Marina, the ferry ride takes around 15-20 minutes, and this service heavily depends on the demand by visitors and locals and the tide.

Scattery Island Observation Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Scattery Island	8	10	18	1	[1]3:00 Hours

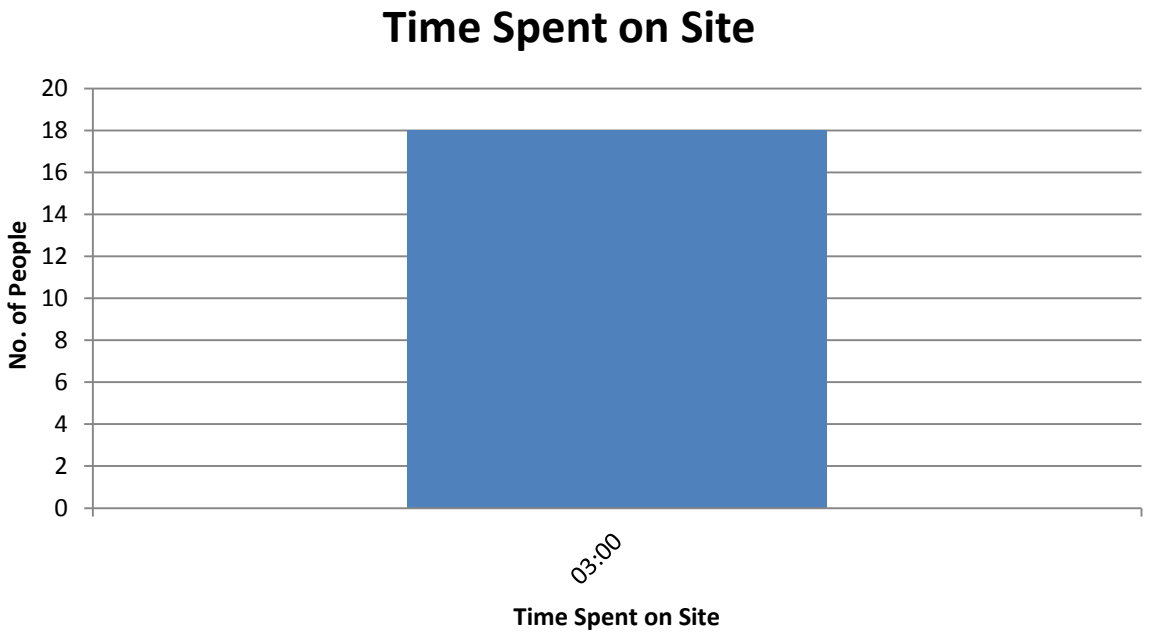


Figure 3.62 Duration of Time spent on site at Scattery Island

[1] All visitors returned to Kilrush Marina at the same time

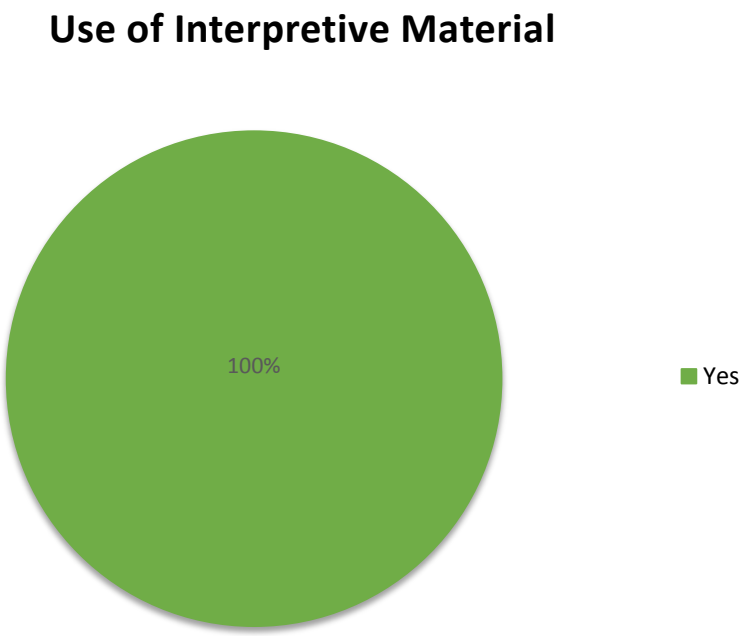


Figure 3.63 Use of Interpretive Material on Scattery Island

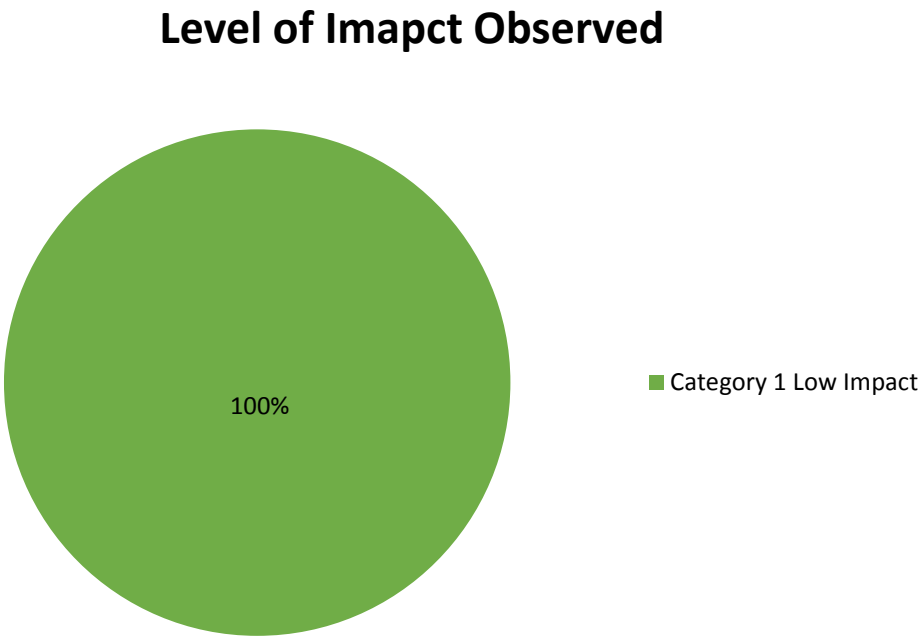


Figure 3.64 Level of Impact observed on Scattery Island

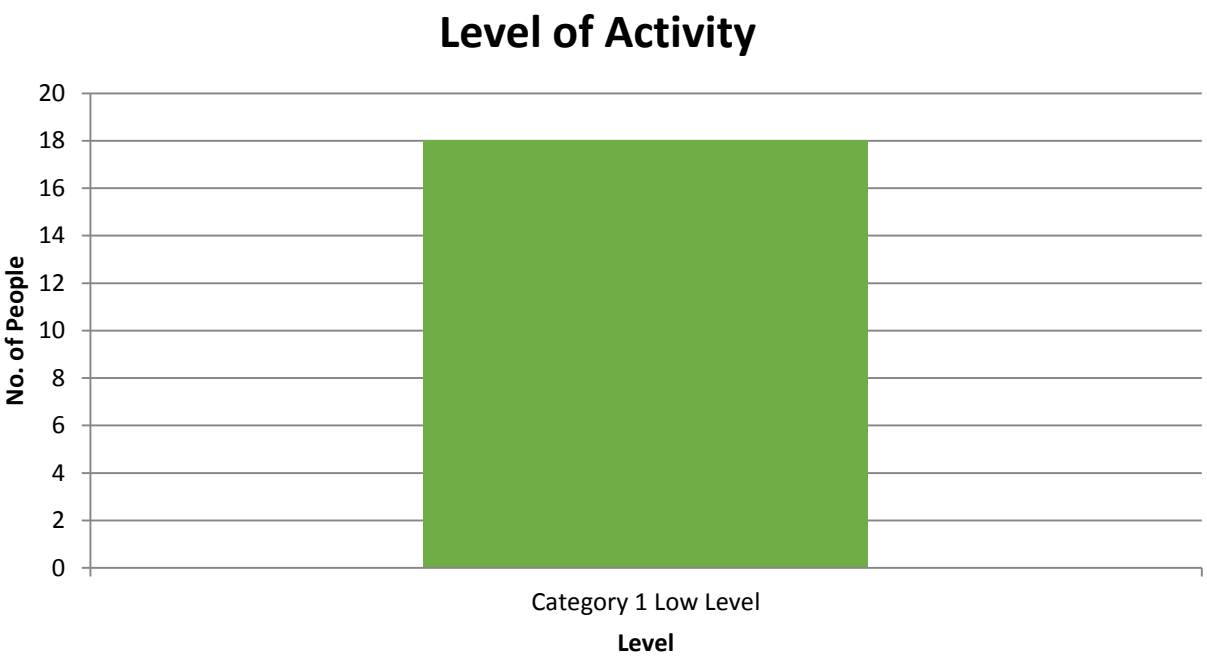


Figure 3.65 Level of Activity observed on Scattery Island

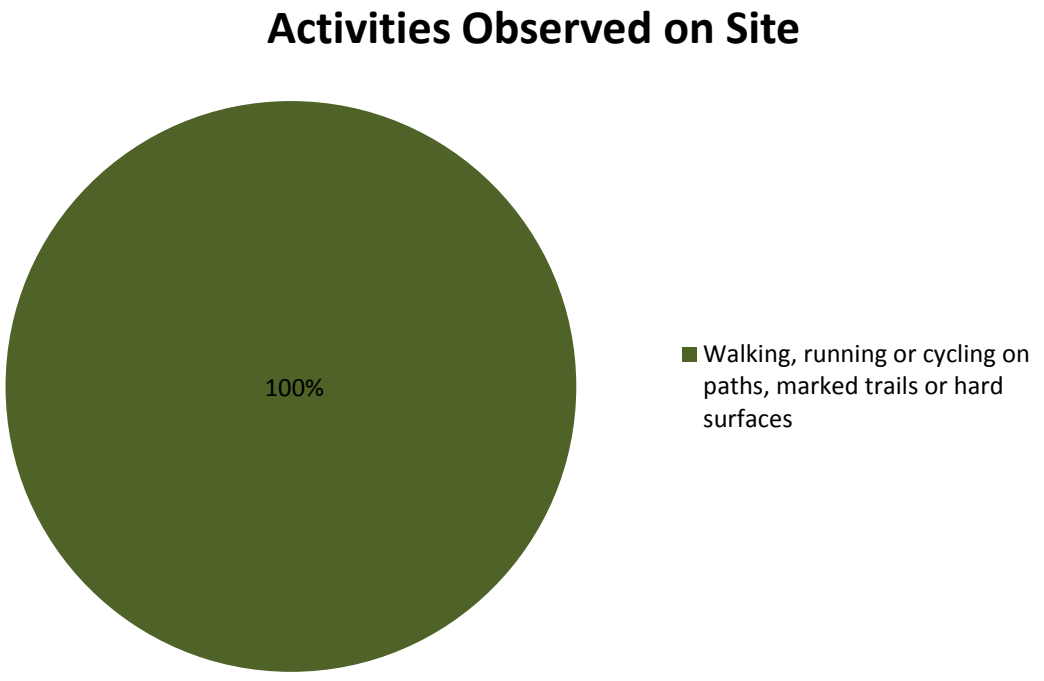


Figure 3.66 Range of activities observed on Scattery Island

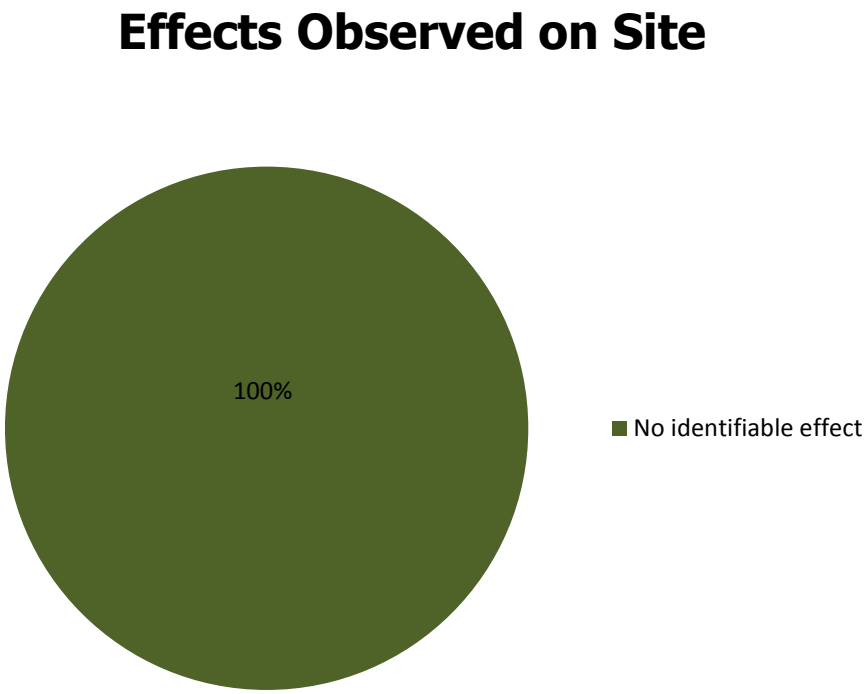


Figure 3.67 Range of effects observed on Scattery Island

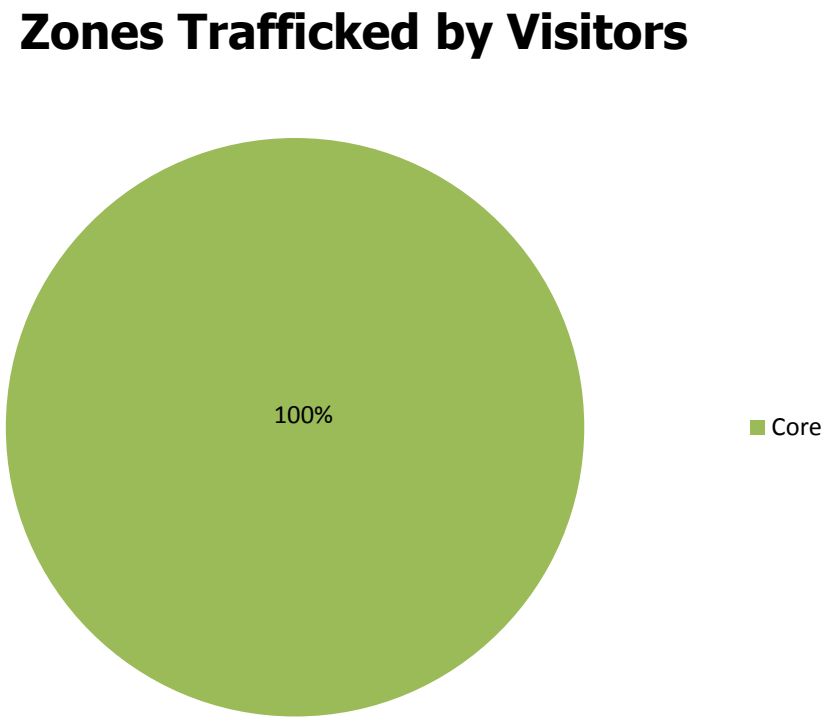


Figure 3.68 Zones Trafficked by visitors on Scattery Island

Movement Patterns Observed

As the ferry to Scattery Island can only leave the marina when the tide is high enough to allow safe docking at the Island, on the day of surveying visitors to the island all boarded the same ferry. It was observed that out of the 30 visitors 18 of those got off at the island where a guided tour is arranged by the OPW. The tour takes around 1 hour 45 minutes, within this time visitors where observed to stay on the designated trails while following the tour guide.

Figure 3.69 Visitor Movement Pattern at Scattery Island

Scattery Island visitor movement pattern

Scattery Island Analysis of Results

100% of the visitors to Scattery Island had no identifiable effect. It was apparent that a combination of the level of management along with the guided tour contributed to good visitor behaviour, which resulted in less evidence of effects.

3.1.10 Mullet Bay

Weather Conditions: Dry/warm/Sunny

Landscape type: Soft shore/Beach

Date Surveyed: 29/07/2016

Site Description:

Blacksod Bay is a 16km bay that is bounded on its western side by the Mullet Peninsula. Blacksod lies adjacent to the Mullet Bay/Blacksod Complex SAC. This site is an SAC for a number of species or habitats listed on Annex I or Annex II of the E.U Habitats directive. The entire mullet peninsula is covered with flat sand dunes. Blacksod bay is wide at its mouth with leaves it a safe place for anchorage. At the North end of the Bay lies Broadhaven Bay which is connected to Blacksod Bay by an 18th century canal that runs through Belmullet.

Elly Bay is a popular location for water sports and it's beside Colaiste Uisce Adventure Centre, this camp uses the beach at least once a day for the summer months for different activities.

There are toilet facilities situated in the car park, along with picnic benches and information boards for visitors.

Mullet Bay Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average duration on site
Mullet Bay	75	72	146	23	00:45 minutes

