

# OBSERVATION STUDY RESULTS

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## STRATEGY FOR ENVIRONMENTAL SURVEYING AND MONITORING

FOR THE

## WILD ATLANTIC WAY OPERATIONAL PROGRAMME

**for:**

**Fáilte Ireland**

88-95 Amiens Street  
Dublin 1



**Fáilte Ireland**

National Tourism Development Authority

**by:**

**CAAS Ltd.**

2<sup>nd</sup> Floor, The Courtyard,  
25 Great Strand Street,  
Dublin 1



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## Table of Contents

<b>Section 1 Introduction .....</b>	<b>7</b>
<b>Section 2 Methodology .....</b>	<b>10</b>
2.1.1 Development of Activities, effects and their categories .....	11
2.1.2 Methodology for Visitor Observation Survey .....	12
2.1.3 Guidelines for undertaking Visitor Observation Survey .....	12
2.1.3.1 Survey Planning .....	12
2.1.3.2 Pre-planning Site Visit .....	13
2.1.3.3 Health and Safety .....	13
2.1.3.4 Survey Recommendations .....	13
2.1.4 Assessment of Movement Patterns Observed on Sites .....	14
2.1.5 Habitat Type Control Sites .....	15
<b>Section 3 Presentation of Results and Analysis .....</b>	<b>16</b>
3.1.1 Malin Head .....	16
3.1.2 Fanad Head.....	23
3.1.3 Slieve League .....	30
3.1.4 Mullaghmore Head.....	37
3.1.5 Downpatrick Head .....	43
3.1.6 Keem Bay.....	50
3.1.7 Killary Harbour .....	58
3.1.8 Derrigimlagh .....	65
3.1.9 Cliffs of Moher .....	71
3.1.10 Loop Head.....	77
3.1.11 Blaskets View.....	85
3.1.12 Bray Head .....	92
3.1.13 Dursey Island .....	100
3.1.14 Mizen Head .....	108
3.1.15 Old Head of Kinsale.....	113
3.1.16 Results and Analysis for all sites.....	119
<b>Section 4 Conclusion and Recommendations.....</b>	<b>130</b>
Appendix I: Example of Completed Survey Sheet for Visitor Observation Study.....	131
Appendix II: Key for completing Observation Survey Sheet.....	132
Appendix III: List of Activities and Effects by Category .....	133

## Table of Figures

Figure 2.1 Sample of Observed Visitor Movement Pattern .....	14
Figure 3.1 Duration of time spent by visitors at Malin Head .....	17
Figure 3.2 Use of interpretive material by visitors at Malin Head.....	17
Figure 3.3 Level of impact observed at Malin Head.....	18
Figure 3.4 Level of activity observed at Malin Head .....	18
Figure 3.5 Range of activities observed at Malin Head .....	19
Figure 3.6 Range of effects recorded at Malin Head .....	20
Figure 3.7 Zones trafficked by visitors at Malin Head .....	21
Figure 3.8 Malin Head visitor movement pattern .....	22
Figure 3.9 Duration of time spent by visitors at Fanad Head .....	23
Figure 3.10 Use of interpretive material by visitors at Fanad Head .....	24
Figure 3.11 Level of impact observed at Fanad Head.....	24
Figure 3.12 Level of activity observed at Fanad Head .....	25
Figure 3.13 Range of activities recorded at Fanad Head .....	26
Figure 3.14 Range of effects recorded at Fanad Head .....	27
Figure 3.15 Zones trafficked by visitors at Fanad Head.....	27
Figure 3.16 Fanad Head visitor movement pattern .....	28
Figure 3.17 Fanad Head visitor movement pattern .....	29
Figure 3.18 Duration of time spent by visitors at Slieve League.....	30
Figure 3.19 Use of interpretive material by visitors at Slieve League.....	31
Figure 3.20 Level of impact observed at Slieve League.....	31
Figure 3.21 Level of activity observed at Slieve League .....	32
Figure 3.22 Range of activities recorded at Slieve League.....	33
Figure 3.23 Range of effects recorded at Slieve League.....	34
Figure 3.24 Zones trafficked by visitors at Slieve League .....	35
Figure 3.25 Slieve League visitor movement pattern .....	36
Figure 3.26 Slieve League visitor movement pattern .....	36
Figure 3.27 Duration of time spent by visitors at Mullaghmore Head .....	37
Figure 3.28 Level of impact observed at Mullaghmore Head .....	38
Figure 3.29 Level of activity observed at Mullaghmore Head .....	38
Figure 3.30 Range of activities recorded at Mullaghmore Head .....	39
Figure 3.31 Range of effects recorded at Mullaghmore Head .....	40
Figure 3.32 Zones trafficked by visitors at Mullaghmore Head.....	41
Figure 3.33 Mullaghmore Head visitor movement pattern .....	42
Figure 3.34 Mullaghmore Head visitor movement pattern .....	42
Figure 3.35 Duration of time spent by visitors at Downpatrick Head .....	43
Figure 3.36 Use of Interpretive Material at Downpatrick Head.....	44
Figure 3.37 Level of impact observed at Downpatrick Head .....	44
Figure 3.38 Level of activity observed at Downpatrick Head.....	45
Figure 3.39 Range of activities recorded at Downpatrick Head .....	46
Figure 3.40 Range of effects recorded at Downpatrick Head .....	47
Figure 3.41 Zones trafficked by visitors at Downpatrick Head.....	48
Figure 3.42 Downpatrick Head visitor movement pattern.....	49
Figure 3.43 Duration of time spent by visitors at Keem Bay .....	50
Figure 3.44 Use of interpretive material by visitors at Keem Bay .....	51
Figure 3.45 Level of impact observed at Keem Bay .....	51
Figure 3.46 Level of activity observed at Keem Bay .....	52
Figure 3.47 Range of activities recorded at Keem Bay .....	53
Figure 3.48 Range of effects recorded at Keem Bay .....	55
Figure 3.49 Zones trafficked by visitors at Keem Bay.....	56
Figure 3.50 Visitor movement pattern at Keem Bay .....	57
Figure 3.51 Duration of time spent by visitors at Killary Harbour .....	58
Figure 3.52 Level of impact observed at Killary Harbour .....	59
Figure 3.53 Level of activity observed at Killary Harbour.....	59
Figure 3.54 Range of activities recorded at Killary Harbour .....	60

## Observation Study Results

Figure 3.55 Range of effects recorded at Killary Harbour .....	62
Figure 3.56 Zones trafficked by visitors at Killary Harbour.....	63
Figure 3.57 Killary Harbour visitor movement pattern .....	64
Figure 3.58 Duration of time spent by visitors at Derrigimlagh .....	65
Figure 3.59 Level of impact observed at Derrigimlagh .....	66
Figure 3.60 Level of activity observed at Derrigimlagh.....	66
Figure 3.61 Range of activities recorded at Derrigimlagh .....	67
Figure 3.62 Range of effects recorded at Derrigimlagh .....	68
Figure 3.63 Zones trafficked by visitors at Derrigimlagh.....	69
Figure 3.64 Derrigimlagh visitor movement pattern .....	70
Figure 3.65 Duration of time spent by visitors at Cliffs of Moher.....	71
Figure 3.66 Level of impact observed at Cliffs of Moher .....	72
Figure 3.67 Level of activity observed at Cliffs of Moher .....	72
Figure 3.68 Range of activities recorded at Cliffs of Moher.....	73
Figure 3.69 Range of effects recorded at Cliffs of Moher.....	74
Figure 3.70 Zones trafficked by visitors at Cliffs of Moher .....	75
Figure 3.71 Cliffs of Moher visitor movement pattern .....	76
Figure 3.72 Duration of time spent by visitors at Loop Head .....	77
Figure 3.73 Use of interpretive material by visitors at Loop Head .....	78
Figure 3.74 Level of impact observed at Loop Head .....	78
Figure 3.75 Level of activity observed at Loop Head.....	79
Figure 3.76 Range of activities recorded at Loop Head .....	80
Figure 3.77 Range of effects recorded at Loop Head .....	81
Figure 3.78 Zones trafficked by visitors at Loop Head.....	82
Figure 3.79 Loop Head visitor movement pattern .....	83
Figure 3.80 Loop Head visitor movement pattern .....	83
Figure 3.81 Duration of time spent by visitors at Blaskets View .....	85
Figure 3.82 Use of interpretive material by visitors at Blaskets View .....	86
Figure 3.83 Level of impact observed at Blaskets View .....	86
Figure 3.84 Level of activity observed at Blaskets View.....	87
Figure 3.85 Range of activities recorded at Blaskets View .....	88
Figure 3.86 Range of effects recorded at Blaskets View .....	89
Figure 3.87 Zones trafficked by visitors at Blaskets View .....	90
Figure 3.88 Blaskets View visitor movement pattern.....	91
Figure 3.89 Duration of time spent by visitors at Bray Head.....	92
Figure 3.90 Use of interpretive material by visitors at Bray Head.....	93
Figure 3.91 Level of impact observed at Bray Head .....	93
Figure 3.92 Level of activity observed at Bray Head .....	94
Figure 3.93 Range of activities recorded at Bray Head.....	95
Figure 3.94 Range of effects recorded at Bray Head.....	97
Figure 3.95 Zones trafficked by visitors at Bray Head .....	98
Figure 3.96 Bray Head visitor movement pattern .....	99
Figure 3.97 Duration of time spent by visitors at Dursey Island and Garnish Point.....	100
Figure 3.98 Use of interpretive material by visitors at Garnish Point .....	101
Figure 3.99 Level of impact observed at Dursey Island and Garnish Point.....	101
Figure 3.100 Level of activity observed at Dursey Island and Garnish Point .....	102
Figure 3.101 Range of activities recorded at Dursey Island and Garnish Point.....	103
Figure 3.102 Range of effects recorded at Dursey Island and Garnish Point.....	104
Figure 3.103 Zones trafficked by visitors at Dursey Island and Garnish Point .....	105
Figure 3.104 Garnish Point visitor movement pattern .....	106
Figure 3.105 Dursey Island visitor movement pattern.....	107
Figure 3.106 Duration of time spent by visitors at Mizen Head .....	108
Figure 3.107 Level of impact observed at Mizen Head .....	109
Figure 3.108 Level of activity observed at Mizen Head.....	109
Figure 3.109 Range of activities recorded at Mizen Head .....	110
Figure 3.110 Range of effects recorded at Mizen Head .....	111
Figure 3.111 Zones trafficked by visitors at Mizen Head.....	112
Figure 3.112 Mizen Head visitor movement pattern .....	112

## Observation Study Results

Figure 3.113 Duration of time spent by visitors at Old Head of Kinsale .....	113
Figure 3.114 Level of impact observed at Old Head of Kinsale .....	114
Figure 3.115 Level of activity observed at Old Head of Kinsale .....	114
Figure 3.116 Range of activities recorded at Old Head of Kinsale .....	115
Figure 3.117 Range of effects recorded at Old Head of Kinsale .....	116
Figure 3.118 Zones trafficked by visitors at Old Head of Kinsale .....	117
Figure 3.119 Old Head of Kinsale visitor movement pattern .....	118
Figure 3.120 Duration of time spent by visitors across all sites .....	119
Figure 3.121 Modes of transport used across all sites .....	120
Figure 3.122 Age demographic across all sites .....	121
Figure 3.123 Use if interpretive material across all sites .....	121
Figure 3.124 Overall level of activity recorded .....	122
Figure 3.125 Level of Activity by Site .....	122
Figure 3.126 Range of activities recorded across all sites .....	123
Figure 3.127 Overall level of impact recorded .....	125
Figure 3.128 Level of Effect by Site .....	125
Figure 3.129 Range of effects recorded across all sites .....	126
Figure 3.130 Zones trafficked by visitors at all sites .....	128

## List of Tables

Table 1.1 Observation Study Sites including Natura 2000 Data .....	8
Table 2.1 Description of Activity Categorisation .....	11
Table 2.2 Description of Effects Categorisation .....	11
Table 3.1 Breakdown of activities observed at Malin Head .....	19
Table 3.2 Breakdown of effects recorded at Malin Head .....	20
Table 3.3 Breakdown of activities observed at Fanad Head .....	26
Table 3.4 Breakdown of activities observed at Slieve League .....	33
Table 3.5 Breakdown of effects observed at Slieve League .....	34
Table 3.6 Breakdown of activities observed at Mullaghmore Head .....	39
Table 3.7 Breakdown of effects observed at Mullaghmore Head .....	40
Table 3.9 Breakdown of activities observed at Downpatrick Head .....	46
Table 3.10 Breakdown of effects observed at Downpatrick Head .....	47
Table 3.11 Breakdown of activities observed at Keem Bay .....	54
Table 3.12 Breakdown of effects observed at Keem Bay .....	55
Table 3.13 Breakdown of activities observed at Killary Harbour .....	61
Table 3.14 Breakdown of effects observed at Killary Harbour .....	62
Table 3.15 Breakdown of activities observed at Derrigimlagh .....	67
Table 3.16 Breakdown of effects observed at Derrigimlagh .....	68
Table 3.17 Breakdown of activities observed at Cliffs of Moher .....	73
Table 3.18 Breakdown of effects observed at Cliffs of Moher .....	74
Table 3.19 Breakdown of activities observed at Loop Head .....	80
Table 3.20 Breakdown of effects observed at Loop Head .....	81
Table 3.21 Breakdown of activities observed at Blaskets View .....	88
Table 3.22 Breakdown of effects observed at Blaskets View .....	89
Table 3.23 Breakdown of activities observed at Bray Head .....	96
Table 3.24 Breakdown of effects observed at Bray Head .....	97
Table 3.25 Breakdown of activities observed at Dursey Island and Garnish Point .....	103
Table 3.26 Breakdown of effects observed at Dursey Island and Garnish Point .....	104
Table 3.27 Breakdown of activities recorded at Mizen Head .....	110
Table 3.28 Breakdown of effects observed at Mizen Head .....	111
Table 3.29 Breakdown of activities observed at Old Head of Kinsale .....	115
Table 3.30 Breakdown of effects observed at Old Head of Kinsale .....	116
Table 3.31 Overview of all sites .....	119
Table 3.32 Breakdown of modes of transport used at all sites .....	120
Table 3.33 Breakdown of activities recorded across all sites .....	124
Table 3.34 Breakdown of effects recorded across all sites .....	127

## Section 1 Introduction

This document details the results of the 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.

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 Guidelines;
- identifying remedial action/works required;
- assessing the capacity for future loadings;
- integrating site management with future European Site Management Plans.

The monitoring examines individual sites as well as larger-scale and regional indicators. The observational element of the surveying discussed in this document examines the types, spatial patterns and intensity of existing visitor activities at and adjacent to candidate Discovery Points. These surveys were carried out at the fifteen candidate Signature Discovery Points along the Wild Atlantic Way and have resulted in the identification of patterns of visitor activity, movement and behaviour at the sites. This work subsequently directed monitoring ecologists 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. This information can be used by relevant members of the Monitoring Group to identify protective, remedial or improvement actions within their own areas of responsibility during the following year. An annual summary of the results of monitoring will be published on the Fáilte Ireland website.

Observation Study Results

**Table 1.1 Observation Study Sites including Natura 2000 Data**

<b>Discovery Point Number</b>	<b>Name</b>	<b>County</b>	<b>GPS Coordinate</b>	<b>Survey Date (2015)</b>	<b>Relevant cSAC</b>	<b>Distance (km)</b>	<b>Relevant SPA</b>	<b>Distance (km)</b>
<b>5</b>	Malin Head	Donegal	55.381018- 7.3738003	6th June 7th June	North Inishowen Coast	Within	Malin Head SPA	3.5
<b>13</b>	Cionn Fhánada (Fanad Head)	Donegal	55.275617-7.6345941	18th April 19th April	Ballyhoorisky Point To Fanad Head	0.06	Horn Head to Fanad Head SPA	Within
<b>30</b>	Sliabh Liag (Slieve League)	Donegal	54.627438-8.6847138	11th April 12th April	Slieve League	Within	West Donegal Coast SPA	Within
<b>37</b>	Mullaghmore Head	Sligo	54.470555-8.4630775	25th April 26th April	Bunduff Lough and Machair/Trawalua/Mullaghmore	Within	Donegal Bay SPA	15
<b>47</b>	Downpatrick Head	Mayo	54.322906-9.3459186	11th June 12th June	Glenamoy Bog Complex	10	Killala Bay/Moy Estuary SPA	12
<b>65</b>	Keem Bay	Mayo	53.967177-10.195409	13th June 14th June	Croaghaun Slievemore	Within	Bill's Rock	17
<b>75</b>	Killary Harbour	Galway	53.595759-9.7645229	26th June 28th June	Maumturk Mountains	0.02	Illaunonearaun SPA	24
<b>80</b>	Derrigimlagh	Galway	53.467003-10.03306	25th June 27th June	Slyne Head Peninsula	0.9	Connemara Bog Complex	2.5
<b>101</b>	Cliffs of Moher	Clare	52.971639-9.4260442	1st May 2nd May	Blackhead/Poulsallagh Complex	8	Cliffs of Moher SPA	0.02

Observation Study Results

<b>Discovery Point Number</b>	<b>Name</b>	<b>County</b>	<b>GPS Coordinate</b>	<b>Survey Date (2015)</b>	<b>Relevant cSAC</b>	<b>Distance (km)</b>	<b>Relevant SPA</b>	<b>Distance (km)</b>
<b>109</b>	Loop Head	Clare	52.560901-9.9304605	3rd May 4th May	Loop Head	Within	Loop Head SPA	0.1
<b>124</b>	Radharc na Mblascaoidi (Blaskets View)	Kerry	52.104973-10.455488	9th May 10th May	Blasket Islands	0.05	Dingle Peninsula SPA	Within
<b>129</b>	Bray Head	Kerry	51.891958-10.396685	20th June 21st June	Valencia Harbour/Portmagee Channel	0.2	Iveragh Peninsula SPA	Within
<b>139</b>	Dursey Island	Cork	51.607717-10.158341	16th May 17th May	Kenmare River	0.06	Beara Peninsula	Within
<b>149</b>	Mizen Head	Cork	51.451562-9.8109117	30th May 31st May	Three Castle Head To Mizen Head	Within	Sheep's Head to Toe Head SPA	Within
<b>159</b>	Old Head of Kinsale	Cork	51.619701-8.542146	30th May 31st May	Courtmacsherry Estuary	15	Old Head of Kinsale SPA	0.05

## 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 initial sites chosen for monitoring are the fifteen candidate Signature Discovery Points along the Wild Atlantic Way. The candidate Signature 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 first round of monitoring focuses on the fifteen candidate Signature Discovery Points. Future monitoring will expand to include candidate Discovery points prioritised in order of sensitivity and significance as directed by a 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**

<b>Activities</b>	
<b>Low Level</b>	Activity for which the site is intended
<b>Medium Level</b>	Activities, often incidental, depending on site management whereby the visitor engages in behaviour that may result in an effect
<b>High Level</b>	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**

<b>Effects</b>	
<b>Low Impact</b>	No impact or a discernible impact i.e. no significant, lasting damage is identified
<b>Medium Impact</b>	A short term, reversible effect that is intermittent but will have no significant, long term impact
<b>High/Severe Impact</b>	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.

## Observation Study Results

Surveyor details including 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.

### **2.1.3.3 Health and Safety**

A Health and Safety Plan should be prepared to include emergency contacts and details of health issues. It should detail procedures in the event of adverse weather conditions or an emergency and detail the location of shelter, toilets etc.

The use of high visibility vests is advised at sites where there is limited visibility or where the observer is located on or adjacent to a road or a parking area. However, high visibility vests may influence visitor behaviour on site if the observer appears to be a figure of authority. It is advisable - only where it is completely safe to do so - to avoid the use of high visibility gear.

### **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 it 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 intermittently 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. The maps are then combined to note the intensity of movement patterns that occurred 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 further levels of activity by a tiny proportion of visitors was also recorded for completeness (tertiary areas).



**Figure 2.1 Sample of Observed Visitor Movement Pattern**

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.

### 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 Signature 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 candidate Signature Discovery Point.

#### 2. Off-site Control Areas

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

#### 3. On-site Control Areas

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

## Section 3 Presentation of Results and Analysis

### 3.1.1 Malin Head

**Landscape Type:** Rocky shore/peat/grassland in peninsular coastal context

**Dates Surveyed:** 6<sup>th</sup> June and 7<sup>th</sup> June 2015

**Weather:** Mostly clear and sunny

#### Site Description

Malin Head is located within the North Inishowen Coast Special Area of Conservation (SAC) and is a proposed Natural Heritage area (pNHA). 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 area is also of significant geological interest. The site attracts visitors for being the most northerly point in the mainland of Ireland.

The Napoleonic tower (Lyolds Signal Tower) built on the top of the hill known as Banba's Crown was constructed by the British in the early 1800's as a lookout post in anticipation of a French invasion. Later, the tower and three concrete buildings located nearby were used as observation posts during both World Wars and as a means of communications with ships off the coast of Ireland. The signal tower and World War look out posts are listed buildings. The 'EIRE' sign made from concrete and rocks was constructed on the mainland to inform planes flying overhead during World War II that they were passing over the neutral state of Ireland.

The site comprises of two small car parks and a cliff top walk. Observation was undertaken from the upper carpark near Lyolds Signal Tower. From here the lower car park can also be viewed. Three World War II look out posts and a viewing platform (constructed in late 2014) are adjacent to the upper car park. Malin Head was part of a pilot survey in 2014.

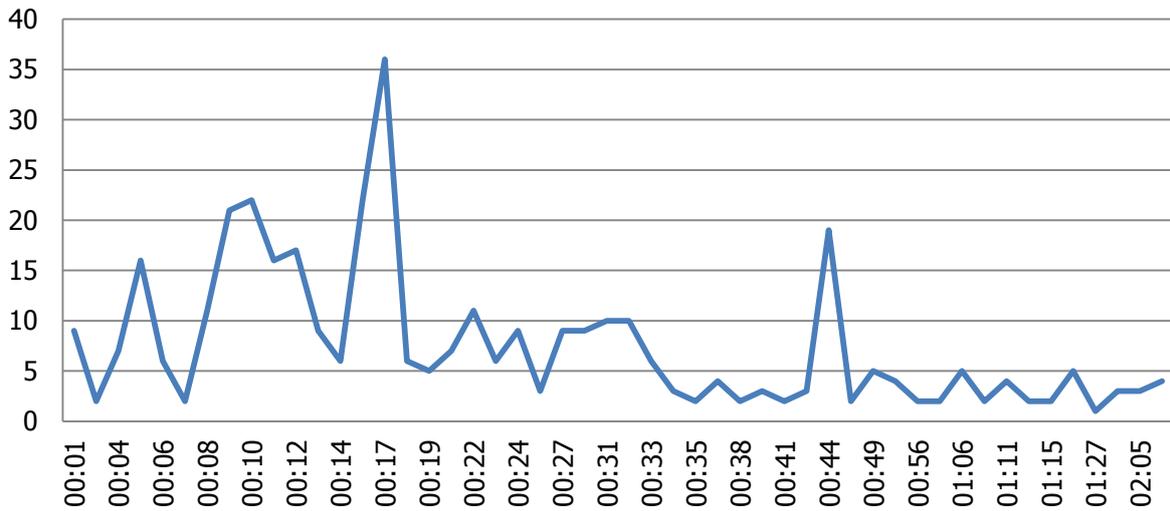
Donegal County Council has approved Planning Permission for a new car park and toilet facility south of Malin Head at the lower carpark.

The site is privately owned and is grazed by sheep. The landowner actively contributes to site maintenance. A coffee van 'Caffe Banba' and a souvenir van were present on the second day of the survey.

**Malin Head Observation Study Results**

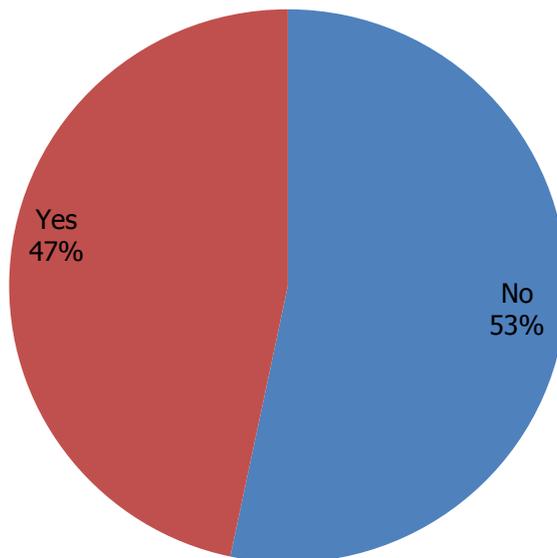
Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Mizen Head	171	206	377	132	00:24 minutes

**Time Spent on Site**



**Figure 3.1 Duration of time spent by visitors at Malin Head**

**Use of Interpretive Material**



**Figure 3.2 Use of interpretive material by visitors at Malin Head**

### Level of Impact Observed

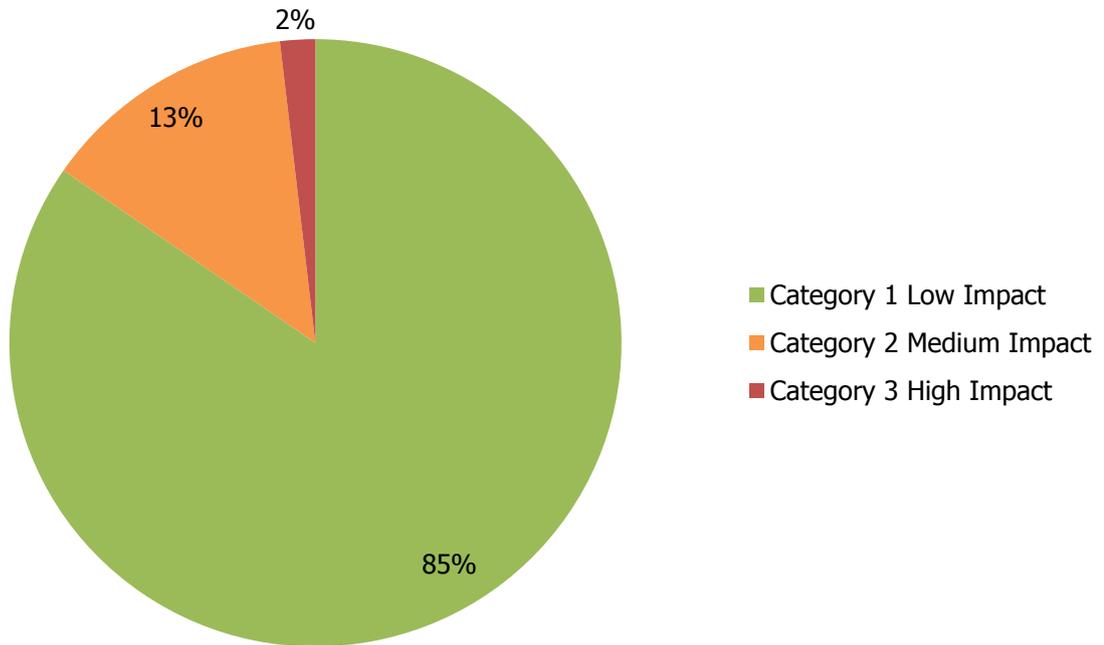


Figure 3.3 Level of impact observed at Malin Head

### Level of Activity Observed

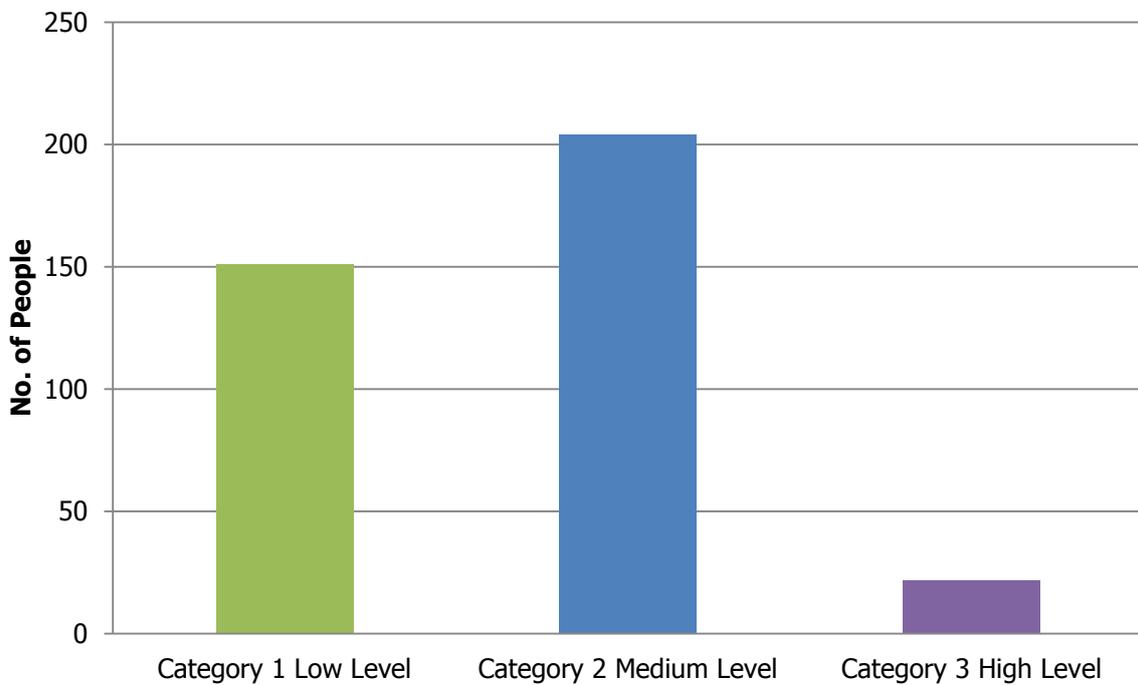
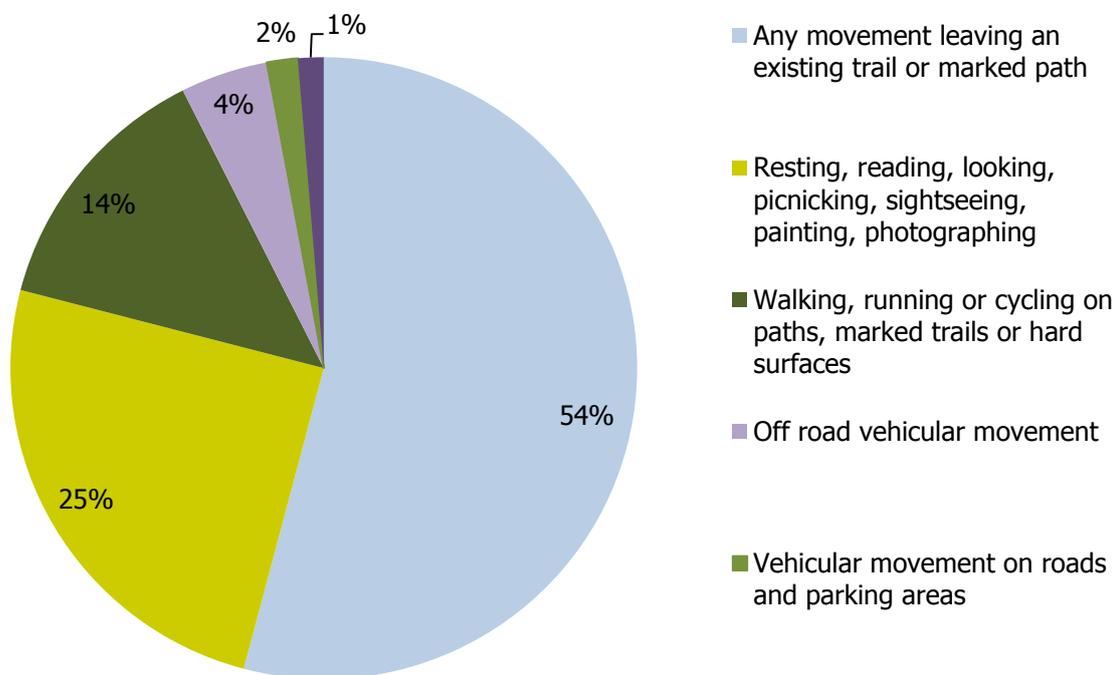


Figure 3.4 Level of activity observed at Malin Head

## Activities Observed

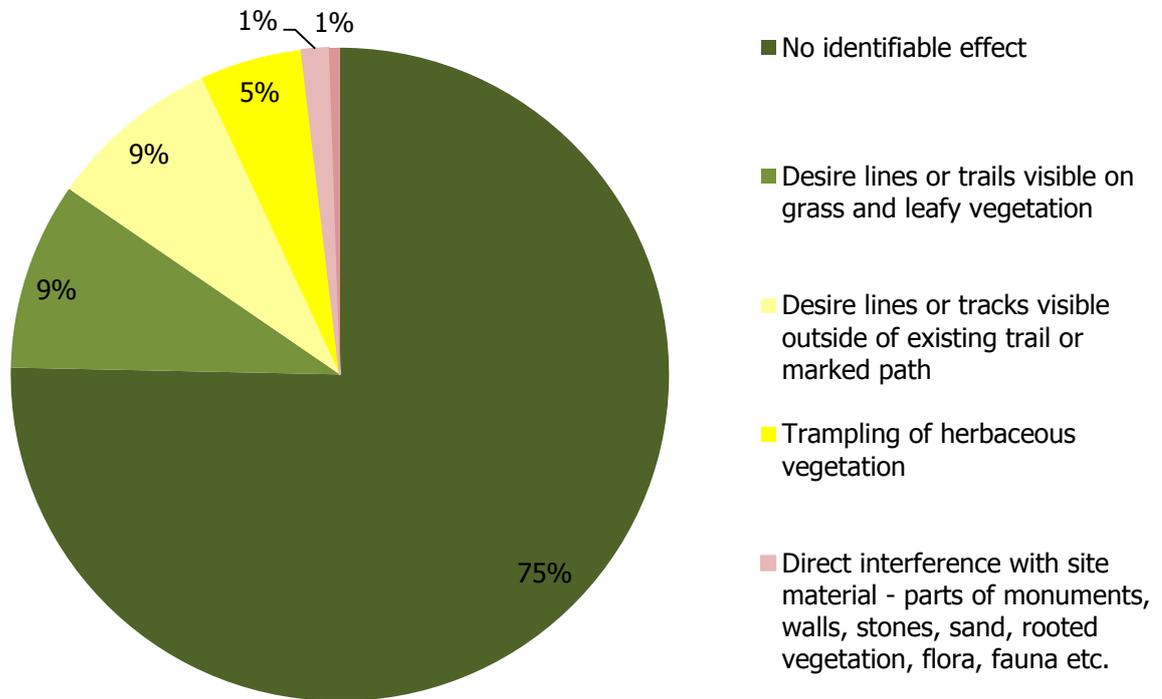


**Figure 3.5 Range of activities observed at Malin Head**

**Table 3.1 Breakdown of activities observed at Malin Head**

Activities Observed	No. of People	% of People
Any movement leaving an existing trail or marked path	204	54.11%
Resting, reading, looking, picnicking, sightseeing, painting, photographing	94	24.93%
Walking, running or cycling on paths, marked trails or hard surfaces	51	13.53%
Off road vehicular movement	17	4.51%
Vehicular movement on roads and parking areas	6	1.59%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc.	5	1.33%
<b>Grand Total</b>	<b>349</b>	<b>100%</b>

## Effects Observed on Site

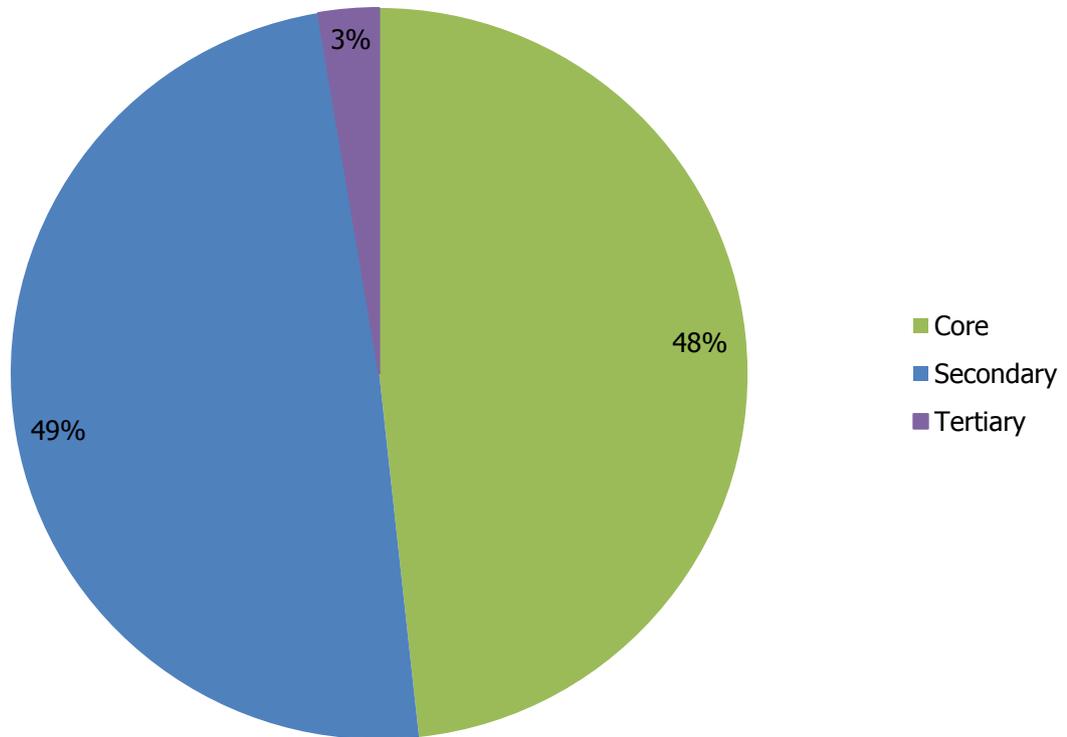


**Figure 3.6 Range of effects recorded at Malin Head**

**Table 3.2 Breakdown of effects recorded at Malin Head**

Effects Observed	No. of People	% of People
No identifiable effect	284	75.33%
Desire lines or trails visible on grass and leafy vegetation	35	9.28%
Desire lines or tracks visible outside of existing trail or marked path	32	8.49%
Trampling of herbaceous vegetation	19	5.04%
Direct interference with site material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	5	1.33%
Destruction of structures, vegetation or fauna	2	0.53%
<b>Grand Total</b>	<b>377</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.7 Zones trafficked by visitors at Malin Head**

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 Pattern Observed**

The site was observed during a fine spell in June, this resulted in the site been exceptionally busy. This was confirmed by the landowner.

Low and medium activity was observed to include visitors walking around, sightseeing and photographing. The majority of visitors remained on paved areas around the tower and car parks. Medium level activity was noted when visitors left the paved areas to look around the look out posts or the signal tower. To view these areas of the site, visitors travelled across bare rock or vegetation.

High level activities included a child interfering with site materials by moving rocks near the 'EIRE' sign to write text. On the second day of observation, the car parks filled up quickly. As a result, vehicles were observed to park on muddy verges and on wet soil/boggy areas. Children were also observed climbing onto the World War look out posts.

### **Malin Head Analysis of Results**

The majority of visitors (75%) were observed to have no effect on the site. When visitors left the paved areas to explore the various buildings on the site, trails became visible on the grass. This was observed to have no effect on the soil or vegetation.

One child from a family of five people was observed to interfere with site materials by moving rocks at 'EIRE' sign to write text. This is a common occurrence at Malin Head and a small number of visitors partake in the activity. The same rocks are moved around frequently by different visitors to the site, causing a temporary irreversible impact.

On the second day of observation, the car parks filled up quickly. As a result, vehicles were observed to park on muddy verges and on wet soil/boggy areas. The result was visible tracks remaining on the vegetation or soil. One car got stuck in a muddy verge and left skid marks behind. Similar results were found in 2015 survey to the discernible impacts observed during the pilot study in 2014.



**Figure 3.8 Malin Head visitor movement pattern**

### 3.1.2 Fanad Head

**Landscape Type:** Rocky shore/peat/grassland in peninsular coastal context

**Dates Surveyed:** 18<sup>th</sup> and 19<sup>th</sup> April 2015

**Weather:** Mostly clear and sunny, occasional cloud

#### Site Description

Fanad Head is positioned in the Fanad Peninsula near Lough Swilly on the north coast of Co. Donegal. Fanad Head Lighthouse is one of 70 lighthouses in Ireland and is operated by the Commissioner of Irish Lights. The lighthouse is closed to the general public at present but it is intended to open the lighthouse as a visitor attraction in the future.

Fanad Head is located within the Ballyhoorisky Point To Fanad Head Special Area of Conservation (SAC) and the Horn Head to Fanad Head Special Protection Area (SPA). The site is a designated as an SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive. The site is also designated as an SPA for the protection of endangered species of birds listed in the European Union Directive on the Conservation of Wild Birds.

The site comprises of a small car park with a capacity for less than ten cars. A World War look out posts is located north of the site and a derelict Coastguard Station building is located within an enclosed wall. All areas are grazed by sheep. Cattle were out-wintered inside the boundaries of derelict Coastguard Station building site. Extensive poaching was evident here. A van selling refreshments - the 'Wild Atlantic Tae' was present on site on the second day of observation.

#### Fanad Head Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Fanad Head	134	140	274	113	00:16

### Time Spent on Site

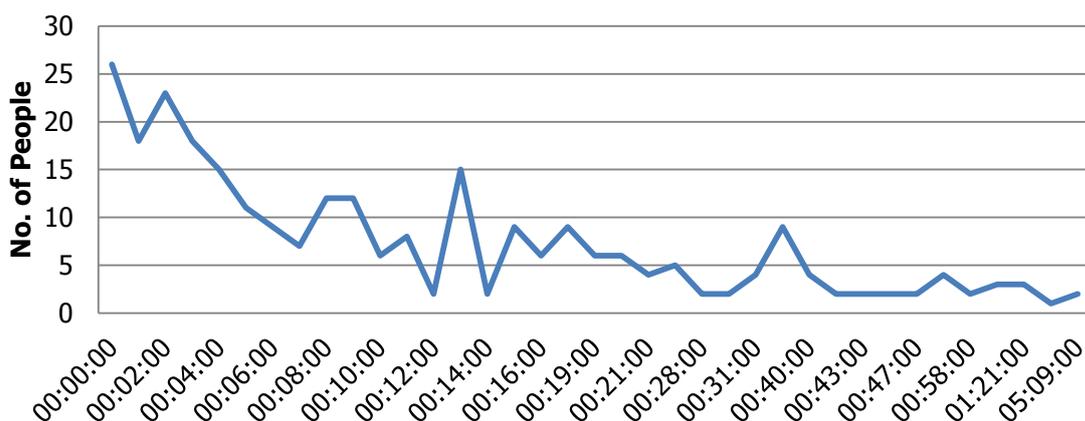
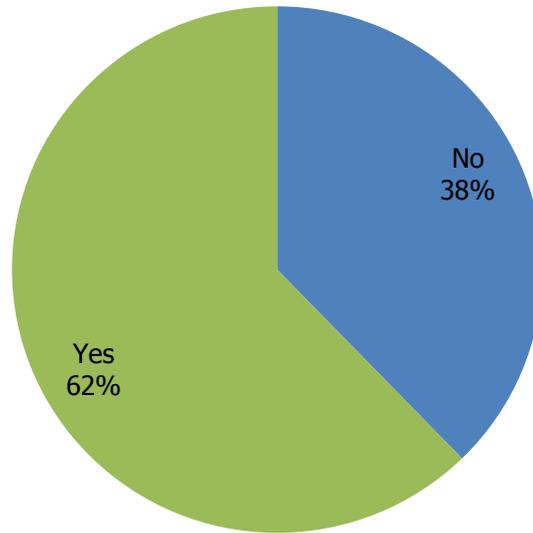


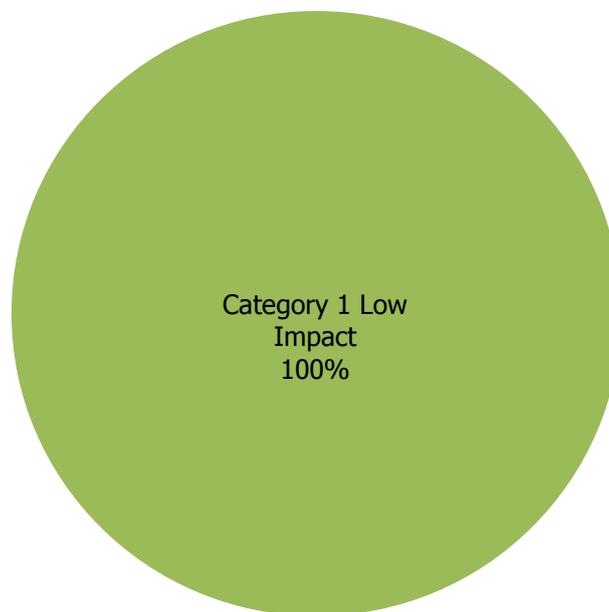
Figure 3.9 Duration of time spent by visitors at Fanad Head

## Use of Interpretive Material



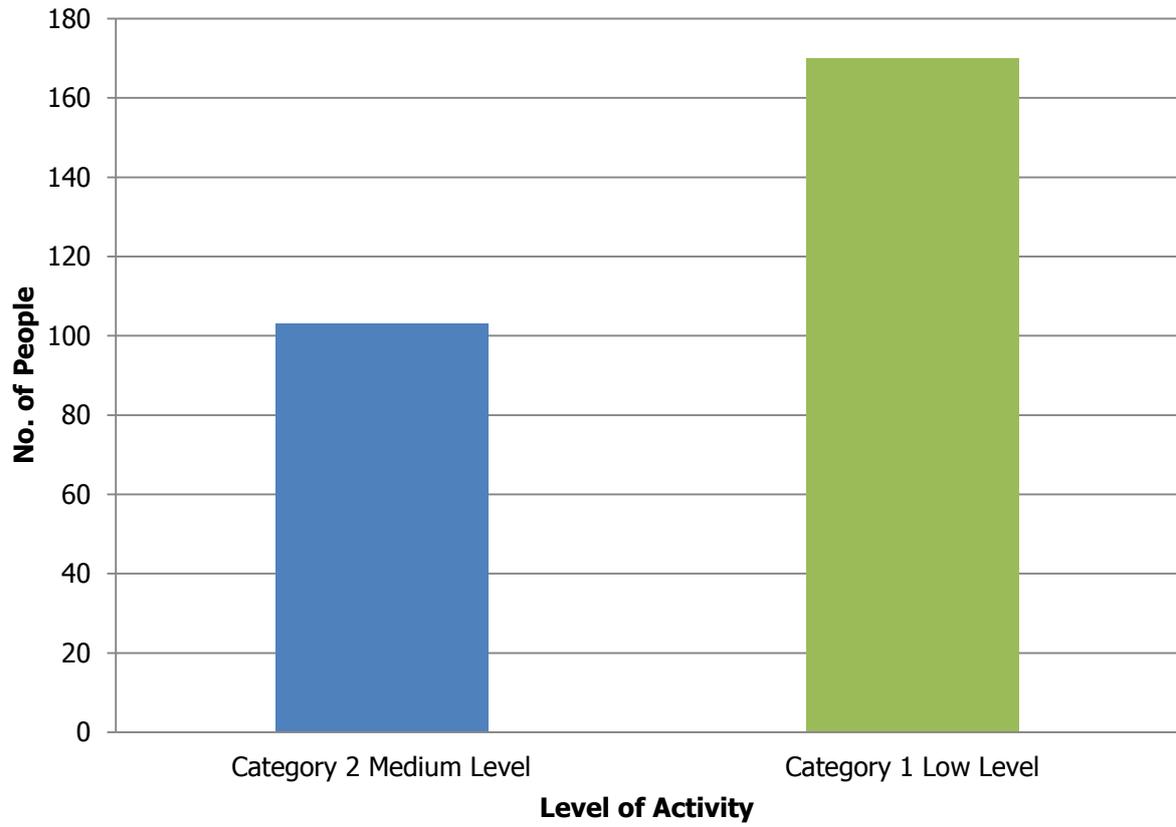
**Figure 3.10 Use of interpretive material by visitors at Fanad Head**

## Level of Impact Observed



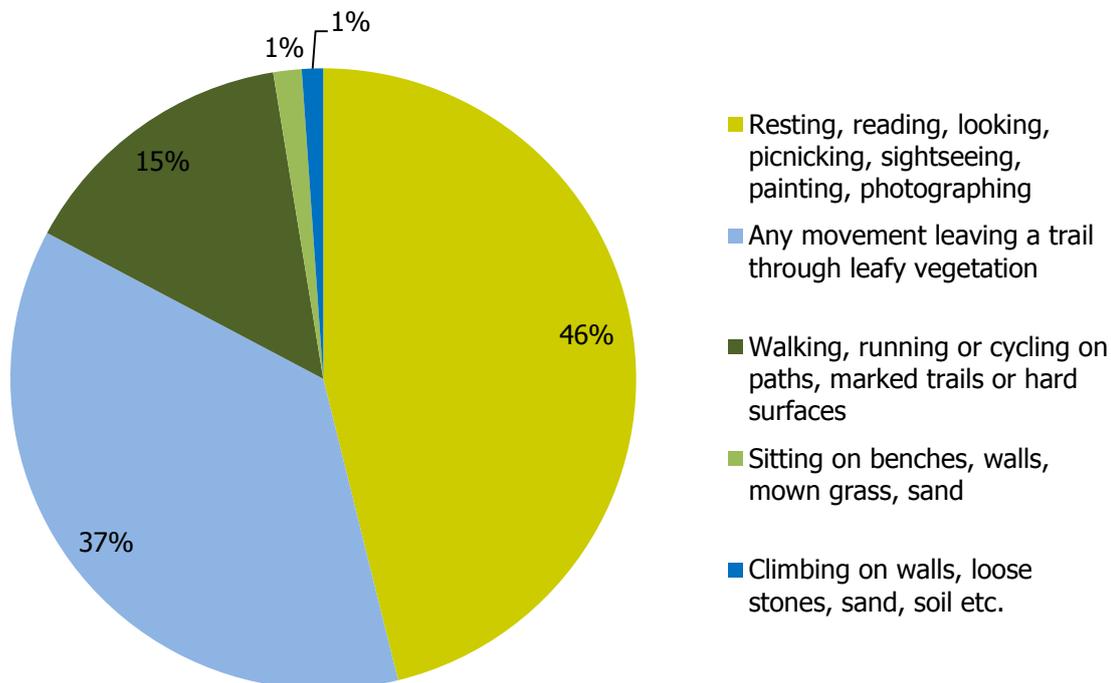
**Figure 3.11 Level of impact observed at Fanad Head**

## Level of Activity Observed



**Figure 3.12 Level of activity observed at Fanad Head**

## Activities Observed on Site



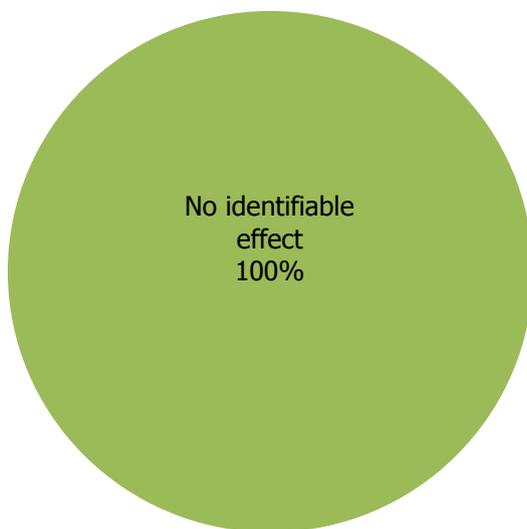
**Figure 3.13 Range of activities recorded at Fanad Head**

**Table 3.3 Breakdown of activities observed at Fanad Head**

Activities Observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	126	46.2%
Any movement leaving a trail through leafy vegetation	100	36.6%
Walking, running or cycling on paths, marked trails or hard surfaces	40	14.7%
Sitting on benches, walls, mown grass, sand	4	1.5%
Climbing on walls, loose stones, sand, soil etc. <sup>1</sup>	3	1.1%
<b>Grand Total</b>	<b>273</b>	<b>100%</b>

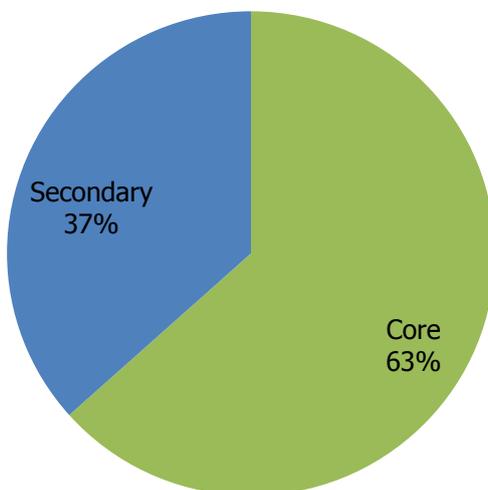
<sup>1</sup> One child from a group of three people was observed climbing on the boundary wall surrounding the derelict house on site

## Effects Observed on Site



**Figure 3.14** Range of effects recorded at Fanad Head

## Zones Trafficked by Visitors



**Figure 3.15** Zones trafficked by visitors at Fanad Head

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**

The majority of visitors (63%) remained within the boundaries of the car park and paved areas. Low level activity was observed to include visitors walking around, sightseeing and photographing the lighthouse.

Medium level activity was recorded when visitors were observed to cross fences and walk towards the World War look out post and for photos of lighthouse. Desire lines from visitor behaviour were evident across the fence which was also broken. Visitors were also identified crossing the fence south of the carpark and walking towards the headland.

The average duration of time spent on site by visitors was 30 minutes. 32 groups equating to 77 people or 28% of visitors observed were recorded to not exit their vehicles and in many cases spent 2 minutes or less on site. In these instances, the visitors were likely to drive to the car park, look at the lighthouse briefly and depart.



**Figure 3.16 Fanad Head visitor movement pattern**



**Figure 3.17 Fanad Head visitor movement pattern**

### **Fanad Head Analysis of Results**

As noted in the movement pattern observed, (63%) remained within the boundaries of the car park and paved areas. Evidence of desire lines was apparent across fences where visitors trafficked secondary zones (totalling 37% of all visitors) to look at the lighthouse or World War look out post. This is readily reversible and will not have a lasting impact.

Overall, visitors to Fanad Head did not engage in activities that resulted in any adverse effects.

### 3.1.3 Slieve League

**Landscape Type:** Montane/upland/peat in peninsular coastal context

**Dates Surveyed:** 11<sup>th</sup> and 12<sup>th</sup> April 2015

**Weather:** Overcast, windy and occasional showers of rain and hail

#### Site Description

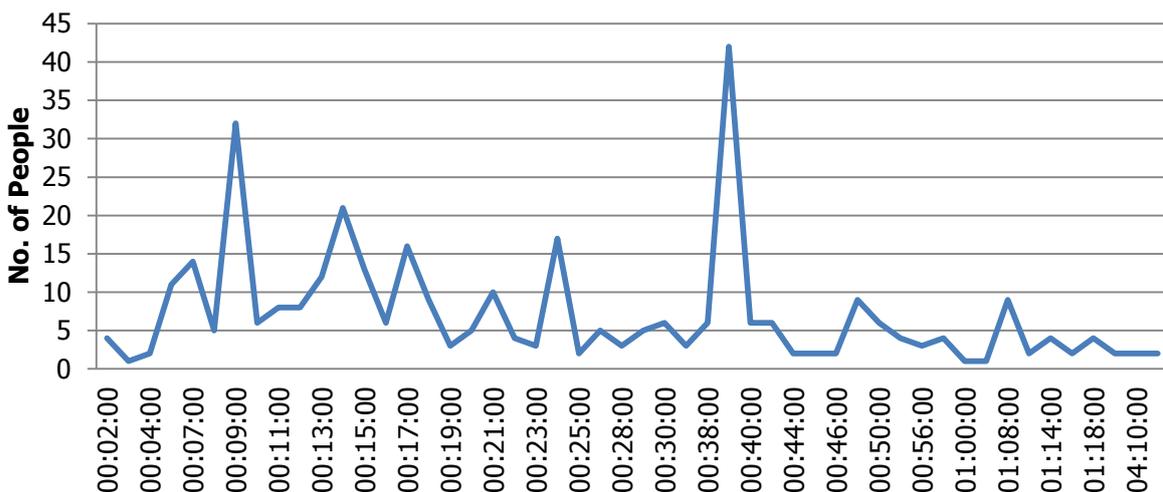
Slieve League cliffs are located on the north-west coast of Donegal approximately five kilometres from the town of Carrick. They are among the highest, accessible sea cliffs in Europe. Slieve League is located within the Slieve League Special Area of Conservation (SAC) and the West Donegal Coast Special Protection Area (SPA). The site is a designated as an SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive. The site is also designated as an SPA for the protection of endangered species of birds listed in the European Union Directive on the Conservation of Wild Birds. The area is also of significant geological interest.

The site comprises of a lower car park and toilet block (under construction) and an upper car park facilitating approximately 20 cars. There is a walking trail towards the summit of Slieve League at the site. Visitors were observed in their activities from the upper car park. Visitor facilities include a large viewing platform, interpretation panels, picnic benches and benches. A pitched pathway is under construction towards the peak of Slieve League. The entire site is grazed by sheep.

#### Slieve League Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Slieve League	198	163	361	110	00:30

### Time Spent on Site



**Figure 3.18 Duration of time spent by visitors at Slieve League**

## Use of Interpretive Material

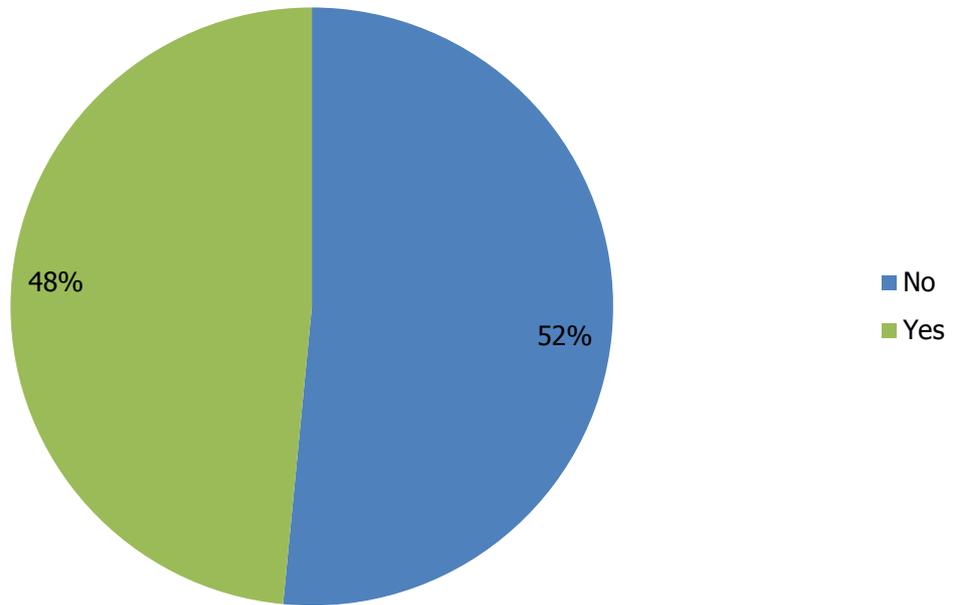


Figure 3.19 Use of interpretive material by visitors at Slieve League

## Level of Impact Observed

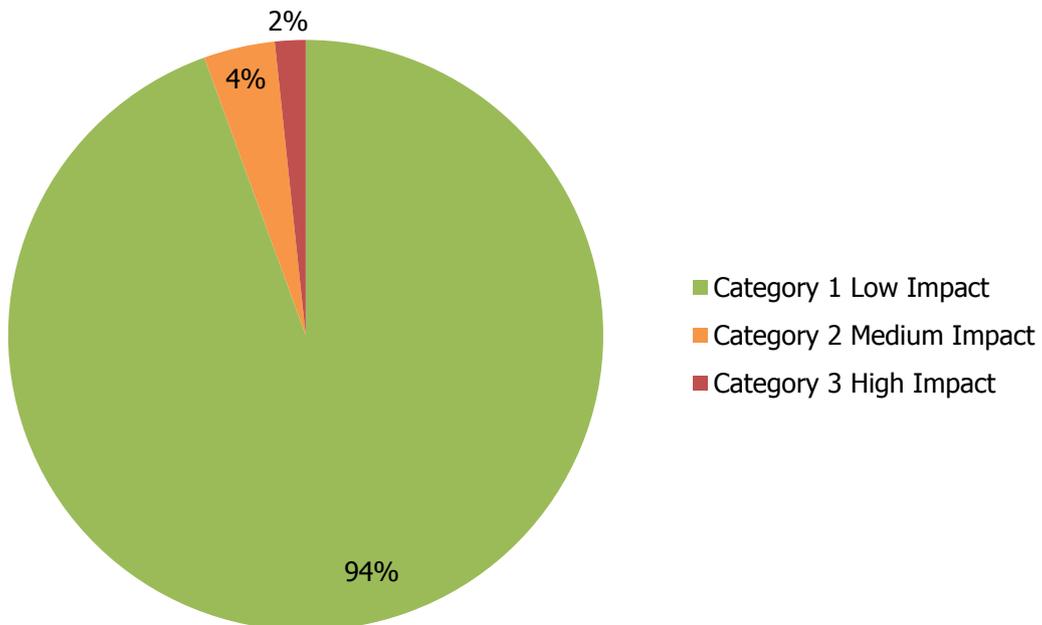
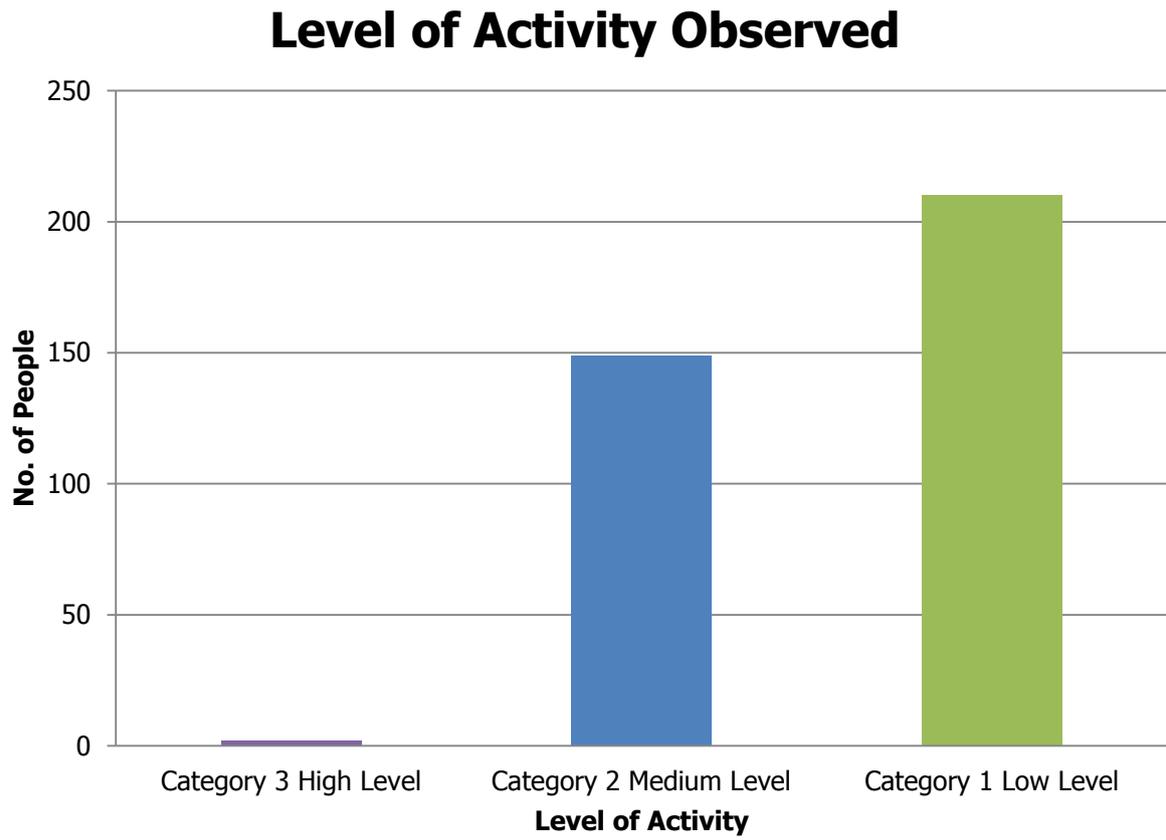
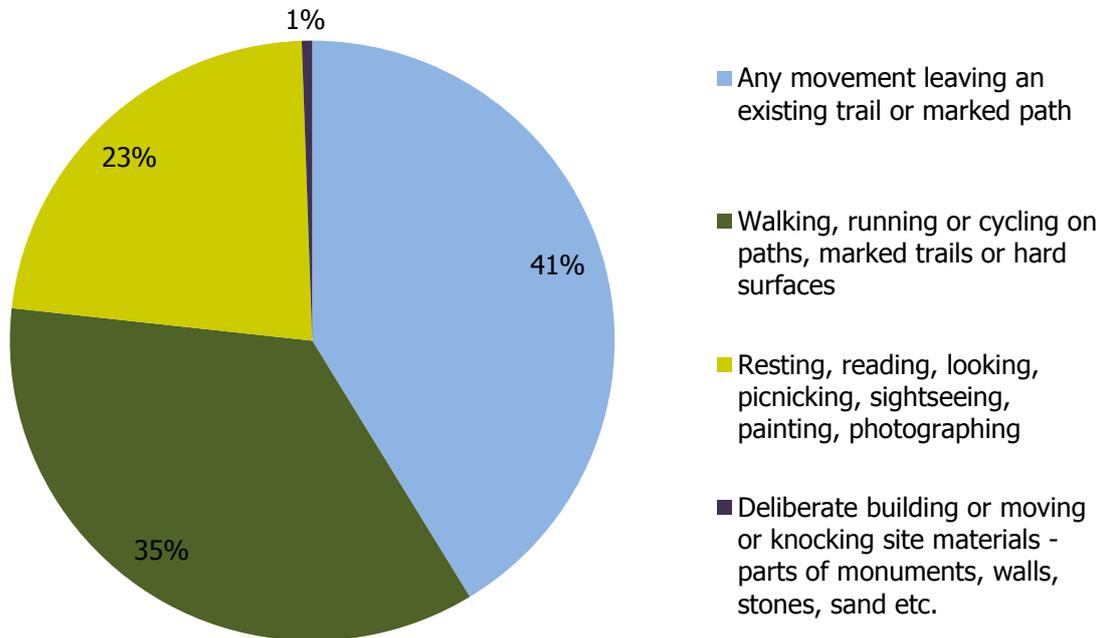


Figure 3.20 Level of impact observed at Slieve League



**Figure 3.21 Level of activity observed at Slieve League**

## Activities Observed on Site



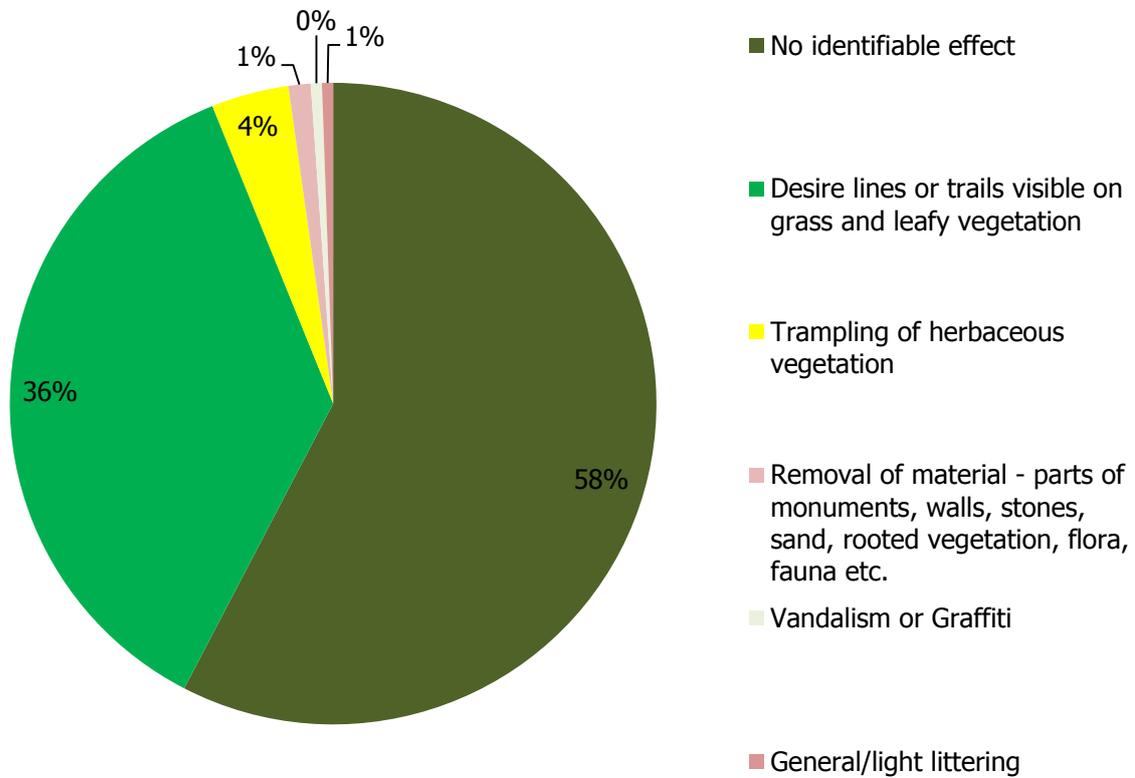
**Figure 3.22 Range of activities recorded at Slieve League**

**Table 3.4 Breakdown of activities observed at Slieve League**

Activities Observed	No. of People	% of People
Any movement leaving an existing trail or marked path	149	41.3%
Walking, running or cycling on paths, marked trails or hard surfaces	128	35.5%
Resting, reading, looking, picnicking, sightseeing, painting, photographing	82	22.7%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc. <sup>2</sup>	2	0.6%
<b>Grand Total</b>	<b>361</b>	<b>100%</b>

<sup>2</sup> One visitor from a group of two was observed scratching text into the wooden fence

## Effects Observed on Site



**Figure 3.23 Range of effects recorded at Slieve League**

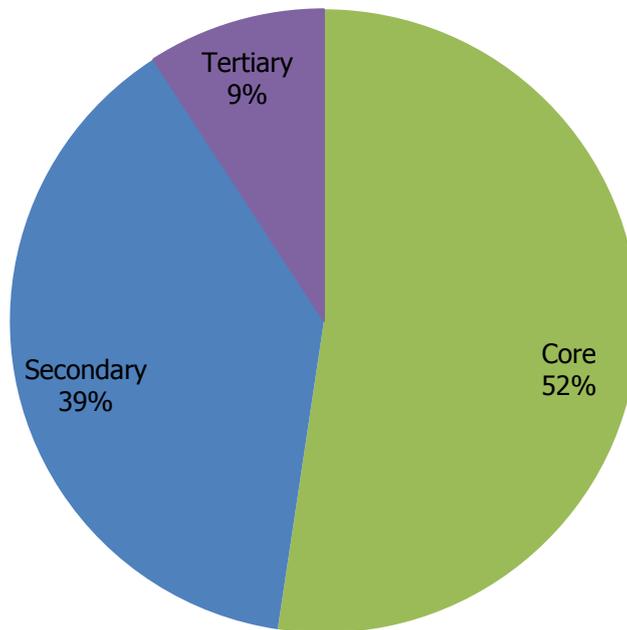
**Table 3.5 Breakdown of effects observed at Slieve League**

Effects Observed	No. of People	% of People
No identifiable effect	208	57.6%
Desire lines or trails visible on grass and leafy vegetation	131	36.3%
Trampling of herbaceous vegetation	14	3.9%
Removal of material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	4	1.1%
Vandalism or Graffiti <sup>3</sup>	2	0.6%
General/light littering <sup>4</sup>	2	0.6%
<b>Grand Total</b>	<b>361</b>	<b>100%</b>

<sup>3</sup> One visitor from a group of two was observed scratching text into the wooden fence

<sup>4</sup> One visitor from a group of two was observed to litter a empty mineral can

## Zones Trafficked by Visitors



**Figure 3.24 Zones trafficked by visitors at Slieve League**

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 Pattern Observed

52% of visitors remained in the core areas of the car park and viewing area. Of the 39% of visitors who extended onto the pitched pathway and started to climb uphill, the majority were observed to remain on pathway where available. This was largely due to the steep incline and difficult terrain. The average duration of time spent on site by visitors was 30 minutes. It was vastly hikers who were observed to extend beyond a certain point and continue towards the summit of Slieve League. This accounted for 9% of all visitors. A total of six hikers ascended the mountain and did not return. These may have finished their hike via the Pilgrims Path to Teelin. It was noted that the weather at the site was changeable and as inclement weather closed in, it led visitors to descend the pitched pathway quickly.



**Figure 3.25 Slieve League visitor movement pattern**



**Figure 3.26 Slieve League visitor movement pattern**

### **Slieve League Analysis of Results**

Over 94% of visitors to the site engaged in activities that did not result in an impact. Effects categorised as medium level included one visitor discarding an empty mineral can and children leaving paved areas and trampling of herbaceous vegetation. This accounted less than 4% of the total visitors to the site and the effects were not discernible. High level effects included one visitor from a group of two scratching text into the wooden fence and another visitor removing a small rock from the site. These were caused by less than 1% of the visitors to the site during the study and are unlikely to have a lasting impact. The activities and effects observed during the study at Slieve League were not reported to result in any significant, long term adverse effects.

### 3.1.4 Mullaghmore Head

**Landscape Type:** Rocky shore/grassland in a coastal plain context

**Dates Surveyed:** 25<sup>th</sup> and 26<sup>th</sup> April 2015

**Weather:** Sunny with occasional light cloud

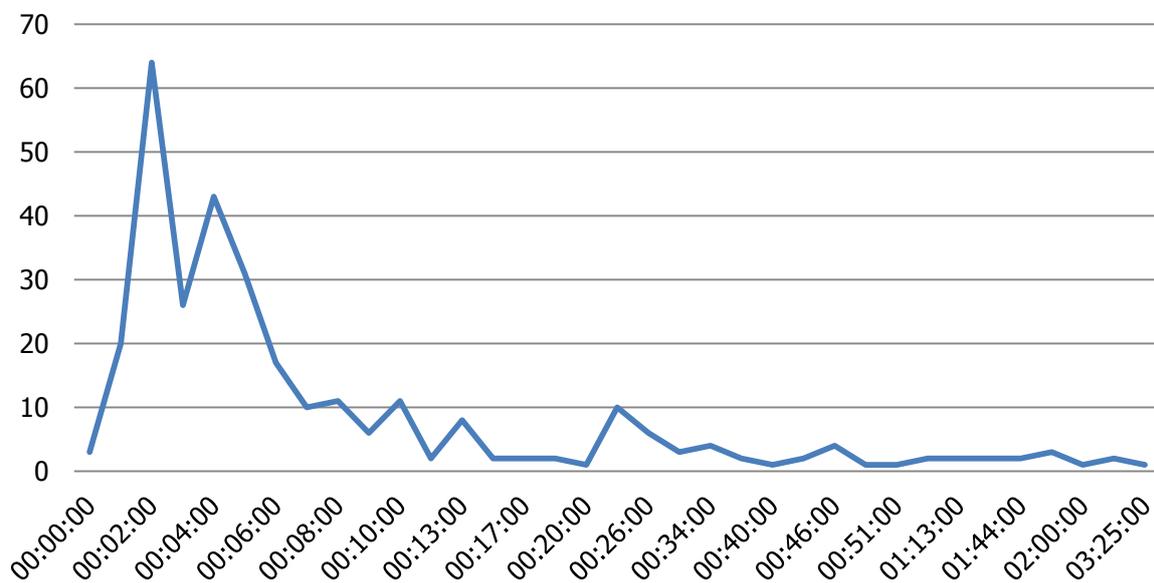
#### Site Description

Mullaghmore Head is a headland located north from the village of Mullaghmore in Co. Sligo. The area is noted for its surfing waves, the historical interest of Classiebawn castle and the skyline dominated by Ben Bulbin Mountain. Mullaghmore Head is located within the Bunduff Lough and Machair/Trawalua/Mullaghmore Special Area of Conservation (SAC). The site is a designated as an SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive. The site comprises of a large layby accommodating approximately 10 cars. A smaller layby east of the site was also observed during the study. This layby can accommodate less than five cars. There was no interpretive material at the site.