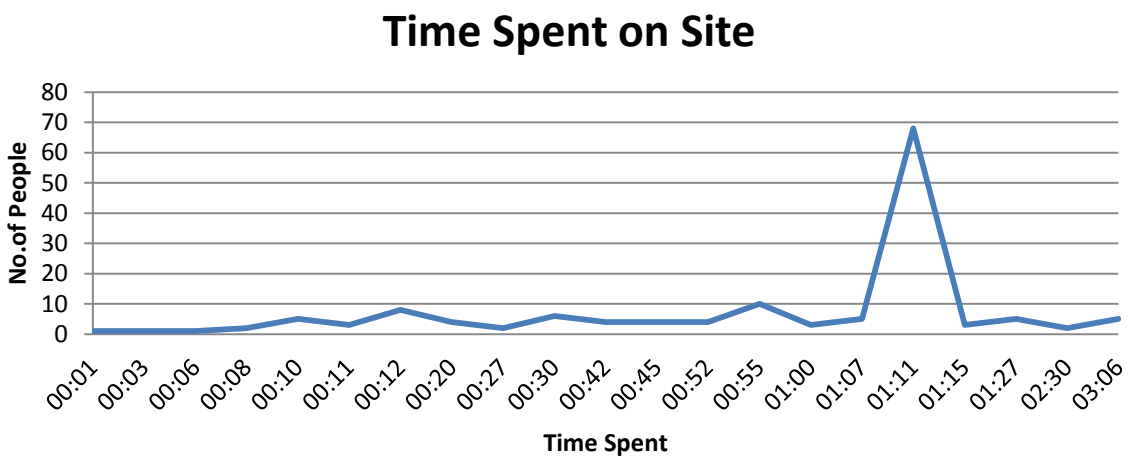


Figure 3.70 Duration of time spent by visitors at Mullet bay

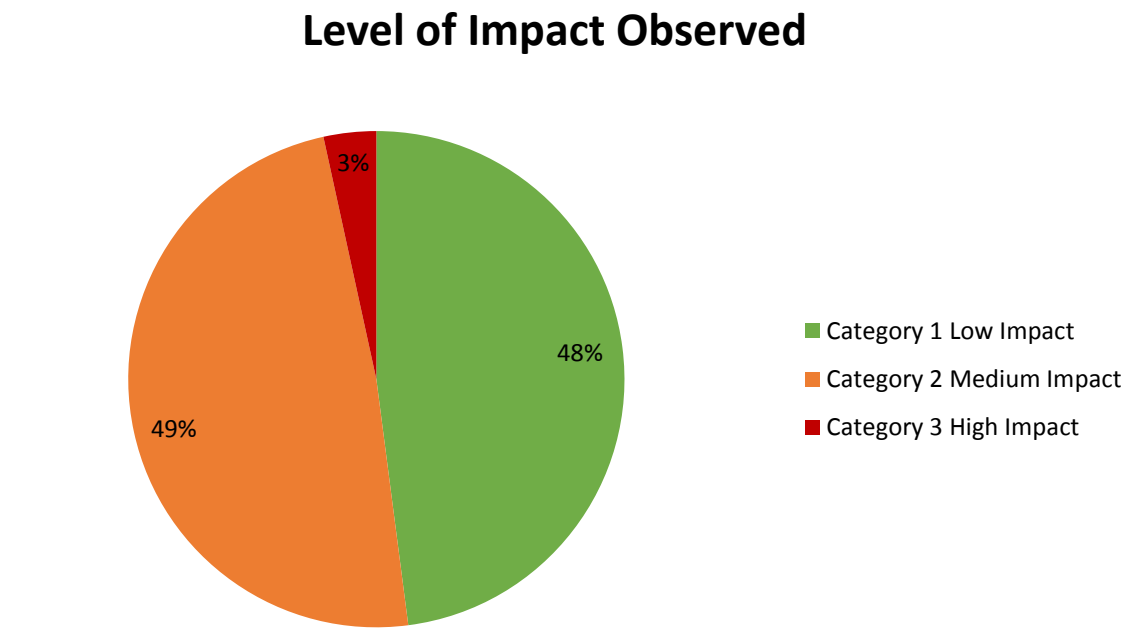


Figure 3.71 Level of Impact Observed at Mullet Bay

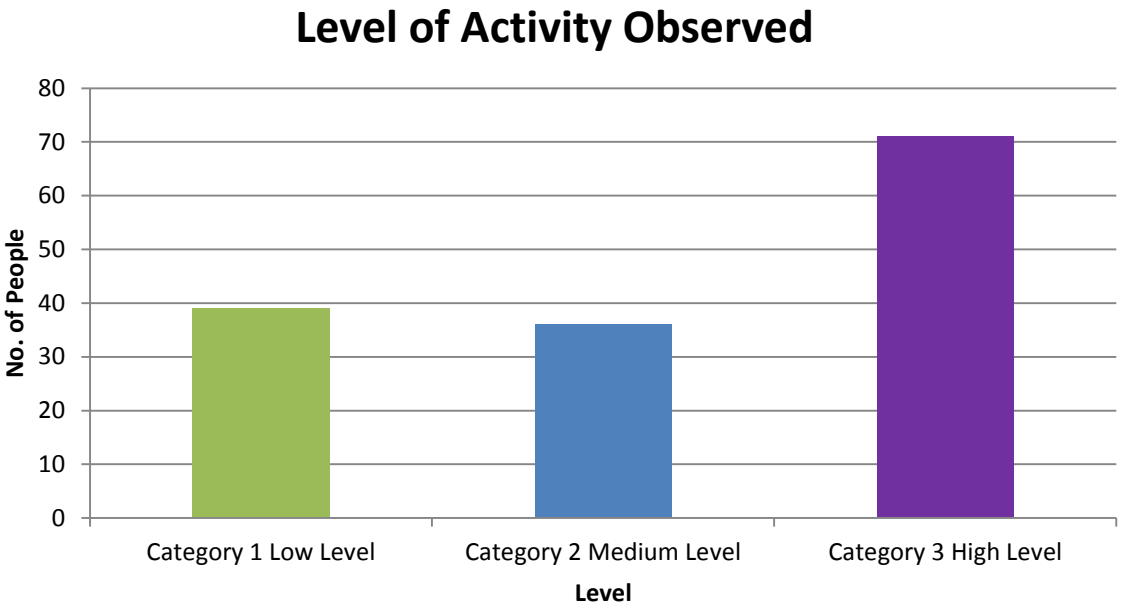


Figure 3.72 Level of activity observed at Mullet Bay

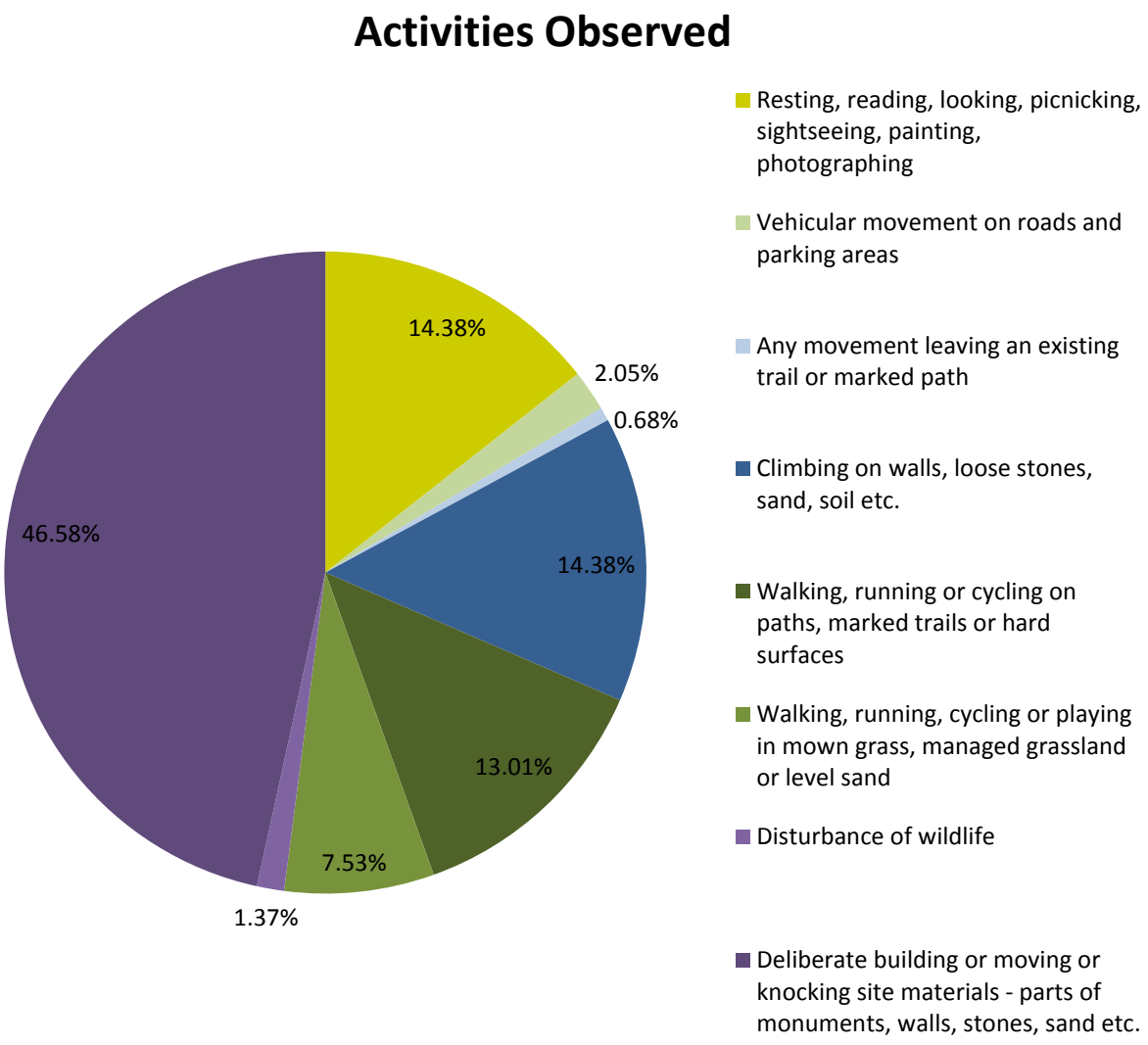


Figure 3.73 Range Activities observed at Mullet Bay

Table 3.16 Breakdown of Effects recorded at Mullet Bay

Activities Observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	21	14.38%
Vehicular movement on roads and parking areas	3	2.05%
Any movement leaving an existing trail or marked path	1	0.68%
Climbing on walls, loose stones, sand, soil etc.	21	14.38%
Walking, running or cycling on paths, marked trails or hard surfaces	19	13.01%
Walking, running, cycling or playing in mown grass, managed grassland or level sand	11	7.53%
Disturbance of wildlife	2	1.37%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc.	68	46.58%
Grand Total	**146**	**100%**

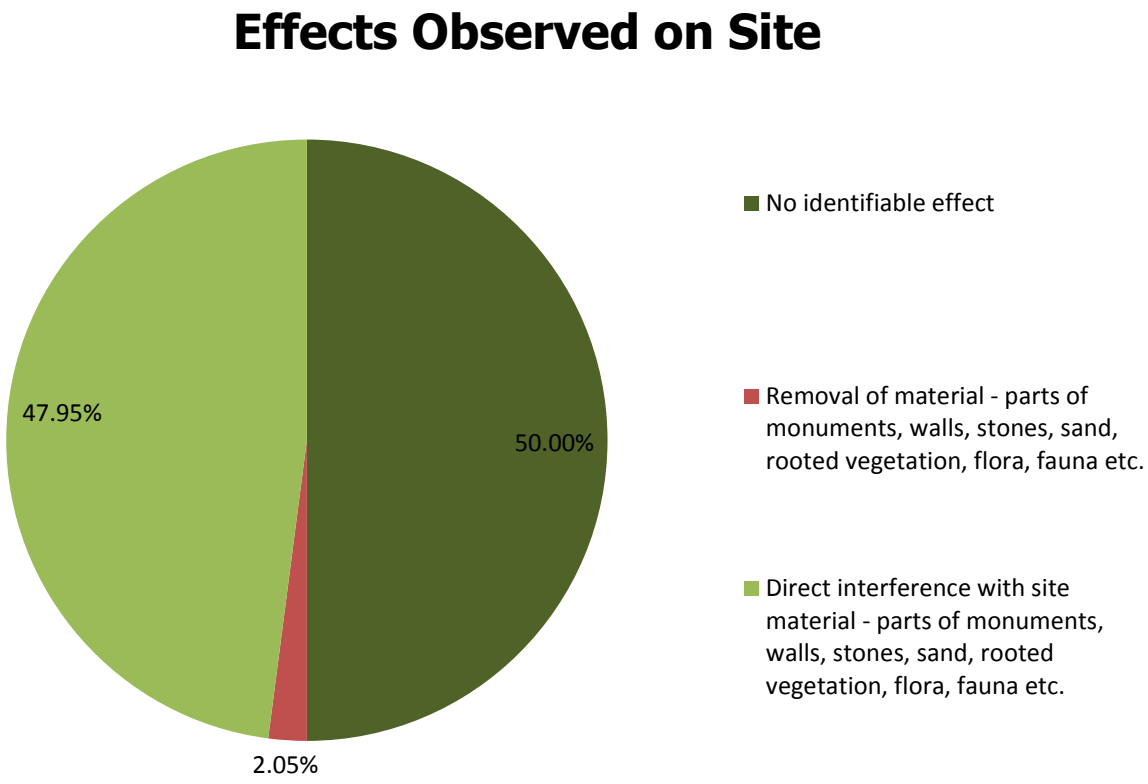


Figure 3.74 Range of effects recorded at Mullet Bay

Effects Observed	No. of People	% of People
No identifiable effect	70	47.95%
Desire lines or tracks visible outside of existing trail or marked path	73	50.00%
Removal of material- parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	3	2.05%
Grand Total	**146**	**100%**

Table 3.17 Breakdown of effects recorded at Mullet Bay

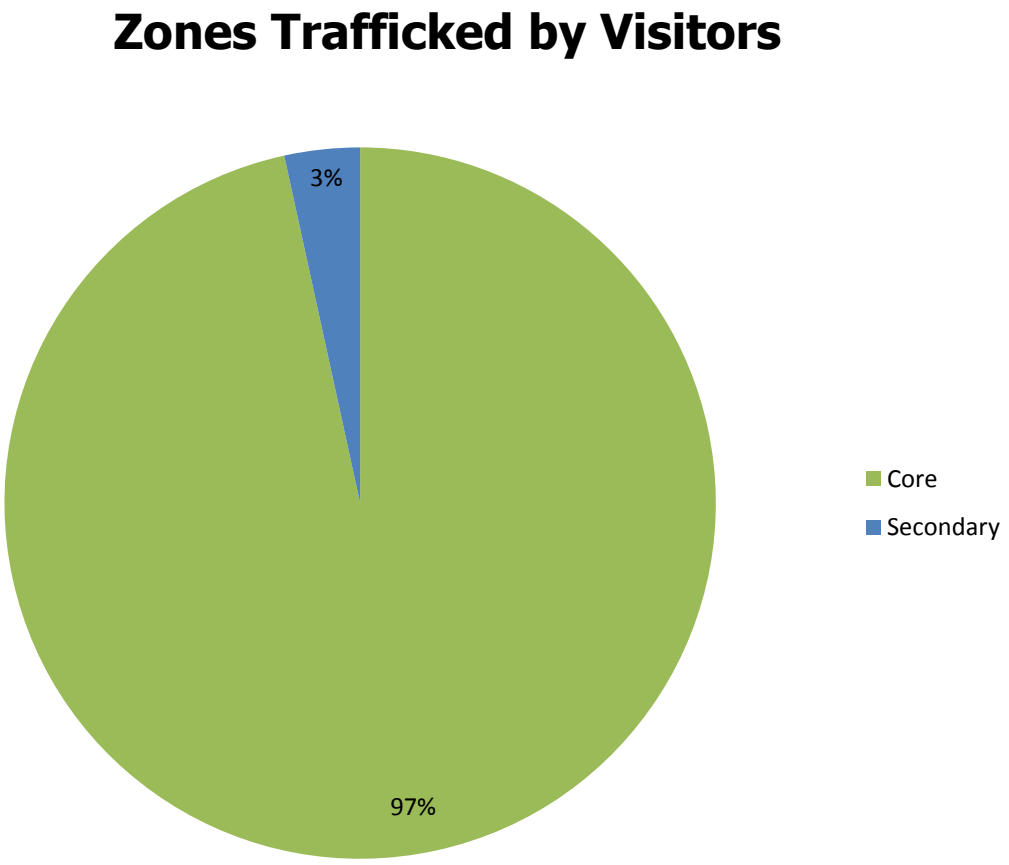


Figure 3.75 Zones trafficked by visitors at Mullet Bay

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.

Movement Pattern observed

On arrival to the site a large group of students from the local summer school had started to make their way down the beach. High level activity was recorded as the visitors played tug of war, dug large holes in the sand and collected shells and other site materials. High level activity was also recorded as a group of two collected razor clams when the tide was out.

The majority of visitors (97%) stayed within the boundaries. Low level activity was recorded as visitors walked along the beach taking photographs or resting on the sand.

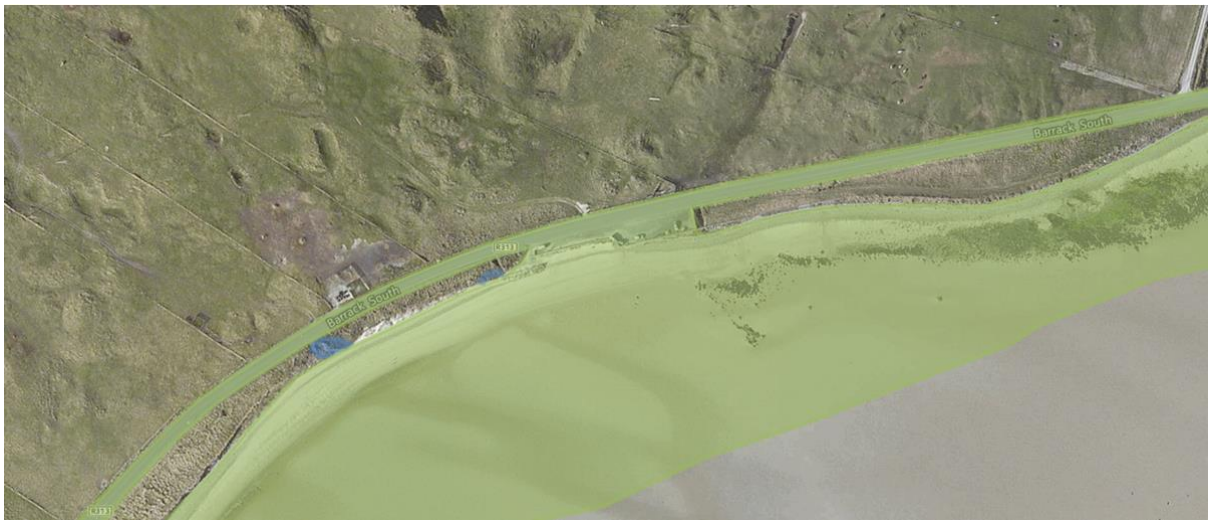


Figure 3.76 Mullet Bay visitor movement pattern

Mullet Bay Analysis of results

2% of visitors engaged in activities that caused High Level Impact. This occurred when a group of two (male and female) were observed to collect razor clams from the beach.

Medium level of activity was observed (48%) when the summer school dug large holes in the sand well above the high-water mark. All of the impacts where shown to have no significant impacts to the site.

50% of visitors to the sites took part in activities that had no identifiable effect to the site.

3.1.11 Inishkea South

Landscape Type: Island

Weather Conditions: Overcast/wet

Date Surveyed 30/07/2016

Site Description: Island

Inishkea South is one of the most rarely visited of Mayo's outposts. It is located within the Iniskea Islands SAC. The site is an SAC for a number of habitats and species listed in Annex I and Annex II of the E.U Habitats Directive. From June to August, depending on the weather boat trips are organised a few times a week. The island is now uninhabited except for seabird's grey seals and sheep.

Archaeological excavation has revealed burial grounds like the mound near the harbour where a slab of stone with early Celtic designs can be seen. This is evidence that monks of early Christian times inhabited the Island.

Up until recently boat trips to Inishkea were erratic and despite the best efforts of Erris boatmen depended entirely on weather. There is now a full boat service that runs throughout the summer.

The boat trip takes around 35 minutes from Blacksod Pier. The boat takes visitors to Inishkea where there is a shelters harbour and pier, which leads onto a white sandy beach that is overlooked by the ruins of the island.