#### Mullaghmore Head Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Mullaghmore Head	149	159	308	150	00:13

### Time Spent on Site



**Figure 3.27 Duration of time spent by visitors at Mullaghmore Head**

### Level of Impact Observed

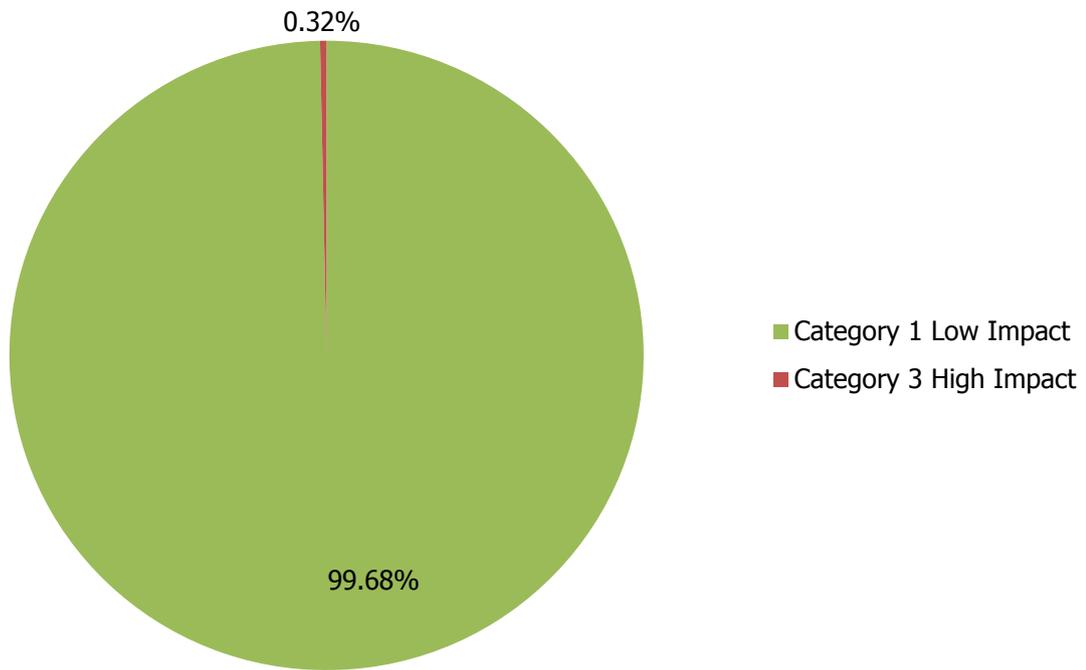


Figure 3.28 Level of impact observed at Mullaghmore Head

### Level of Activity Observed

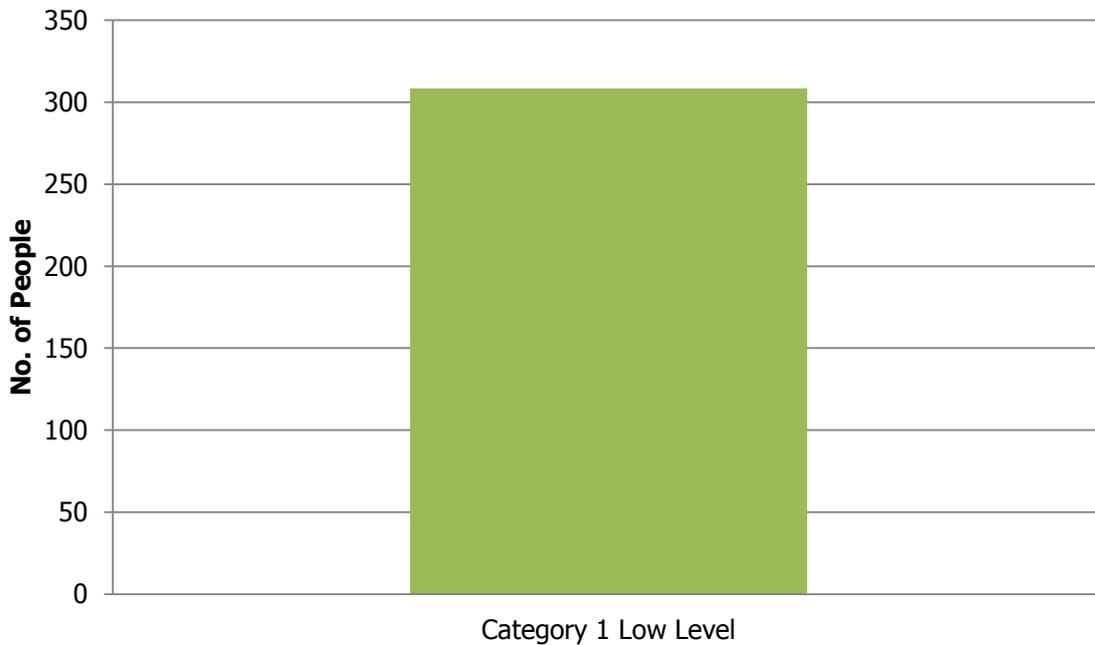
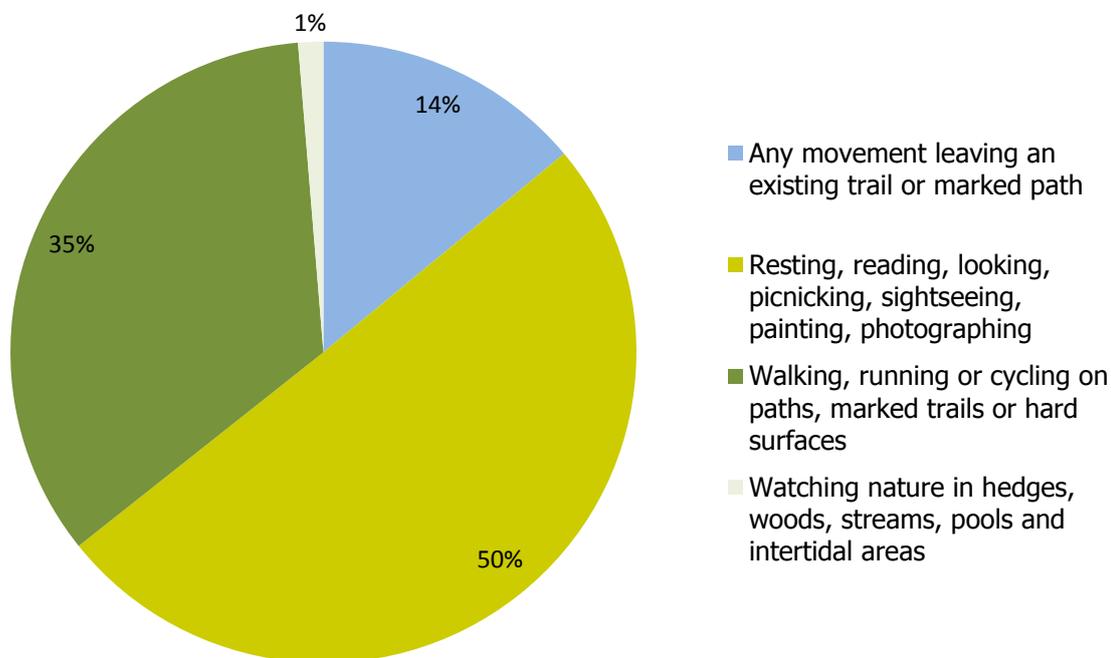


Figure 3.29 Level of activity observed at Mullaghmore Head

## Activities Observed on Site

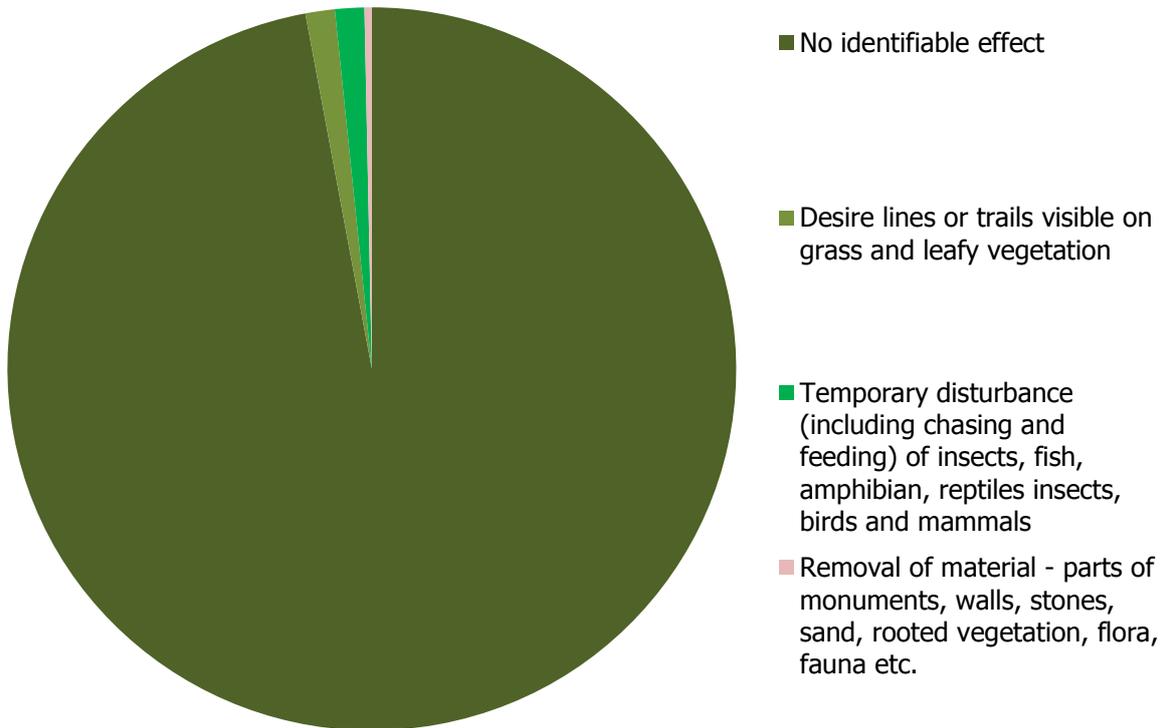


**Figure 3.30 Range of activities recorded at Mullaghmore Head**

**Table 3.6 Breakdown of activities observed at Mullaghmore Head**

Activities Observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	155	50.3%
Walking, running or cycling on paths, marked trails or hard surfaces	106	34.4%
Any movement leaving an existing trail or marked path	43	14.0%
Watching nature in hedges, woods, streams, pools and intertidal areas	4	1.3%
<b>Grand Total</b>	<b>308</b>	<b>100%</b>

## Effects Observed on Site



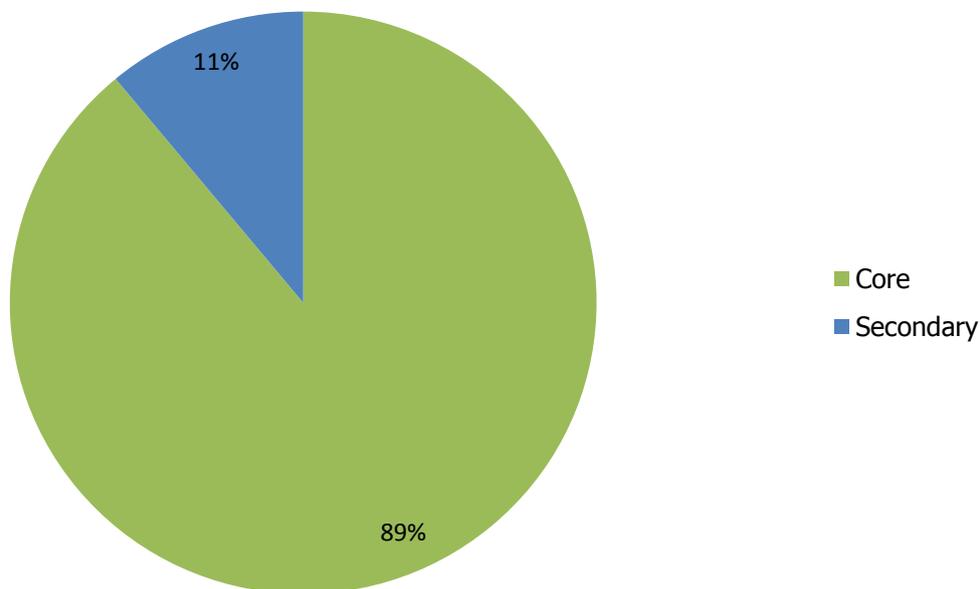
**Figure 3.31 Range of effects recorded at Mullaghmore Head**

**Table 3.7 Breakdown of effects observed at Mullaghmore Head**

Effects Observed	No. of People	% of People
No identifiable effect	299	97.1%
Desire lines or trails visible on grass and leafy vegetation	4	1.3%
Temporary disturbance (including chasing and feeding) of insects, fish, amphibian, reptiles insects, birds and mammals	4	1.3%
Removal of material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc. <sup>5</sup>	1	0.3%
<b>Grand Total</b>	<b>308</b>	<b>100%</b>

<sup>5</sup> One visitor was observed taking a rooted plant (leafy with flowers) from the site. This represents 0.32% of all visitors observed.

## Zone Trafficked by Visitors



**Figure 3.32 Zones trafficked by visitors at Mullaghmore Head**

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

In most instances, visitors were observed to remain at the layby or on the road. The average duration of time spent on site by visitors was 13 minutes. 37 groups equating to 72 people or 23% of visitors observed were recorded to not exit their vehicles. Visitors were likely to walk along the road south-west to look at Classiebawn Castle. The castle is not visible from the layby. Some were observed to walk onto the headland to look at the cliffs or cross fences into nearby farmland for a view of the castle.

Buses were recorded as passing this layby and not stopping. It became apparent that they were not using the layby at a stopping point. Buses were observed pulling in off the road west of the layby and allowing visitors to extend into nearby fields for photos of Classiebawn Castle. 92% of visitors remained in core areas which consisted of the road and laybys. 8% of visitors trafficked secondary areas, this included grassy verges and nearby fields.



**Figure 3.33 Mullaghmore Head visitor movement pattern**



**Figure 3.34 Mullaghmore Head visitor movement pattern**

### **Mullaghmore Head Analysis of Results**

Over 99%% of visitors of Mullaghmore Head were recorded to engage in low level activities that resulted in no effects. One visitor (less than 0.5% of visitors overall) was observed taking a rooted plant (leafy with flowers) from the site. The plant was pulled from the road verge.

The activities and effects observed during the study at Mullaghmore Head were not reported to result in any significant, long term adverse effects.

### 3.1.5 Downpatrick Head

**Landscape Type:** Rocky shore/peat/grassland in peninsular coastal context

**Dates Surveyed:** 11<sup>th</sup> and 12<sup>th</sup> June 2015

**Weather:** Sunny

#### Site Description

Downpatrick Head is a headland located north-east of the village of Ballycastle in Co. Mayo. It is noted for its cliffs, coastal features including blow holes and the sea stack (Dún Briste), and its megalithic and geological interest.

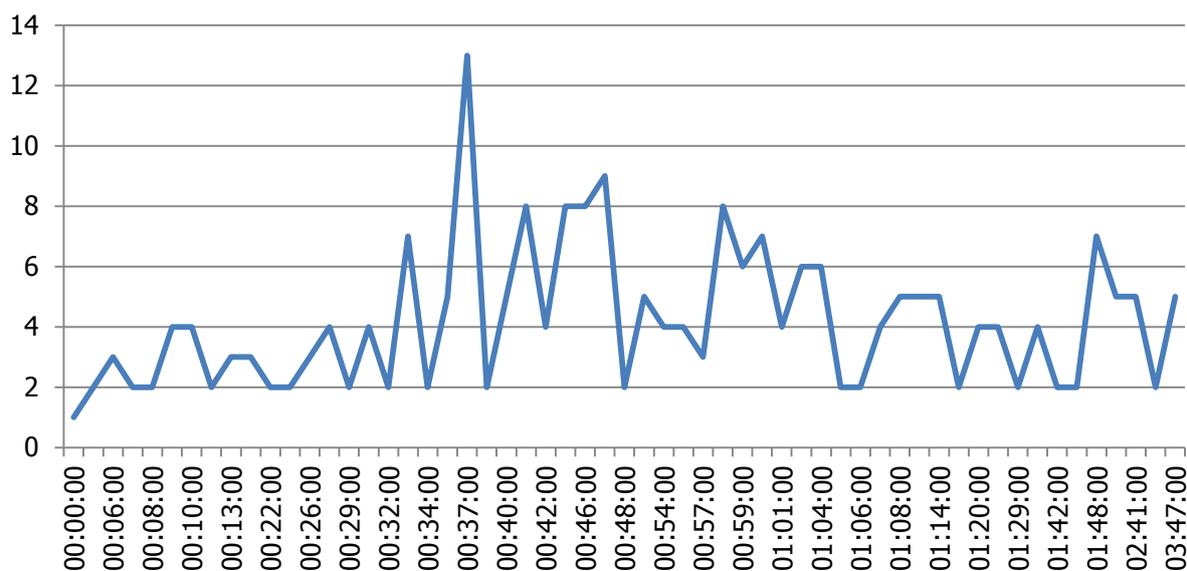
Downpatrick Head consists of a carpark with two smaller laybys south of the car park. The car park has capacity for approximately 30 cars. From here visitors can walk to Downpatrick Head. The site is grazed by sheep in all areas. The land is a privately owned farm. The site has recently been developed to include a 'bund' and viewpoint around the larger of two blowholes. There is also glass panels and safety railing surrounding the blowhole. The smaller blowhole (near to the car park) has been covered by steel mesh allowing visitors to walk over it.

A fast food van was present in the carpark on both days. Visitors were observed from the bund around the larger blowhole. The car park was visible from the survey station. There was some interpretive material inside the hideout underneath the viewing platform at the larger blowhole.

#### Downpatrick Head Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Downpatrick Head	179	168	349	109	00:38 minutes

### Time Spent on Site



**Figure 3.35 Duration of time spent by visitors at Downpatrick Head**

## Use of Interpretive Material

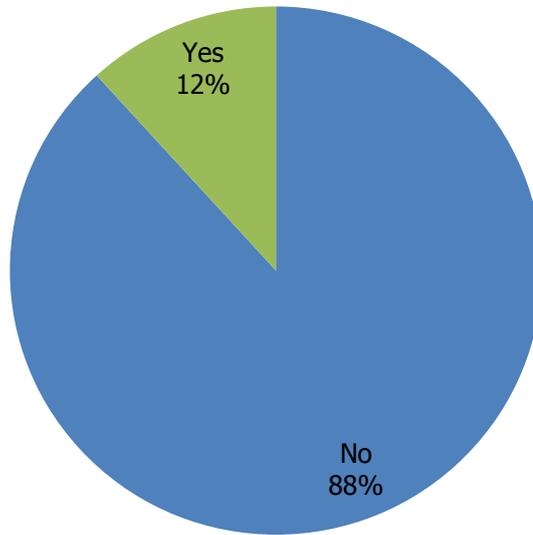


Figure 3.36 Use of Interpretive Material at Downpatrick Head

## Level of Impact Observed

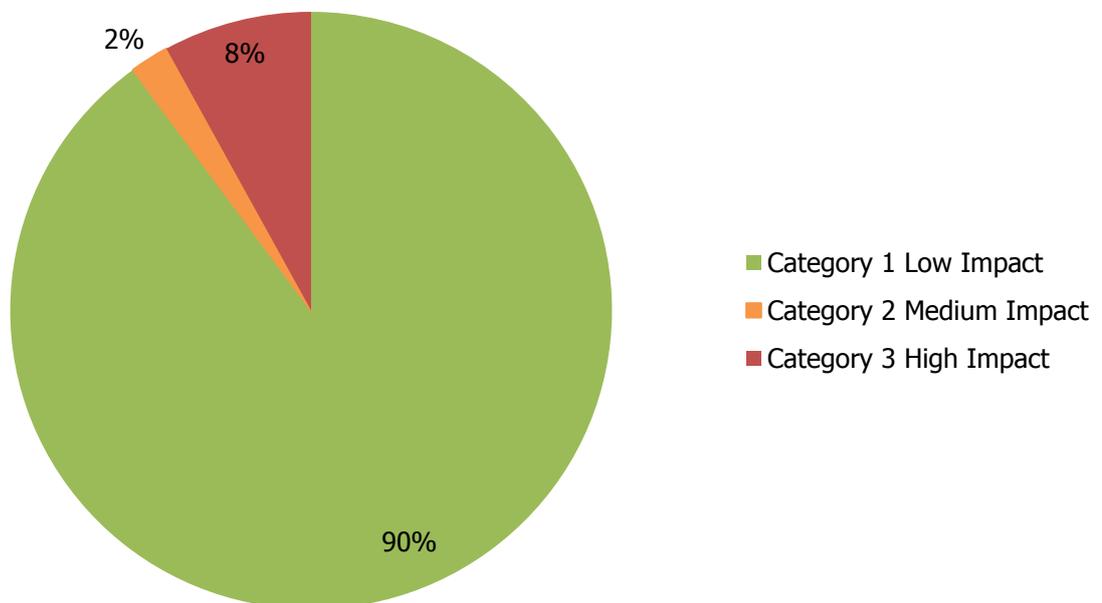
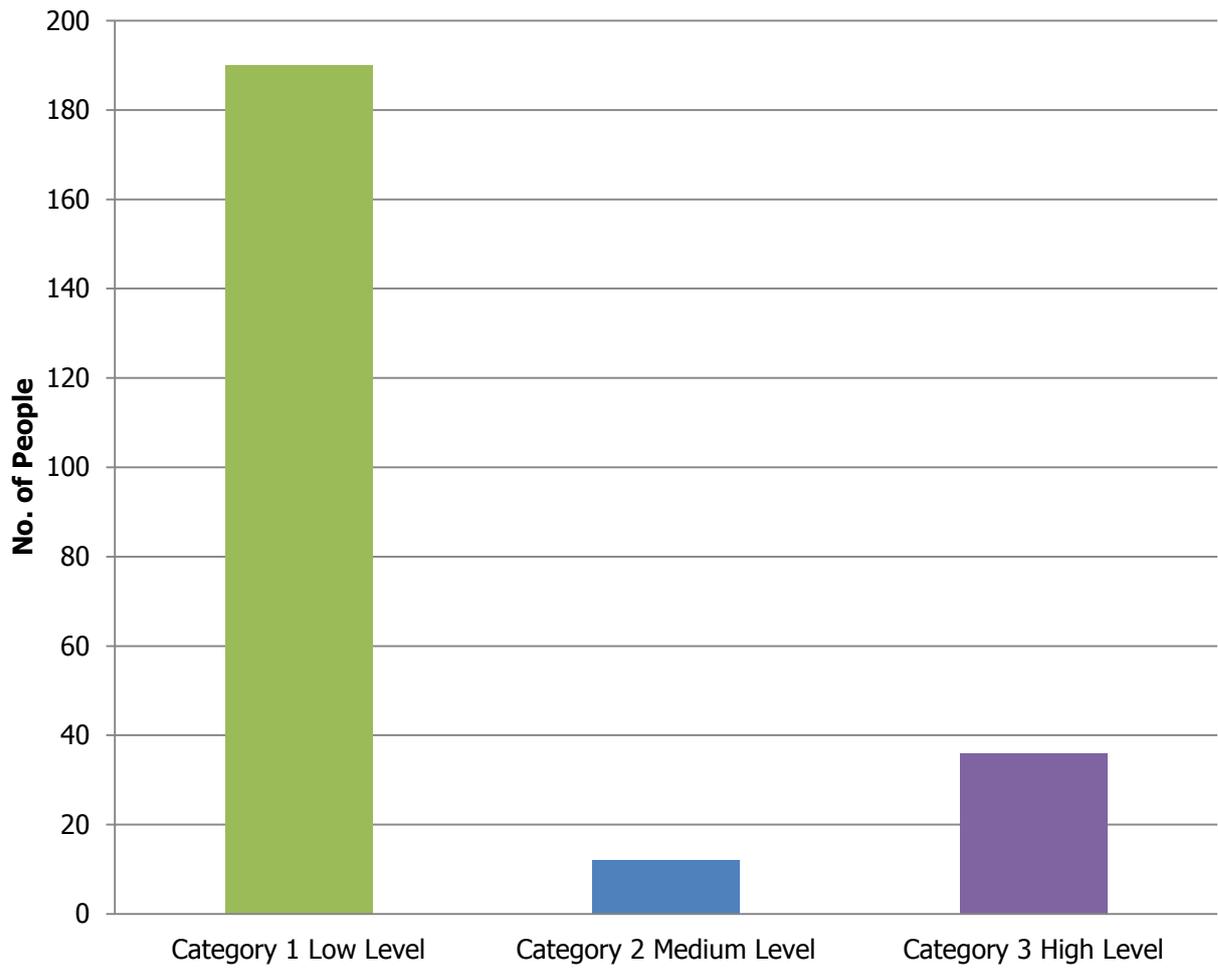
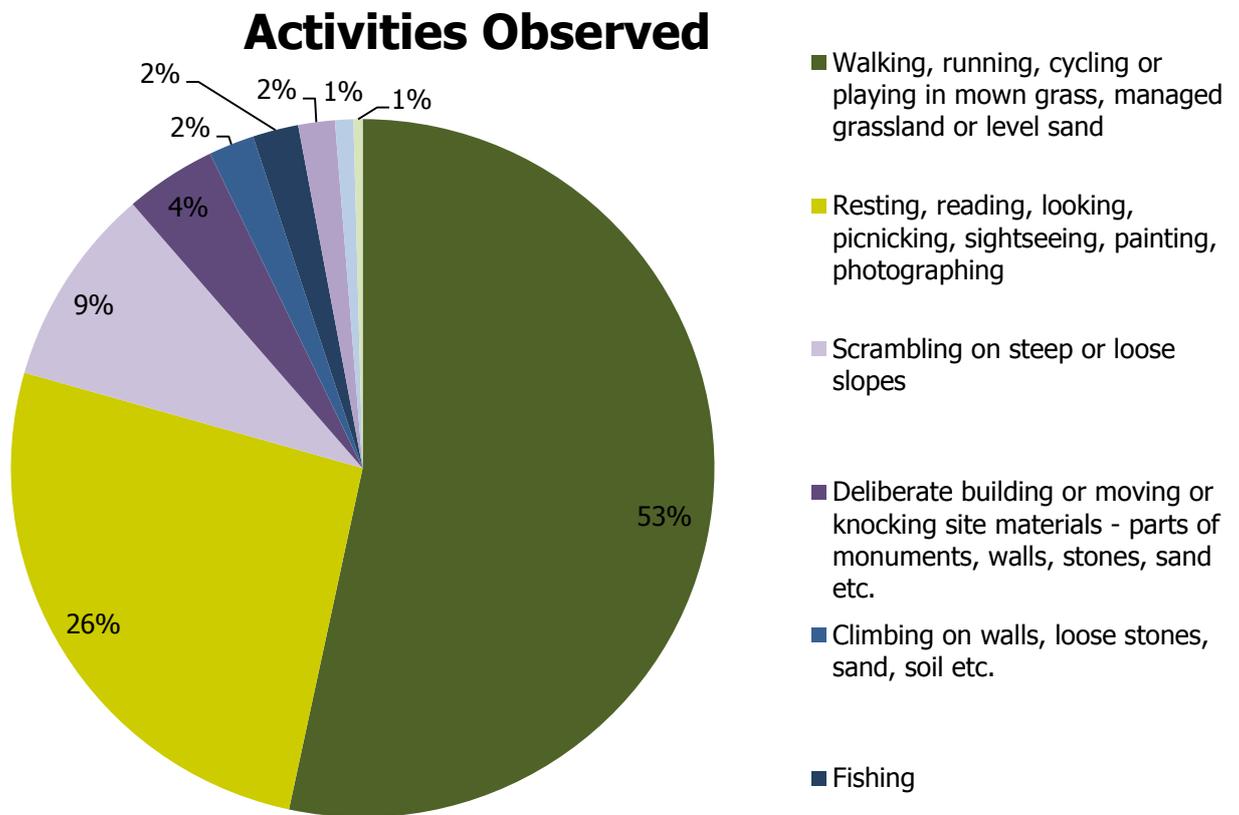


Figure 3.37 Level of impact observed at Downpatrick Head

## Level of Activity Observed



**Figure 3.38 Level of activity observed at Downpatrick Head**

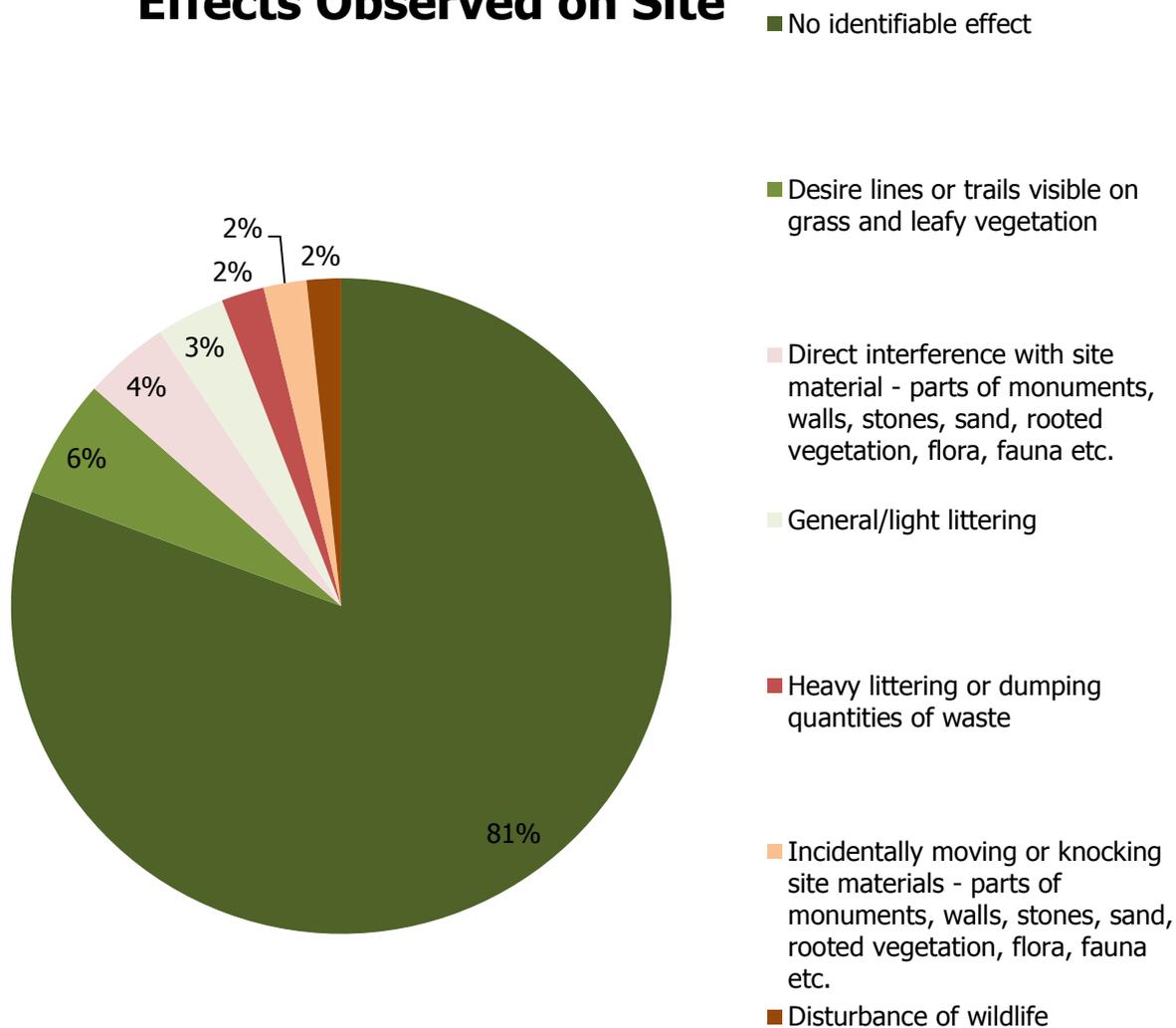


**Figure 3.39** Range of activities recorded at Downpatrick Head

**Table 3.8** Breakdown of activities observed at Downpatrick Head

Activities Observed	No. of People	% of People
Walking, running, cycling or playing in mown grass, managed grassland or level sand	127	53.36%
Resting, reading, looking, picnicking, sightseeing, painting, photography	62	0.42%
Scrambling on steep or loose slopes	22	9.24%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc.	10	26.05%
Climbing on walls, loose stones, sand, soil etc.	5	2.10%
Fishing	5	1.68%
Disturbance of wildlife	4	4.20%
Any movement leaving an existing trail or marked path	2	2.10%
Vehicular movement on roads and parking areas	1	0.84%
<b>Grand Total</b>	<b>238</b>	<b>100%</b>

## Effects Observed on Site

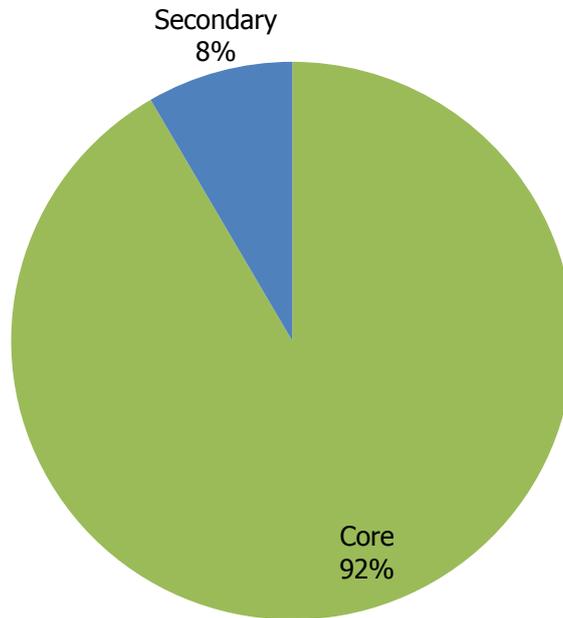


**Figure 3.40 Range of effects recorded at Downpatrick Head**

**Table 3.9 Breakdown of effects observed at Downpatrick Head**

Effects Observed	No. of People	% of People
No identifiable effect	192	80.67%
Desire lines or trails visible on grass and leafy vegetation	14	5.88%
Direct interference with site material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	10	4.20%
General/light littering	8	3.36%
Heavy littering or dumping quantities of waste	5	2.10%
Incidentally moving or knocking site materials - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	5	2.10%
Disturbance of wildlife	4	1.68%
<b>Grand Total</b>	<b>238</b>	<b>100%</b>

## Zones Trafficked by Visitors

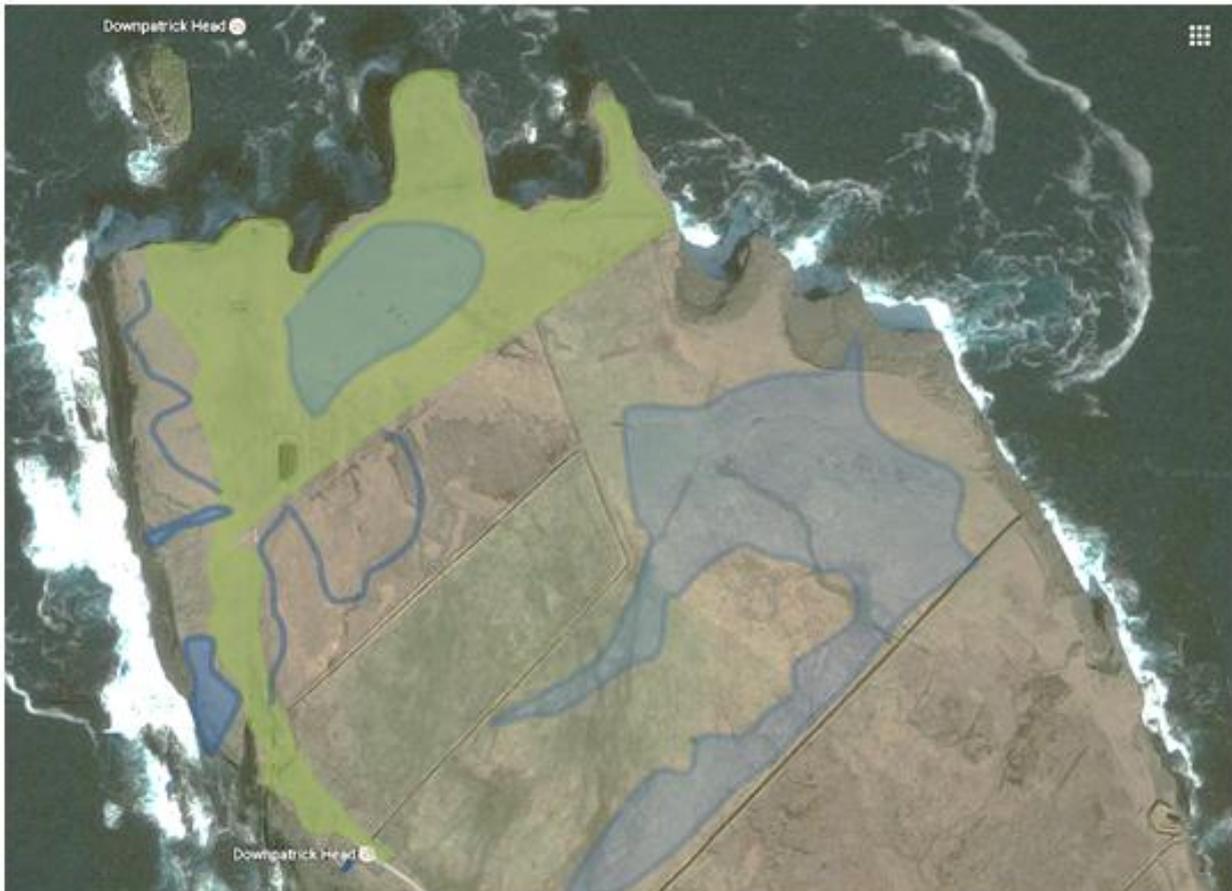


**Figure 3.41 Zones trafficked by visitors at Downpatrick Head**

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

Visitors walked from the car park to the blowhole, past the statue of St. Patrick and up to the World War 2 look out posts to look at Dún Briste (the sea stack). Some visitors continued around the headland to look at the 'EIRE 64' sign (used during World War II to alert pilots that they were flying over Ireland) and beyond before returning to the carpark. There was some difficulty surrounding access to the viewpoint as there are no steps up to it. Evidence of erosion was evident on the bund where visitors scramble on the steep slope to access the viewpoint.



**Figure 3.42 Downpatrick Head visitor movement pattern**

### Mullaghmore Head Analysis of Results

2% of visitors engaged in activities that resulted in a medium impact. This occurred when two males from a group of five were observed throwing stones into the sea.

8% of visitors engaged in activities that resulted in a category 3 high impact. This included a group of locals training greyhounds to chase hares in nearby farmland resulting in temporary disturbance of wild life. One male from another group was observed running across loose stones, incidentally moving stones which are part of a stony beach. A child from another group was observed scrambling on the slopes surrounding the blowhole and throwing loose lumps of soil into the blowhole.

A group of five men brought fishing gear along the headland and out of site. On return, the group did not appear to catch any fish. A visitor from a separate group commented that the group had left a significant amount of litter behind. This was later confirmed by the surveyors.

On further analysis of the 8% of visitors who were recorded to have a high impact on the site, all of impacts were not reported to result in any significant, long term adverse effects. 90% of visitors to the site engaged in activities that resulted in no impact.

### 3.1.6 Keem Bay

**Landscape Type:** Soft shore/beach in peninsular coastal context

**Dates Surveyed:** 13<sup>th</sup> and 14<sup>th</sup> June 2015

**Weather:** Sunny

#### Site Description

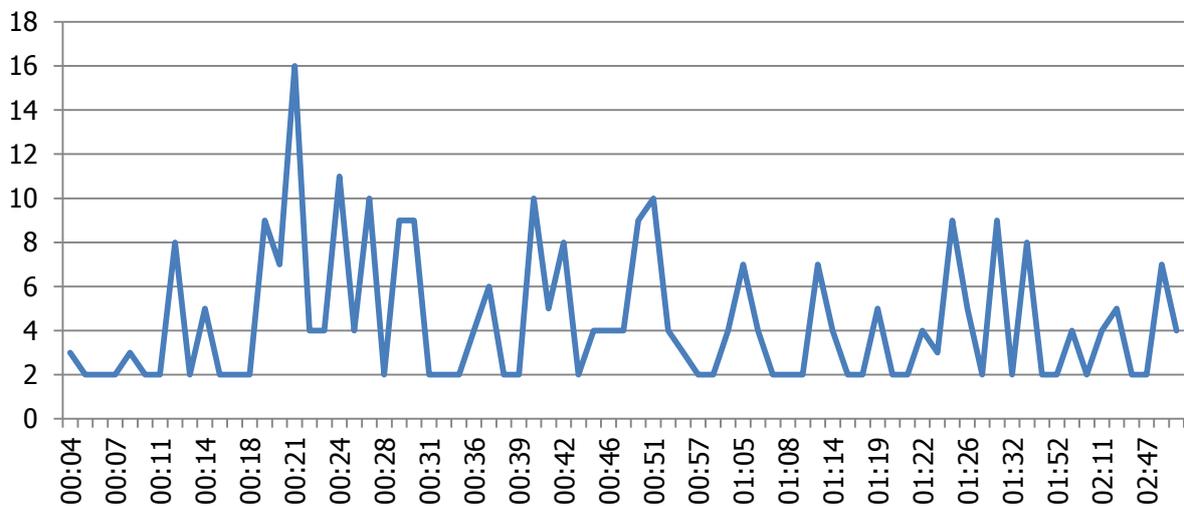
Keem Bay is a sheltered beach located at the western end of Achill Island, Co. Mayo. Keem Bay is located within the Croaghnaun Slievemore Special Area of Conservation (SAC). The site is a designated as an SAC for a number of habitats and species listed on Annex I and II of the E.U.

Toilet and car parking facilities are located north of the site. There is a life guard hut, a van selling snacks and a container with facilities for kayaking present in the lower car park. Observation was undertaken in June during a spell of fine weather when the site was very busy.

#### Keem Bay Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Keem Bay	156	174	330	113	00:52 minutes

### Time Spent on Site



**Figure 3.43 Duration of time spent by visitors at Keem Bay**

## Use of Interpretive Material

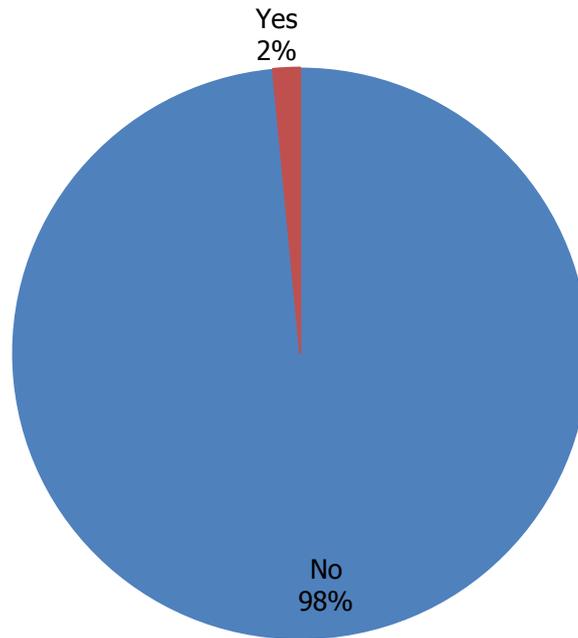


Figure 3.44 Use of interpretive material by visitors at Keem Bay

## Level of Impact Observed

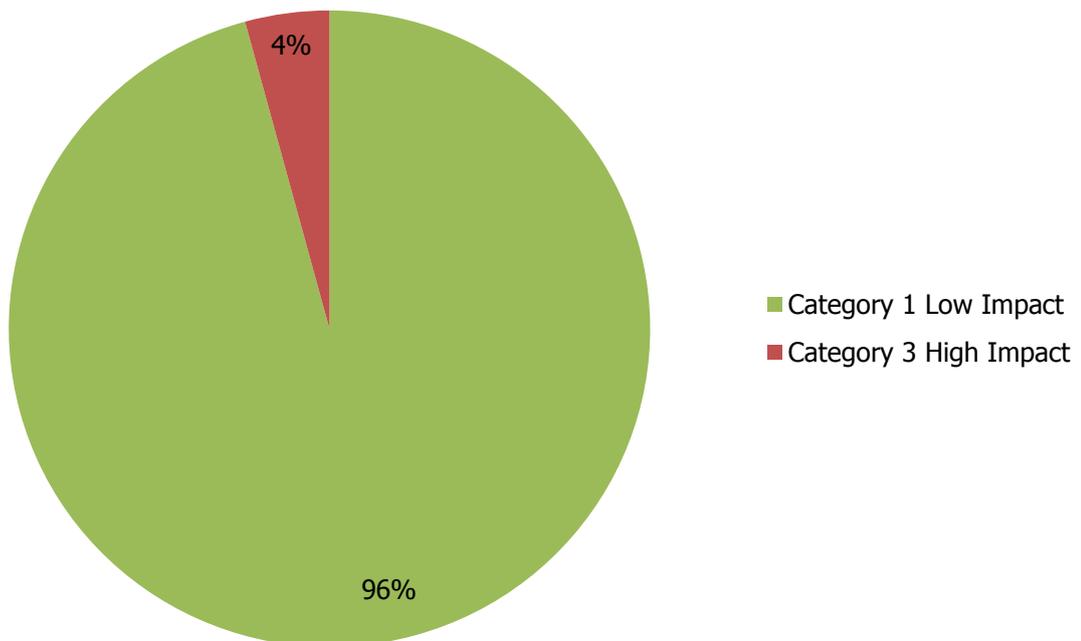
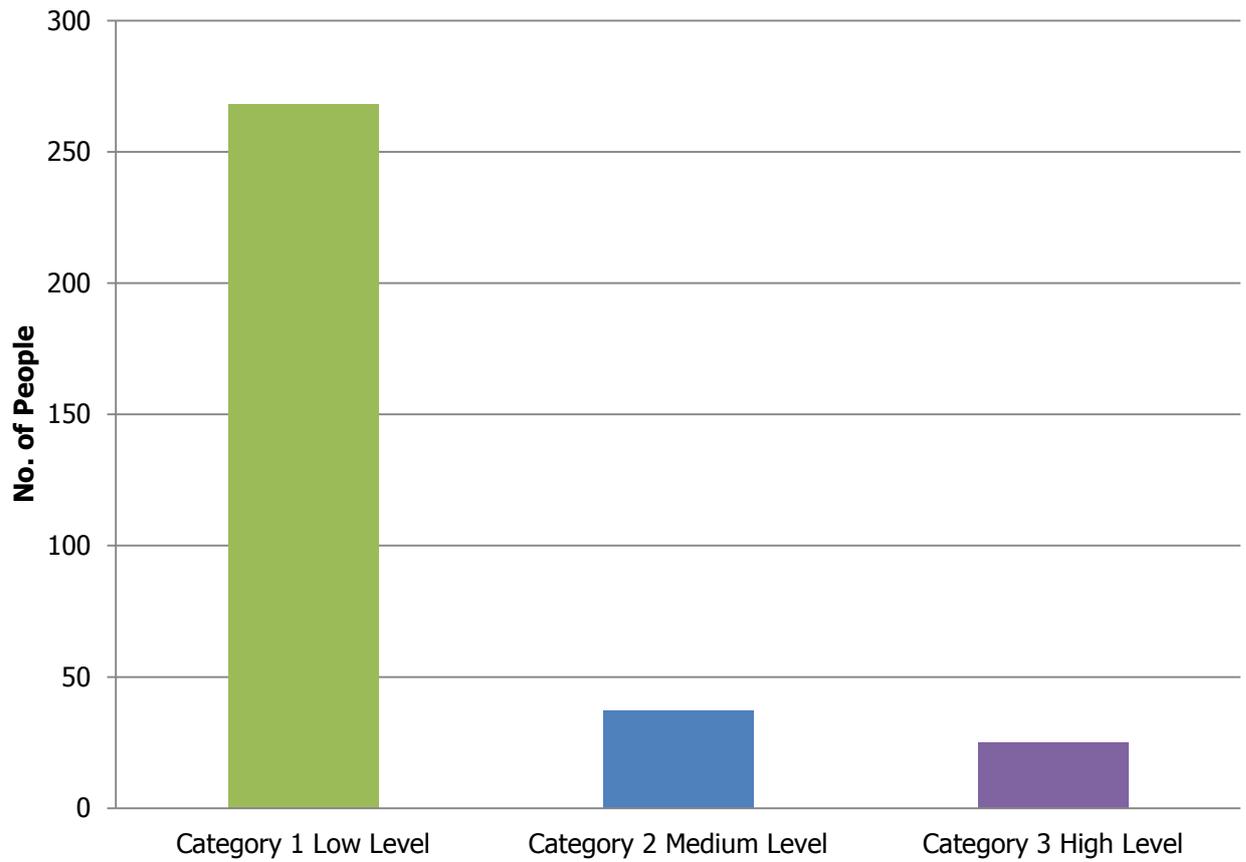


Figure 3.45 Level of impact observed at Keem Bay

## Level of Activity Observed



**Figure 3.46 Level of activity observed at Keem Bay**

## Activities Observed

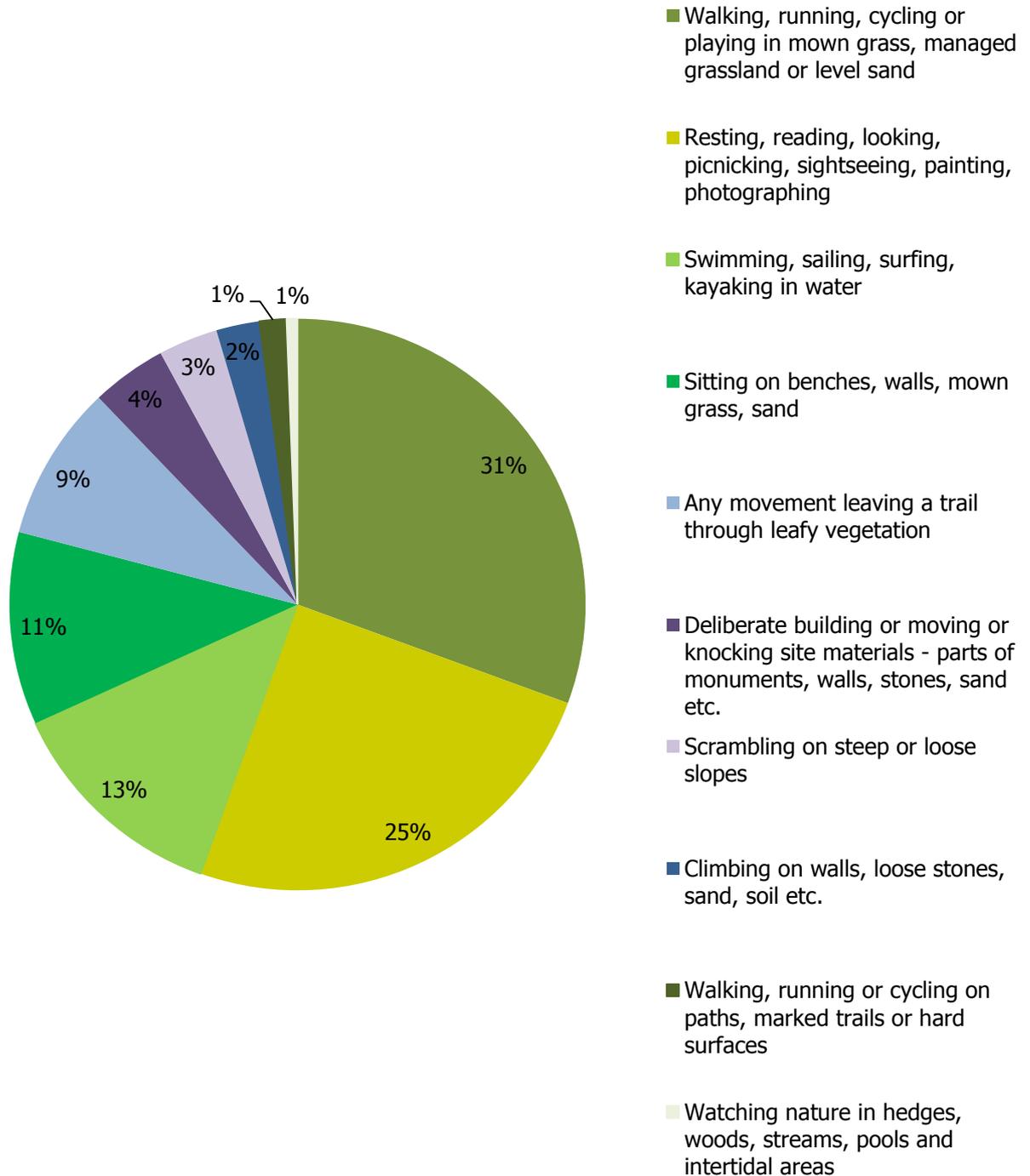
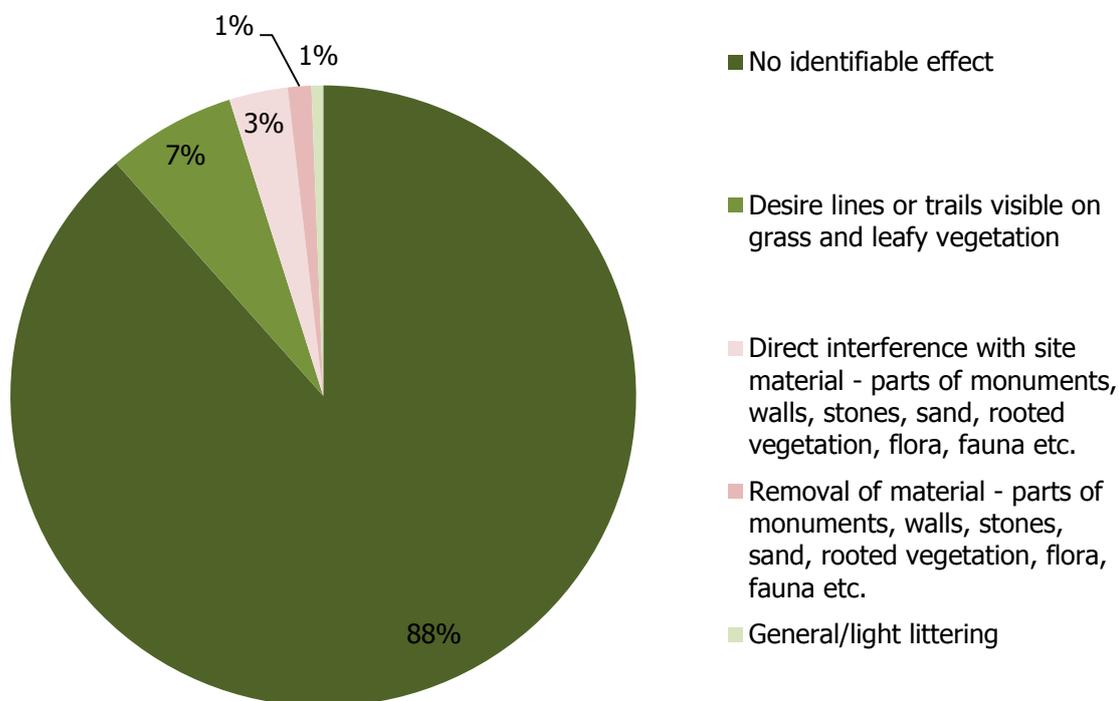


Figure 3.47 Range of activities recorded at Keem Bay

**Table 3.10 Breakdown of activities observed at Keem Bay**

<b>Activities Observed</b>	<b>No. of People</b>	<b>% of People</b>
Walking, running, cycling or playing in mown grass, managed grassland or level sand	101	30.61%
Resting, reading, looking, picnicking, sightseeing, painting, photographing	82	24.85%
Swimming, sailing, surfing, kayaking in water	42	12.73%
Sitting on benches, walls, mown grass, sand	36	10.91%
Any movement leaving a trail through leafy vegetation	29	8.79%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc.	14	4.24%
Scrambling on steep or loose slopes	11	3.33%
Climbing on walls, loose stones, sand, soil etc.	8	2.42%
Walking, running or cycling on paths, marked trails or hard surfaces	5	1.52%
Watching nature in hedges, woods, streams, pools and intertidal areas	2	0.61%
<b>Grand Total</b>	<b>330</b>	<b>100%</b>

## Effects Observed on Site

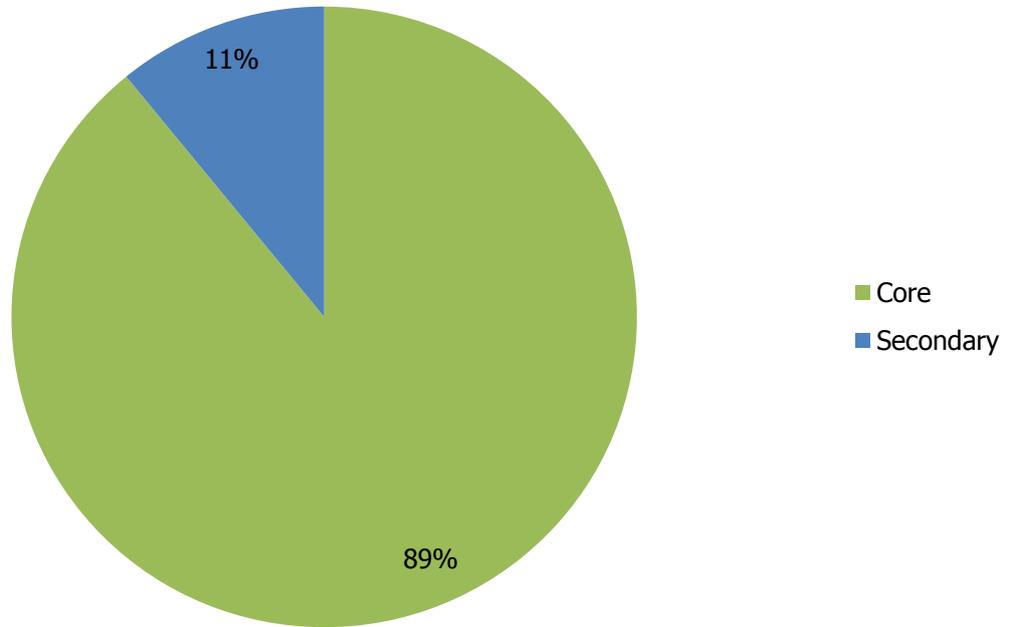


**Figure 3.48 Range of effects recorded at Keem Bay**

**Table 3.11 Breakdown of effects observed at Keem Bay**

Effects Observed	No. of People	% of People
No identifiable effect	292	88.48%
Desire lines or tracks visible outside of existing trail or marked path	22	6.67%
Direct interference with site material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	10	3.03%
Removal of material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	4	1.21%
General/light littering	2	0.61%
<b>Grand Total</b>	<b>330</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.49 Zones trafficked by visitors at Keem 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**

Visitors were observed to fill the car park and the laybys north of the beach. 90% of visitors to the site remained in the core areas of the site including the car park, laybys, the road, grassy areas adjacent to the beach containing site furniture and the beach.

Visitors who extended into secondary zones were observed cutting across grassy areas to take a shortcut to the beach and climbing up the steep slope south-west of the beach. A number of visitors were noted to park the roadside verge at busy intervals throughout the survey.



**Figure 3.50 Visitor movement pattern at Keem Bay**

### **Keem Bay Analysis of Results**

4% of visitors were recorded to have a high impact on the site. Three visitors from three separate groups were observed to remove pebbles/shells from the beach or throw stones into the sea. These effects will not result in any significant, long term adverse effects. 96% of visitors to Keem Bay engaged in activities that resulted in no identifiable effect or a low impact on the site.

### 3.1.7 Killary Harbour

**Landscape Type:** Montane/upland/peat in peninsular coastal context

**Dates Surveyed:** 26<sup>th</sup> and 28<sup>th</sup> June 2015

**Weather:** Overcast with occasional showers

#### Site Description

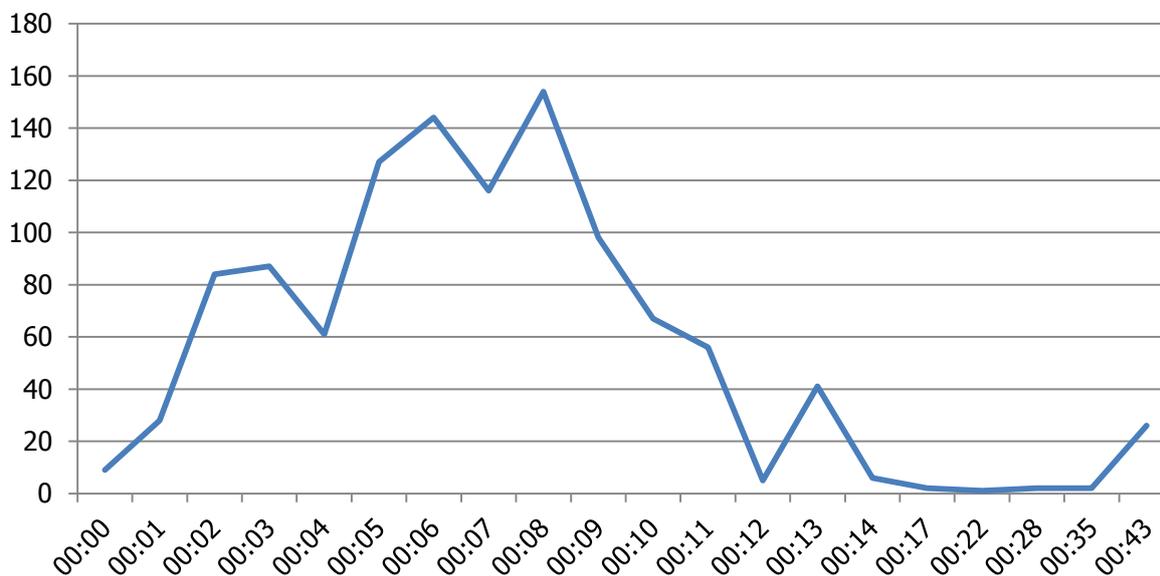
Killary Harbour is known for Ireland’s only fjord and is located west of the village of Leenaun in Connemara, Co. Galway. Locally the area is known for aquaculture including salmon farms and mussel rafts. The candidate Signature Discovery Point is located adjacent to the Maumturk Mountains Special Area of Conservation (SAC). The site is a designated as an SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive.

The site comprises of a Killary Harbour is a large layby west of Leenaun (capacity approximately 10-20 cars). It has recently been redeveloped. The site has a small viewing platform constructed from stone on the western side of the layby. The layby experiences a high volume of cars and buses stopping off when completing the Connemara Loop. There was no interpretive material at the site.

#### Killary Harbour Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Killary Harbour	498	617	1116	205	00:05 minutes

### Time Spent on Site



**Figure 3.51 Duration of time spent by visitors at Killary Harbour**

### Level of Impact Observed

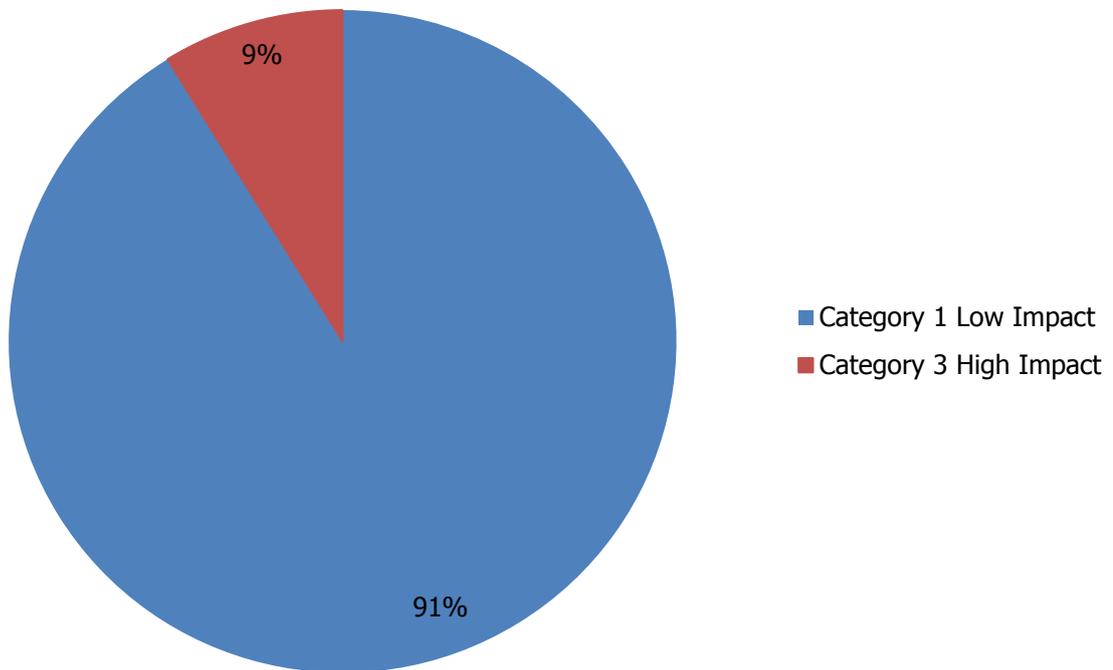


Figure 3.52 Level of impact observed at Killary Harbour

### Level of Activity Observed

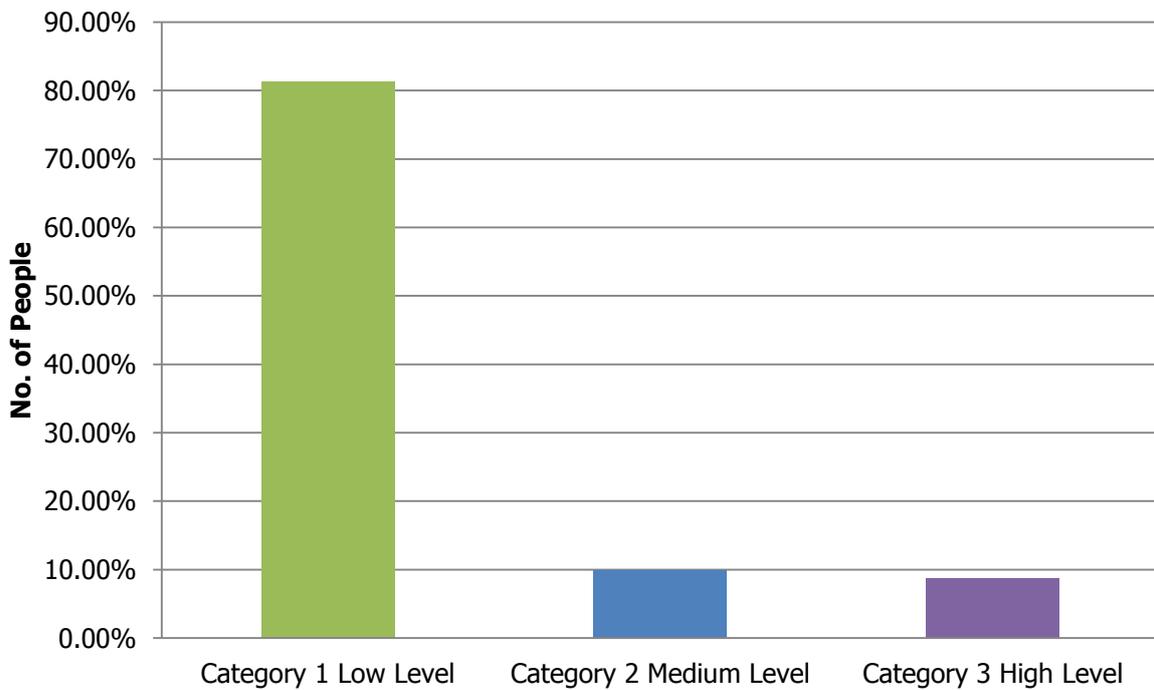


Figure 3.53 Level of activity observed at Killary Harbour

## Activities Observed

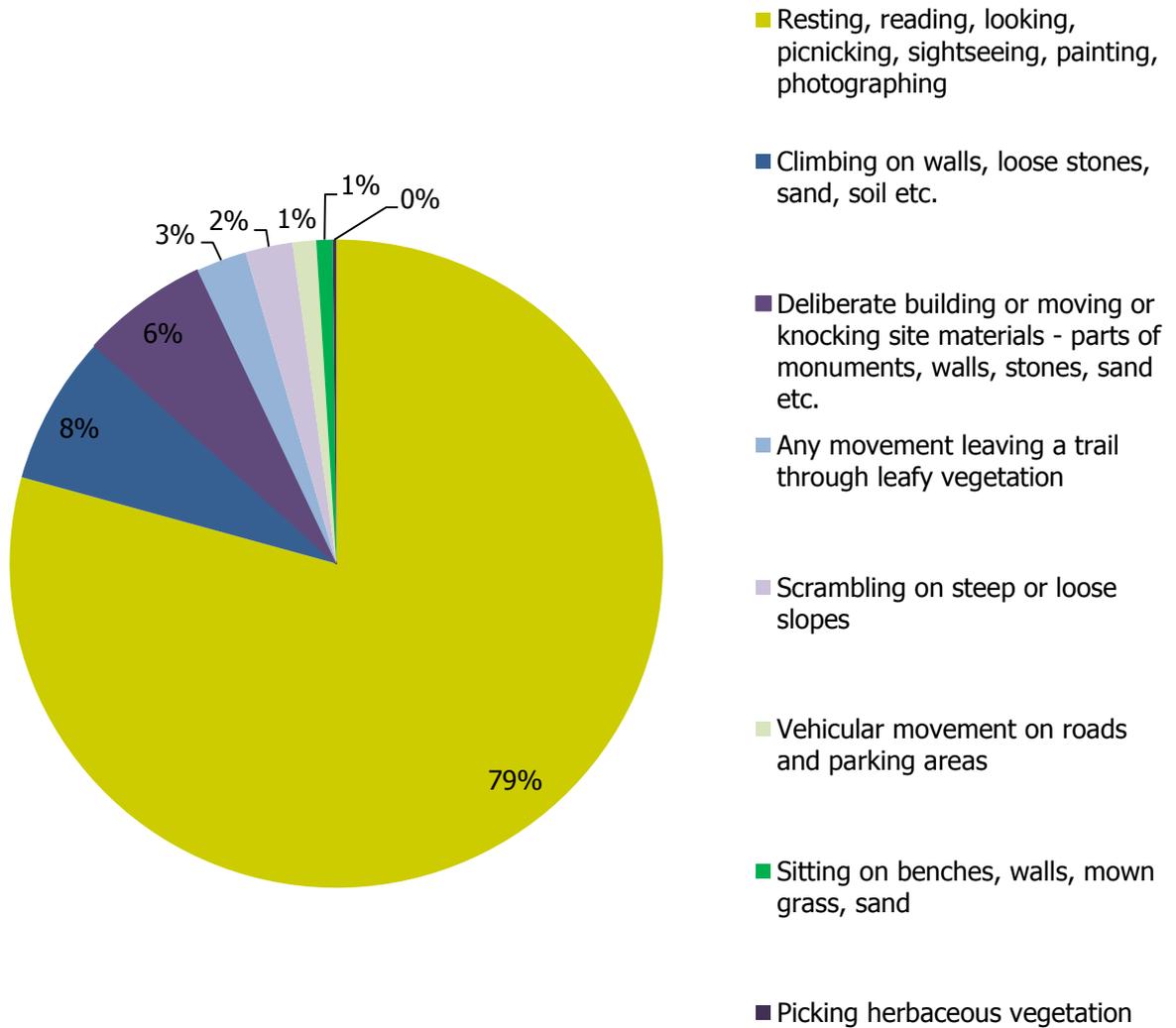
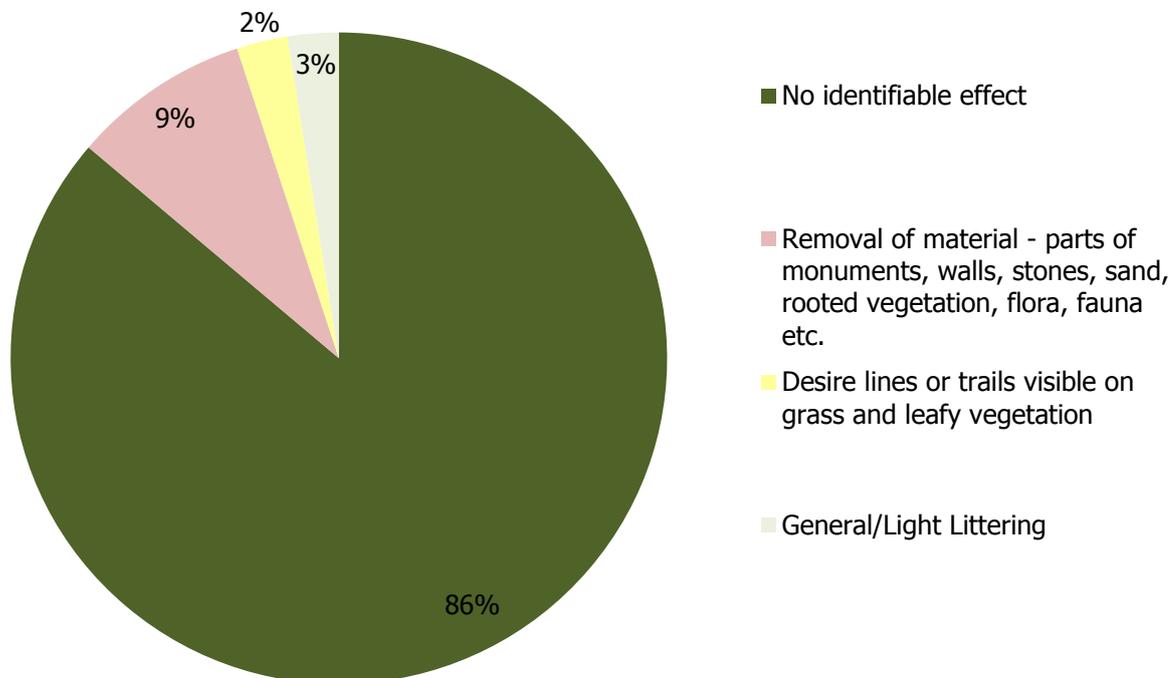


Figure 3.54 Range of activities recorded at Killary Harbour

**Table 3.12 Breakdown of activities observed at Killary Harbour**

<b>Activities Observed</b>	<b>No. of People</b>	<b>% of People</b>
Resting, reading, looking, picnicking, sightseeing, painting, photographing	885	79.30%
Climbing on walls, loose stones, sand, soil etc.	83	7.44%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc.	70	6.27%
Any movement leaving a trail through leafy vegetation	28	2.51%
Scrambling on steep or loose slopes	26	2.33%
Vehicular movement on roads and parking areas	13	1.16%
Sitting on benches, walls, mown grass, sand	9	0.81%
Picking herbaceous vegetation	2	0.18%
<b>Grand Total</b>	<b>1116</b>	<b>100%</b>

## Effects Observed

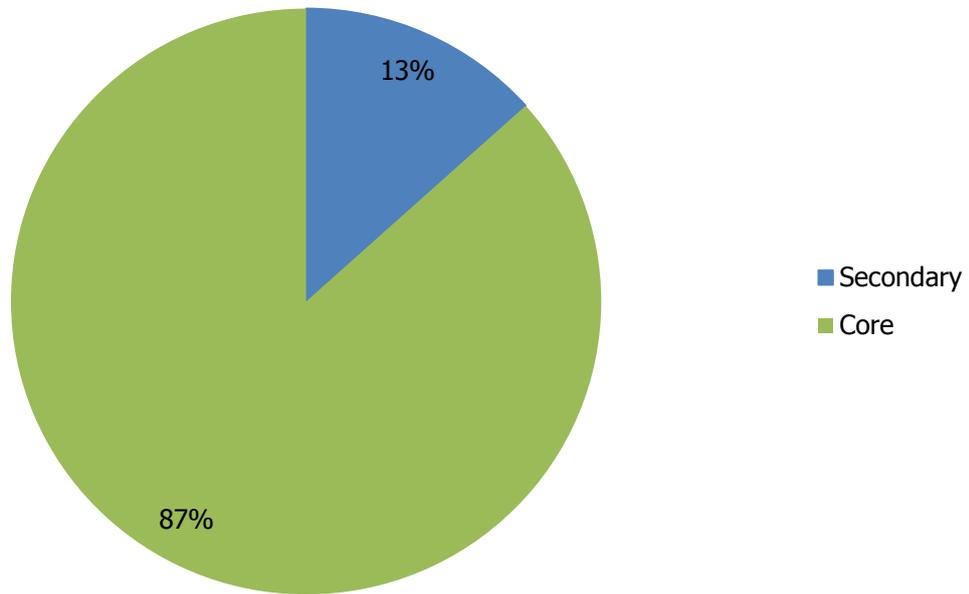


**Figure 3.55** Range of effects recorded at Killary Harbour

**Table 3.13** Breakdown of effects observed at Killary Harbour

Effects Observed	No. of People	% of People
No identifiable effect	962	86.20%
Removal of material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	98	8.78%
Desire lines or trails visible on grass and leafy vegetation	28	2.51%
General/Light Littering	28	2.51%
<b>Grand Total</b>	<b>1116</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.56 Zones trafficked by visitors at Killary Harbour**

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 remained within the paved areas of the layby and road. Visitors were observed to spend an average of five minutes at the site, looking and taking photos before departing. The 13% of visitors who trafficked outside the core zone were observed to cross the road to look at sheep in adjacent fields or to get a better photo. Some climbed up the steep bank at the roadside.



**Figure 3.57 Killary Harbour visitor movement pattern**

### **Killary Harbour Analysis of Results**

Six visitors were recorded removing stones from the gravel surface on the layby. The surface is due to be resurfaced with tarmac. One female picked vegetation and removed it from site. Another male from a different group, picked grass and attempted to feed sheep.

All of the above people were part of four groups, three of which were bus tours. These effects will not result in any significant, long term adverse effects.

### 3.1.8 Derrigimlagh

**Landscape Type:** Montane/upland/peat in peninsular coastal context

**Dates Surveyed:** 25<sup>th</sup> and 27<sup>th</sup> June 2015

**Weather:** Overcast with persistent heavy showers

#### Site Description

Derrigimlagh is located south of Clifden. Derrigimlagh blanket bog is known for being the landing spot of the first trans-Atlantic flight flown by Alcock and Brown. A monument to the Alcock and Brown landing site is located across the road from the candidate Signature Discovery Point. South of the site is the historic site of the Marconi Station, a wireless transmitting site during the earth 20<sup>th</sup> century. The ruins of the buildings still exist.

The site at Derrigimlagh is located adjacent to the Slyne Head Peninsula Special Area of Conservation (SAC). The site is a designated as an SAC for a number of habitats and species listed on Annex I and II of the E.U.

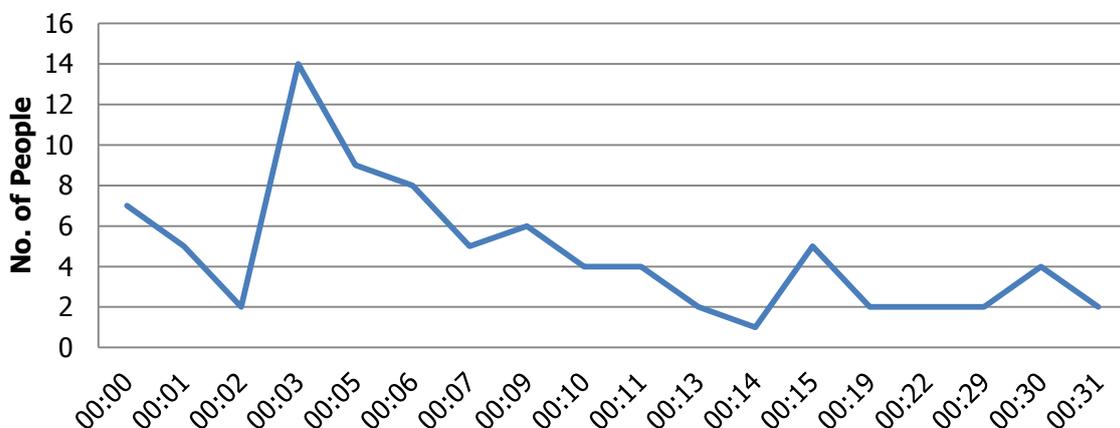
Planning permission for development of a car park and walkway has been sought for the Marconi Site south of the monument. It is understood that the candidate Signature Discovery Point will be concentrated in this area in the future. Works are due to begin in July 2015. During the survey, a number of spot visits were made to this site. Two vehicles were observed leaving the site. Both vehicles had opened the gate and had driven along the rough track towards the ruins of the Marconi Site.

The site surveyed is a large layby site (capacity approximately 10-20 cars) located in a remote area south of Clifden. The layby is deteriorating in condition, the car park surface is rough and the onsite furniture is broken and worn. There was no interpretive material at the site.