Inishkea South Observation Results

Site	Males	Females	No. of People	No. of Groups	Average Duration on Site
Inishkea South	5	4	9	3	[2]04:00 hours

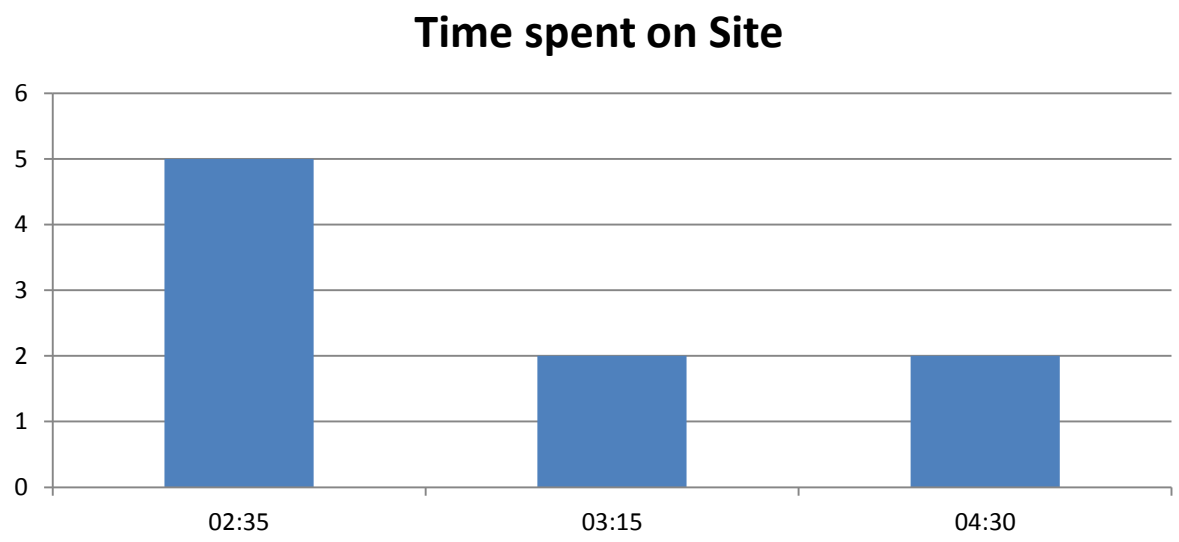


Figure 3.77 Duration of time spent by visitors on Inishkea Island

[2] All visitors returned to Blacksod pier at the same time

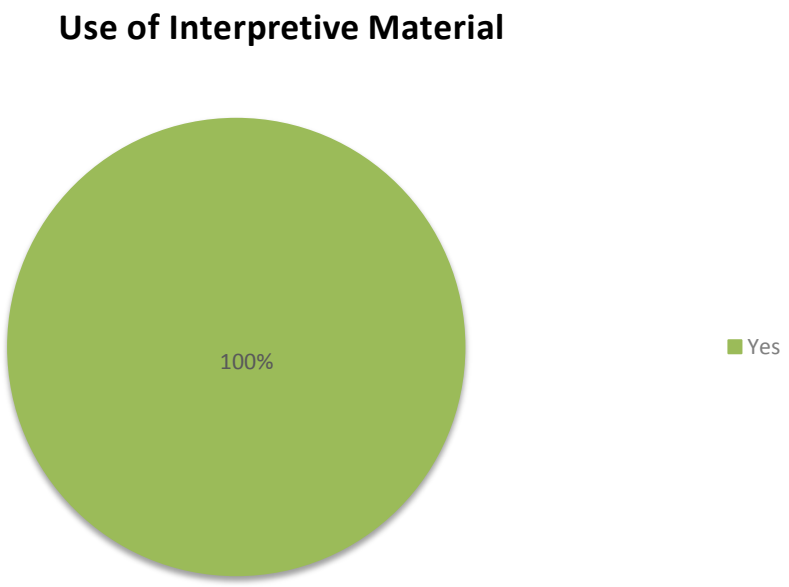


Figure 3.78 Use of Interpretive Material on Inishkea South

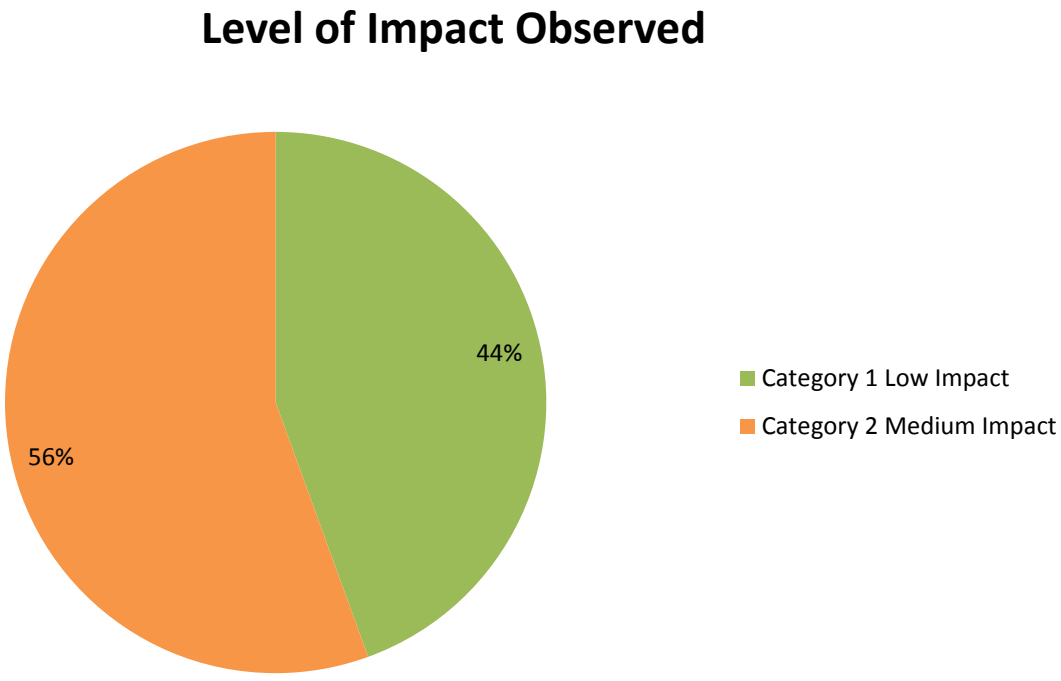


Figure 3.79 Level of Impact Observed on Inishkea South

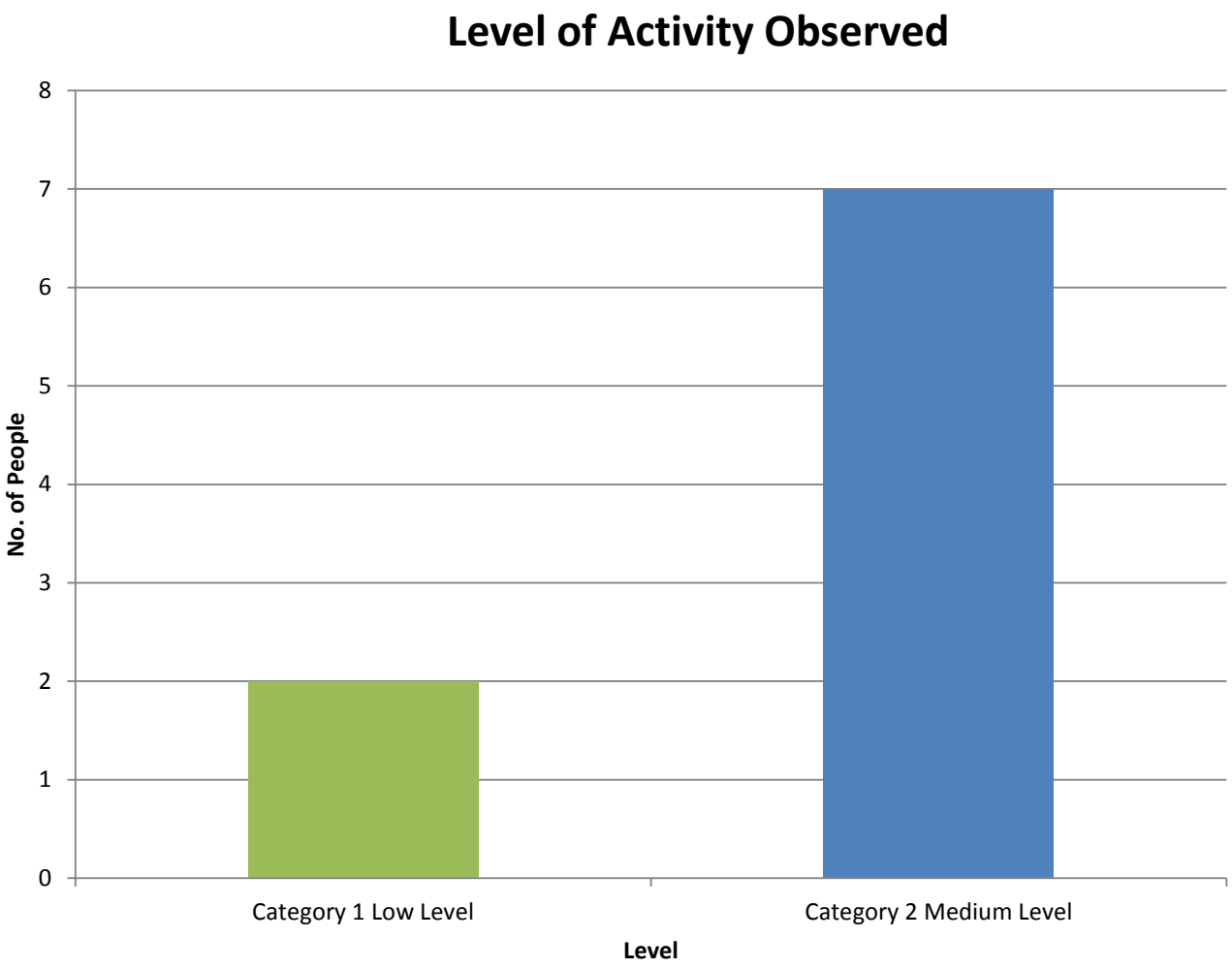


Figure 3.80 Level of Activity observed at Inishkea South

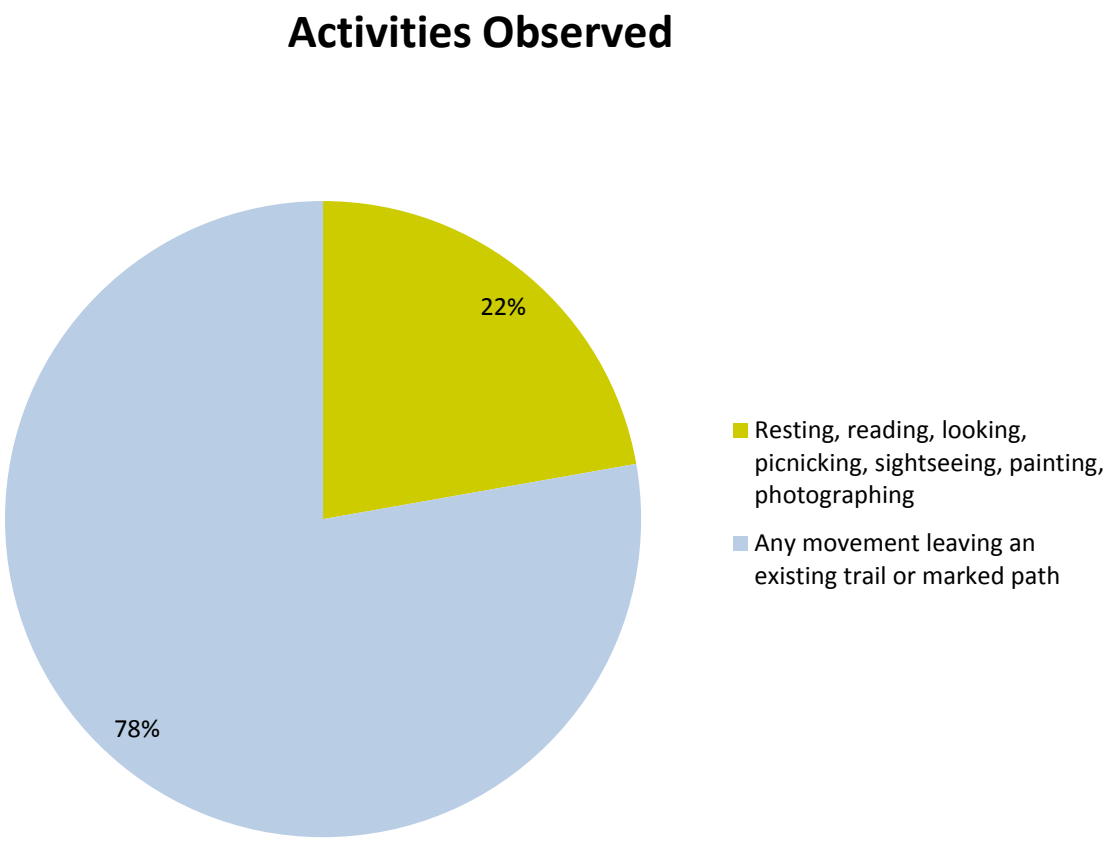


Figure 3.81 Range of Activities observed at Inishkea South

Table 3.18 Breakdown of Results Observed at Inishkea South

Activities Observed	No of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	2	22%
Any movement leaving an existing trail or marked path	7	78%
Grand Total	**9**	**100%**

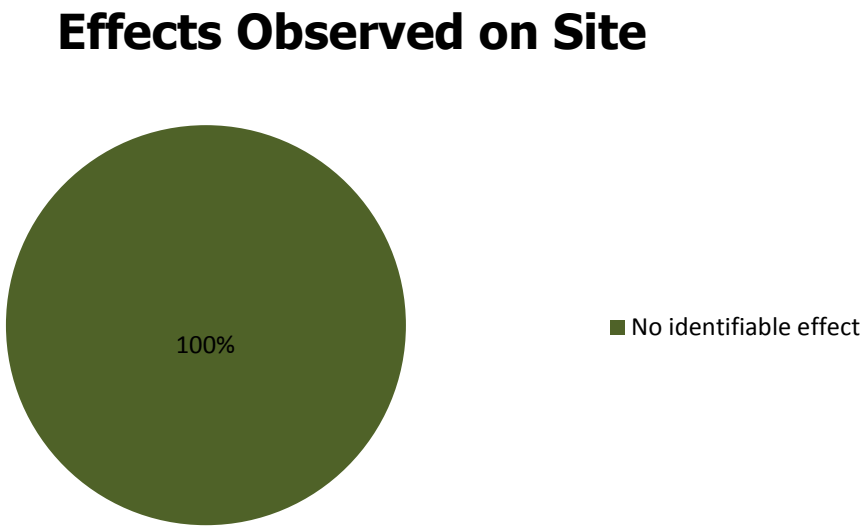


Figure 3.82 Range of Effects observed on Inishkea South

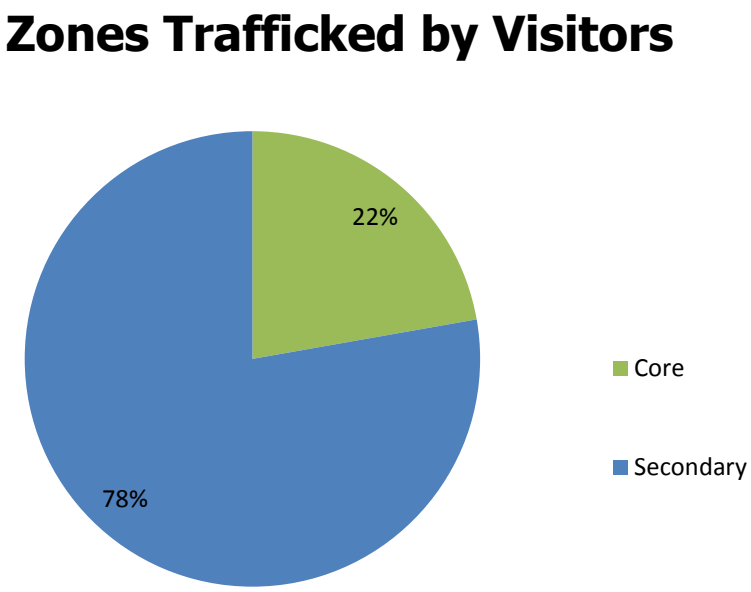


Figure 3.83 Zones Trafficked by Visitors on Inishkea South

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, and tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.

Movement Pattern observed

On arrival to the site there was already a number of groups present waiting to get the ferry back to Blacksod pier, the groups were observed to be using disposable barbeques, having picnics and photographing and sightseeing on the beach. Three groups in total where observed on this survey day. The majority of visitors where observed to go beyond the core zones, walking along grassland to photograph and sightsee the many lookout towers and ruins on the Island.

Inishkea South Analysis of Results

Theboat trips to Inishkea are scheduled and are usually booked in advance. On the day of surveying, there were 9 people which consisted of 3 separate groups. The majority of visitors from the Ferry (78%) went wayward from the core area of the beach and pier. They were observed to climb uphill towards the lookout tower, as there are no designated pathways leading to any of the main sites on the island, desire lines and tracks were visible in managed grassland, this however was not shown to have any lasting or significant effects on the site.

3.1.12 Rossguill

Landscape Type: Montane/upland

Date Surveyed 14/08/2016

Weather Conditions: Overcast/warm

Site Description:

Rosguill is a peninsula situated in north-north-west County Donegal, Ireland. Lying between the peninsula of Fanad to the east and Horn Head to the west. Rossguill is located within the Tranarossam and Melmore Lough SAC and Horn Head to Fanad Head SPA. This site is an SAC for a number of habitats and species listed in Annex I and Annex II of the E.U Habitats Directive. Rossguill is a dichotomy of heathland and ocean. With the great Sheephaven Bay with its mellow waters and pure-white strands on the one hand, and the treacherous sand banks of Mulroy Bay on the other. Between, a mixture of bog, hill and pastureland, the ancient walls, remnants of cattle enclosures, and the various evidences of fortification are proof of the area's use since antiquity. The Parish of Rosguill is an alternative name for the Parish of Mevagh, which covers the peninsula and an equally sized hinterland.

The layby at which the Rosguill Wild Atlantic Way is situated is a small area with enough space for around 10 cars at any one time, there are no facilities at the stop, with the closest amenity being a small pub/coffee shop that is situated about 2km from the layby.

Rossguill Observation Results

Site	Male	Female	No. of People	No. of Groups	Average time spent on site
Rossguill	67	48	115	56	00:03