#### Derrigimlagh Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Derrigimlagh	51	33	84	36	00:09 minutes

### Time Spent on Site



**Figure 3.58** Duration of time spent by visitors at Derrigimlagh

## Level of Impact Observed

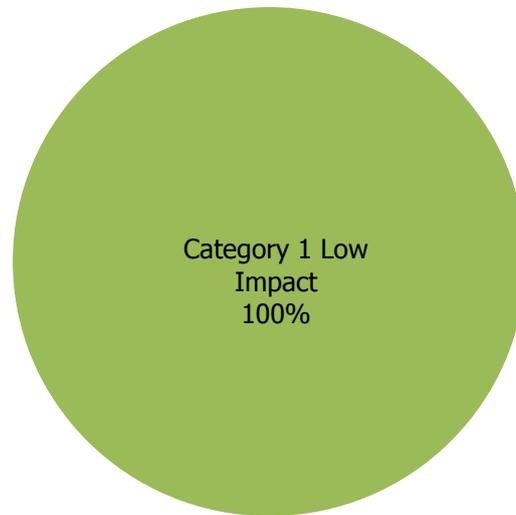


Figure 3.59 Level of impact observed at Derrigimlagh

## Level of Activity Observed

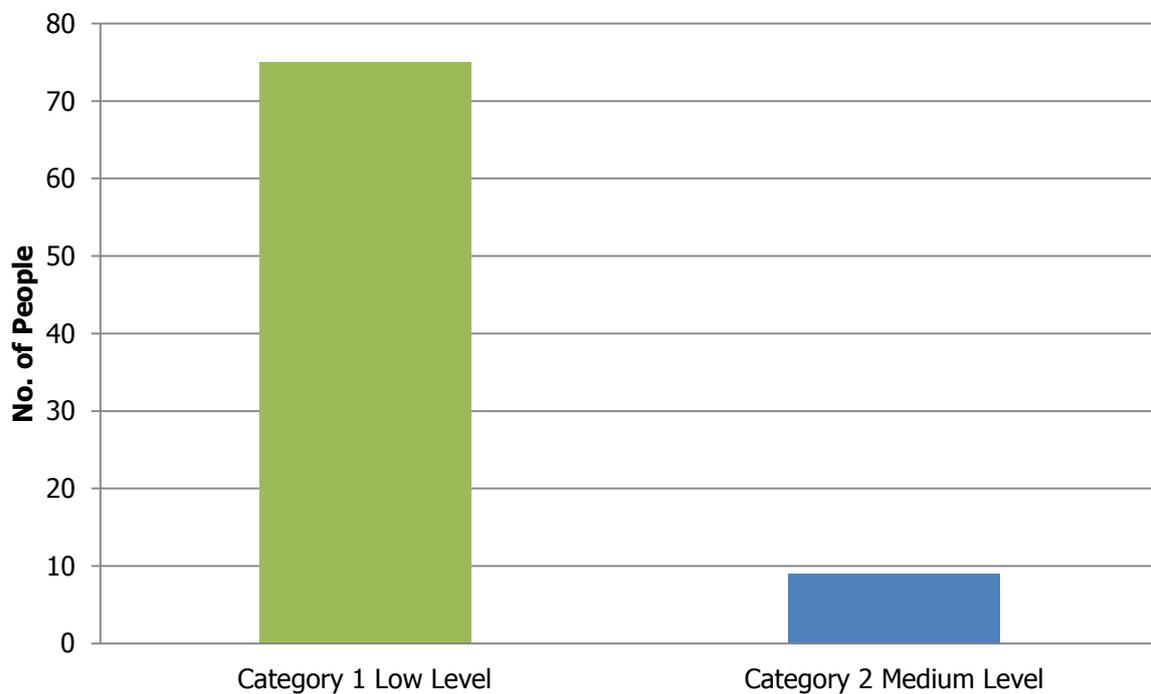
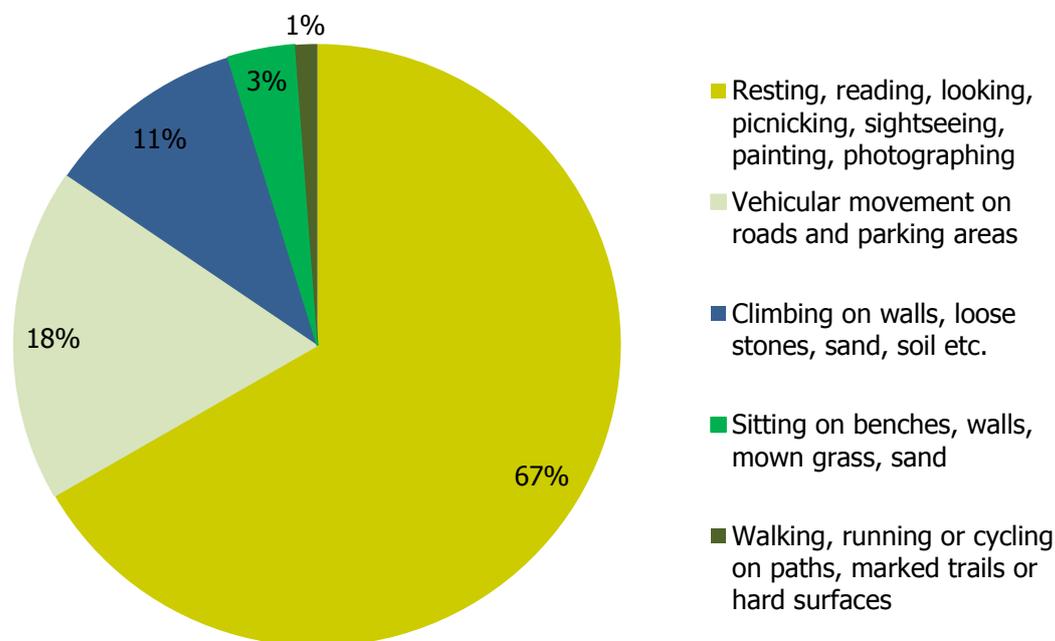


Figure 3.60 Level of activity observed at Derrigimlagh

## Activities Observed

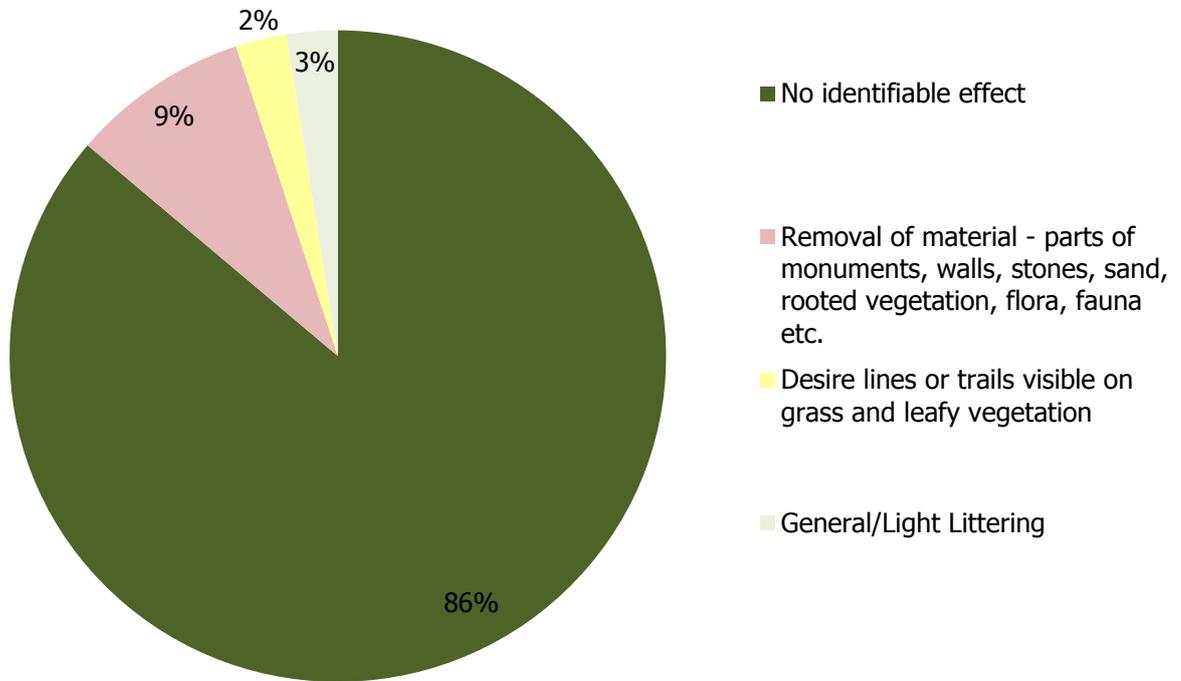


**Figure 3.61 Range of activities recorded at Derrigimlagh**

**Table 3.14 Breakdown of activities observed at Derrigimlagh**

Activities Observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	56	66.67%
Vehicular movement on roads and parking areas	15	17.86%
Climbing on walls, loose stones, sand, soil etc.	9	10.71%
Sitting on benches, walls, mown grass, sand	3	3.57%
Walking, running or cycling on paths, marked trails or hard surfaces	1	1.19%
<b>Grand Total</b>	<b>84</b>	<b>100%</b>

## Effects Observed

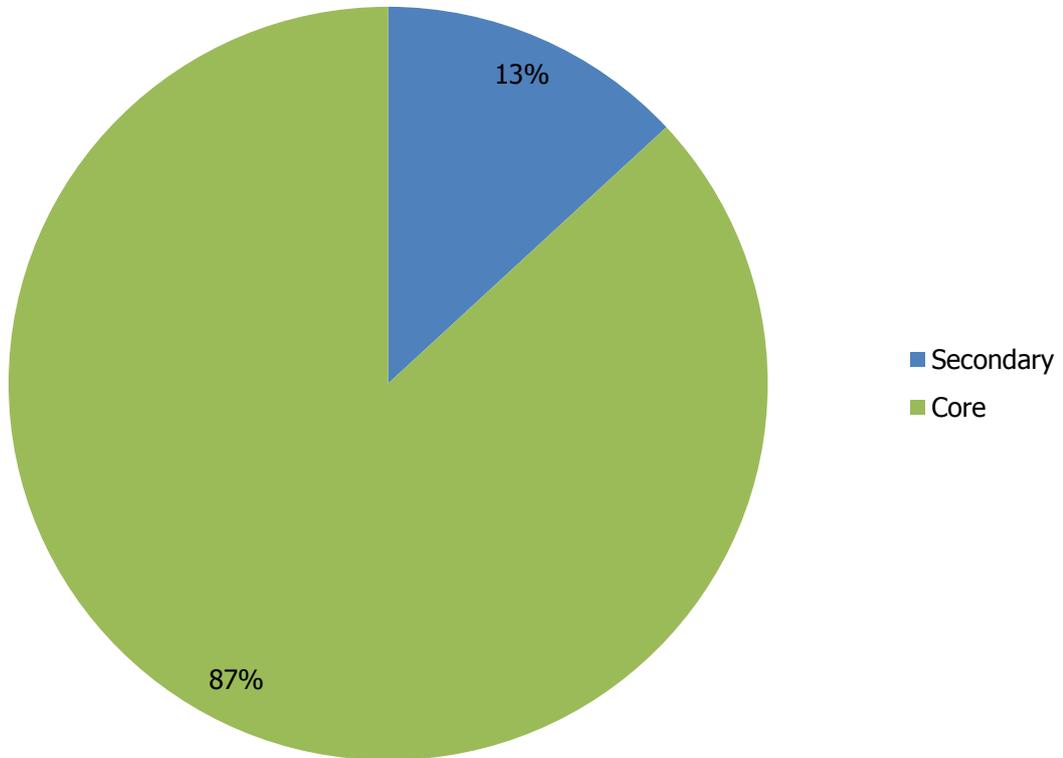


**Figure 3.62 Range of effects recorded at Derrigimlagh**

**Table 3.15 Breakdown of effects observed at Derrigimlagh**

Effects Observed	No. of People	% of People
No identifiable effect	82	97.62%
General/Light littering	2	2.38%
<b>Grand Total</b>	<b>84</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.63 Zones trafficked by visitors at Derrigimlagh**

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 remained within the car park and paved areas of the site. Activities included looking, photographing. Approximately 18% of visitors to the site did not exit their vehicles. The 13% of visitors who extended beyond the core area walked behind the Alcock and Brown monument to look at the view behind.



**Figure 3.64 Derrigimlagh visitor movement pattern**

### **Derrigimlagh Analysis of Results**

The site was extremely quiet and recorded the least amount of visitors overall. The weather was overcast with persistent showers during the survey which may have impacted on the amount of time spent by visitors. Visitors were observed to stop briefly (average duration on site 9 minutes) to look around and take photos of the monument. Approximately 10% of visitors to the site were recorded to climb on walls or on the Alcock and Brown monument. No effects were observed at the site.

### 3.1.9 Cliffs of Moher

**Landscape Type:** Rocky shore/peat/grassland in peninsular coastal context

**Dates Surveyed:** 1<sup>st</sup> and 2<sup>nd</sup> May 2015

**Weather:** Overcast, windy and occasional drizzle

#### Site Description

The Cliffs of Moher in Co. Clare are located approximately six kilometres north of Liscannor. The cliffs are Ireland’s most visited natural attraction. The Cliffs of Moher are located adjacent to the Cliffs of Moher Special Protection Area (SPA). The site is designated as an SPA for the protection of endangered species of birds listed in the European Union Directive on the Conservation of Wild Birds. The Cliffs are also of significant geological and historical interest.

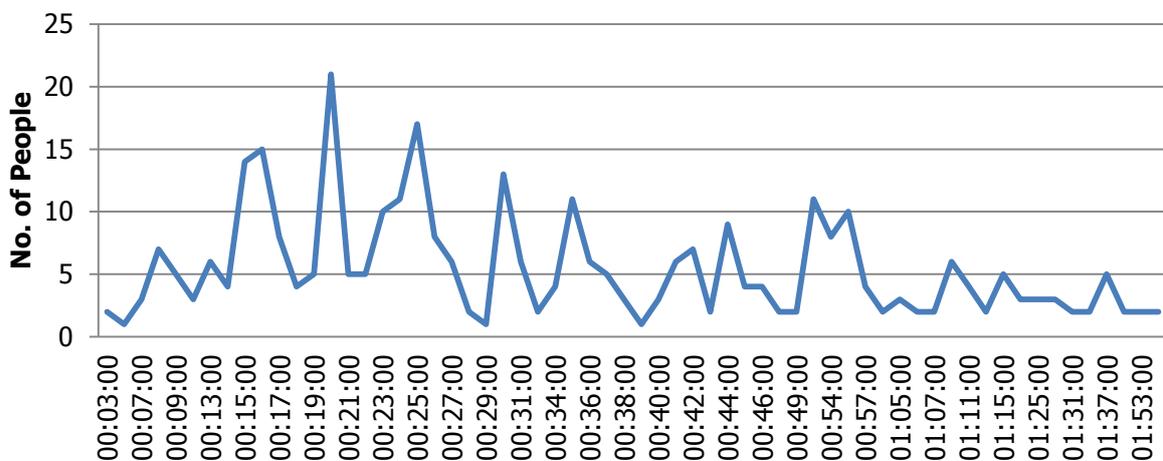
The site is highly managed with a visible staff presence, a visitor centre, a large car park across the road and coach parking. O’Briens Tower is accessible from the North Platform. From here, access can be gained to the northern part of the Coastal Walk trail. The South Platform allows access to the walk to Hag’s Head along the southern section of the Coastal Walk trail. Observation was undertaken from between the Main Platform (near the visitor centre) and the North Platform. A day was spent observing both north and south of the Coastal Walk trail to observe visitor behaviour outside the main visitor areas.

Interpretative panels were located in various places around the site. Due to the volume of people using the site, the use of interpretative material by visitors was not recorded. Visitors were observed from the time they began ascending the steps to the O’Briens tower. Visitors were not observed in or around the visitor centre and car park.

#### Cliffs of Moher Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Cliffs of Moher	187	193	380	134	00:36

### Time Spent on Site



**Figure 3.65 Duration of time spent by visitors at Cliffs of Moher**

### Level of Impact Observed

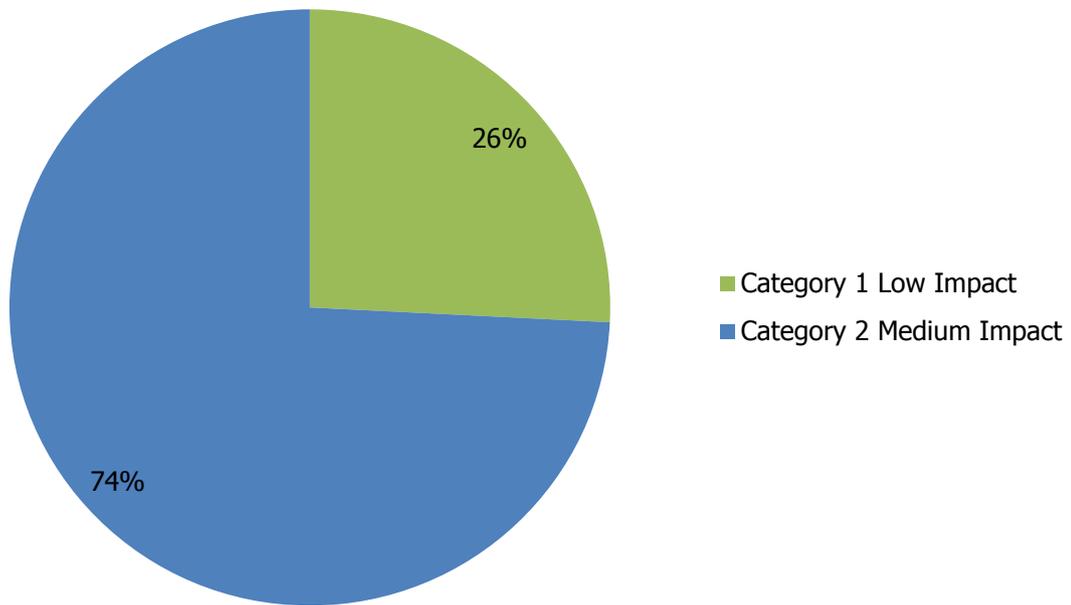


Figure 3.66 Level of impact observed at Cliffs of Moher

### Level of Activity Observed

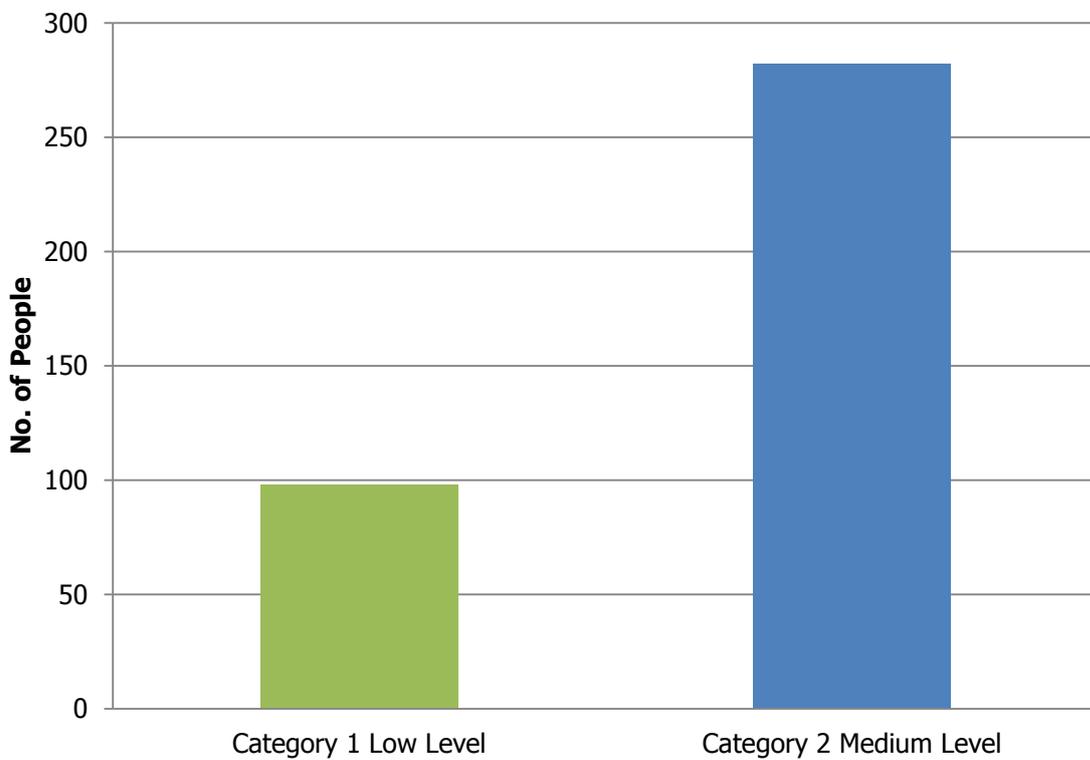
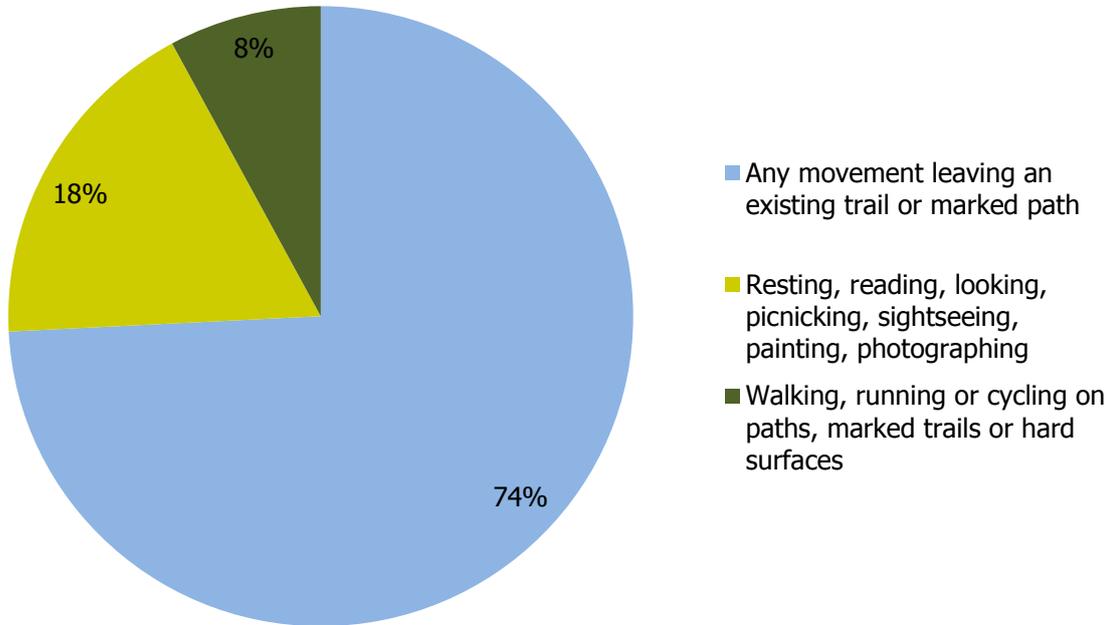


Figure 3.67 Level of activity observed at Cliffs of Moher

## Activities Observed on Site

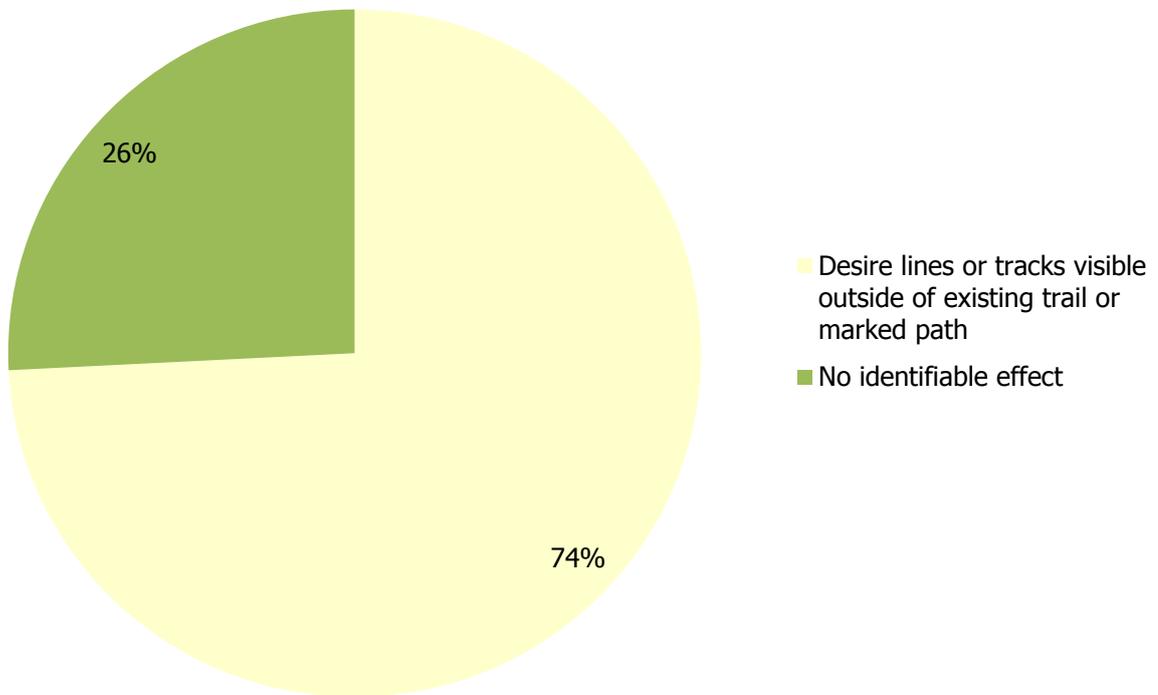


**Figure 3.68 Range of activities recorded at Cliffs of Moher**

**Table 3.16 Breakdown of activities observed at Cliffs of Moher**

Activities Observed	No. of People	% of People
Any movement leaving an existing trail or marked path	282	74%
Resting, reading, looking, picnicking, sightseeing, painting, photographing	68	18%
Walking, running or cycling on paths, marked trails or hard surfaces	30	8%
<b>Grand Total</b>	<b>380</b>	<b>100%</b>

## Effects Observed on Site

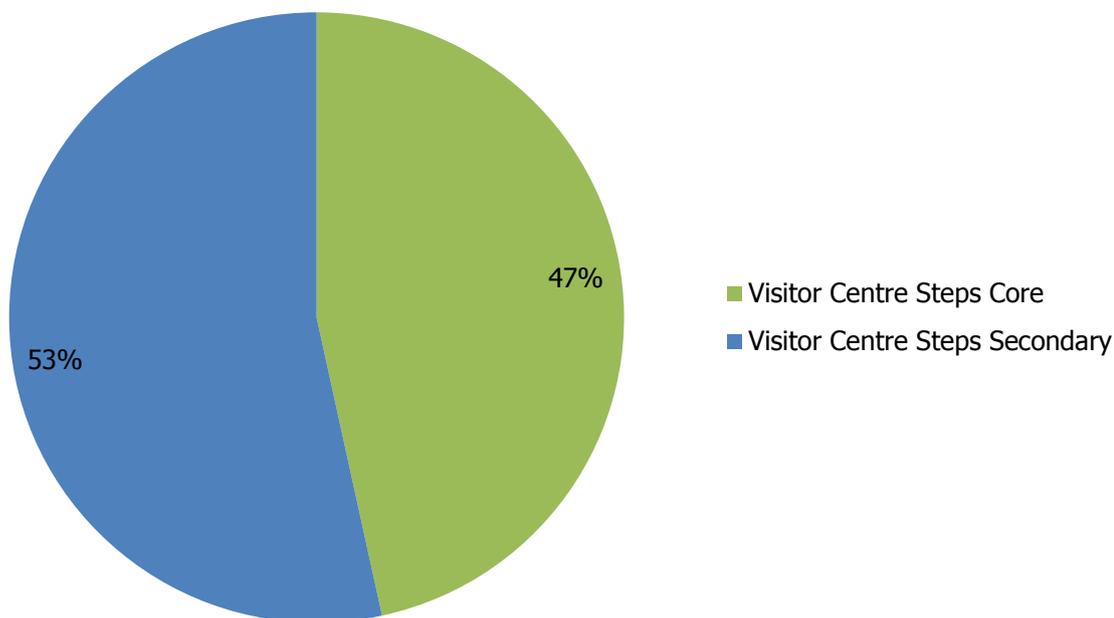


**Figure 3.69 Range of effects recorded at Cliffs of Moher**

**Table 3.17 Breakdown of effects observed at Cliffs of Moher**

Effects Observed	No. of People	% of People
Desire lines or tracks visible outside of existing trail or marked path	282	74%
No identifiable effect	98	26%
<b>Grand Total</b>	<b>380</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.70 Zones trafficked by visitors at Cliffs of Moher**

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

Visitors were observed from the steps leading up to O'Briens tower in the main areas of the visitor centre. Any movement on the trails that deviated away from the marked pathways or trails was recorded as secondary movements. Core movements related to visitors remaining in the main areas of the visitor centre or using the trails and not deviating from the marked trail.

Areas where visitor management are in place (the visitor centre, North and South Platforms) displayed best practice. Visitors primarily remained on the paved areas where available. There is a visible staff presence throughout the main visitor areas.

53% of visitors remain in the core area i.e. the main areas containing the visitor centre, north and south platforms. 47% of visitors observed from the main areas were recorded to extend onto the north and south sections of the Coastal Walking Trail.

On both trails north and south of the site, visitors were observed leaving the trails and walking along desire lines – which have formed deeply eroded tracks – along the headland. It was noted that if a visitor began walking on a trail, they were likely to walk away from the marked path.

On section of the Coastal Trail north of the visitor centre, a stile leads to a walled pathway on the other side. A pattern emerged where visitors were immediately deviating away from the pathway on

crossing the stile and walked up along the edge of the cliffs. There is evidence of deeply eroded desire lines along the edge of the cliff. Visitors are likely to return to the main visitor areas via the walled pathway.

On section of the Coastal Trail south of the visitor centre, a walled pathway extends along the cliffs for approximately one kilometre. Visitors were observed to remain on this pathway as it is difficult to cross the wall along the route. When the walled pathway ends, visitors spill out onto the cliff edge and there is evidence of deeply eroded tracks along the edge of the cliff. On return to the main visitor areas, visitors deviated from the walled pathway and returned to it at intervals as the cliff edge becomes narrower.



**Figure 3.71 Cliffs of Moher visitor movement pattern**

### **Cliffs of Moher Analysis of Results**

The visitors who remained within the compounds of the main visitor areas were recorded to have no identifiable effects. Deeply eroded tracks are visible outside of existing marked paths along the Coastal Walking Trails and this was marked as an effect caused cumulatively by the volume of people using the trails. 74% of visitors studied left trails or pathways. This high percentage is contributable to the fact that a day was spend observing activities only on the trails and the second study day was spent in the main areas which also recorded the number of visitors using the Coastal Walking Trail (North and South).

### 3.1.10 Loop Head

**Landscape Type:** Rocky shore/peat/grassland in peninsular coastal context

**Dates Surveyed:** 3<sup>rd</sup> and 4<sup>th</sup> May 2015

**Weather:** Overcast with occasional drizzle

#### Site Description

Loop Head is located on a Peninsula north of the mouth of the River Shannon in Co. Clare. Loop Head Lighthouse is one of 70 lighthouses in Ireland that is operated by the Commissioner of Irish Lights. The lighthouse is open to the general public for tours and is managed by Clare County Council. The headland west of the lighthouse contains an 'EIRE' sign which was used during World War II to alert pilots that they were flying over Ireland.

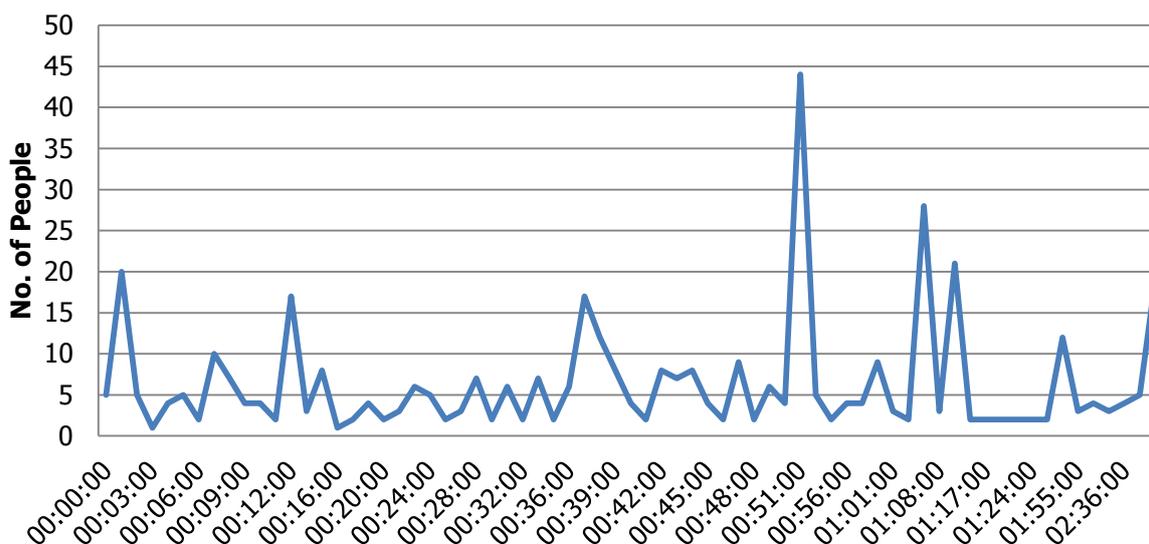
Loop Head is located within the Loop Head Special Area of Conservation (SAC) and adjacent to the Loop Head Special Protection Area (SPA). The site is a designated as an SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive. The site is also designated as an SPA for the protection of endangered species of birds listed in the European Union Directive on the Conservation of Wild Birds.

The site comprises of a car park for approximately 30-40 cars. The lighthouse is enclosed by a wall and is accessible to the public.

#### Loop Head Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Loop Head	207	230	437	133	00:52

### Time Observed on Site



**Figure 3.72 Duration of time spent by visitors at Loop Head**

## Use of Interpretive Panels

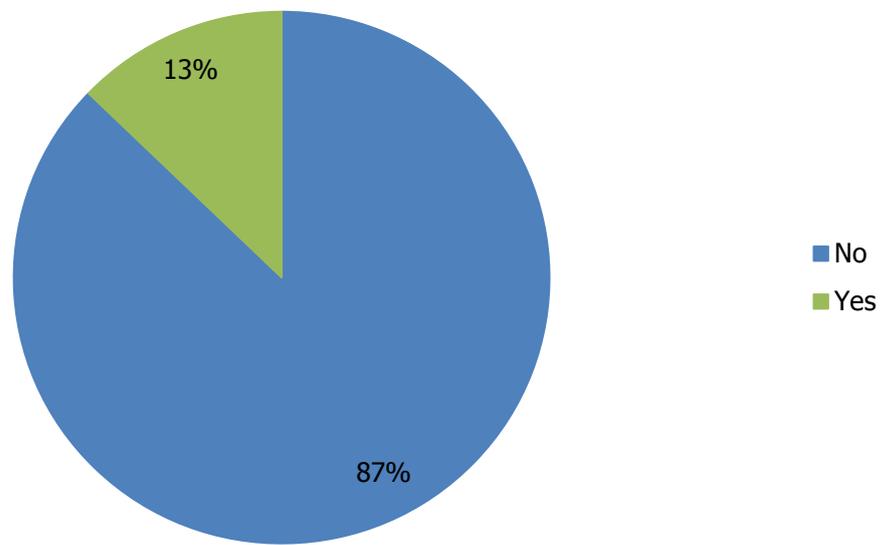


Figure 3.73 Use of interpretive material by visitors at Loop Head

## Level of Impact Observed

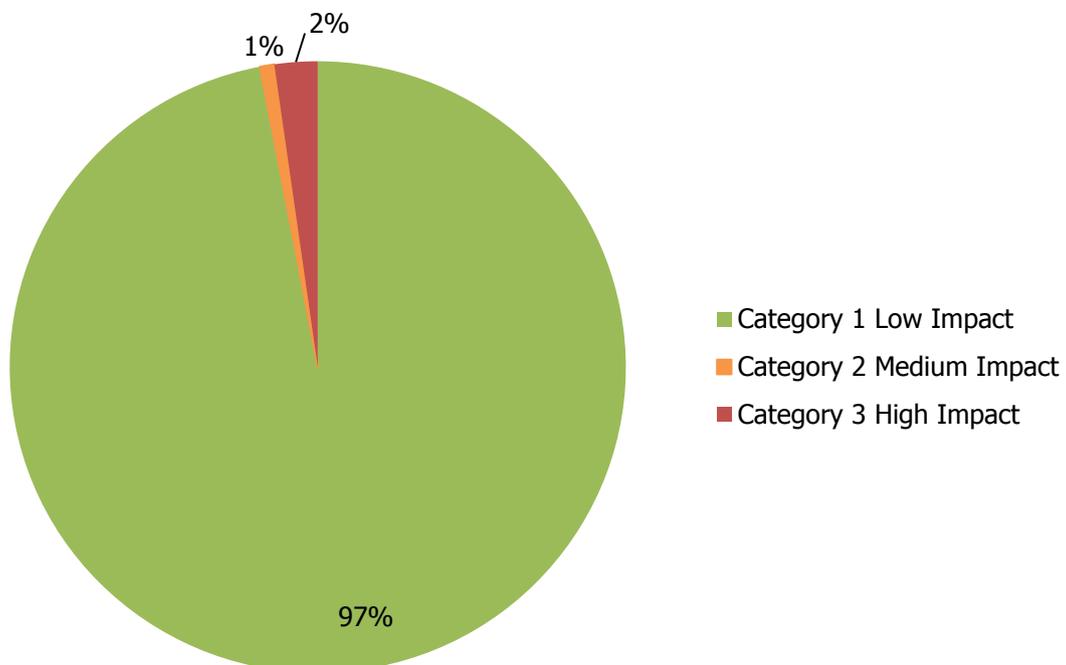
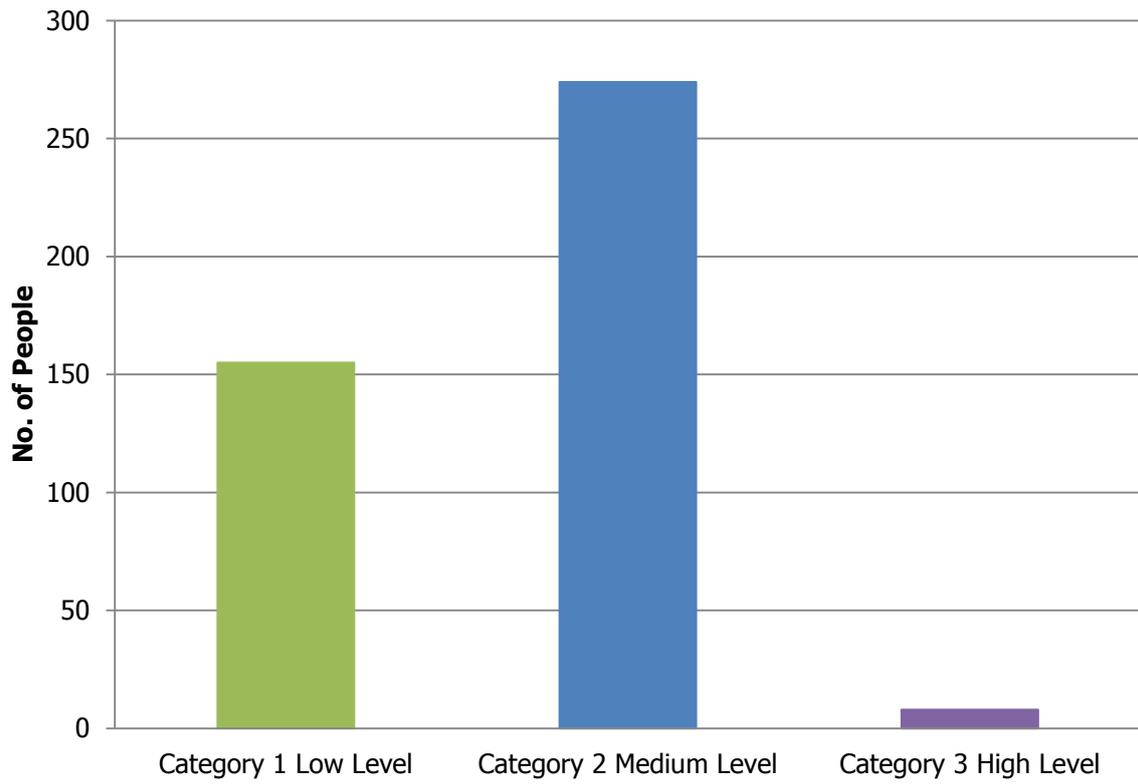


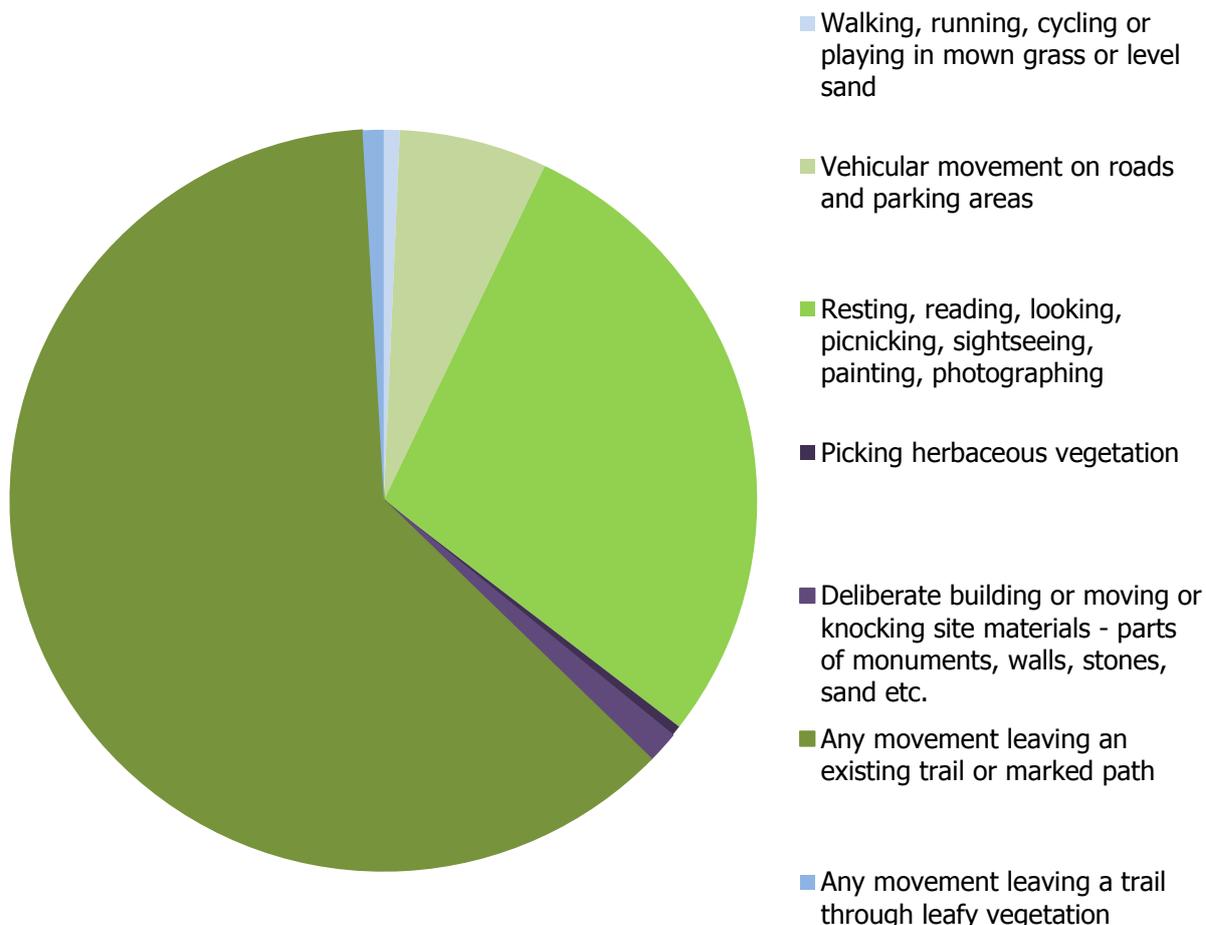
Figure 3.74 Level of impact observed at Loop Head

## Level of Activity Observed



**Figure 3.75 Level of activity observed at Loop Head**

## Activities Observed on Site

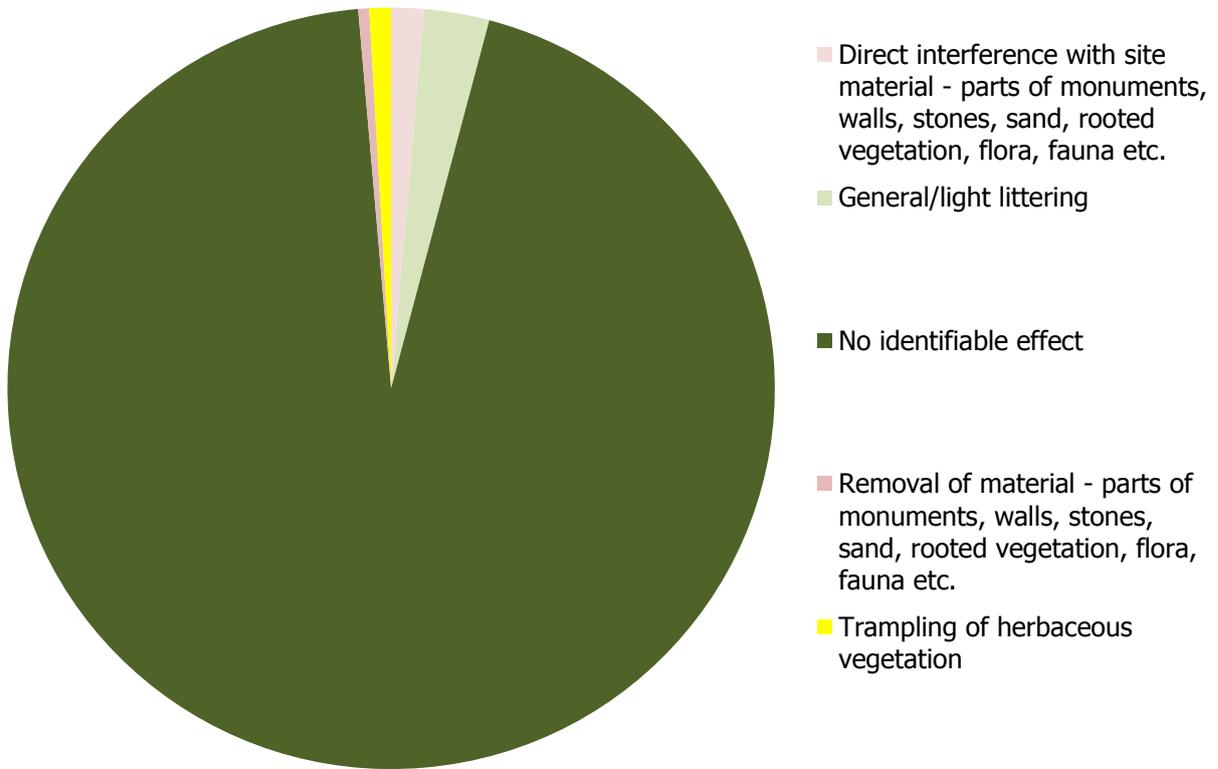


**Figure 3.76 Range of activities recorded at Loop Head**

**Table 3.18 Breakdown of activities observed at Loop Head**

Activities Observed	No. of People	% of People
Any movement leaving an existing trail or marked path	270	61.8%
Resting, reading, looking, picnicking, sightseeing, painting, photographing	124	28.4%
Vehicular movement on roads and parking areas	28	6.4%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc.	6	1.4%
Any movement leaving a trail through leafy vegetation	4	0.9%
Walking, running, cycling or playing in mown grass or level sand	3	0.7%
Picking herbaceous vegetation	2	0.5%
<b>Grand Total</b>	<b>437</b>	<b>100%</b>

## Effects Observed on Site

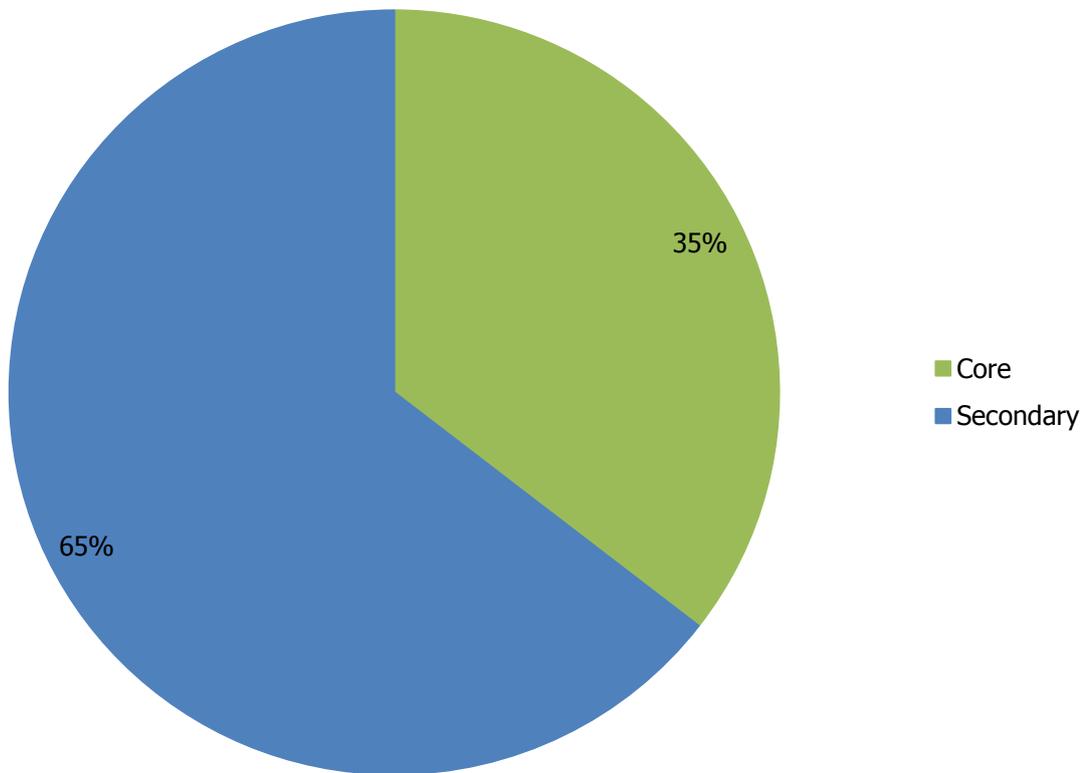


**Figure 3.77** Range of effects recorded at Loop Head

**Table 3.19** Breakdown of effects observed at Loop Head

Effects Observed	No. of People	% of People
No identifiable effect	413	94.5%
General/light littering	12	2.7%
Direct interference with site material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	6	1.4%
Trampling of herbaceous vegetation	4	0.9%
Removal of material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	2	0.5%
<b>Grand Total</b>	<b>437</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.78 Zones trafficked by visitors at Loop Head**

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

The majority of visitors were observed to visit the lighthouse while others went for a walk around the headland. Many of the visitors to the lighthouse took the tour and then went for a walk around the headland. 65% of visitors left the core area of the lighthouse enclosure and car park and proceeded to walk round the headland. A pattern emerged where visitors walked north away from the car park before proceeding west along the headland in the direction of the 'EIRE' sign. Visitors walked primarily along desire lines evident in the vegetation arising from visitor behaviour.

Most visitors walked towards the 'EIRE' sign before retracing their steps or returning along the northern boundary wall of the lighthouse. Some visitors simply walked to the headland north of the lighthouse before returning to the car park. A smaller percentage of visitors continued around the perimeter before returning along the eastern boundary wall. Weather was a defining factor in the amount of time spent walking around the headland.



**Figure 3.80 Loop Head visitor movement pattern**



**Figure 3.79 Loop Head visitor movement pattern**

### **Loop Head Analysis of Results**

Almost 95% of visitors had no identifiable effect on the site. Desire lines are evident in the vegetation around the headland arising from visitor behaviour.

Effects included trampling of herbaceous vegetation caused less than 1% of visitors, removal of vegetation (one visitor picked flowers) caused by less than 0.5% of visitors, littering (less than 3%) where a small number of visitors discarded cigarette butts and one person in a group of six people visitor throwing rocks into the sea. This resulted in no discernible impact on the site and the effects were not recorded to have a lasting impact on the site.

### 3.1.11 Blaskets View

**Landscape Type:** Rocky shore/grassland in peninsular coastal context

**Dates Surveyed:** 9<sup>th</sup> and 10<sup>th</sup> May 2015

**Weather:** Mostly clear and sunny with occasional light cloud on first day. Overcast with heavy, persistent showers on second day.

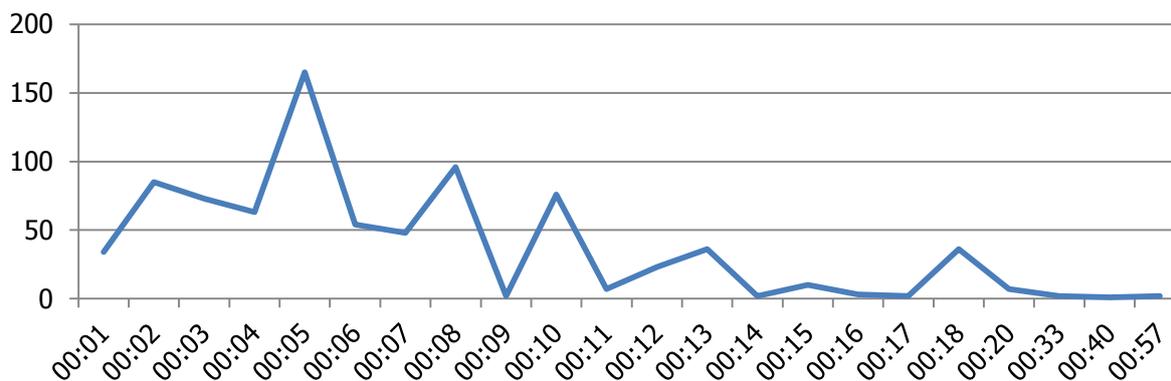
#### Site Description

Blaskets View is a layby located along the Slea Head Drive in the Dingle Peninsula in Co. Kerry. There is a clear view of the Blasket Islands from the site. It is located adjacent to the Blasket Islands Special Area of Conservation (SAC). The site is a designated as an SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive. The lay-by experiences a high volume of traffic. The layby has two additional lower tiers below the road.

#### Blaskets View Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Blaskets View	369	458	827	196	00:05 minutes

### Time Spent on Site



**Figure 3.81 Duration of time spent by visitors at Blaskets View**

## Use of Interpretive Materials

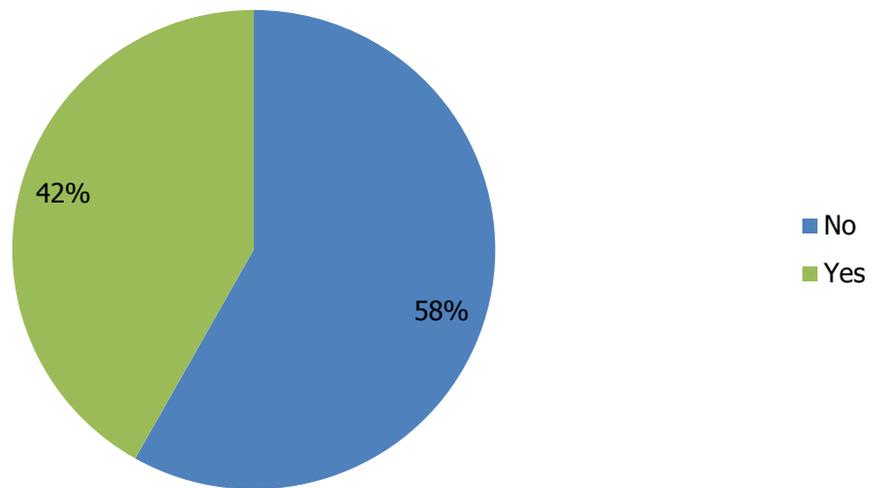


Figure 3.82 Use of interpretive material by visitors at Blaskets View

## Level of Impact Observed

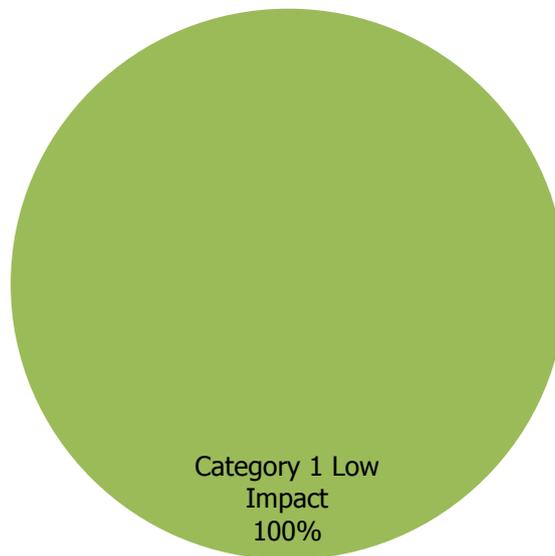
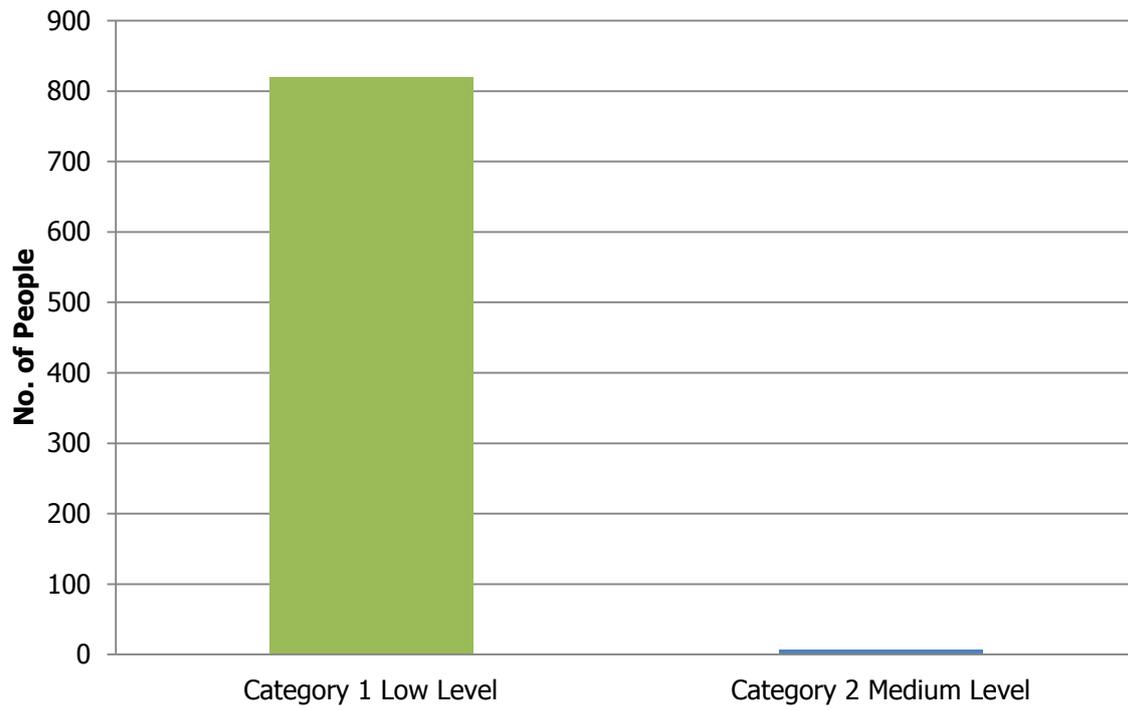


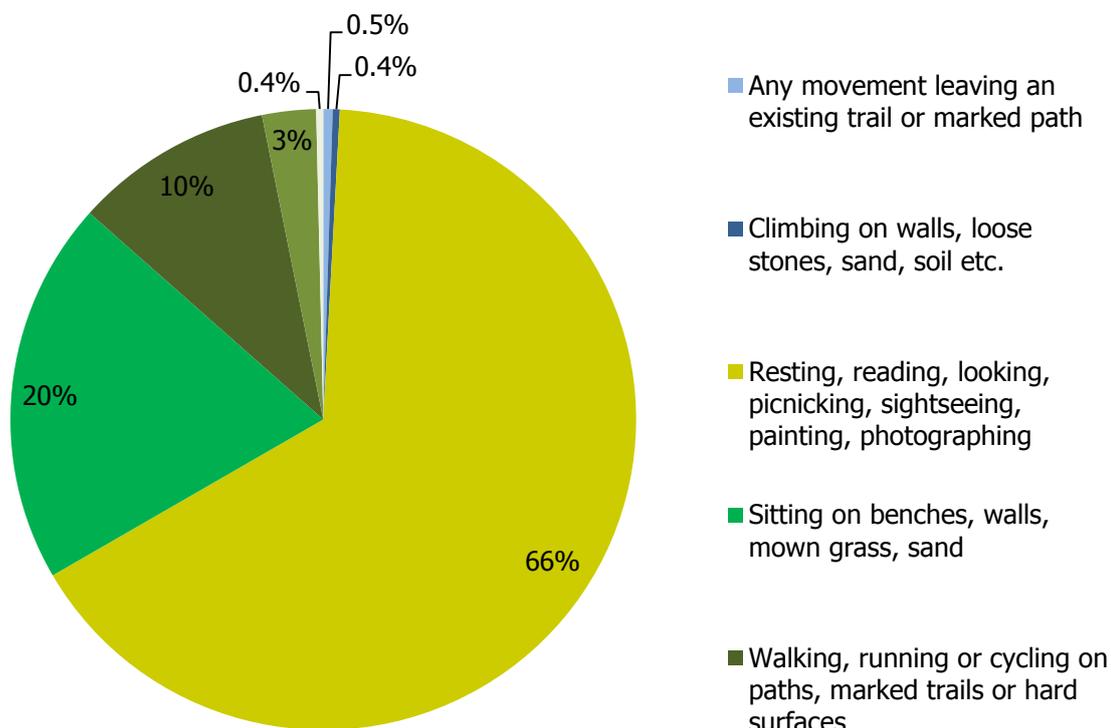
Figure 3.83 Level of impact observed at Blaskets View

## Level of Activity Observed



**Figure 3.84 Level of activity observed at Blaskets View**

## Activities Observed on Site

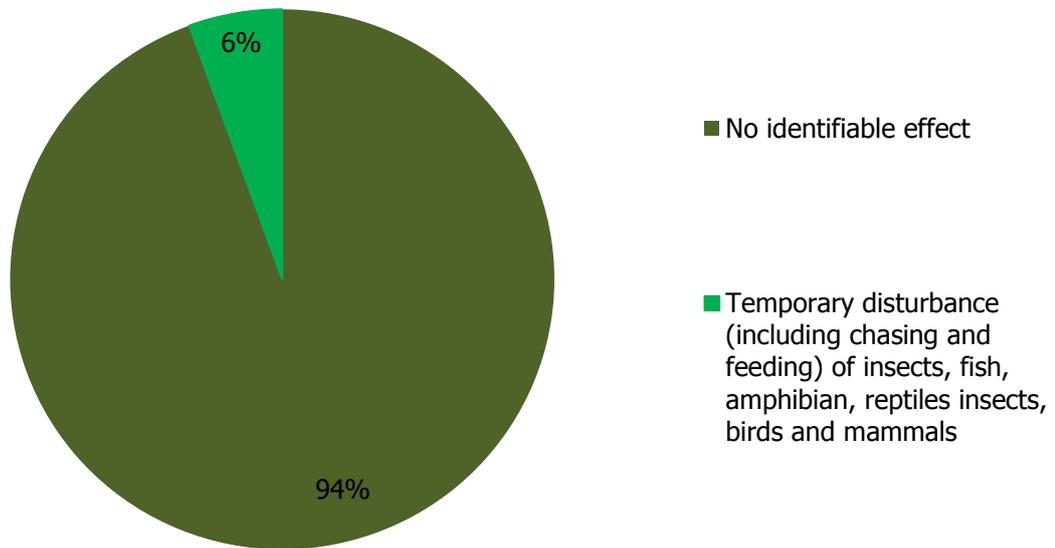


**Figure 3.85 Range of activities recorded at Blaskets View**

**Table 3.20 Breakdown of activities observed at Blaskets View**

Activities Observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	544	65.8%
Sitting on benches, walls, mown grass, sand	165	20.0%
Walking, running or cycling on paths, marked trails or hard surfaces	85	10.3%
Walking, running, cycling or playing in mown grass, managed grassland or level sand	23	2.8%
Any movement leaving an existing trail or marked path	4	0.5%
Watching nature in hedges, woods, streams, pools and intertidal areas	3	0.4%
Climbing on walls, loose stones, sand, soil etc.	3	0.4%
<b>Grand Total</b>	<b>827</b>	<b>100%</b>

## Effects Observed on Site

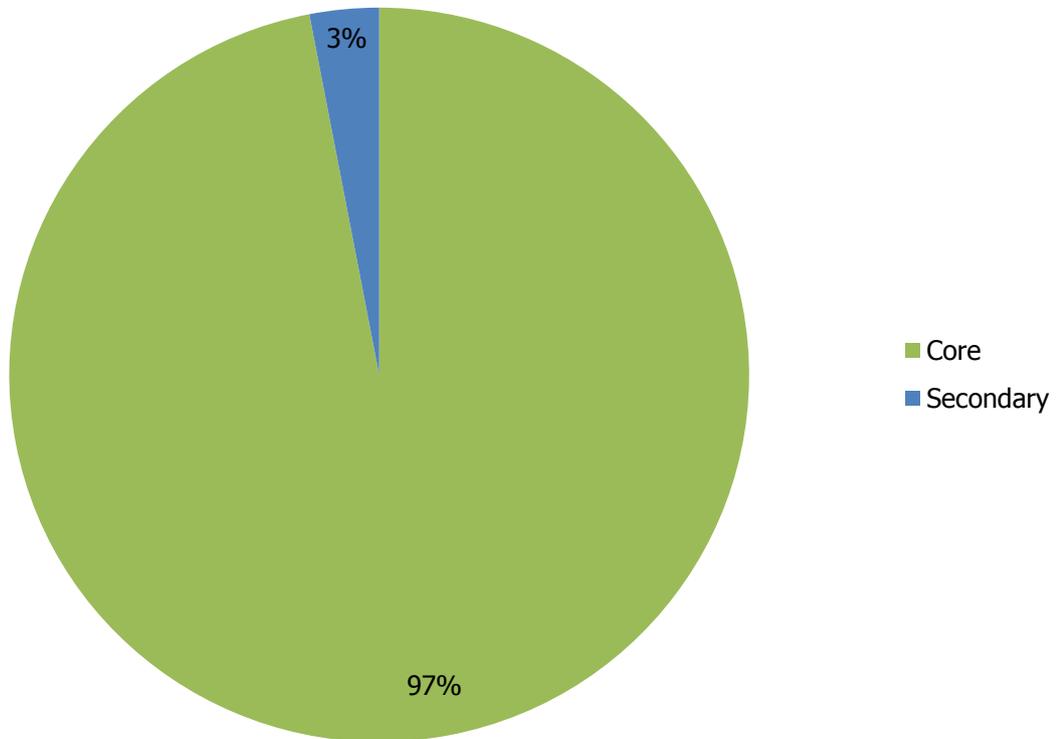


**Figure 3.86 Range of effects recorded at Blaskets View**

**Table 3.21 Breakdown of effects observed at Blaskets View**

Effects Observed	No. of People	% of People
No identifiable effect	781	94.4%
Temporary disturbance (including chasing and feeding) of insects, fish, amphibian, reptiles insects, birds and mammals	46	5.6%
<b>Grand Total</b>	<b>827</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.87 Zones trafficked by visitors at Blaskets View**

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**

97% of visitors remained within the paved areas of the layby and road. Visitors were observed to spend an average of five minutes at the site, looking and taking photos before departing. The 3% of visitors who trafficked outside the core zone were observed to cross the road and walk towards the entrance of a farm to look.



**Figure 3.88 Blaskets View visitor movement pattern**

### **Blaskets View Analysis of Results**

6% of visitors were observed feeding birds causing temporary disturbance to wildlife. Overall no impacts were observed and visitors to Blaskets View appeared to be careful and aware of site sensitivities.

### 3.1.12 Bray Head

**Landscape Type:** Rocky shore/peat/grassland in peninsular coastal context

**Dates Surveyed:** 21<sup>st</sup> and 22<sup>nd</sup> June

**Weather:** Mostly clear and sunny with occasional light cloud

#### Site Description

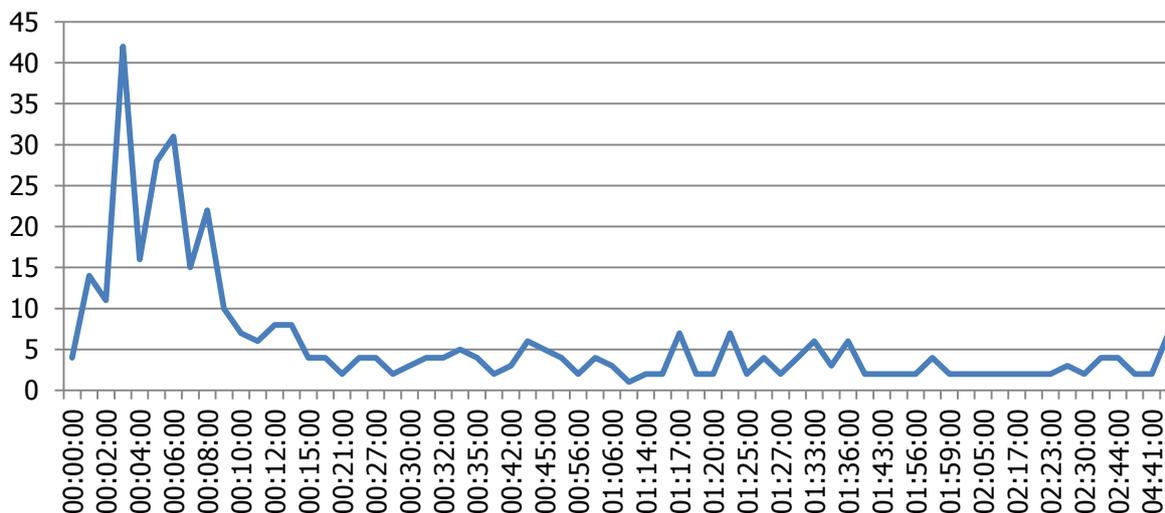
Bray Head is located at the most south-westerly point of Valentia Island, Co. Kerry. A trail leads to a signal tower at the summit and overlooks Portmagee Harbour and the Skellig Islands. There is also evidence of beehive huts near the summit which are of archaeological interest. The site is grazed by sheep. Bray Head is located adjacent to the Valencia Harbour/Portmagee Channel Special Area of Conservation (SAC). The site is a designated as an SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive.

The site comprises of a car park at the bottom of Bray Head and a pathway which forms a trail to the signal tower. The car park has been redeveloped in recent years and is privately owned. There is a fee of €2 for parking. The landowners were present on both days during the observation confirming that visitors paid the parking fee, ensuring good parking behaviour and removing any litter from the site. There was no interpretive material at the site.

#### Bray Head Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Bray Head	187	204	391	162	00:38 minutes

### Time Spent on Site



**Figure 3.89** Duration of time spent by visitors at Bray Head

## Use of Interpretive Material

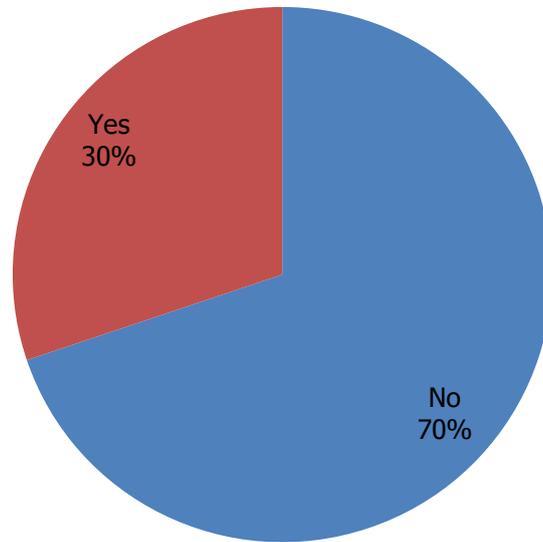


Figure 3.90 Use of interpretive material by visitors at Bray Head

## Level of Impact Observed

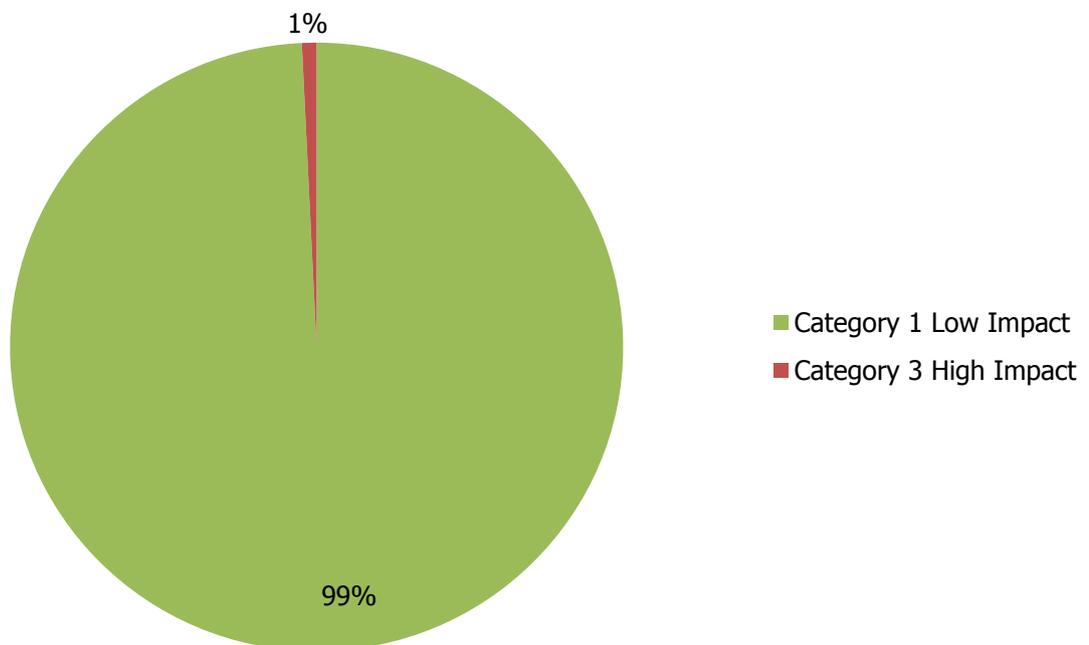
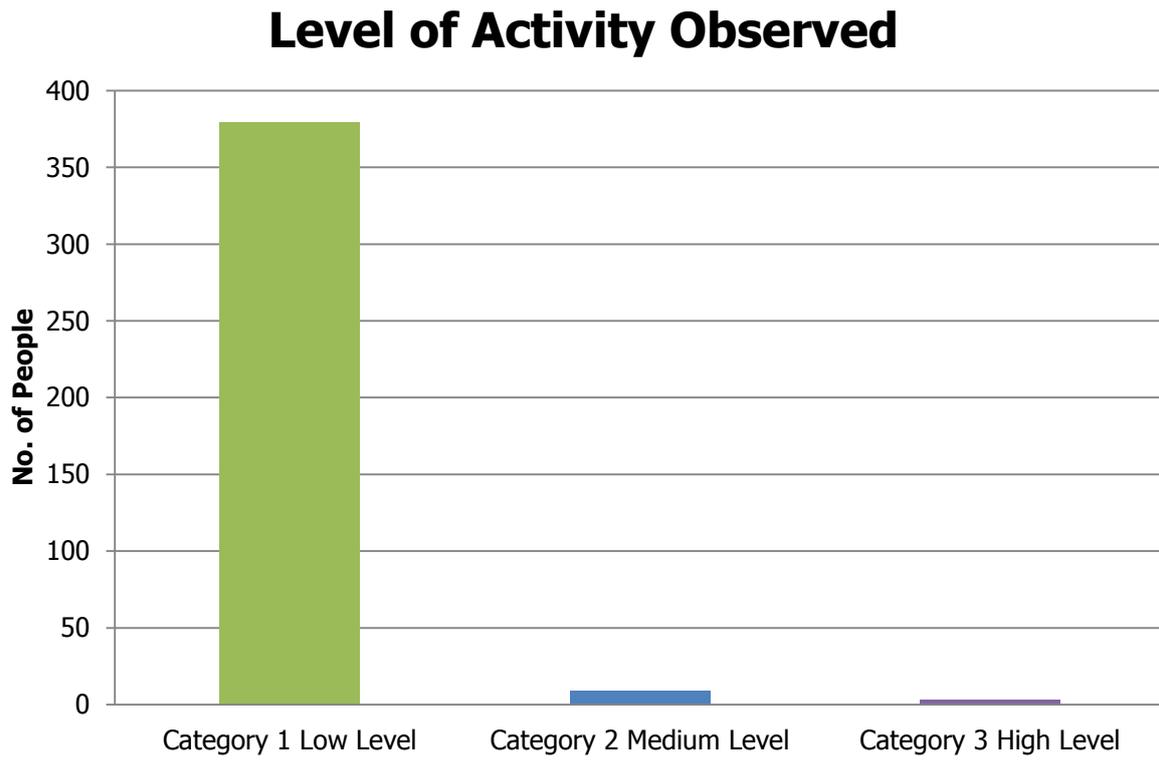
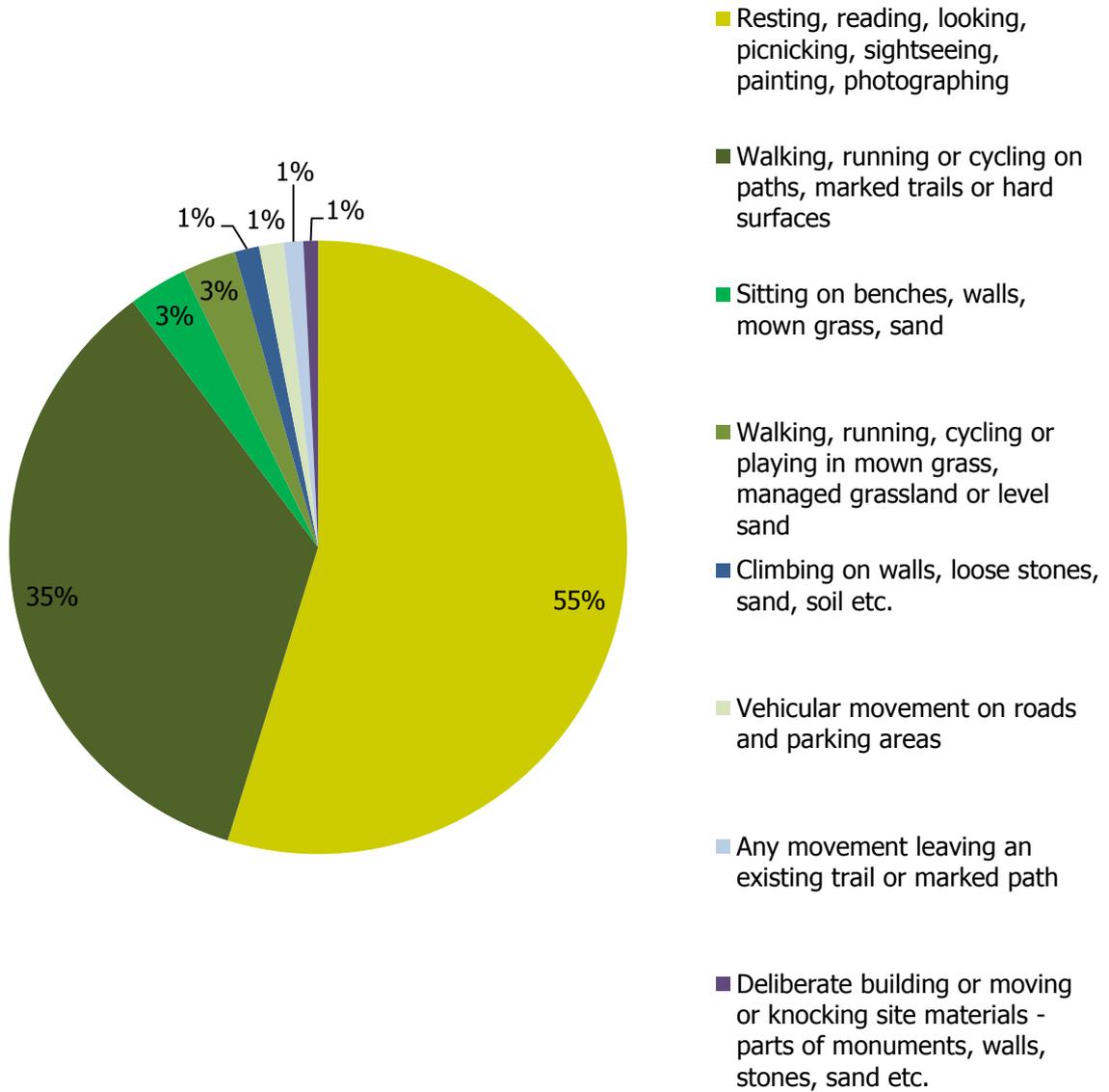


Figure 3.91 Level of impact observed at Bray Head



**Figure 3.92 Level of activity observed at Bray Head**

## Activities Observed

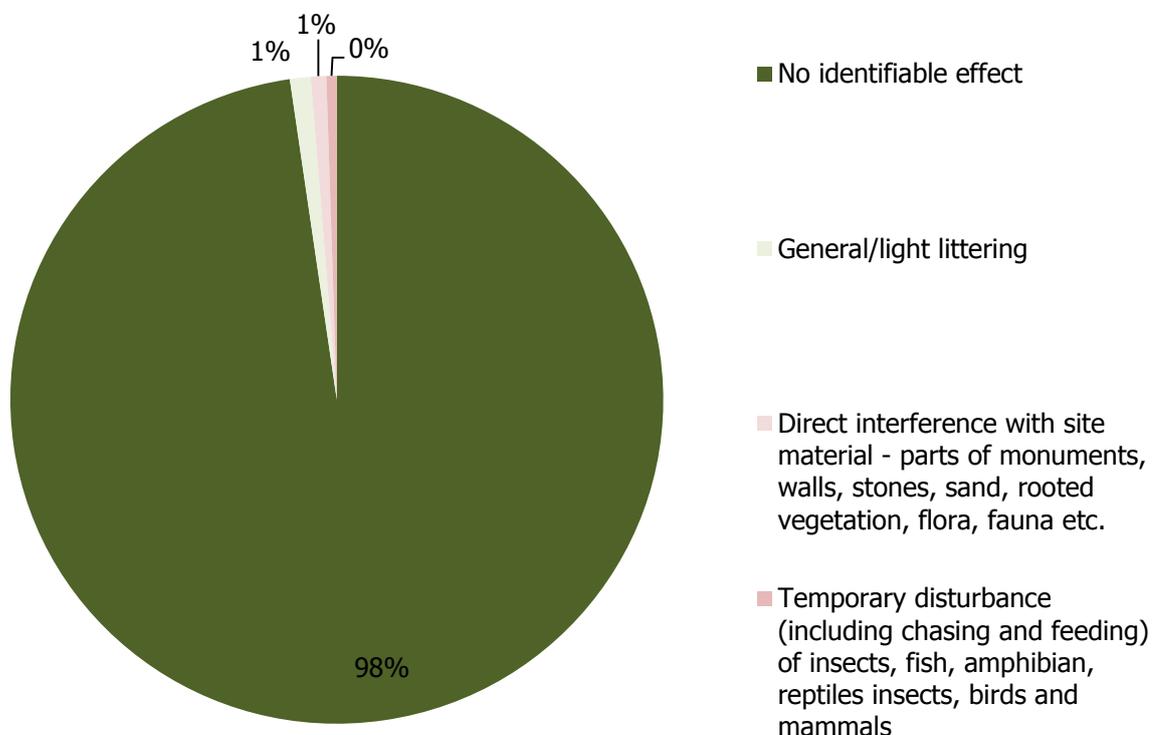


**Figure 3.93 Range of activities recorded at Bray Head**

**Table 3.22 Breakdown of activities observed at Bray Head**

<b>Activities Observed</b>	<b>No. of People</b>	<b>% of People</b>
Resting, reading, looking, picnicking, sightseeing, painting, photographing	214	54.73%
Walking, running or cycling on paths, marked trails or hard surfaces	137	35.04%
Sitting on benches, walls, mown grass, sand	12	3.07%
Walking, running, cycling or playing in mown grass, managed grassland or level sand	11	2.81%
Climbing on walls, loose stones, sand, soil etc.	5	1.28%
Vehicular movement on roads and parking areas	5	1.28%
Any movement leaving an existing trail or marked path	4	1.02%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc.	3	0.77%
<b>Grand Total</b>	<b>391</b>	<b>100%</b>

## Effects Observed on Site

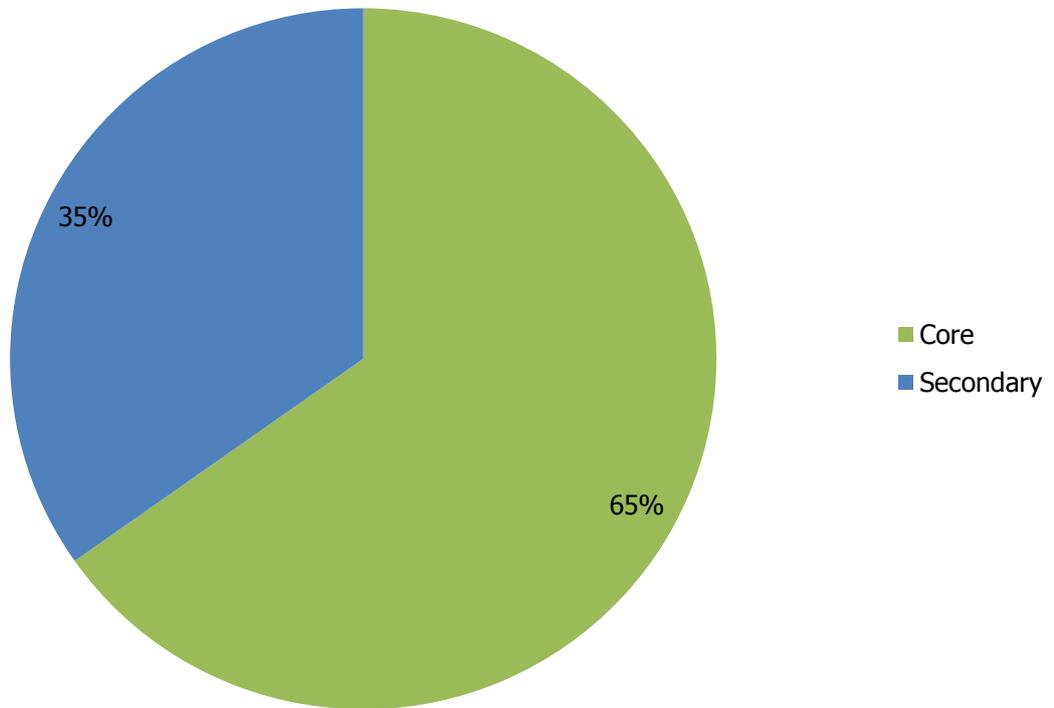


**Figure 3.94 Range of effects recorded at Bray Head**

**Table 3.23 Breakdown of effects observed at Bray Head**

Effects Observed	No. of People	% of People
No identifiable effect	382	97.70%
General/light littering	4	1.02%
Direct interference with site material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	3	0.77%
Temporary disturbance (including chasing and feeding) of insects, fish, amphibian, reptiles insects, birds and mammals	2	0.51%
<b>Grand Total</b>	<b>391</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.95 Zones trafficked by visitors at Bray Head**

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

65% of visitors were observed to remain in car park area. Visitors who ascended the pathway to Bray Head were primarily profiled as hikers, this accounted for 35% of visitors to the site. They were observed to remain on the pathway both on departure and return the exception of two visitors who deviated off the marked pathway on their return.