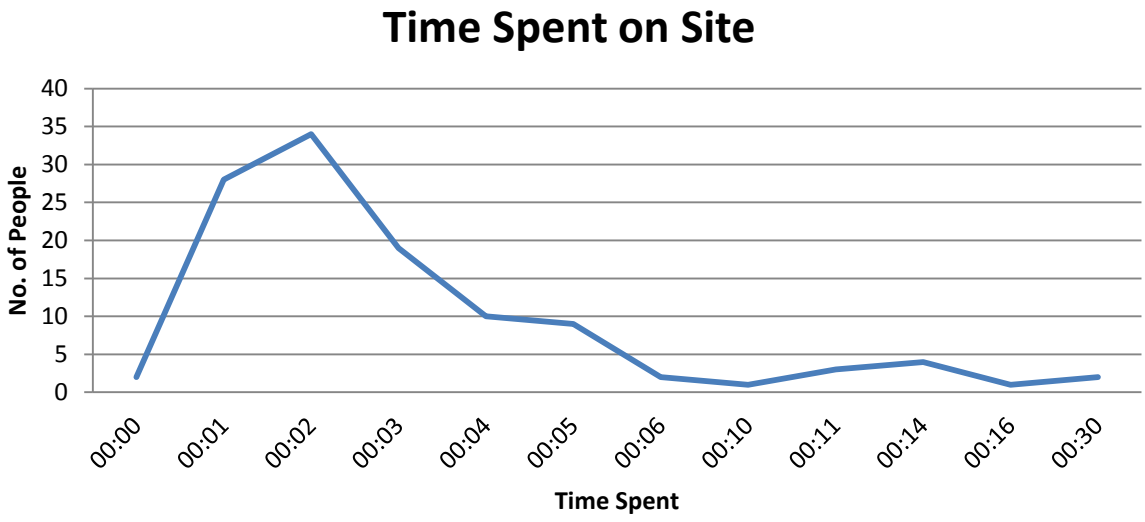


Figure 3.85 Duration of time spent by visitors at Rossguill

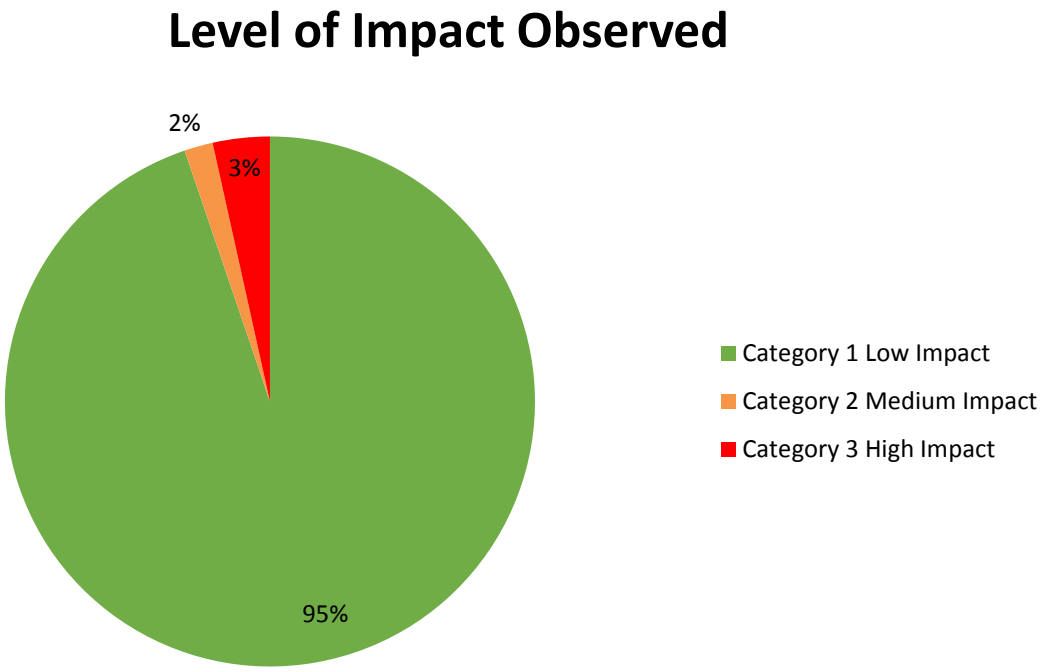


Figure 3.86 Level of Impact observed at Rossguill

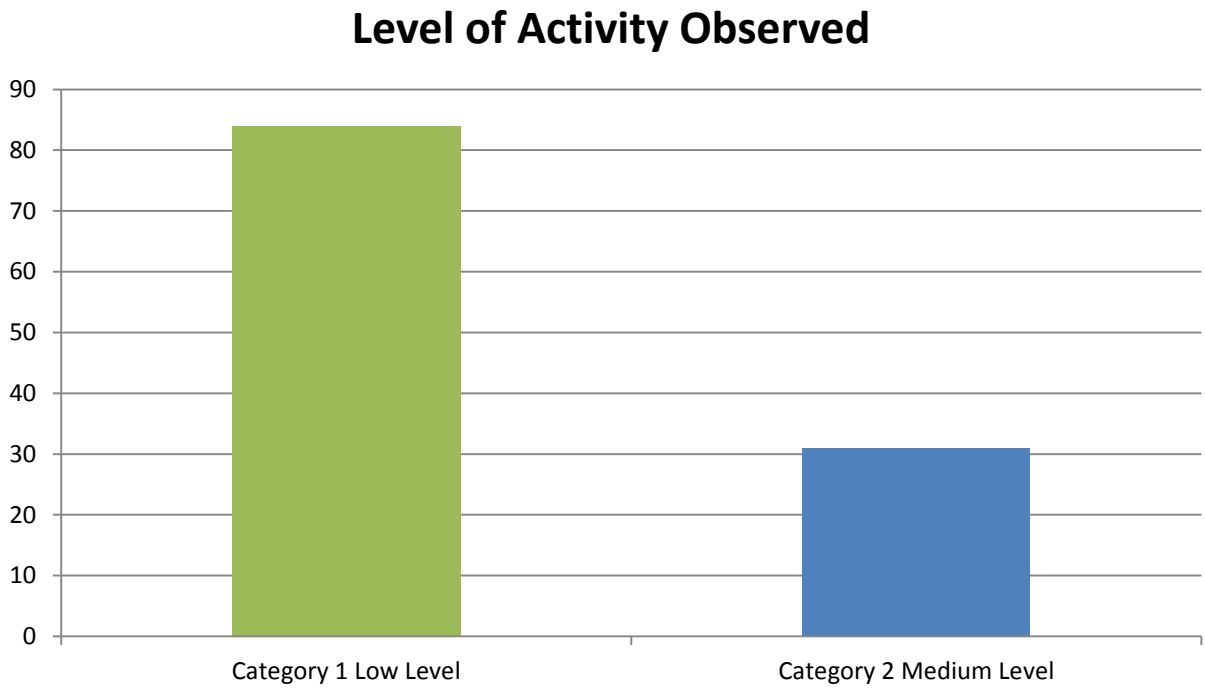


Figure 3.87 Level of Activity Observed at Rossguill

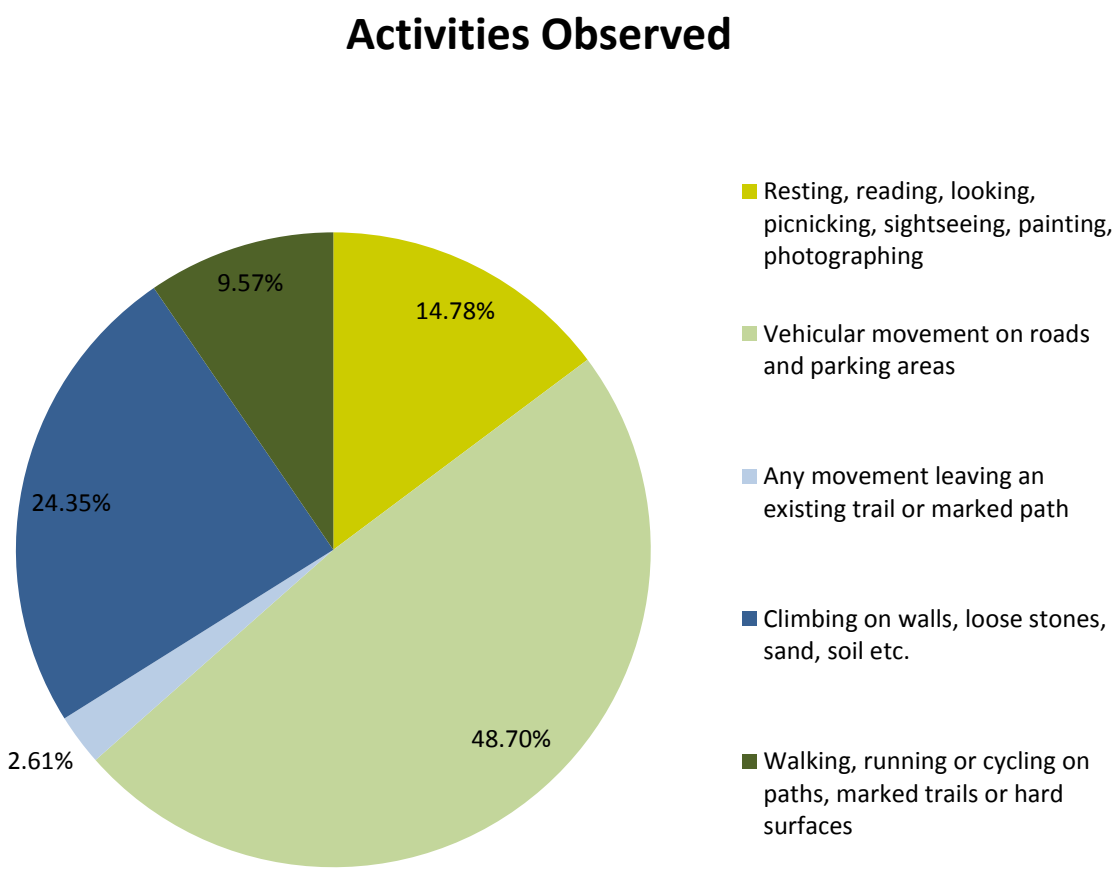


Figure 3.88 Range of activities recorded at Rossguill

Table 3.19 Breakdown of Activities recorded at Rossguill

Activities Observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	17	14.78%
Vehicular movement on roads and parking areas	56	48.70%
Any movement leaving an existing trail or marked path	3	2.61%
Climbing on walls, loose stones, sand, soil etc.	28	24.35%
Walking, running or cycling on paths, marked trails or hard surfaces	11	9.57%
Grand Total	**115**	**100%**

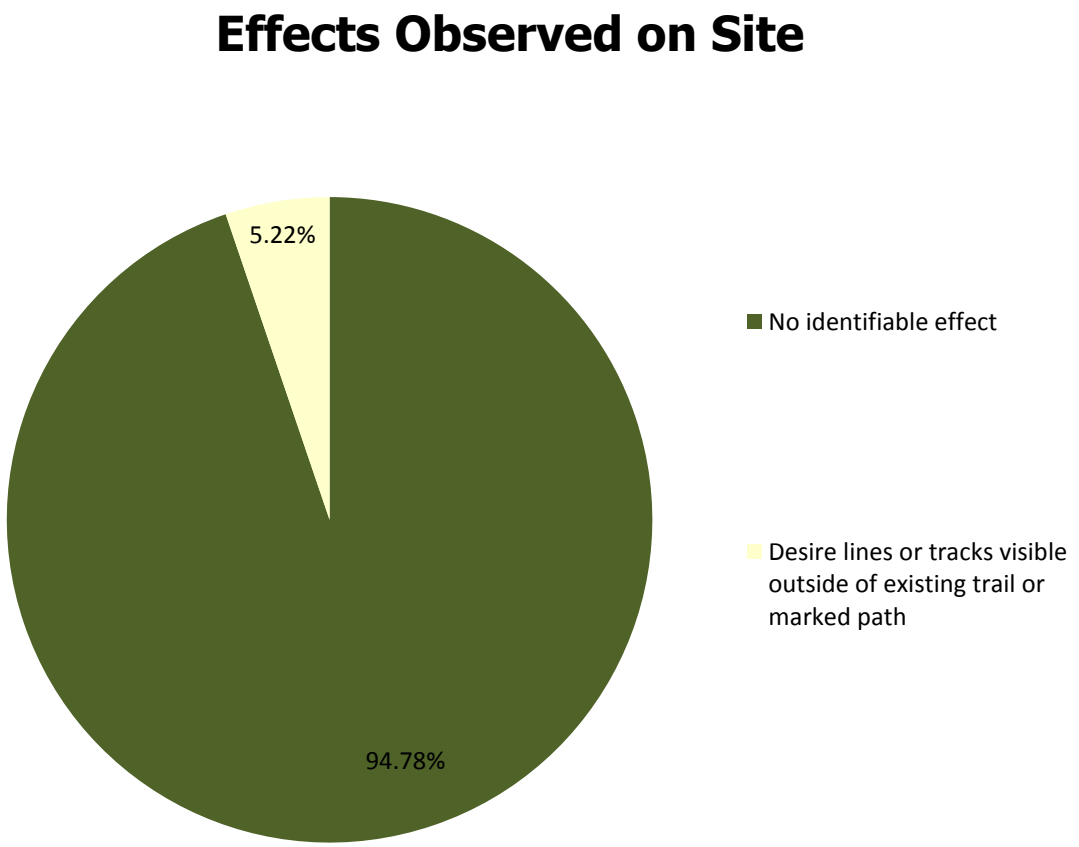


Figure 3.89 Range of Effects observed at Rossguill

Table 3.20 Breakdown of Effects observed at Rossguill

Effects Observed	No. of People	% of people
No identifiable effect	109	94.78%
Desire lines or tracks visible outside of existing trail or marked path	6	5.22%
Grand Total	**115**	**100%**

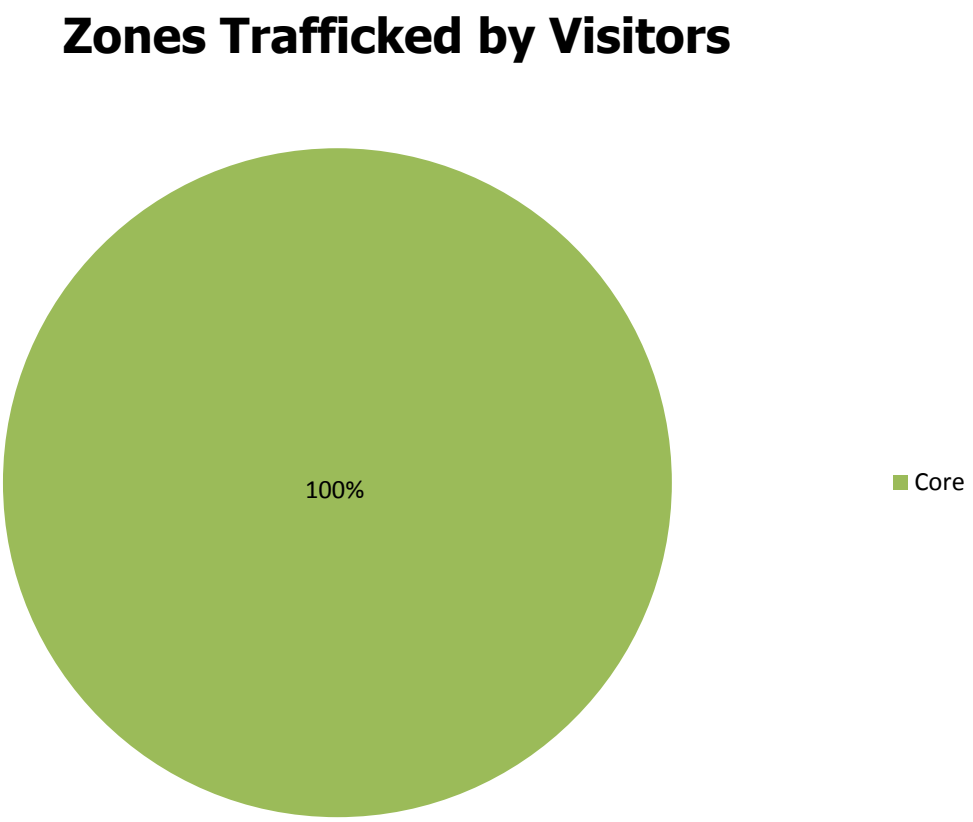


Figure 3.90 Zones Trafficked by visitors at Rossguill

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.

Movement Patterns observed

100% of the visitors to Rossguill remained within the paved areas of the layby and the road. Visitors spent on average about 3 minutes on site, taking photographs and sightseeing before departing.

Rossguill Analysis of results

Overall, no lasting impacts were observed, visitors seemed to be careful and respectful of site sensitivities.

Figure 3.91 Visitor Movement Patterns at Ross Guill

3.1.13 Gola Island

Landscape Type: Island

Date Surveyed: 16/08/2016

Weather Conditions: Sunny

Site Description:

Gola Island is situated less than 2km from the mainland at Gweedore. Gola is located within the Gweedore Bay islands SAC and the West Donegal Islands SPA. The site is a SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive. The island has been uninhabited since the 1960's, evidence of the islands heritage remains in the form of stone cottages of families who have long moved to the mainland.

As a result of the launching of a regular ferry service and the growing interest in ecology and cliff climbing, new life has been brought back into the Island.

The ferry departs from Magheragallen pier and takes around 10-15 minutes to reach the Island.

There are limited facilities on the island, there is one toilet, which on busy days, results in visitors relying on people to allow them into their homes to avail of facilities. There is a small shop located in the centre of the Island, it is run by one of the locals who bring stock over from the mainland by the ferry each day during peak season. The shop also hosts a range of history memorabilia such as census records and newspaper articles.

Site	Male	Female	Total No.of People	No.of Groups	Average Duration on Site
Gola Island	4	10	14	[3]5	04:00:00

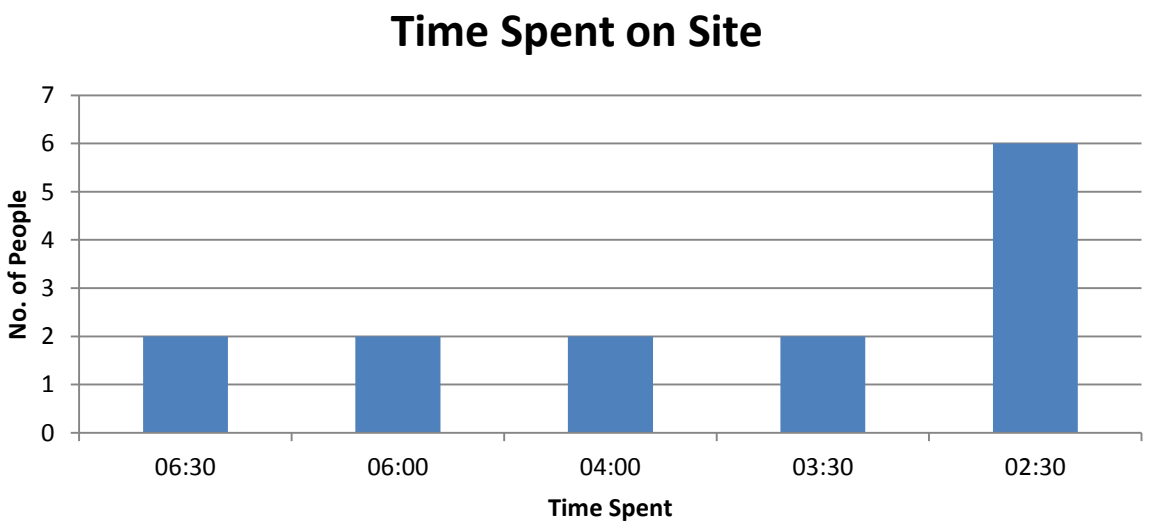


Figure 3.92 Duration of time spent on Gola Island

[3] Fewer groups observed due to high volume of visitors, groups observed on a one by one basis

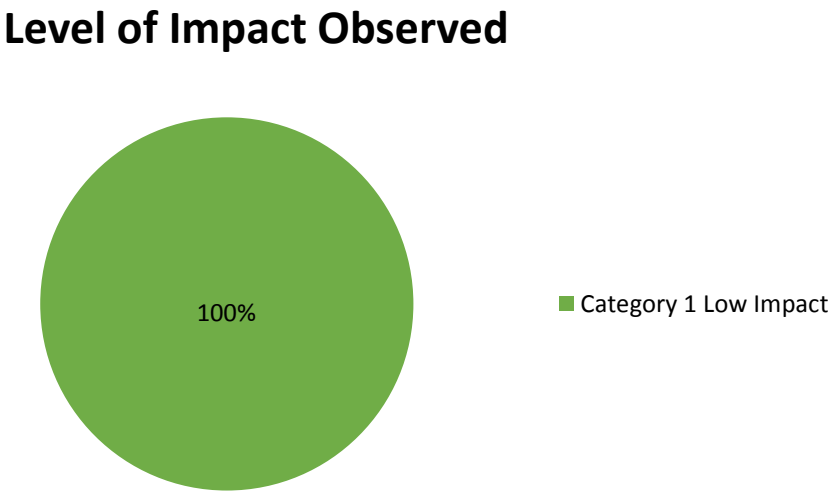


Figure 3.93 Level of Impact observed on Gola Island

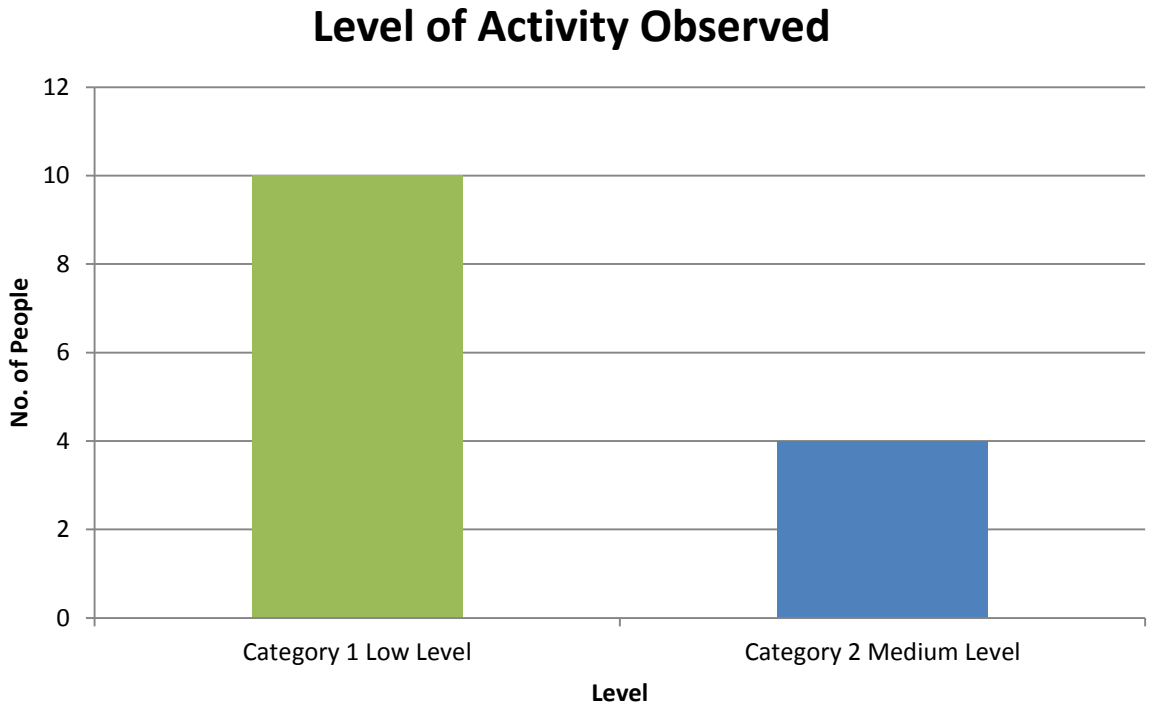


Figure 3.94 Level of Activity observed on Gola Island

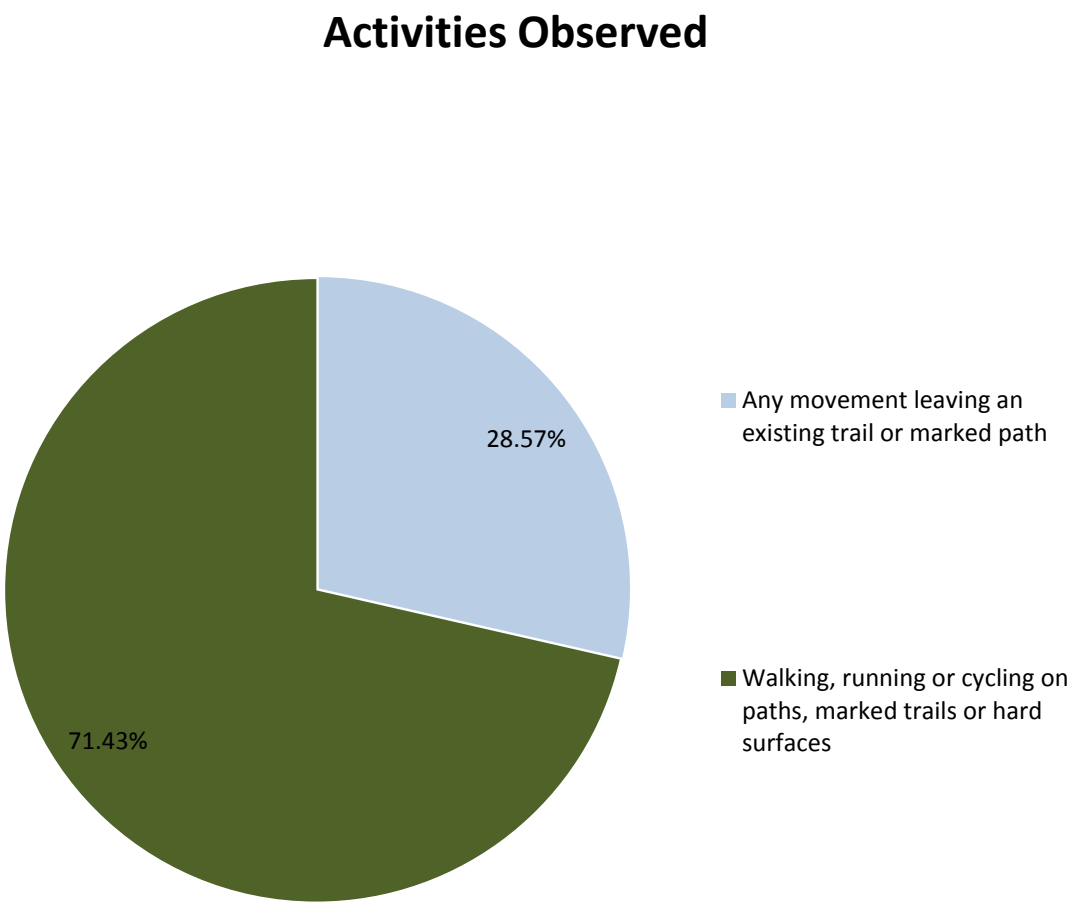


Figure 3.95 Range of Activities observed on Gola Island

Table 3.21 Breakdown of Activities observed on Gola Island

Activities Observed	Sum of Number of People	% of people
Any movement leaving an existing trail or marked path	4	28.57%
Walking, running or cycling on paths, marked trails or hard surfaces	10	71.43%
Grand Total	**14**	**100%**