**Figure 3.96 Bray Head visitor movement pattern**

### Bray Head Analysis of Results

98% of visitors had no discernible impact to the site. Visitors appeared to be respectful and aware of the sensitivities of the site. The remaining 2% of visitors engaged in high impacts including one visitor discarding a cigarette butt and a child throwing stones across the fence and into the sea. This was not reported to give rise to any significant, long term or adverse effects.

### 3.1.13 Dursey Island

**Landscape Type:** Rocky shore/peat/grassland in peninsular coastal context

**Dates Surveyed:** 16<sup>th</sup> and 17<sup>th</sup> June 2015

**Weather:** Mostly clear with light cloud. Intermittent drizzle

#### Site Description

Dursey Island is located on the south-westerly tip of the Beara Peninsula in Co. Cork. The island is connected to the mainland by Ireland’s only cable car. Approximately six people live on the island which it is farmed locally and grazed by sheep. Dursey Island is located within the Kenmare River Special Area of Conservation (SAC) and adjacent to the Beara Peninsula Special Protection Area (SPA). The site is a designated as an SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive. The site is also designated as an SPA for the protection of endangered species of birds listed in the European Union Directive on the Conservation of Wild Birds.

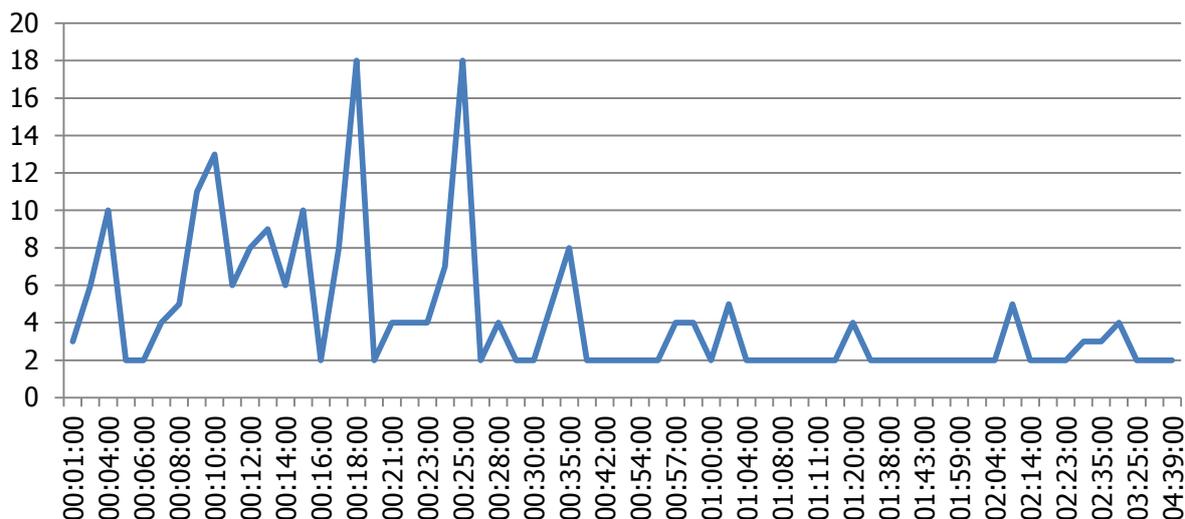
Visitor access to the island is restricted by the running times of the cable car which ran on a winter schedule during summer 2015. The island contains a looped hiking trail to the Napoleonic signal tower at the far end of the island. There are also the remains of a World War II ‘EIRE’ sign nearby.

The embarkation point at Garnish Point contains most of the visitor traffic to the site. There is a car park, ticket office and toilet facilities at this point. The area is popular for hikers who use the various waymarked trails from the site. This area is also grazed by sheep.

#### Dursey Island Observation Study Results

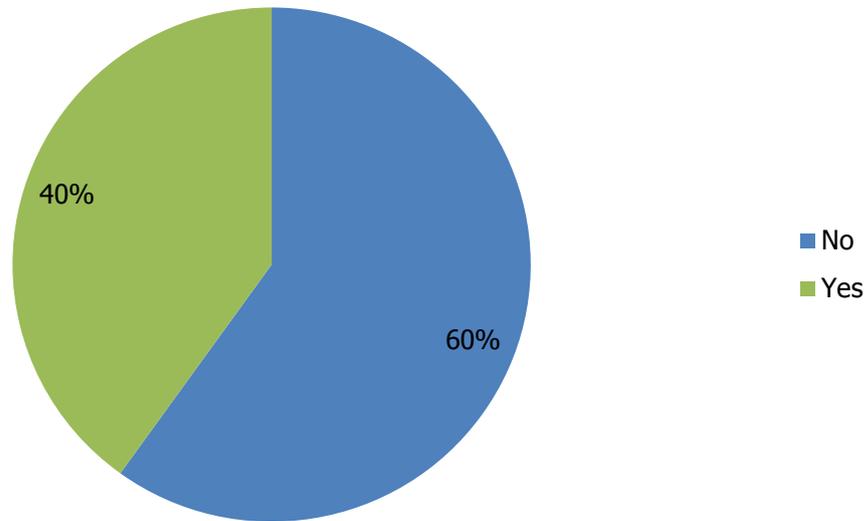
Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Dursey Island	144	133	277	110	00:44 minutes

### Time Spent on Site



**Figure 3.97 Duration of time spent by visitors at Dursey Island and Garnish Point**

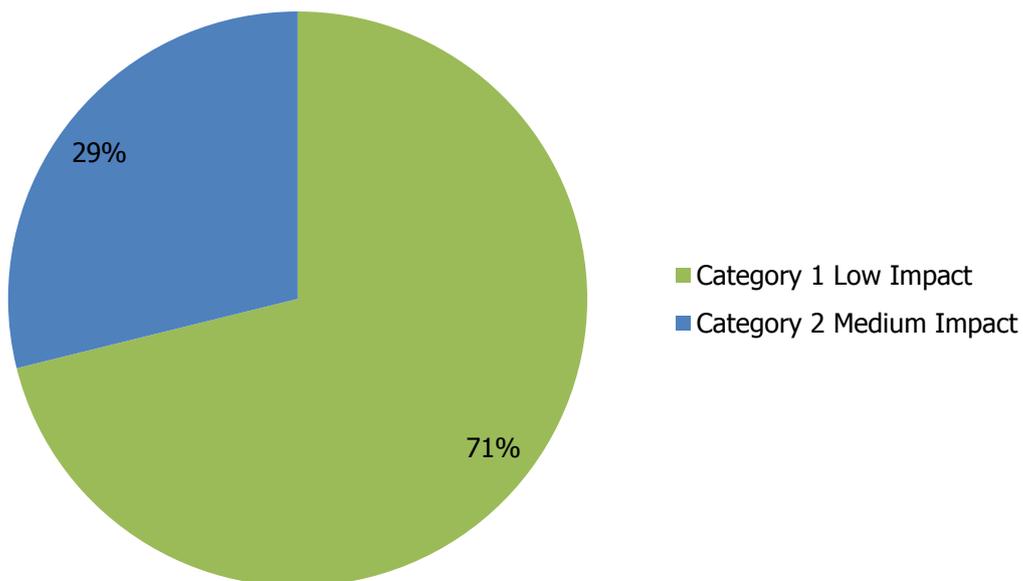
## Use of Interpretive Materials



**Figure 3.98 Use of interpretive material by visitors at Garnish Point**

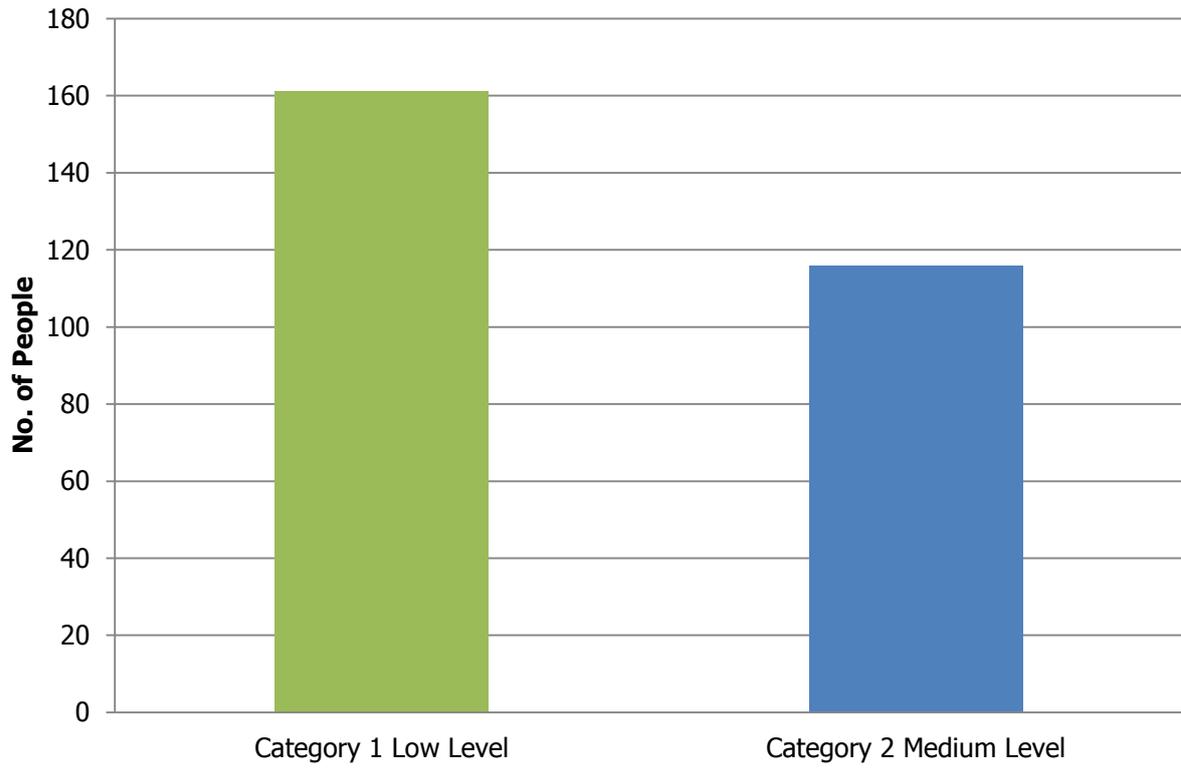
There was no Interpretive Material or signage on Dursey Island. There was information panels and signage at Garnish Point and it was noted when visitors used these.

## Level of Impact Observed



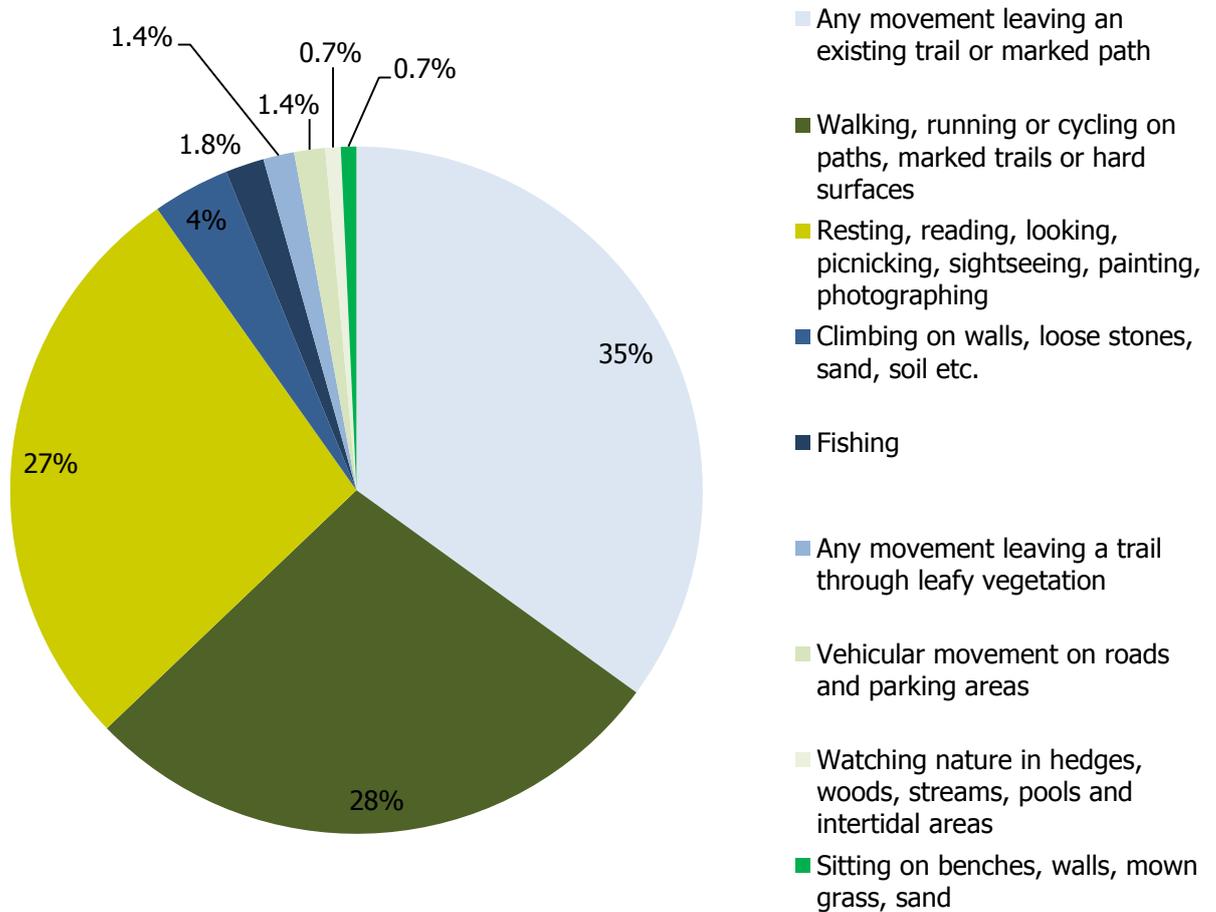
**Figure 3.99 Level of impact observed at Dursey Island and Garnish Point**

## Level of Activity Observed



**Figure 3.100 Level of activity observed at Dursey Island and Garnish Point**

## Activities Observed on Site

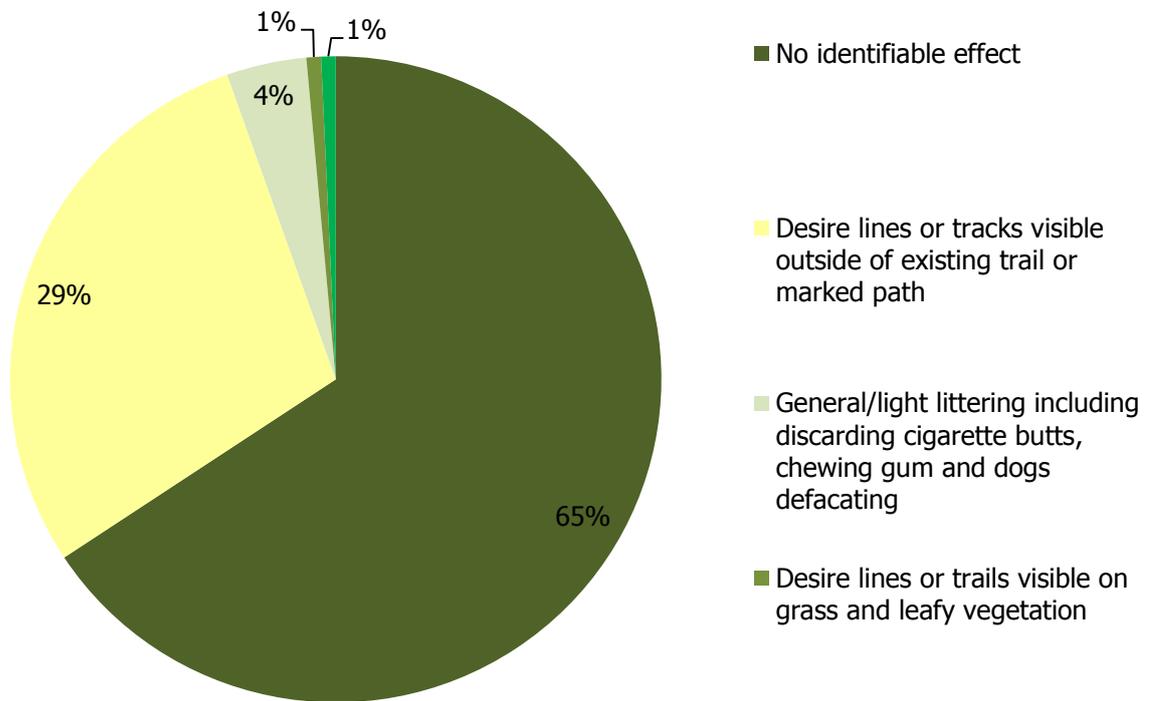


**Figure 3.101 Range of activities recorded at Dursey Island and Garnish Point**

**Table 3.24 Breakdown of activities observed at Dursey Island and Garnish Point**

Activities Observed	No. of People	% of People
Any movement leaving an existing trail or marked path	97	35.02%
Walking, running or cycling on paths, marked trails or hard surfaces	77	27.80%
Resting, reading, looking, picnicking, sightseeing, painting, photographing	76	27.44%
Climbing on walls, loose stones, sand, soil etc.	10	3.61%
Fishing	5	1.81%
Any movement leaving a trail through leafy vegetation	4	1.44%
Vehicular movement on roads and parking areas	4	1.44%
Watching nature in hedges, woods, streams, pools and intertidal areas	2	0.72%
Sitting on benches, walls, mown grass, sand	2	0.72%
<b>Grand Total</b>	<b>277</b>	<b>100%</b>

## Effects Observed on Site

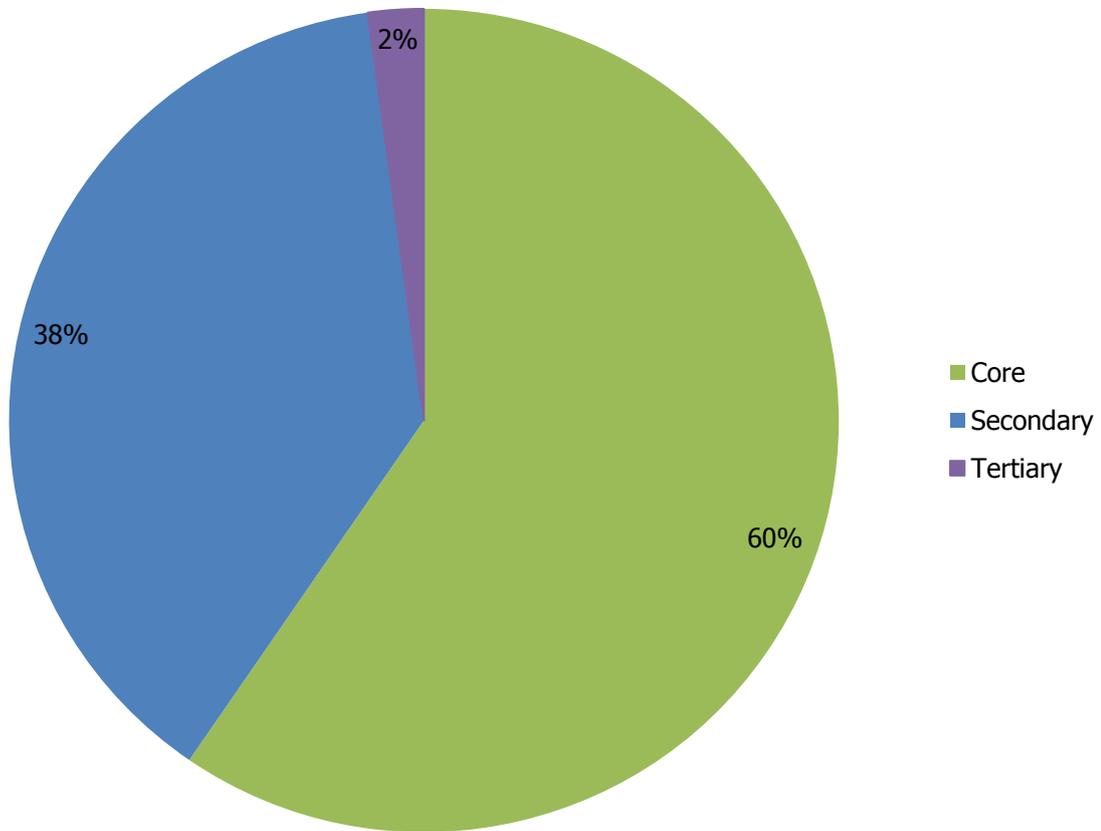


**Figure 3.102 Range of effects recorded at Dursey Island and Garnish Point**

**Table 3.25 Breakdown of effects observed at Dursey Island and Garnish Point**

Effects Observed	No. of People	% of People
No identifiable effect	182	65.70%
Desire lines or tracks visible outside of existing trail or marked path	80	28.88%
General/light littering	11	3.97%
Temporary disturbance (including chasing and feeding) of insects, fish, amphibian, reptiles insects, birds and mammals	2	0.72%
Desire lines or trails visible on grass and leafy vegetation	2	0.72%
<b>Grand Total</b>	<b>277</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.103 Zones trafficked by visitors at Dursey Island and 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 Pattern Observed**

On the island, visitors who were mainly profiled as hikers were observed to follow the road and way marked trail. A pattern emerged where visitors began walking east of the car park along the trail and return via the road. In most cases, visitors remained on the island for less than one hour. This may have been due to the restricted cable car running times.

At Garnish Point, the majority of the visitors remained in the car park and paved areas. Some visitors were observed to leave the vicinity of the car park and step onto grazed land/bare rock to take photos and/or cross the stile onto the trail. The area was popular for hikers who were observed to follow the waymarked trails.



**Figure 3.104 Garnish Point visitor movement pattern**



**Figure 3.105 Dursey Island visitor movement pattern**

#### **Dursey Island and Garnish Point Analysis of Results**

Over 70% of visitors to Garnish Point and Dursey Island had no effect on the site. The remaining 30% of visitors had a medium impact. These visitors were observed to leave the car park and paved areas and walk in areas where desire lines were evident in the vegetation arising from visitor behaviour. In some cases this included areas where waymarked trails were in place. Three visitors from three separate groups were observed to discard cigarette butts. Overall, the activities and effects observed during the study at Dursey Island and Garnish Point were not reported to result in any significant, long term adverse effects.

### 3.1.14 Mizen Head

**Landscape Type:** Rocky shore/peat/grassland in peninsular coastal context

**Dates Surveyed:** 30<sup>th</sup> and 31<sup>st</sup> May 2015

**Weather:** Overcast, windy and showery

#### Site Description

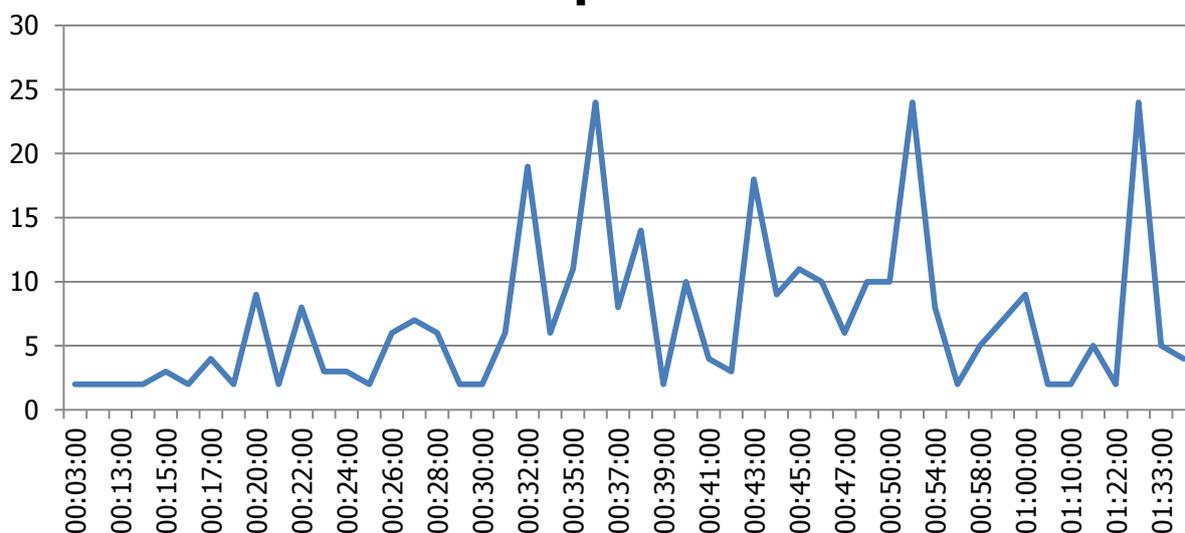
Mizen Head Signal Station is Ireland’s most south-westerly point. It is located at the end of the Mizen Peninsula. The site consists of a car park, visitor centre and walkways that cross an arched bridge to the Signal Station. The site is highly managed and has a constant presence of staff on the site. It is an example of best practice visitor management. The site is fenced off controlling visitor flow in all areas. Visitors have no option other than to remain on the pathways and viewing points.

Mizen Head is located within the Three Castle Head to Mizen Head Special Area of Conservation (SAC) and within the Sheep's Head to Toe Head SPA Special Protection Area (SPA). The site is a designated as an SAC for a number of habitats and species listed on Annex I and II of the E.U. Habitats Directive. The site is also designated as an SPA for the protection of endangered species of birds listed in the European Union Directive on the Conservation of Wild Birds. It is also of significant geological interest. Interpretive material was available inside the visitor centre and signal stations, the use of these by visitors was not recorded.

#### Mizen Head Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Mizen Head	179	168	349	109	00:38 minutes

### Time Spent on Site



**Figure 3.106 Duration of time spent by visitors at Mizen Head**

### Level of Impact Observed

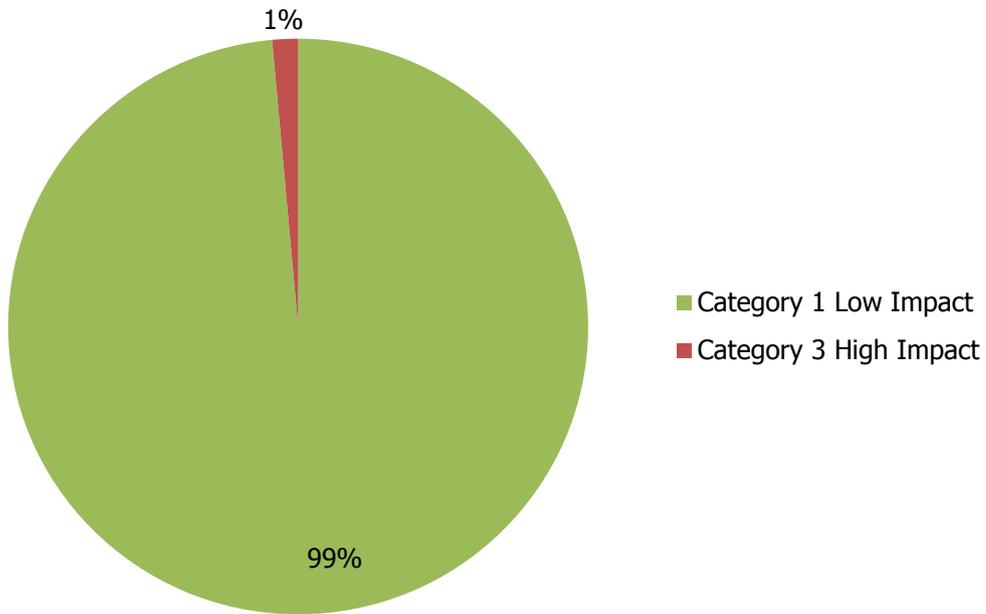


Figure 3.107 Level of impact observed at Mizen Head

### Level of Activity Observed

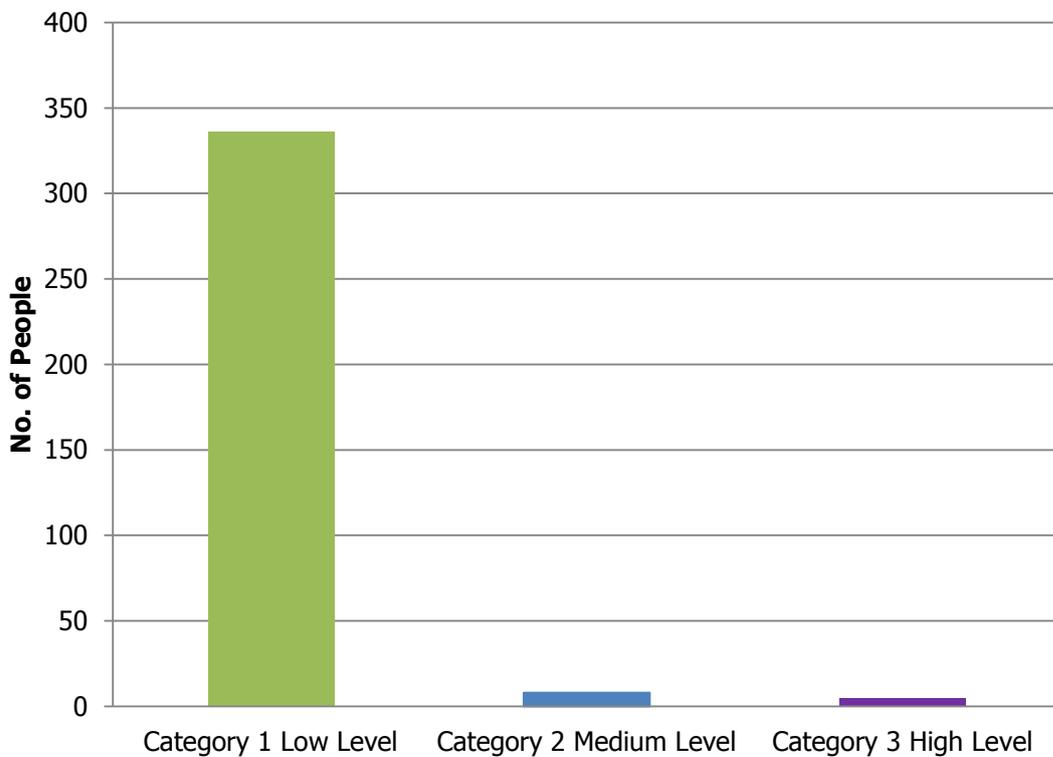
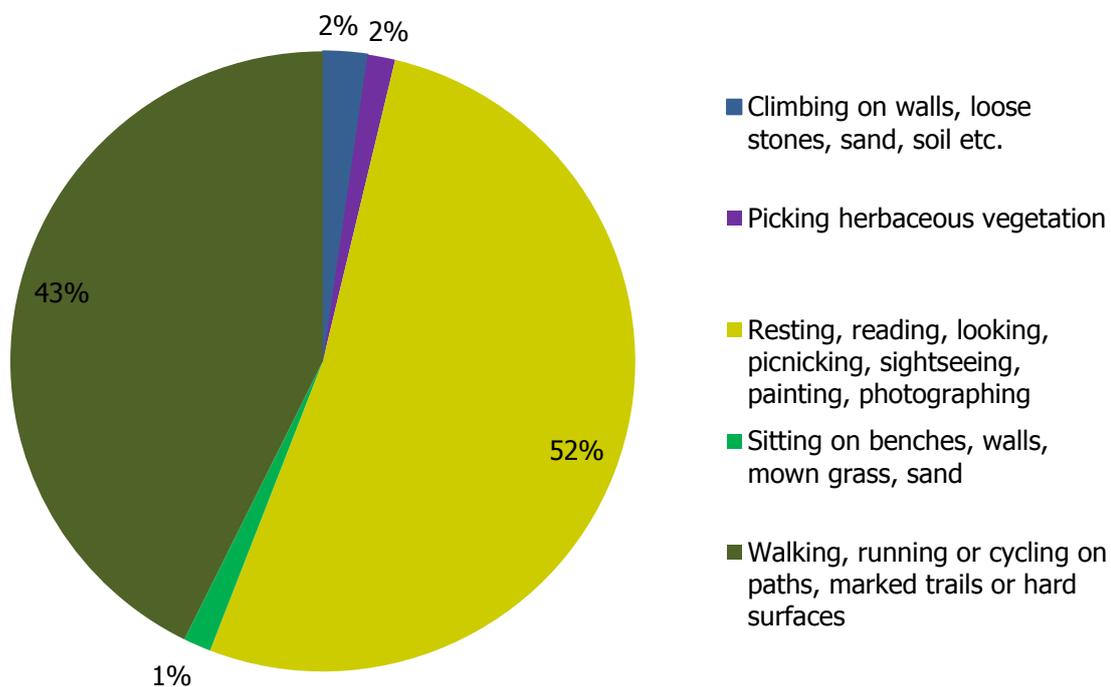


Figure 3.108 Level of activity observed at Mizen Head

## Activities Observed

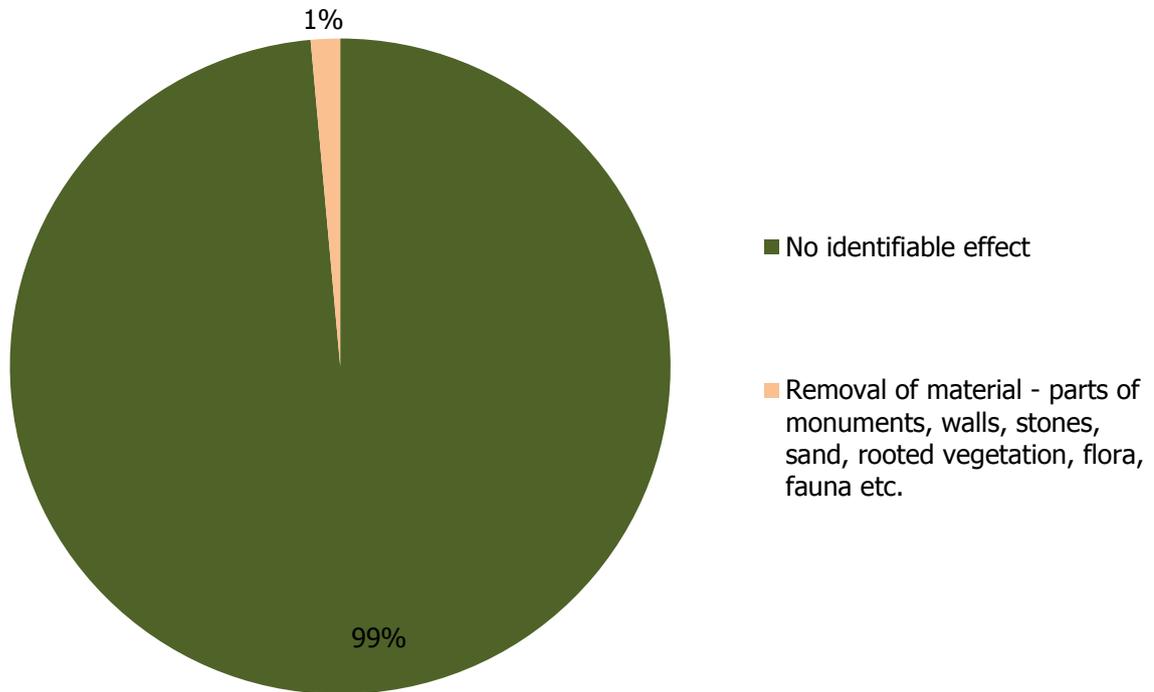


**Figure 3.109 Range of activities recorded at Mizen Head**

**Table 3.26 Breakdown of activities recorded at Mizen Head**

Activities Observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	182	52.15%
Walking, running or cycling on paths, marked trails or hard surfaces	149	42.69%
Climbing on walls, loose stones, sand, soil etc.	8	2.29%
Picking herbaceous vegetation	5	1.43%
Sitting on benches, walls, mown grass, sand	5	1.43%
<b>Grand Total</b>	<b>349</b>	<b>100%</b>

## Effects Observed on Site

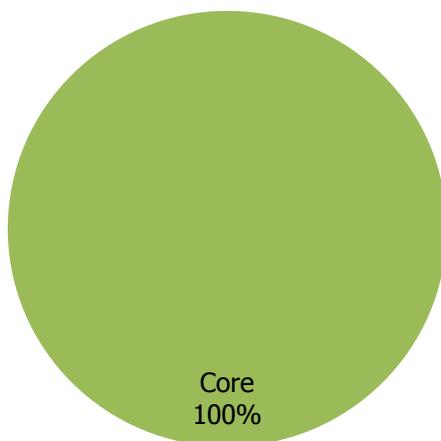


**Figure 3.110 Range of effects recorded at Mizen Head**

**Table 3.27 Breakdown of effects observed at Mizen Head**

Effects Observed	No. of People	% of People
No identifiable effect	344	98.57%
Removal of material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	5	1.43%
<b>Grand Total</b>	<b>349</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.111 Zones trafficked by visitors at Mizen Head**

<b>Core Zone</b>	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.
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### Movement Pattern Observed

Visitors have no option other than to remain on the pathways and viewing points due to fenced walkways controlling visitor flow at the site. The highly managed nature of the site and the presence of staff throughout all areas of the site ensured good visitor behaviour.