Movement Pattern Observed

This site was surveyed during an unexpected hot day in August. This resulted in the site being busier than usual. This was confirmed by the Ferryman.

A low level of Impact was observed as the majority of visitors where travelling to the island to go to the beach, visit the houses that are occupied and a small percentage of visitors taking the walking trails to the various attractions.

A medium level of activity was recorded when visitors left the core areas to visit these areas of interest, such as the sea cliff that lies to the east of the Island. Visitors had no other choice but to leave core areas as the only paths available are that of severely eroded shale and gravel coming about from year of footfall and movement on the island.

The average duration in site was 4 hours. As the site was so busy, the surveyors took a group each and observed them until they made their way back to the ferry.

Figure 3.96 Gola Island Visitor Movement Pattern

Gola Analysis of Results

As noted in the movement pattern observed visitors had no option but to leave core areas. Visitors did not engage in any activities that resulted in any adverse or significant effects.

3.1.14 Lisfannon Beach

Landscape Type: Soft Shore/ Beach

Date Surveyed: 15/08/2016

Weather Conditions: Sunny

Site Description:

Lisfannon is a major recreational beach for locals and particularly for day-trippers from Derry City in Northern Ireland. Lisfannon Blue Flag Beach (Baile Fearainn) is located close to the village of Fahan and the seaside town of Buncrana on the western coast of the Inishowen Peninsula in County Donegal. Lisfannon provides spectacular views of the majestic Lough Swilly, Rathmullan and Inch Island. An excellent location for bird watching and a great spot to check out a diverse range of Flora and Fauna.

This is a sandy beach on the shores of Lough Swilly. Lisfannon Beach is located within the Gweedore Bay islands SAC and the West Donegal Islands SPA. The site is an SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive. The area is also a Natural Heritage Area (NHA) and an important wetlands site for birds. Fahan Wood within 1km of the beach is classified as being of Regional Importance noted for Oak, Hazel and Rowan.

This beach is lifeguard patrolled during the bathing season

There is ample parking available at the beach for visitors along with toilet facilities; there are also several bins located at each exit of the beach.

Lisfannon Beach Observation Results

Site	Male	Female	Total No.of People	No.of Groups	Average Duration on Site
Lisfannon Beach	126	124	212	73	00:60 minutes

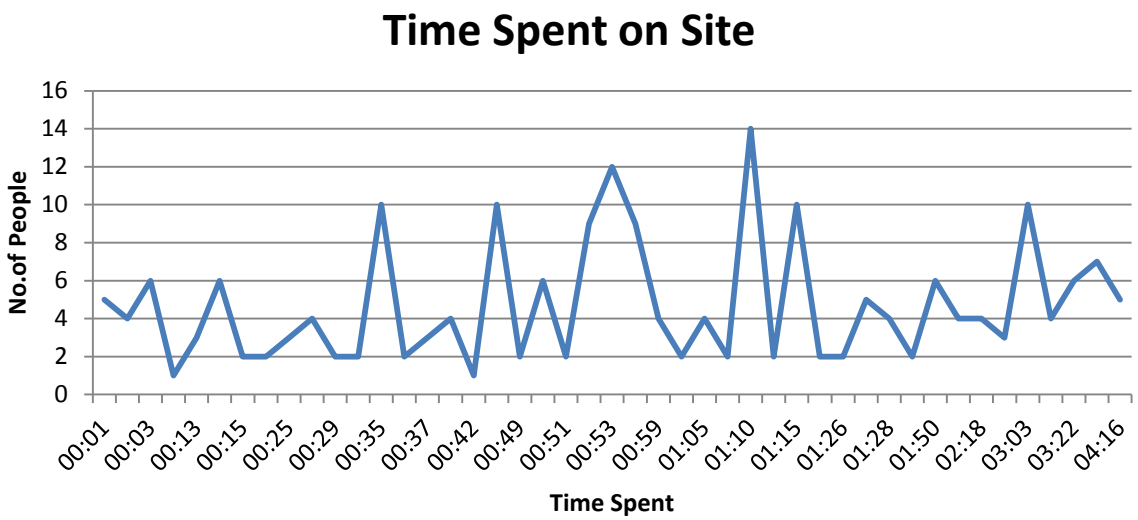


Figure 3.97 Duration of Time spent by visitors at Lisfannon Beach

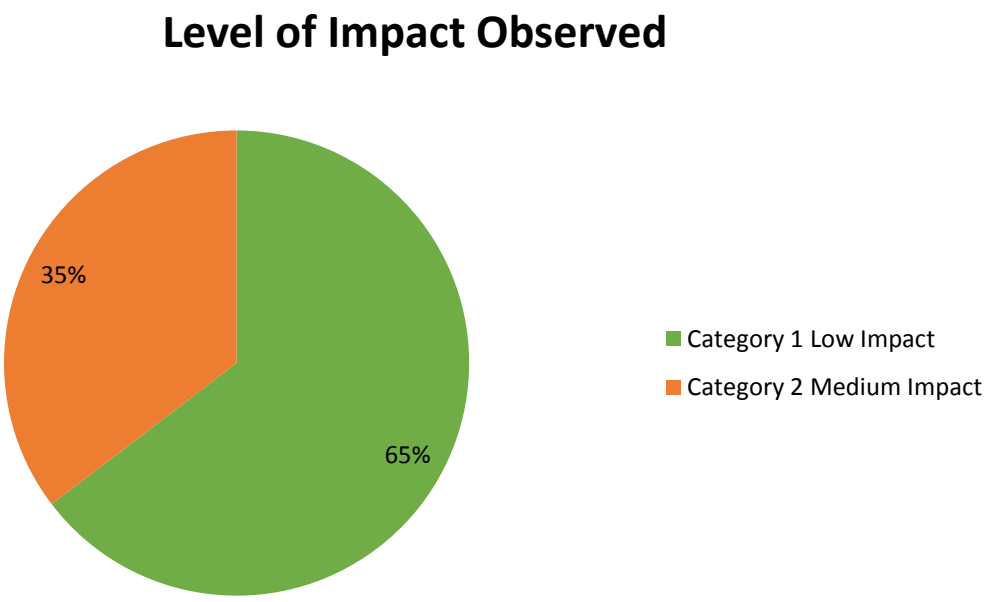


Figure 3.98 Level of impact observed at Lisfannon Beach

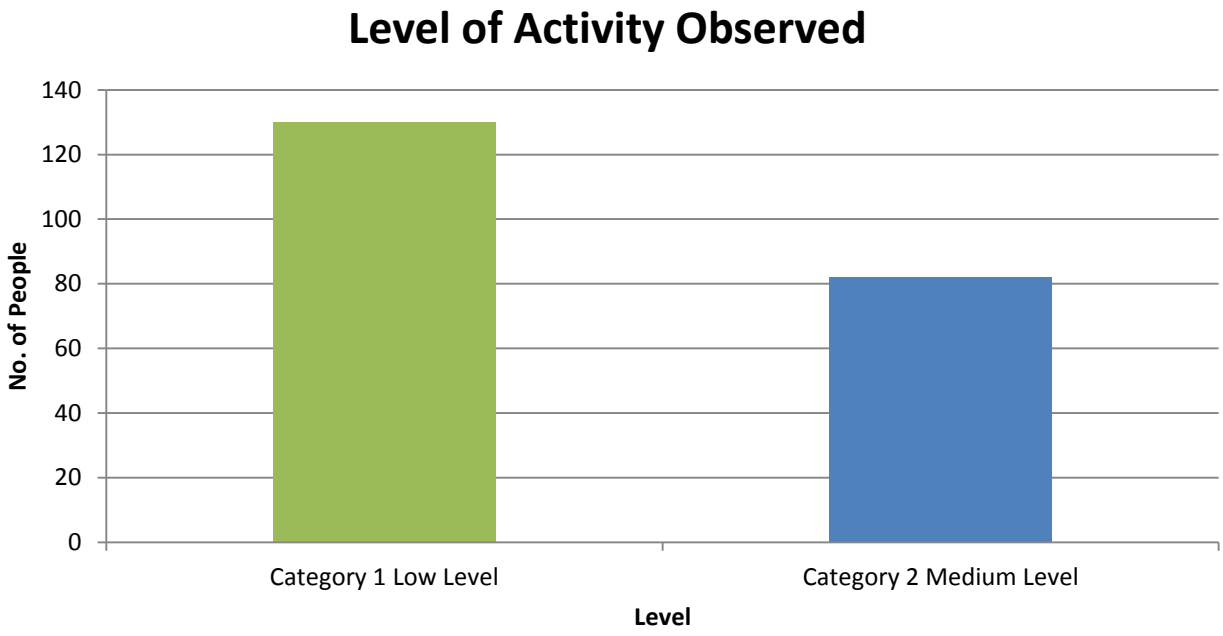


Figure 3.99 Level of Activity observed at Lisfannon Beach

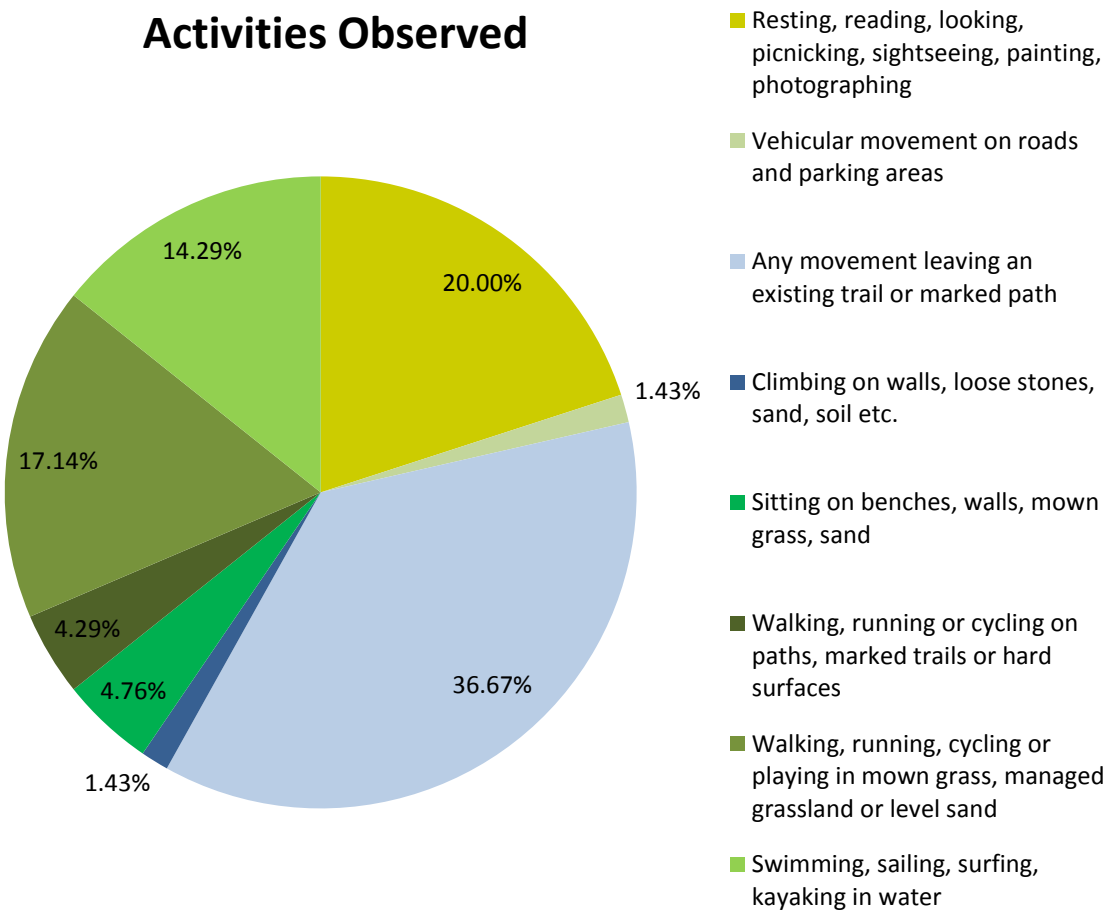


Figure 3.100 Activities observed at Lisfannon Beach

Table 3.22 Breakdown of Activities observed at Lisfannon beach

Activities Observed	No of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	42	20.00%
Vehicular movement on roads and parking areas	3	1.43%
Any movement leaving an existing trail or marked path	77	36.67%
Climbing on walls, loose stones, sand, soil etc.	3	1.43%
Sitting on benches, walls, mown grass, sand	10	4.76%
Walking, running or cycling on paths, marked trails or hard surfaces	9	4.29%
Walking, running, cycling or playing in mown grass, managed grassland or level sand	36	17.14%
Swimming, sailing, surfing, kayaking in water	30	14.29%
Grand Total	**210**	**100%**

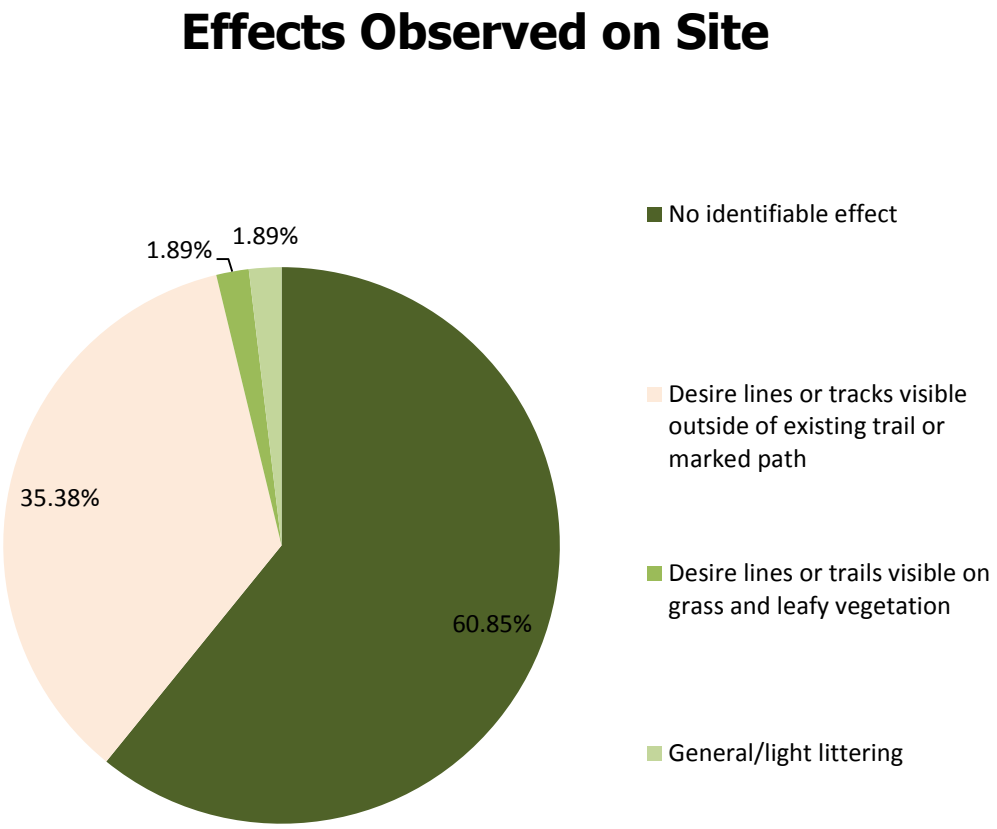


Figure 3.101 Effects observed at Lisfannon Beach

Table 3.23 Breakdown of effects observed at Lisfannon Beach

Effects Observed	No of People	% of people
No identifiable effect	129	60.85%
Desire lines or tracks visible outside of existing trail or marked path	75	35.38%
Desire lines or trails visible on grass and leafy vegetation	4	1.89%
General/light littering	4	1.89%
Grand Total	**212**	**100%**

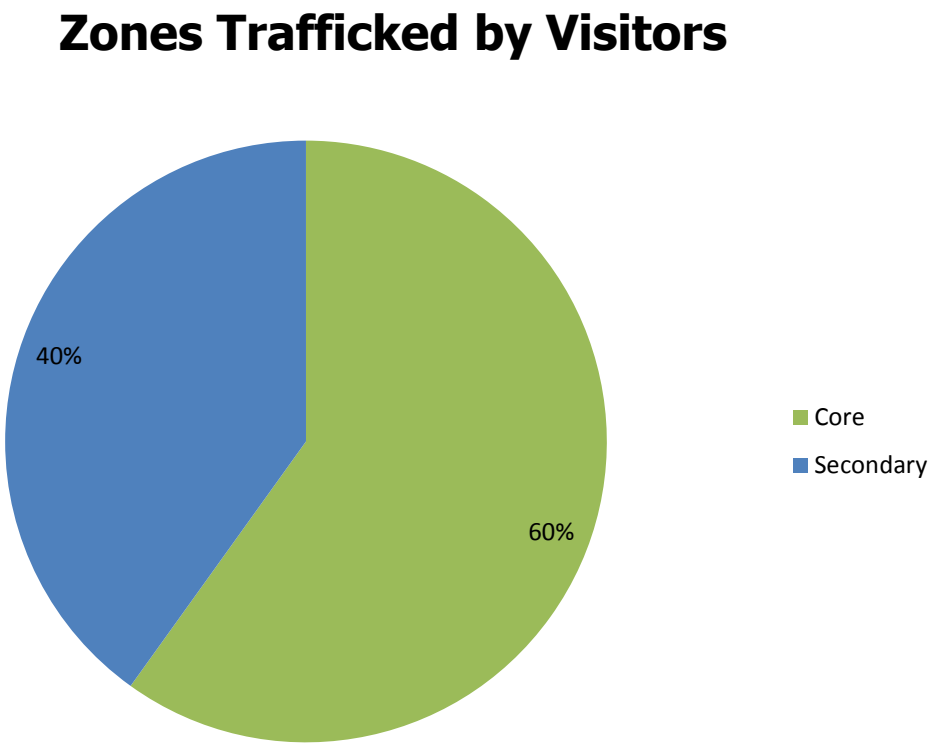


Figure 3.102 Zones Trafficked by Visitors at Lisfannon Beach

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, and tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.

Movement Pattern observed

There are limited car parking facilities available at Lisfannon apart from two small laybys, one at the beginning of the beach and one at the latter end. This resulted in cars parking on the grass verges. Visitors entered the beach from two main areas, the core area being at the head of the beach beside the lifeguard post and through the dune area (secondary area). 60% of the total visitors to the beach on the day of surveying accessed the beach via the core zone. The average time spent on site was 1 hour, with the majority of visitors sitting or leisurely walking.

Lisfannon Analysis of Results

61% of visitors to Lisfannon were observed to have no identifiable effects to the site. Desire lines were visible in the vegetation surrounding the dunes where visitors made their way to the beach. These results were shown to have no lasting effect on the site.

Figure 3.103 Lisfannon Beach visitor movement pattern

3.1.15 Málainn Bhig

Landscape type: Upland/Beach

Date Surveyed 17/08/2016

Weather Conditions: Wet/Windy

Site Description:

Málainn Bhig also known as Malinbeg is a secluded bay visible from the Silver Strand beach Discovery Point and dramatised by the surrounding high, horseshoe shaped cliffs. The Bay is accessed by a steeply sloping series of steps. The headland on the Western side of the Bay presents the remains of fortifications beyond which Rathlinn O'Birne Island is just visible. The headland to the south-east rises, parallel with the coastline to the top of Sliabh Liag Mountain.

Silver strand beach which is a hidden oasis tucked in under the cliffs is only accessible by sea or by foot. There is a series of steps leading to the beach, 155 going down and 154 going up.

The bay is called 'The Doon' and both bay and beach are surrounded by high cliffs which act as windbreaker, making the beach a natural suntrap.

There are toilet facilities available for visitor use, visitors were observed from the discovery point. There was interpretive information situated just beside the gate at the entrance to the steps which gain access to the beach.

Málainn Bhig Observation Study Results

Site	Male	Female	Total no. of People	No. of Groups	Average Duration spent on site
Málainn Bhig	42	42	84	34	00:19 minutes

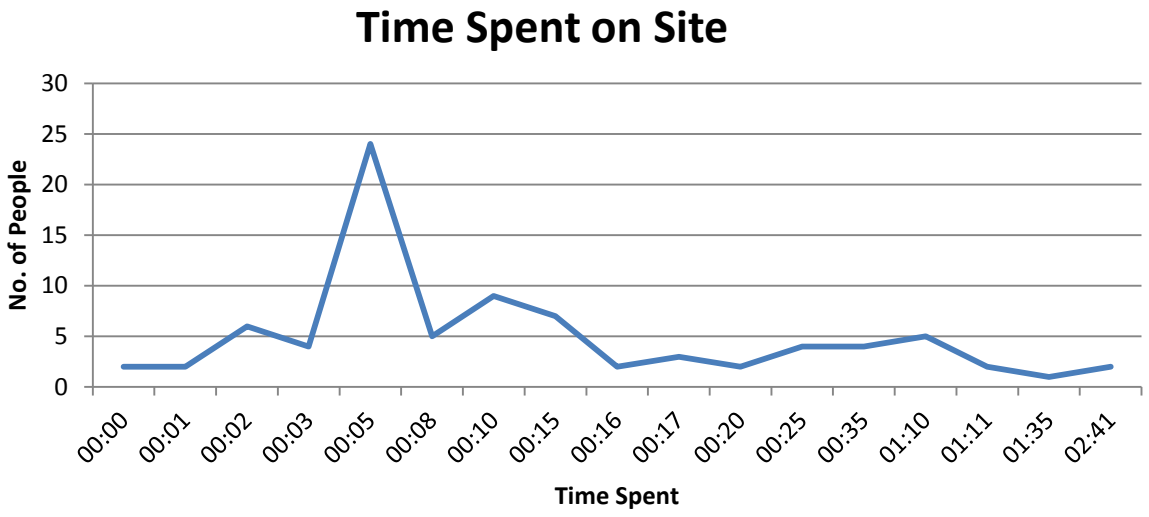


Figure 3.104 Duration of time spend on site at Málainn Bhig

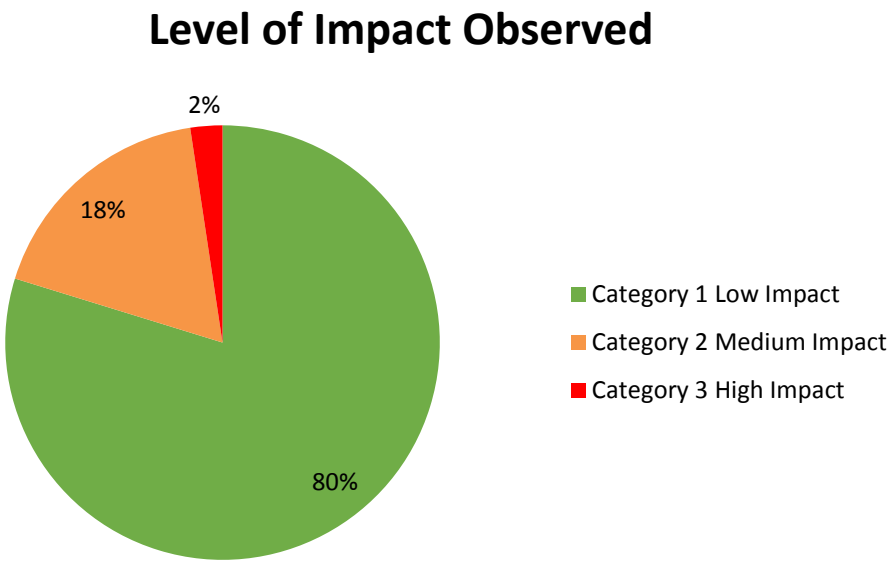


Figure 3.105 Level of Impact observed at Málainn Bhig

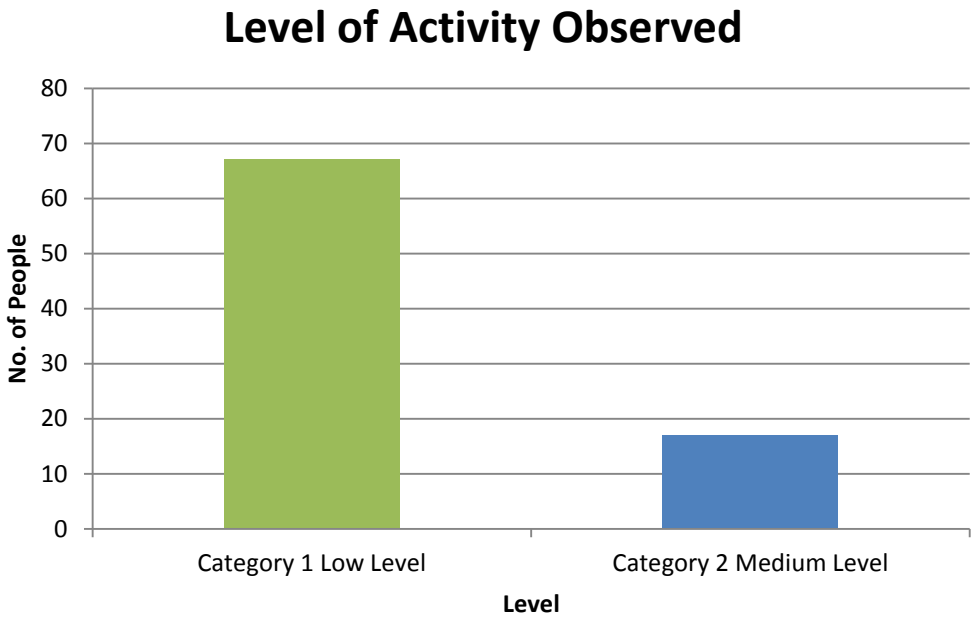


Figure 3.106 Level of activity observed at Málainn Bhig

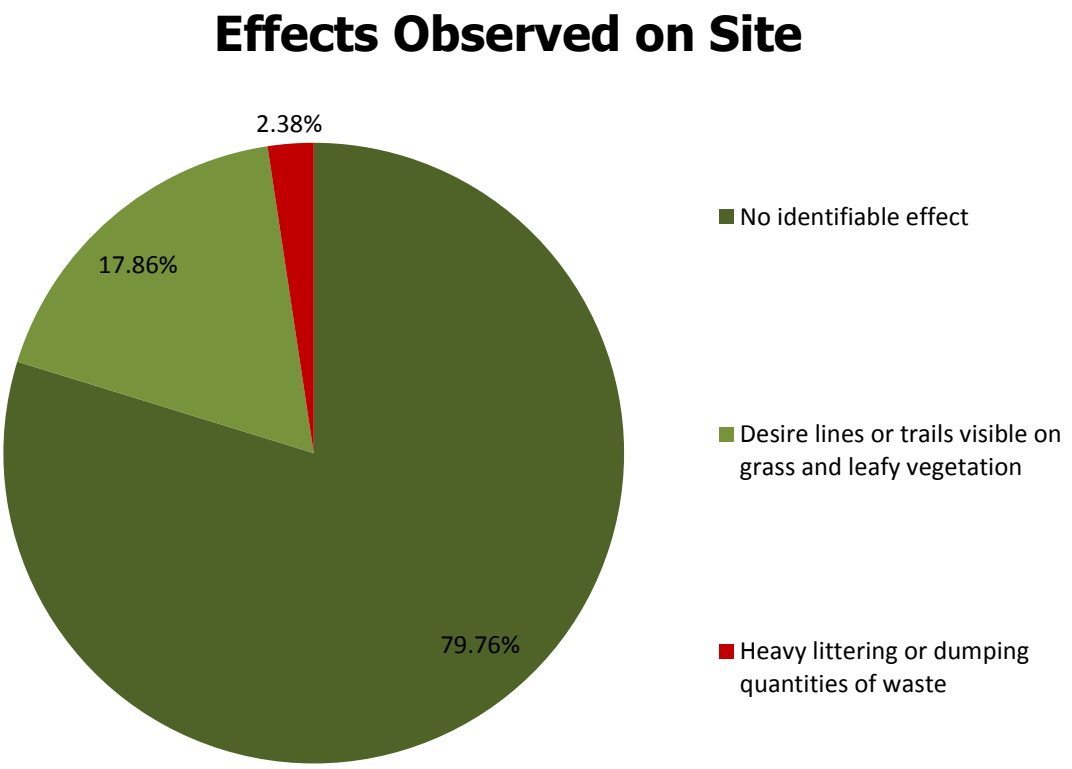


Figure 3.107 Range of effects recorded at Málainn Bhig

Effects Observed	No. of Number of People	% of People
No identifiable effect	67	79.76%
Desire lines or trails visible on grass and leafy vegetation	15	17.86%
Heavy littering or dumping quantities of waste	[4]2	2.38%
Grand Total	**84**	**100%**

Table 3.24 Breakdown of Activities observed at Málainn Bhig

[4] One group were observed to fill a bag of rubish from their campervan and leave it behing the WAW Sign. This accounted for 2% of all the visitors observed

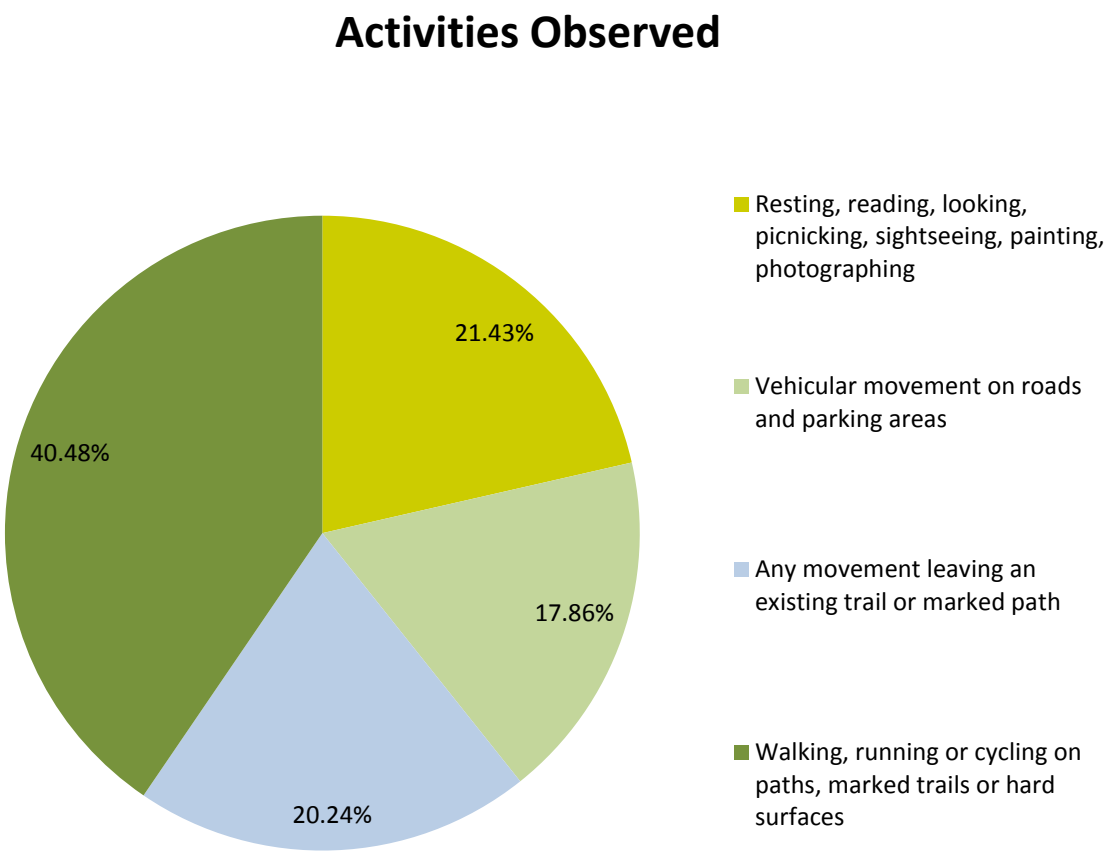


Figure 3.108 Range of effects observed at Málainn Bhig

Activities observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	18	21.43%
Vehicular movement on roads and parking areas	15	17.86%
Any movement leaving an existing trail or marked path	17	20.24%
Walking, running or cycling on paths, marked trails or hard surfaces	34	40.48%
Grand Total	**84**	**100%**

Table 3.25 Breakdown of activities observed at Málainn Bhig

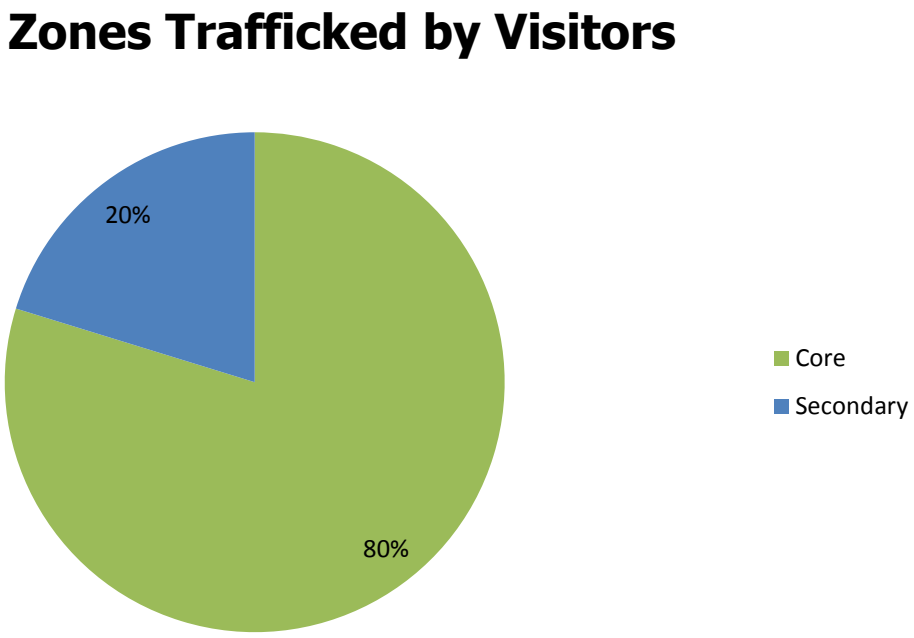


Figure 3.109 Zones trafficked by visitors at Málainn Bhig

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.

Movement Patterns Observed

This site was observed during a wet overcast day, resulting in fewer tourists.

Low and medium levels of activity were recorded by visitors going around the site photographing and sightseeing. The majority of visitors (80%) remained within the paved areas of the car park and the paved stairway in place to access the beach.

Medium level of activity was observed when visitors left the paved areas to walk across the managed grassland to take photographs**.**

A high level of activity was observed when a man from a campervan filled a rubbish bag and left it sitting behind the Wild Atlantic Way sign.

Figure 3.110 Málainn Bhig Analysis of Results

The majority of visitors to Málainn Bhig (80%) took part in activities that contributed to no lasting effects on the site.

3.1.16 Results and Analysis for all sites

Table 3.26 Overview of all Sites

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Lisfannon Beach	126	124	213	73	01:01:33
Ross Guill	67	48	115	56	00:03:00
Gola Island	4	10	14	5	04:00:00
Málainn Bhig	42	42	84	34	00:19:00
Mullet Bay	75	72	146	23	00:45:00
Inishkea South	5	4	9	3	04:00:00
Scattery Island	8	10	18	1	03:00:00
Castlegregory Beach	126	136	268	107	00:45:00
Mount Brandon	60	67	125	57	00:11:00
Blasket I.C	144	146	310	82	00:33:00
Rossbeigh Strand	259	258	487	169	00:43:00
Mountain Stage	169	172	341	115	00:04:00
Dooneen	62	50	111	45	00:08:00
Barley Cove	77	78	150	62	00:38:00
Garnish Point	149	157	306	115	01:30:00
Grand Total	**1,309**	**1,388**	**2,697**	**941**	**00:41:00**

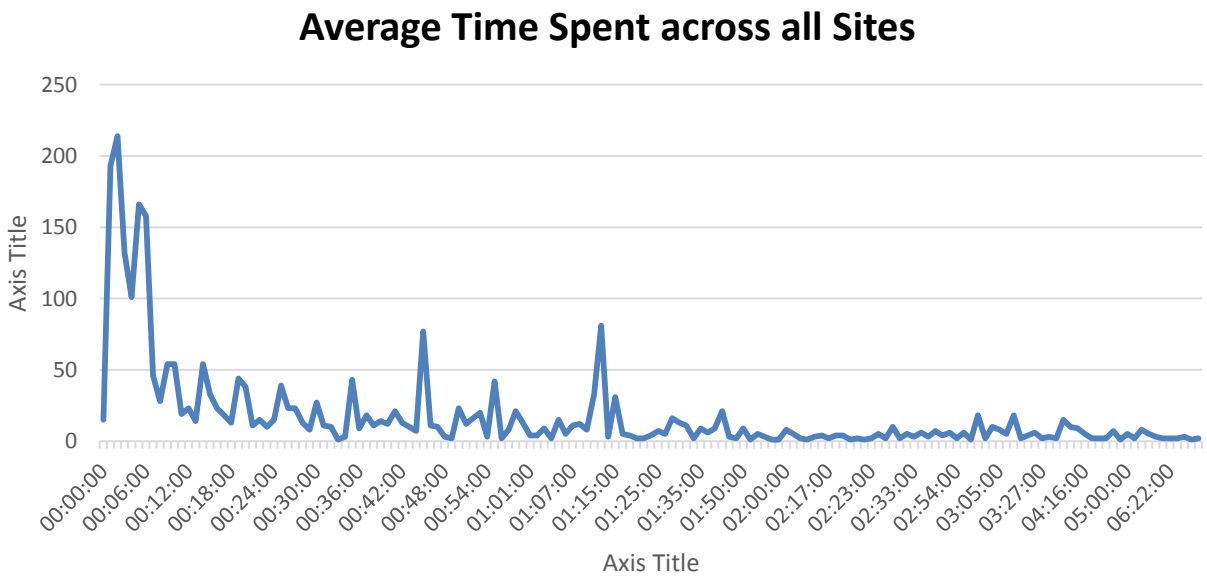


Figure 3.111 Duration of time spent by visitors across all sites

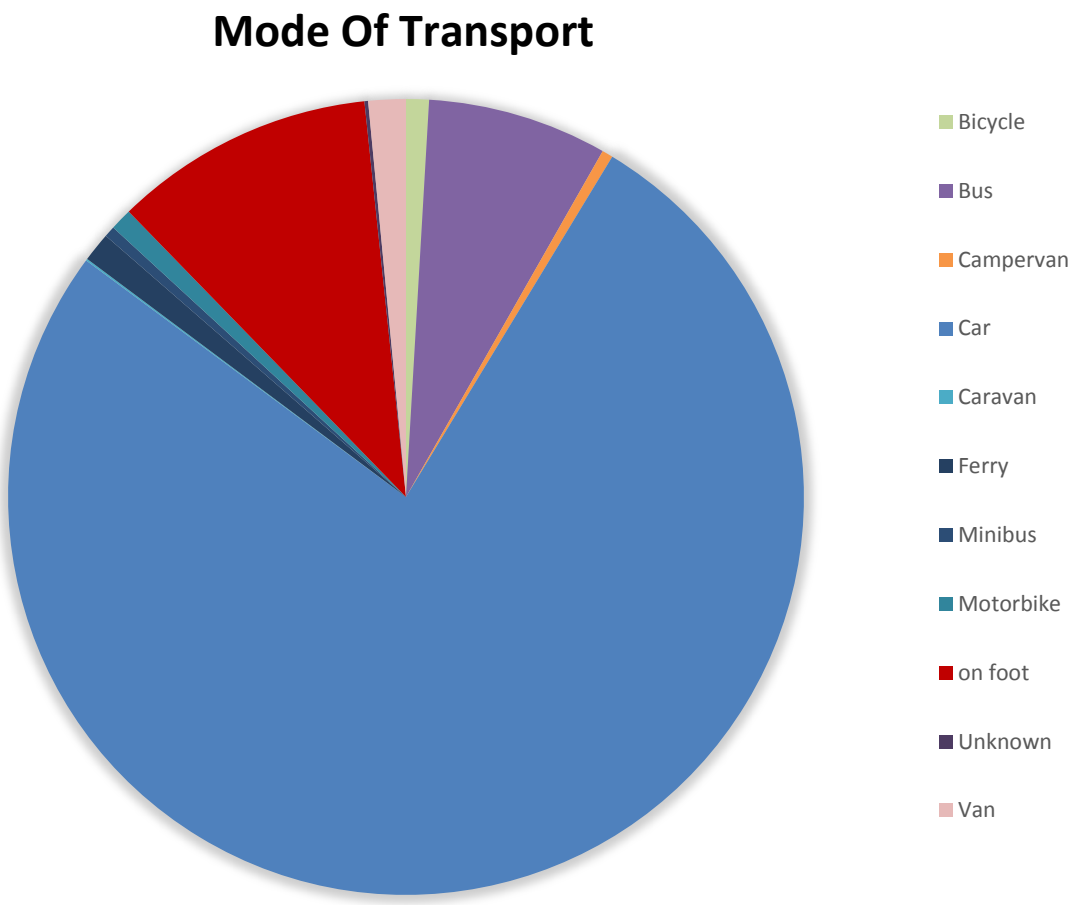


Figure 3.112 Modes of Transport used across all Sites

Table 3.27 Breakdown of modes of transport used at all sites

Mode of Transport	Number of People	Percentage of People
Car	2062	76.46%
On Foot	286	10.60%
Bicycle	25	0.93%
Bus	197	7.30%
Motorbike	24	0.89%
Van	41	1.52%
Minibus	12	0.44%
Ferry	32	1.19%
Caravan	12	0.44%
Unknown	4	0.15%
Grand Total	**2697**	**100%**

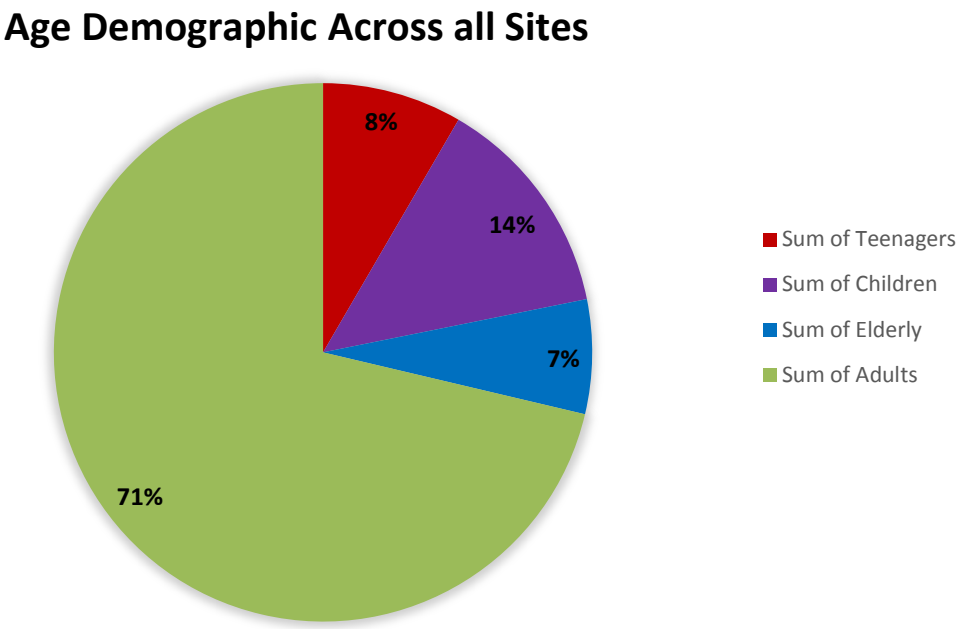


Figure 3.113 Age Demographic across all sites

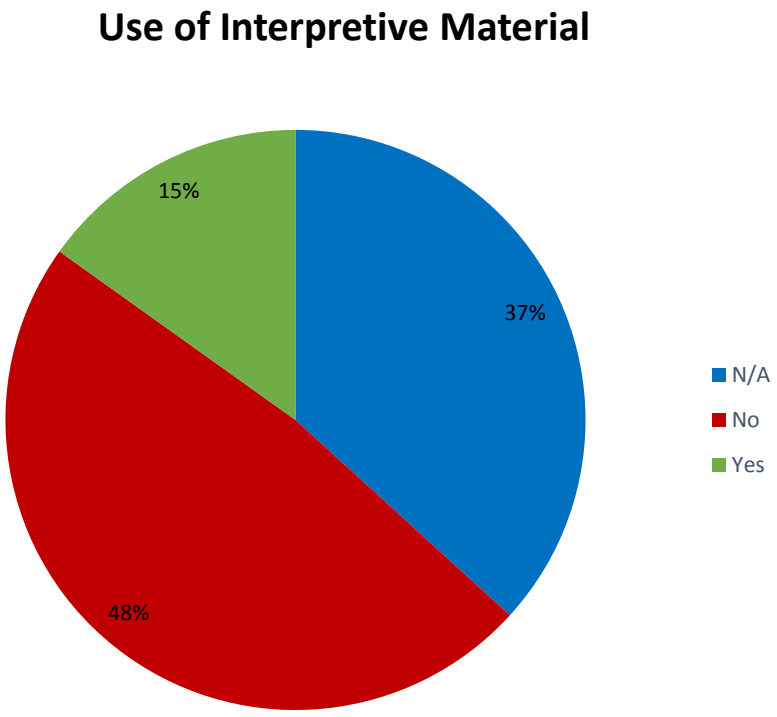


Figure 3.114 Use of Interpretive Material across all Sites

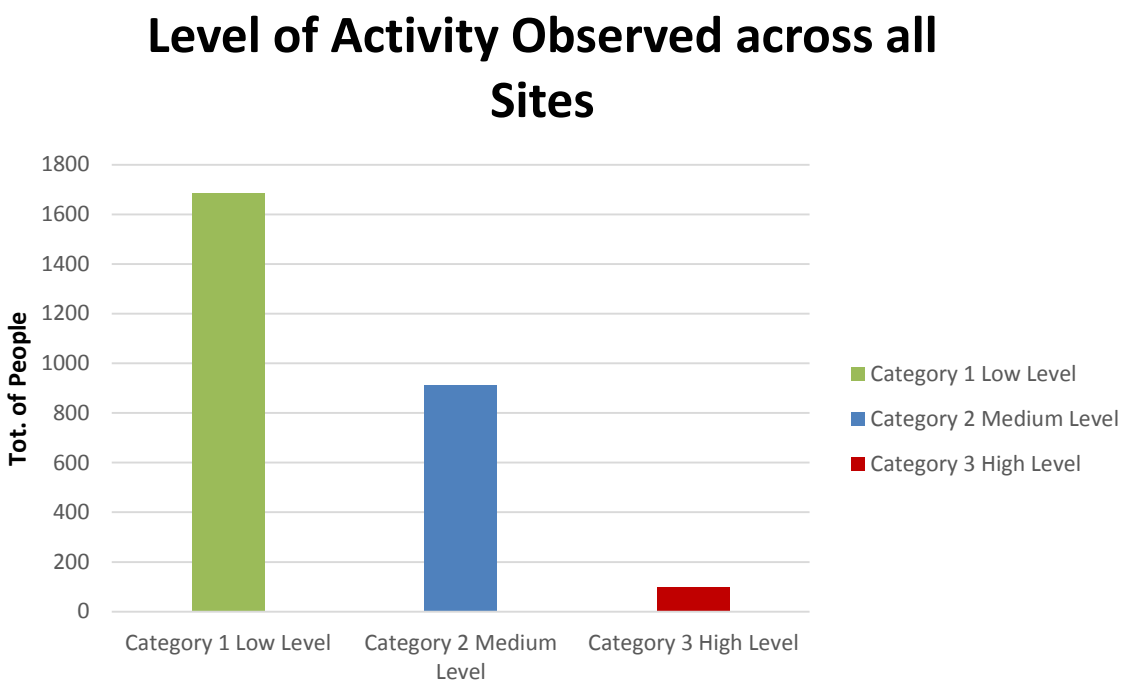


Figure 3.115 Overall Level of Activity Recorded

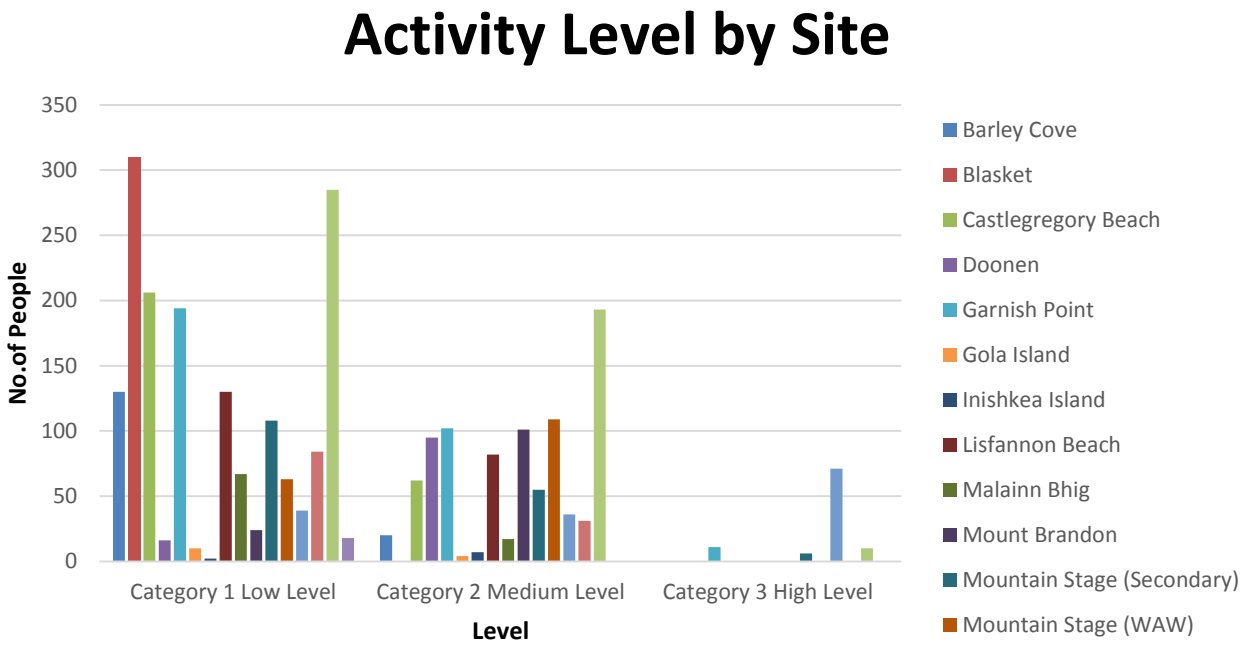


Figure 3.116 Level of Activity by Site

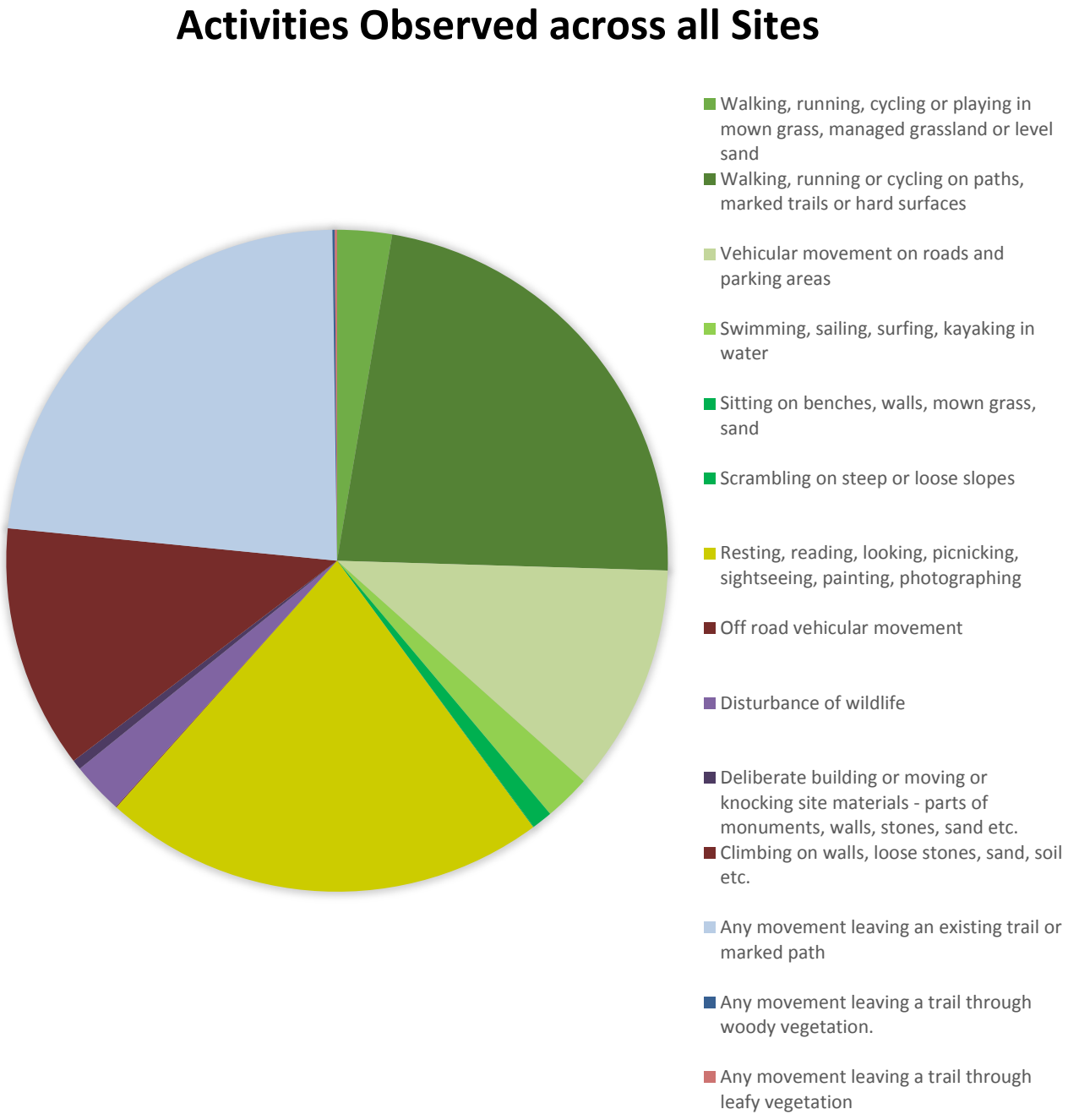


Figure 3.117 Range of Activities Recorded across all sites

Table 3.28 Breakdown of Activities Recorded across all Sites

Activities Observed	No. of People	% of People
Walking, running, cycling or playing in mown grass, managed grassland or level sand	72	2.67%
Walking, running or cycling on paths, marked trails or hard surfaces	615	22.80%
Vehicular movement on roads and parking areas	300	11.12%
Swimming, sailing, surfing, kayaking in water	61	2.26%
Sitting on benches, walls, mown grass, sand	27	1.00%
Scrambling on steep or loose slopes	1	0.04%
Resting, reading, looking, picnicking, sightseeing, painting, photographing	586	21.73%
Off road vehicular movement	1	1.14%
Disturbance of wildlife	68	2.52%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc.	13	0.48%
Climbing on walls, loose stones, sand, soil etc.	321	11.90%
Any movement leaving an existing trail or marked path	626	23.21%
Any movement leaving a trail through woody vegetatio	3	0.11%
Any movement leaving a trail through leafy vegetation	3	0.11%
Grand Total	**2697**	**100%**

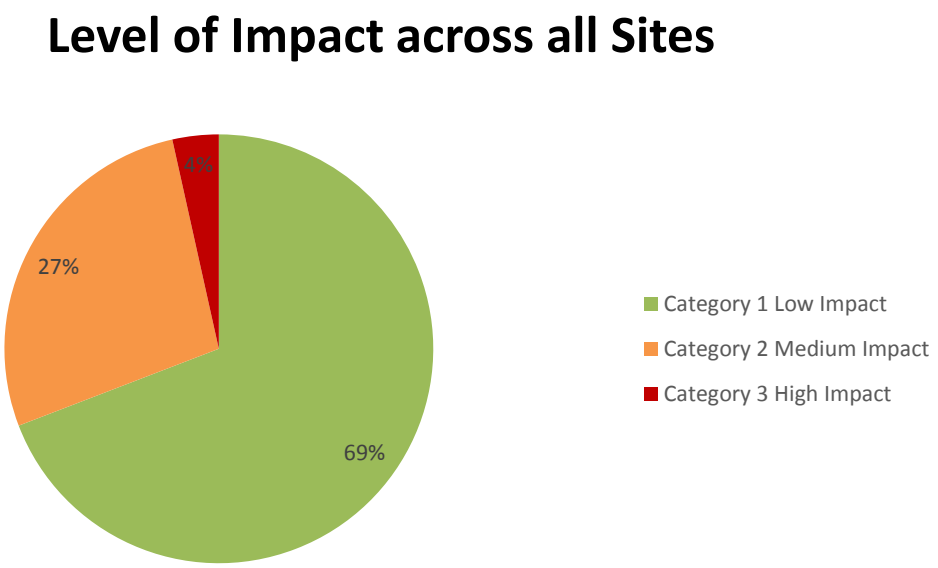


Figure 3.118 Level of Impact observed across all sites

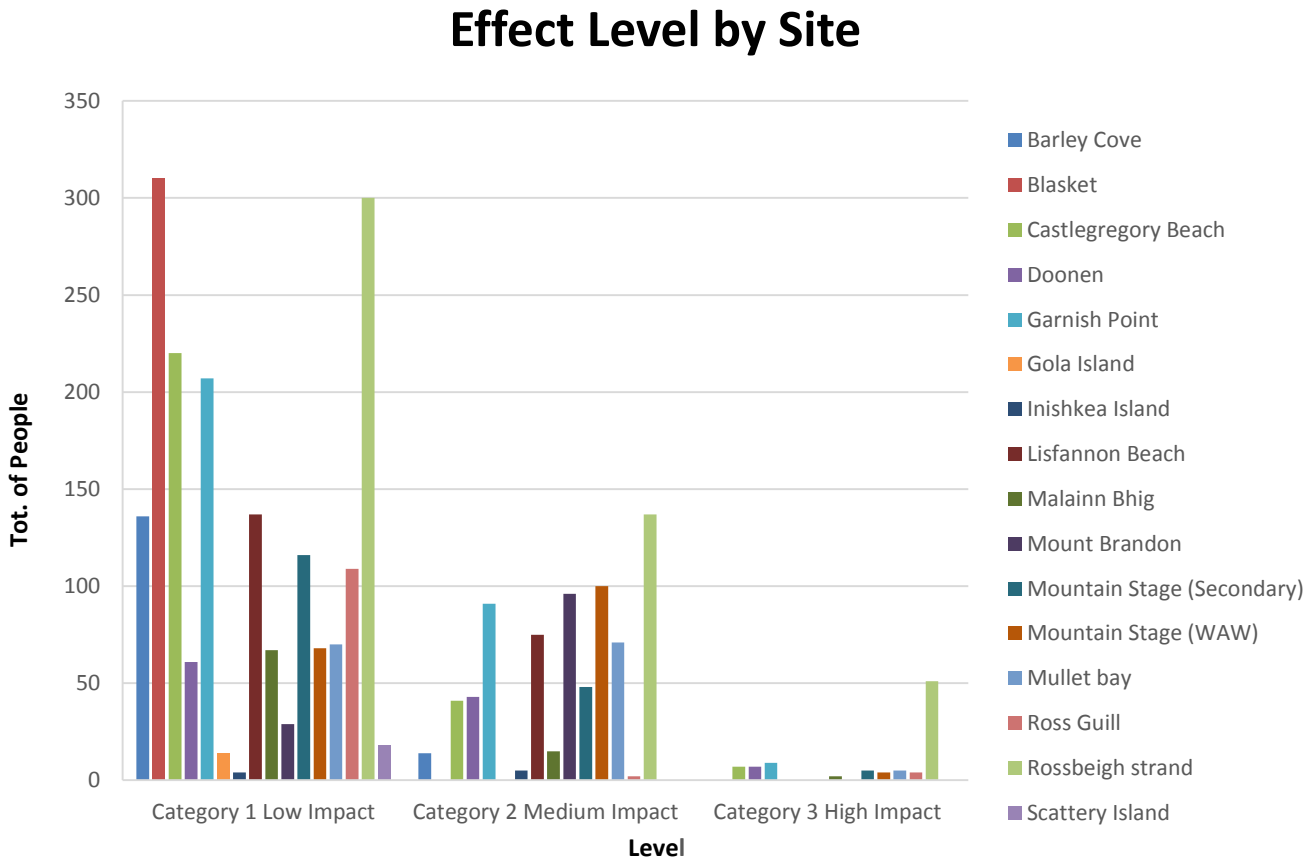


Figure 3.119 Level of Effect by Site

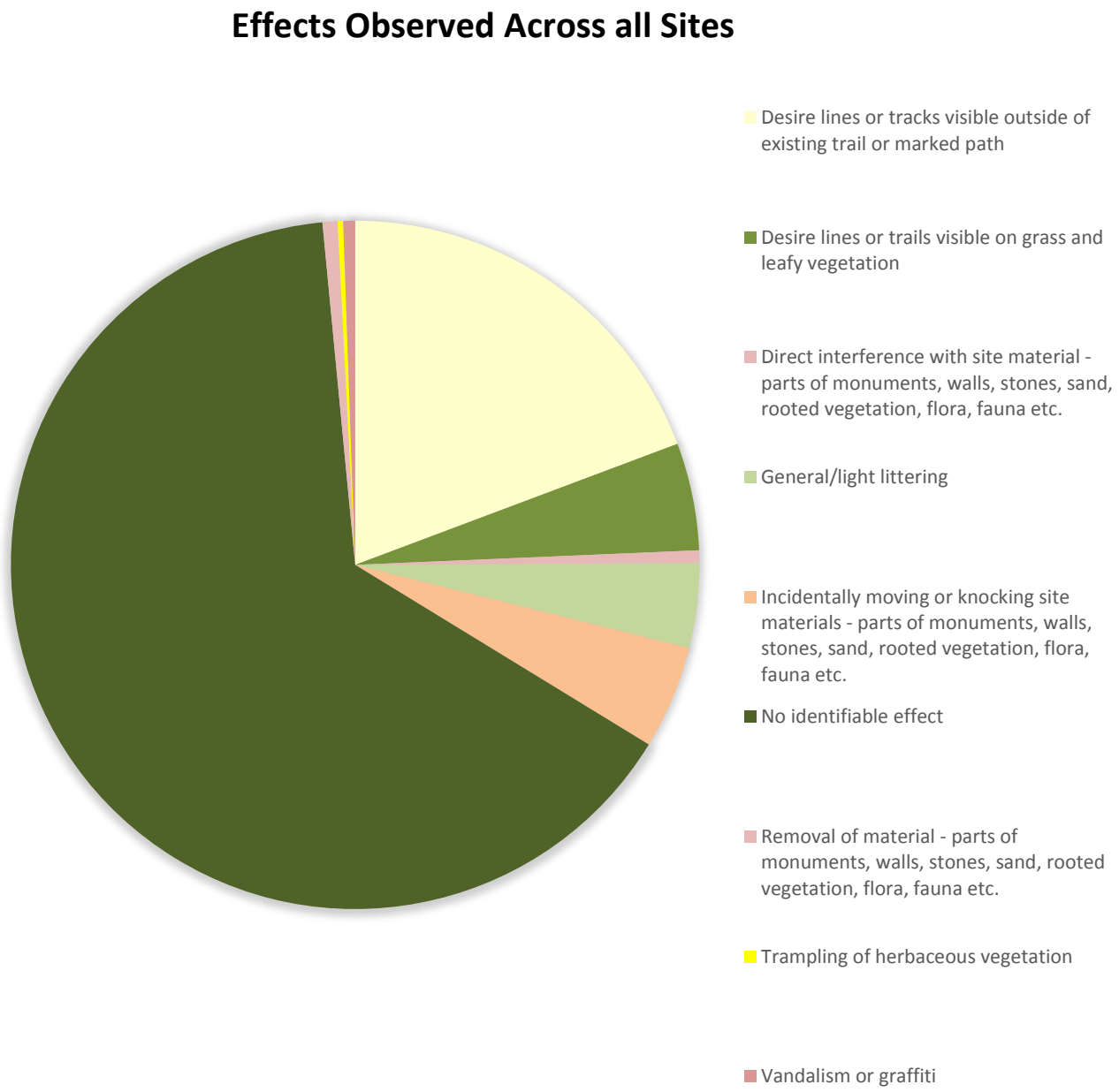


Figure 3.120 Range of Effects observed across all sites

Effects Observed	No. **of People**	% of People
Desire lines or tracks visible outside of existing trail or marked path	**516**	**19%**
Desire lines or trails visible on grass and leafy vegetation	**137**	**5%**
Direct interference with site material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	**44**	**2%**
General/light littering	**105**	**4%**
Incidentally moving or knocking site materials - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	**103**	**4%**
No identifiable effect	**1742**	**65%**
Removal of material - flora, Desire lines or tracks visible outside of existing trail or marked path	**8**	**0%**
Removal of material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	**14**	**0%**
Temporary disturbance (including chasing and feeding) of insects, fish, amphibian, reptiles insects, birds and mammals	**6**	**0%**
Trampling of herbaceous vegetation	**7**	**0%**
Vandalism or graffiti	**15**	**1%**
Grand Total	**2697**	**100%**

Table 3.29 Breakdown of Effects observed across all sites

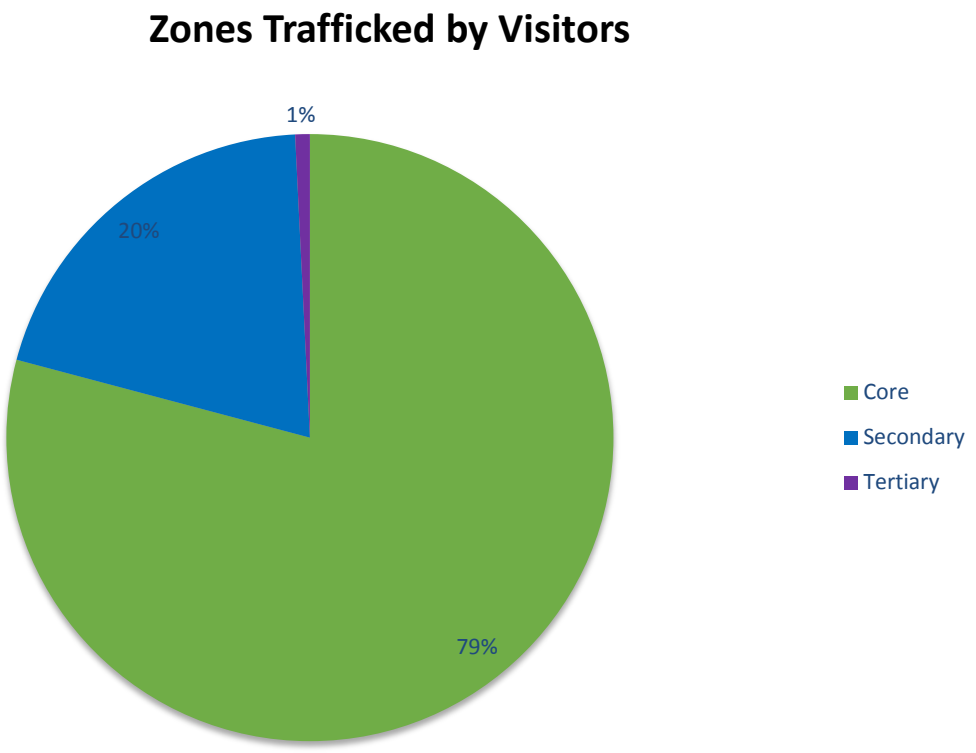


Figure 3.121 Zones Trafficked by Visitors across all Sites

Core Zone	Existing car parks, paved areas, viewing platforms, marked pathways, trails, tracks and managed grassland and areas where pathways, trails or roads exist. The majority of visitors remain in these zones.
Secondary Zone	Areas outside of existing car park, paved areas, marked pathways, trails, and tracks and managed grassland. Visitors are likely to traffic areas of grassland (in some cases farmland grazed by sheep or cattle), heath or bare rock, usually to get a better view of site attractions or to access trails at the site.
Tertiary Zone	Areas where no car park, paved areas, marked pathways, trails, tracks and managed grassland are identifiable and beyond the immediate boundaries of the site.

Analysis of Results for all Sites

General Analysis of sites

- Of the 2697 visitors observed during the survey,
- 69% were reported to have a low impact on the sites,
- 27% were reported to have a medium impact, these effects however were not thought to have a significant or lasting impacts on the sites.
- 4% of visitors were recorded to have a high impact, (See table 3.30) however when this was analysed it became clear that this was a very small number of people and their activities did not have a lasting impact on the sites.
- Visitors spent most time at sites with trials or looped walks, beaches or where activities were available; Lisfannon Beach (1 hr), Gola Island (4hrs), Mullet Bay (45min), Inishkea South (4hrs), Castlegregory (45mins), Rossbeigh (43mins), Garnish Point (1hr 30mins)

Site Based Evidence

- Visitors that spent a short time at observation study sites where largely observed to be aware to site sensitivities. The majority of visitors to these sites were shown to take part on low level activities such as sightseeing and photographing before moving off.
- It was noted that the longer visitors spent on site the likelihood of effects increased. In most instances, effects were caused by a small minority of visitors who carried out more significant harm.
- 77% of visitors across all sites engaged in low or medium level activities i.e. walking on marked paths, resting, reading, photographing, and sightseeing (low level) leaving an existing marked trail or path (Medium level).
- The most consistent evidence that arose from the surveys included the direct relationship between sites with physical landmarks and the likelihood of environmental effects arising.
- Large groups of visitors and groups with young children were also observed to have a higher level of Impact to sites.
- Evidence of effects were less apparent around layby sites on days of bad weather were visitors engaged in low level activities.
- Visitors were observed to spend less time at laybys with visitors spending an average of 3 minutes at Ross Guill and 4 minutes at Mountain Stage.
- 95% of visitors recorded to have no or low level effects.
- Where impacts did occur at the various sites, they were not reported to give rise to any significant long term effects.

Section 4 Conclusions and Recommendations

Site Management

The Blasket Interpretation Centre and Scattery Island displayed a good example of best practice management, as a result of this a low level of effect was recorded at both sites, this good management coming about as a result of onsite personal and visitor centres.

At sites where management decreased visitors where more likely to engage in activities which resulted in medium or high effects. This was evident at Garnish Point where visitors left the paved areas and climbed over walls to walk on unmanaged trails across vegetation and onto other walking trails for better sightseeing and photographing.

Visitors spend most time at sites that had long walking trails, activities, beaches and in the case of this study the three islands where visitors spend an average of three hours. As a result of good visitor behaviour at these sites a very low level of effect was recorded despite the length of time visitors where present.

Conclusion

- A total of 2697 visitors were observed across fifteen discovery points. The majority of visitors to these sites where aware of the importance to respect the natural environment.
- Of the 2696 visitors observed during the survey 69% were reported to have a low impact on the sites, 27% were reported to have a medium impact, these effects however were not thought to have a significant or lasting impacts on the sites. 4% of visitors were recorded to have a high impact, however when this was analysed it became clear that this was a very small number of people and their activities did not have a lasting impact on the sites.
- There is a direct relationship between sites with physical landmarks and the likelihood of environmental effects arising. It was also evident that the longer visitors stayed on the site the likelihood of effects increased.
- Large groups of visitors with young children were also observed to have a higher level of Impact to sites.
- The average duration at the observation sites was 40 minutes, wet and windy conditions did seem to deter any visitors from layby sites where the main purpose of the visit was to stop take a photograph and leave. Visitors who remained at a site for longer periods were generally recorded at larger sites.

Recommendations

Site management is recommended were visitors spend more than 15/20 minutes. When deciding on the level of management the size and level of activity should be taken into account, especially at laybys were visitors where shown to spend less time.

All sites should be evaluated and developed to ensure the correct facilities are put in place to deal with the level of footfall each site receives. If these sites are left without any intervention, effects that currently, may not have any significance may, in the long-term cause effects to worsen.

- At sites with pressures to dune systems- Castlegregory, Rossbeigh and to a lesser extent Barley Cove, it is recommended to develop a system to prevent further pressures/damage to these sites, while maintaining consideration to site sensitivities.
- Mountain stage, Rossbeigh, Dooneen, Castlegregory, Mullet Bay and Rossguill were noted to have little to no interpretive material or relative signage, it is recommended that the implementation of such features should be carried out, while maintaining consideration to site sensitivities
- At layby sites (Mountain stage, Dooneen, Ross Guill) were the entrance becomes apparent to the visitor suddenly, appropriate signage should be implemented for visitor Safety

Recommendations for future surveys

Where site dynamics have changed since 2016, such as the addition of a new feature i.e. a car park or layby, repeat the observation survey for these discovery points.

During the Ecological Surveys carried out in 2016, if any sensitivities were identified, repeat surveys of these discovery points.

Carry out the monitoring and surveying strategy for further candidate discovery points approved by Failte Ireland.

Appendix I: Example of Completed Survey Sheet for visitor Observation Survey

0.5	717	Dooneen	

Total No. of People	Gender		Age			
	M	F	Kids	Teens	Adults	Elderly
2	1	1			2	

Mode of Transport	Arrival Time	Departure Time	Read Info Boards	
			Yes	No
Car	12:04	12:19		✓

Activities

Lv M1
L1
LR

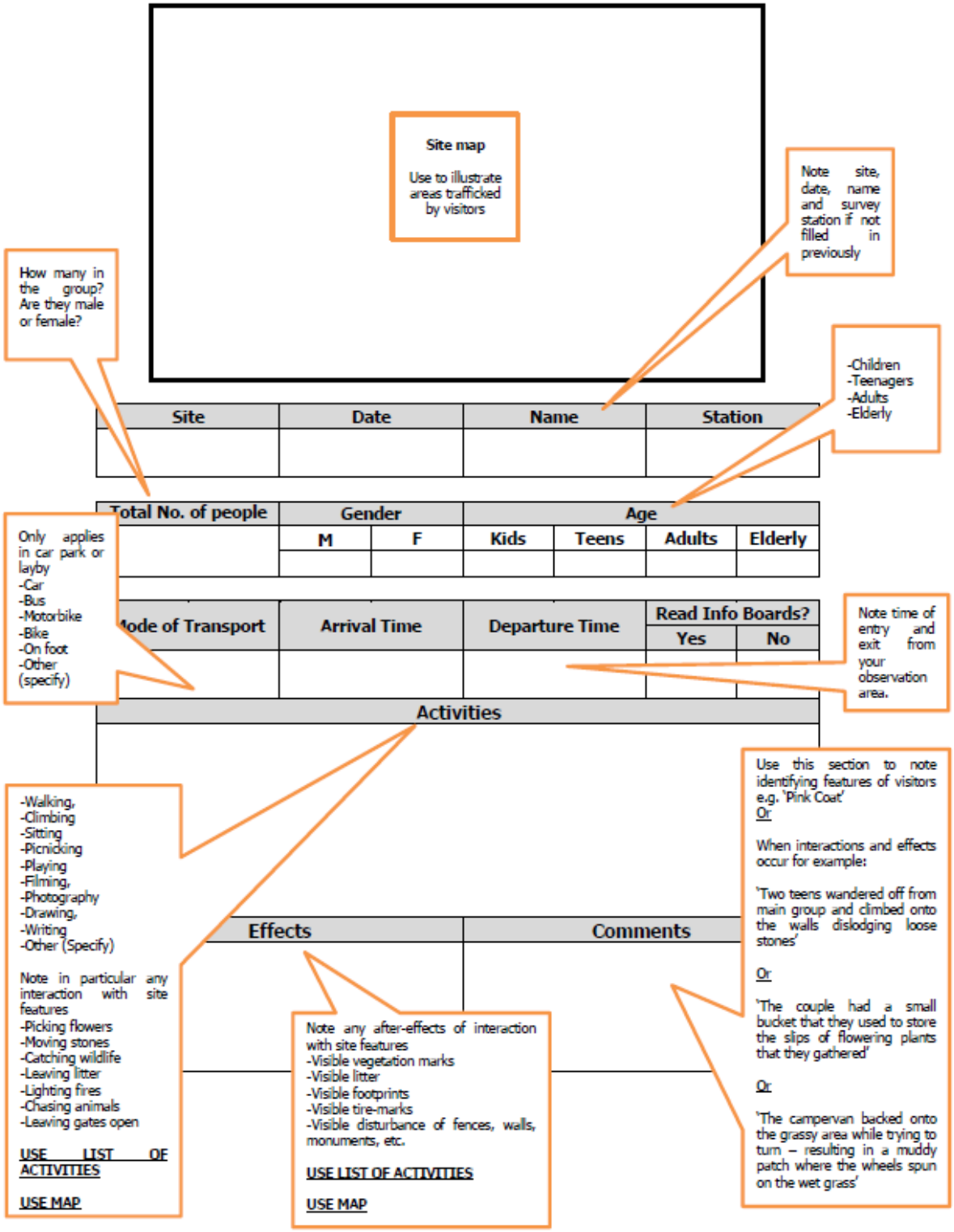
Effects

M1
M2
LL

Comments

General / light littering -> Banana peals + Ciggarette butts.

Appendix II: Key for Completing Observation Survey Sheet



Appendix III: List of Activities and Effects by Category

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

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