**Figure 3.112 Mizen Head visitor movement pattern**

### Mizen Head Analysis of Results

99% of visitors to the site had no identifiable effect. One visitor was observed to pick vegetation (Sea Pink *Armeria maritima*) from the pathway verges. It was apparent that the level of management at the site contributed towards good visitor behaviour which resulted in less evidence of effects.

### 3.1.15 Old Head of Kinsale

**Landscape Type:** Rocky shore/grassland in peninsular coastal context

**Dates Surveyed:** 30<sup>th</sup> and 31<sup>st</sup> May

**Weather:** Overcast with sun breaking through occasionally

#### Site Description

Old Head of Kinsale is a headland situated south of the town of Kinsale in Co. Cork. It is located adjacent to the Old Head of Kinsale SPA Special Protection Area (SPA). The site is designated as an SPA for the protection of endangered species of birds listed in the European Union Directive on the Conservation of Wild Birds. Old Head of Kinsale is privately owned with an onsite golf links and accommodation. The golf links and the lighthouse are inaccessible to visitors.

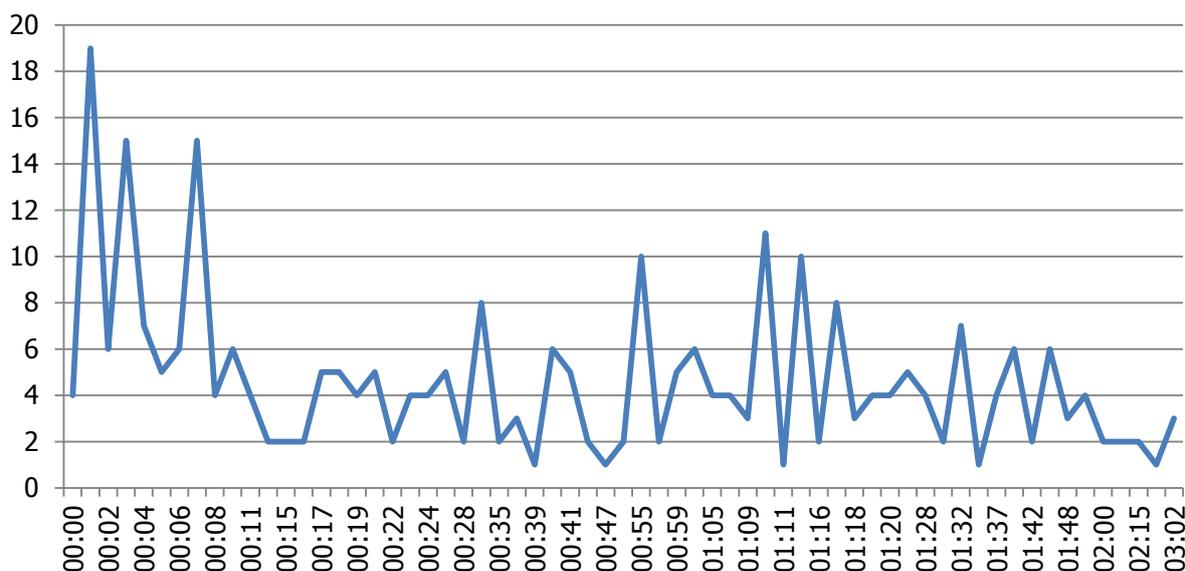
The candidate Signature Discovery Point is a lay-by located south of the Old Head Signal Tower. The site is of historical interest for when the RMS Lusitania sank off the coast of Old Head in the early 20<sup>th</sup> Century. The Old Head Signal Tower has been refurbished and was opened in May 2015. It has a car park and is free for visitors to enter. The Old Head Signal Tower site consists of road access, parking for 18 cars and 2 buses, a flag and ball signalling system with a mast 15 metres high, and the signal tower which is open to visitors.

Future works proposed include a Lusitania memorial garden consisting of garden infrastructure including; footpaths, steps, disabled access ramp, seating, signage, viewing area, iconic artefact/sculpture memorial features and all associated utility & landscaping works. The proposed development is located within the current site boundary.

#### Old Head of Kinsale Observation Study Results

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Old Head of Kinsale	145	149	294	110	00:40 minutes

### Time Spent on Site



**Figure 3.113 Duration of time spent by visitors at Old Head of Kinsale**

### Level of Impact Observed

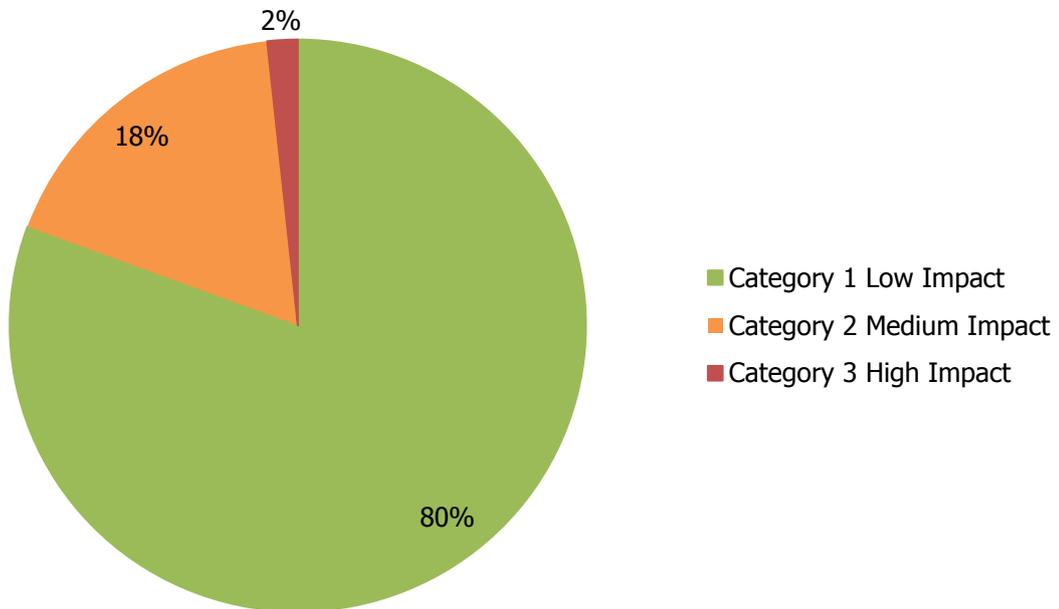


Figure 3.114 Level of impact observed at Old Head of Kinsale

### Level of Activity Observed

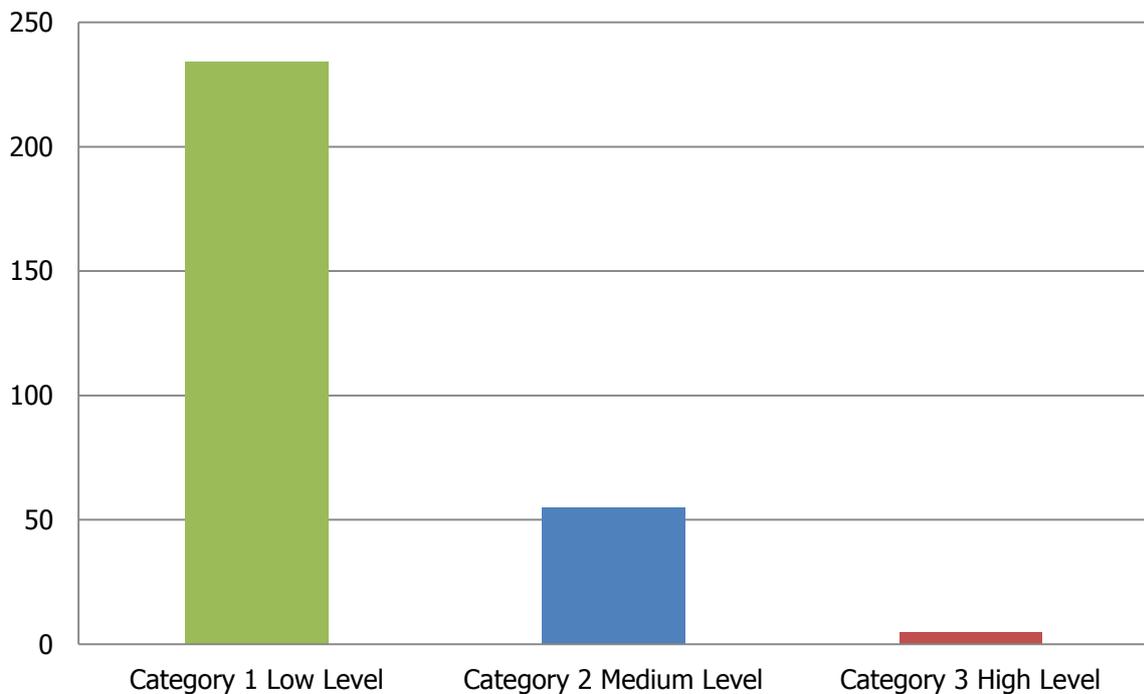
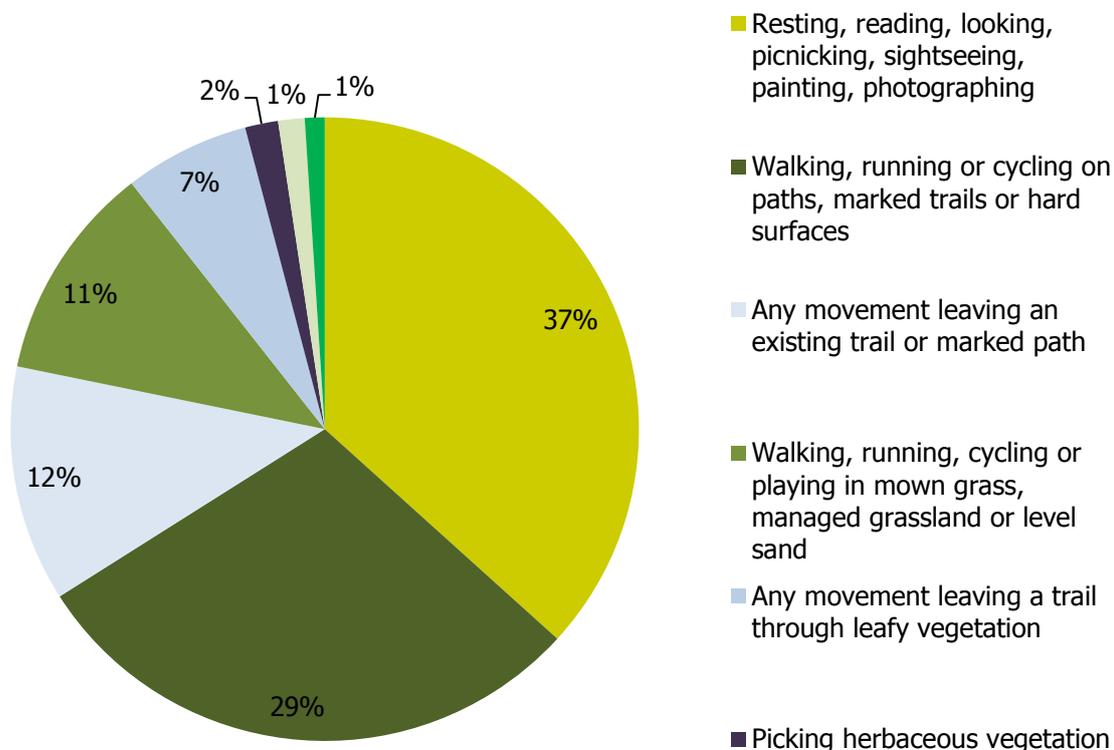


Figure 3.115 Level of activity observed at Old Head of Kinsale

## Activities Observed

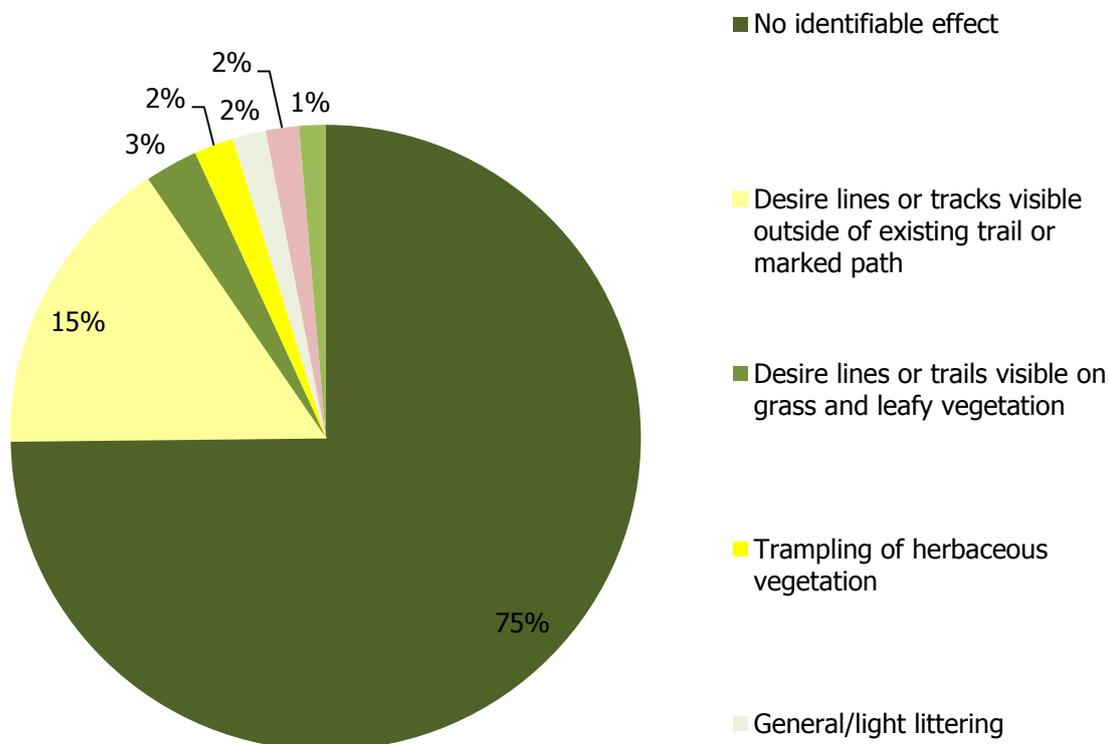


**Figure 3.116 Range of activities recorded at Old Head of Kinsale**

**Table 3.28 Breakdown of activities observed at Old Head of Kinsale**

Activities Observed	No. of People	% of People
Resting, reading, looking, picnicking, sightseeing, painting, photographing	108	36.73%
Walking, running or cycling on paths, marked trails or hard surfaces	86	29.25%
Any movement leaving an existing trail or marked path	36	12.24%
Walking, running, cycling or playing in mown grass, managed grassland or level sand	33	11.22%
Any movement leaving a trail through leafy vegetation	19	6.46%
Picking herbaceous vegetation	5	1.70%
Vehicular movement on roads and parking areas	4	1.36%
Sitting on benches, walls, mown grass, sand	3	1.02%
<b>Grand Total</b>	<b>294</b>	<b>100%</b>

## Effects Observed on Site

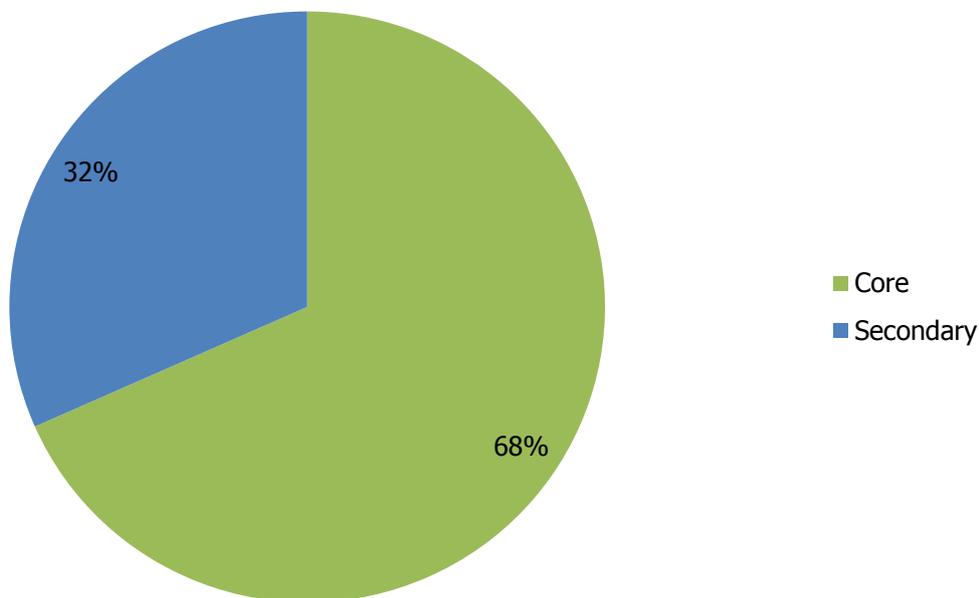


**Figure 3.117 Range of effects recorded at Old Head of Kinsale**

**Table 3.29 Breakdown of effects observed at Old Head of Kinsale**

Effects Observed	No. of People	% of People
No identifiable effect	220	74.83%
Desire lines or tracks visible outside of existing trail or marked path	46	15.65%
Desire lines or trails visible on grass and leafy vegetation	8	2.72%
Trampling of herbaceous vegetation	6	2.04%
General/light littering	5	1.70%
Removal of material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	5	1.70%
Temporary disturbance (including chasing and feeding) of insects, fish, amphibian, reptiles insects, birds and mammals	4	1.36%
<b>Grand Total</b>	<b>294</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.118 Zones trafficked by visitors at Old Head of Kinsale**

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

Visitors to the layby were observed to pull in briefly to look and take photos. Some visitors were observed to walk across the grazed area south of the layby to the cliff edge. There is evidence of existing eroded tracks here.

The tower held an open day on the second day of surveying which also facilitated a tour of the lighthouse. This displayed a once off situation where the site was running at maximum capacity with cars parking in fields in front of the layby and visitors walking on recently reseeded soil to access the ticket trailer.

68% of visitors to the site remained in core zones. As noted above, the open day led visitors to park and walk in areas not usually trafficked by visitors under normal circumstances.



**Figure 3.119 Old Head of Kinsale visitor movement pattern**

### **Old Head of Kinsale Analysis of Results**

Over 80% of visitors to the Old Head of Kinsale resulted in no identifiable effect on the site. Visitor management was in place on the second day which contributed towards good visitor behaviour at the site which resulted in fewer effects.

18% of visitors had a medium level impact on the site. This resulted from visitors leaving paved areas and walking to the cliff edge on areas which showed evidence of eroded tracks. Children were also observed running through fields and trampling vegetation. 2% resulting in high impacts, this was caused by one child in a group of five people who picked flowers in a field. These were not reported to result in any significant, long term adverse effects and are readily reversible.

### 3.1.16 Results and Analysis for all sites

Table 3.30 Overview of all sites

Site	Male	Female	Total No. of People	No. of Groups	Average Duration on Site
Malin Head	171	206	377	132	00:24:25
Fanad Head	134	140	274	113	00:16:01
Slieve League	198	163	361	112	00:30:02
Mullaghmore Head	149	159	308	150	00:13:52
Downpatrick Head	130	108	238	88	00:53:30
Keem Bay	156	174	330	113	00:52:39
Killary Harbour	498	617	1116	205	00:05:29
Derrigimlagh	51	33	84	36	00:09:08
Cliffs of Moher	187	193	380	134	00:36:25
Loop Head	207	230	437	133	00:41:29
Bray Head	187	204	391	161	00:38:51
Blaskets View	369	458	827	196	00:05:44
Dursey Island	144	133	277	110	00:46:01
Mizen Head	179	168	349	109	00:38:43
Old Head of Kinsale	145	149	294	110	00:40:39
<b>Grand Total</b>	<b>2905</b>	<b>3135</b>	<b>6043</b>	<b>1902</b>	<b>00:28:22</b>

### Average time spent across all sites

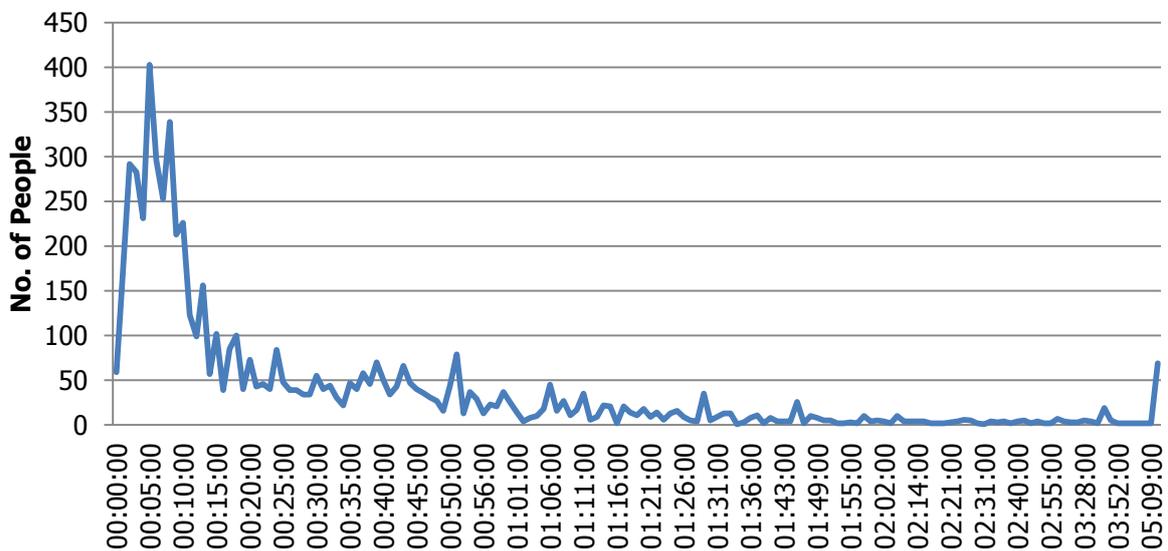
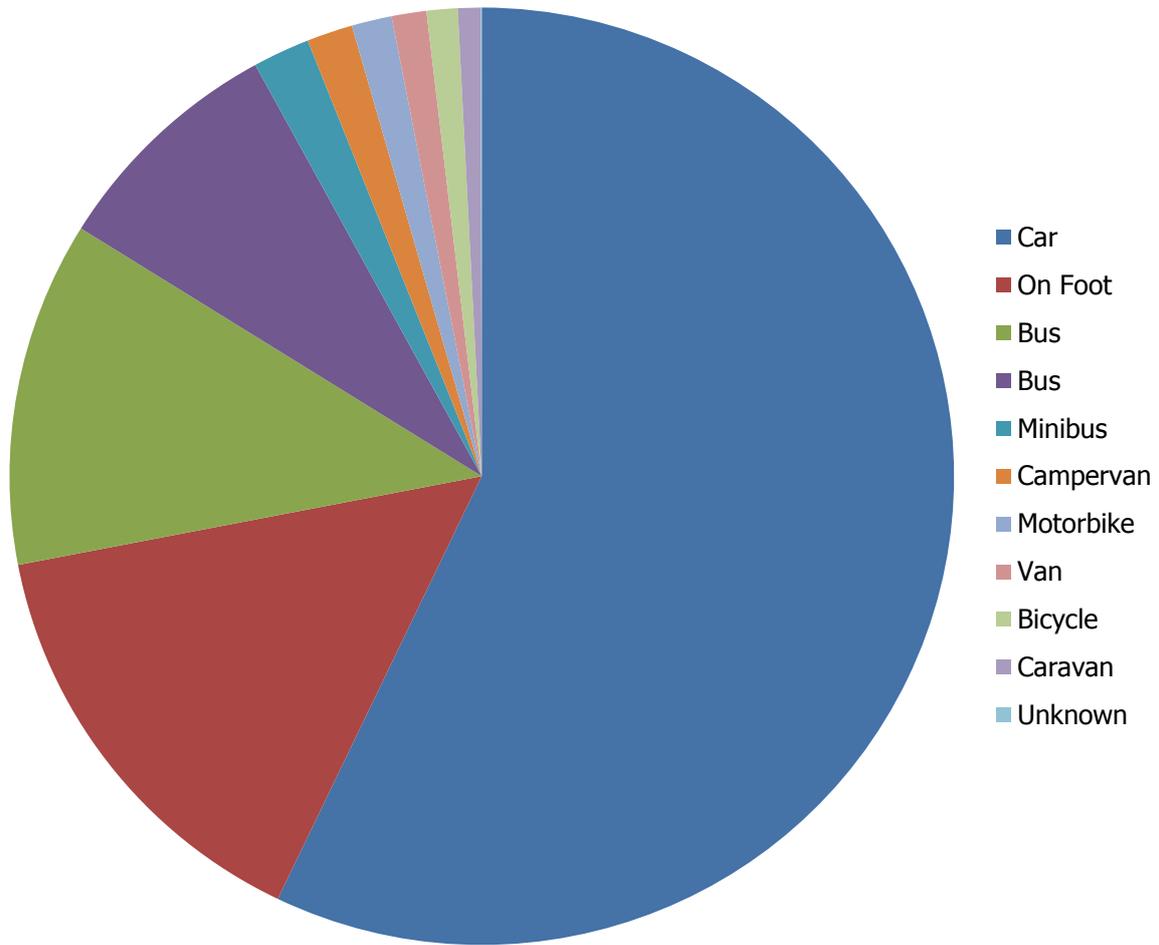


Figure 3.120 Duration of time spent by visitors across all sites

## Mode of Transport



**Figure 3.121 Modes of transport used across all sites**

**Table 3.31 Breakdown of modes of transport used at all sites**

Mode of Transport	Number of People	Percentage of People
Car	3451	57.11%
On Foot	898	14.86%
Bus	719	11.90%
Bus	494	8.17%
Minibus	118	1.95%
Campervan	95	1.57%
Motorbike	83	1.37%
Van	72	1.19%
Bicycle	64	1.06%
Caravan	47	0.78%
Unknown	2	0.03%
<b>Grand Total</b>	<b>6043</b>	<b>100%</b>

### Age demographic across all sites

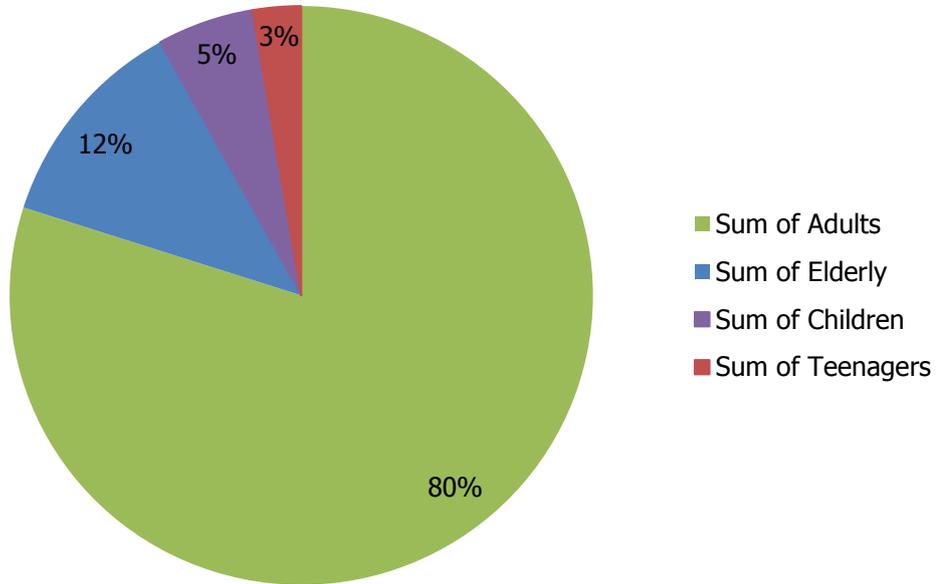


Figure 3.122 Age demographic across all sites

### Use of Interpretive Material

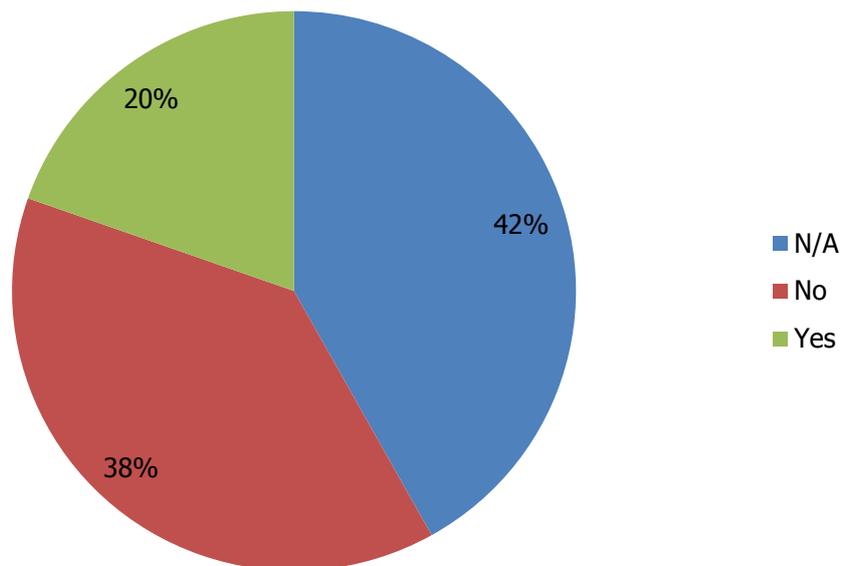


Figure 3.123 Use if interpretive material across all sites

## Level of activity observed across all sites

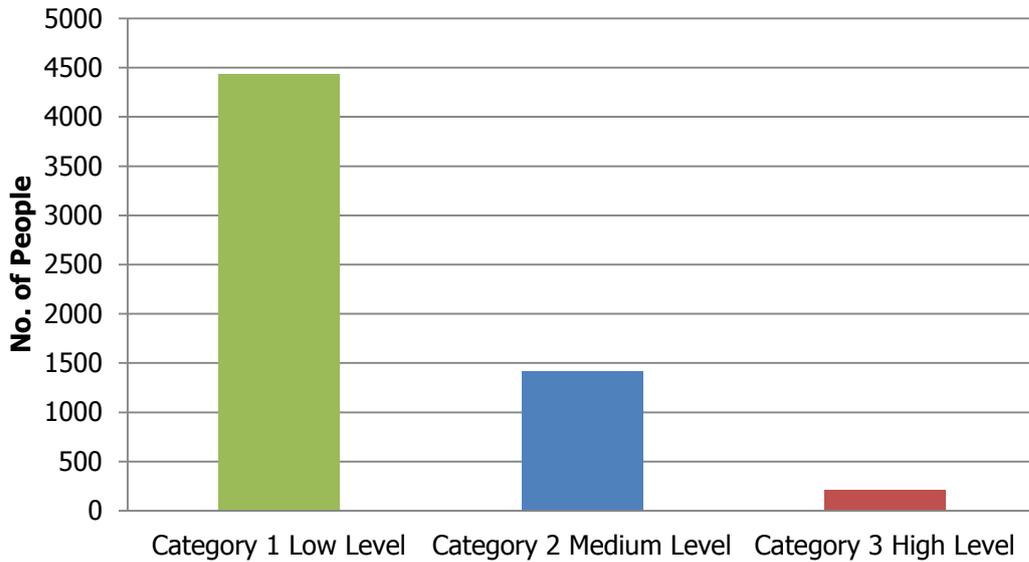


Figure 3.124 Overall level of activity recorded

## Activity Level by Site

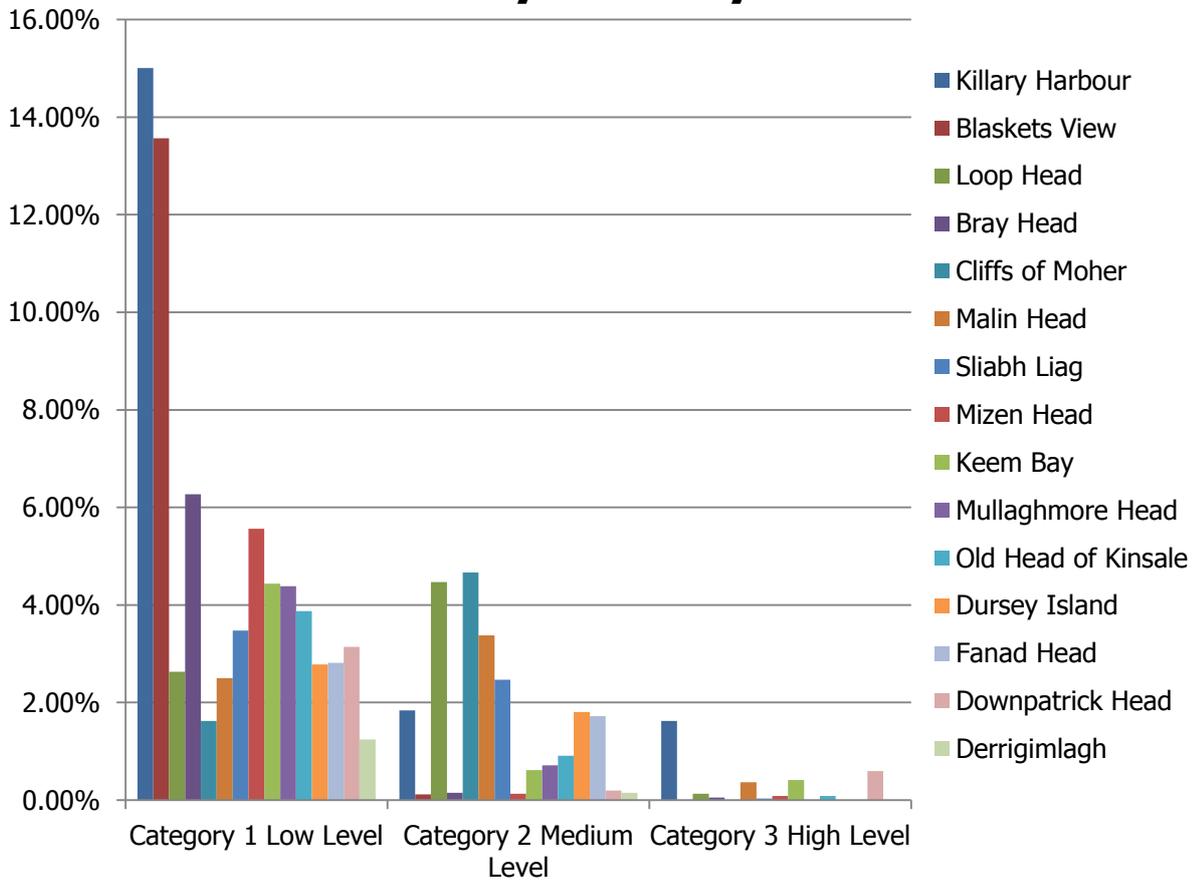


Figure 3.125 Level of Activity by Site

## Activities observed across all sites

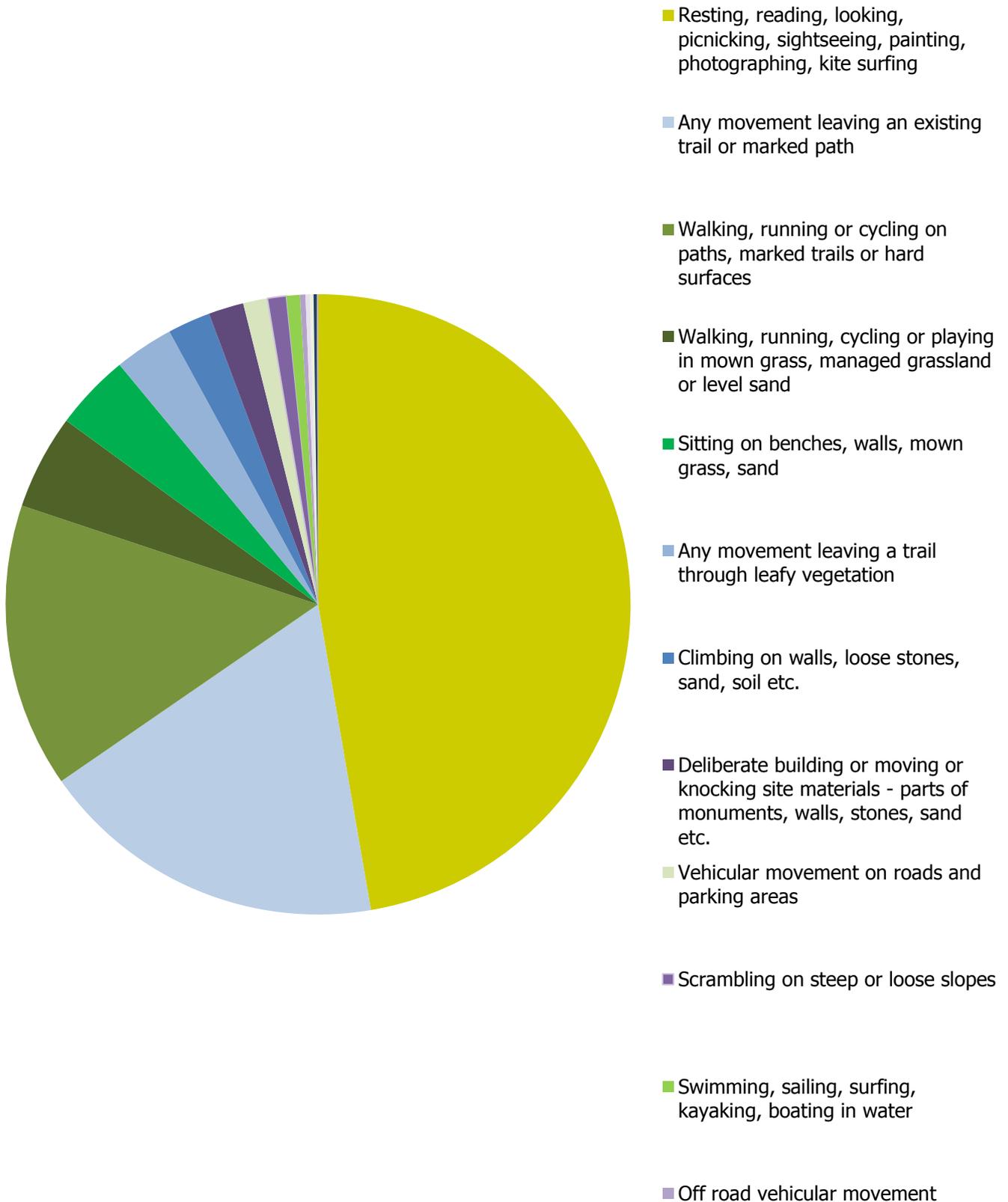


Figure 3.126 Range of activities recorded across all sites

**Table 3.32 Breakdown of activities recorded across all sites**

<b>Activities Observed</b>	<b>No. of People</b>	<b>% of People</b>
Resting, reading, looking, picnicking, sightseeing, painting, photographing, kite surfing	2858	47.29%
Any movement leaving an existing trail or marked path	1091	18.05%
Walking, running or cycling on paths, marked trails or hard surfaces	895	14.81%
Walking, running, cycling or playing in mown grass, managed grassland or level sand	298	4.93%
Sitting on benches, walls, mown grass, sand	239	3.95%
Any movement leaving a trail through leafy vegetation	185	3.06%
Climbing on walls, loose stones, sand, soil etc.	134	2.22%
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc.	110	1.82%
Vehicular movement on roads and parking areas	76	1.26%
Scrambling on steep or loose slopes	59	0.98%
Swimming, sailing, surfing, kayaking, boating in water	42	0.70%
Off road vehicular movement	17	0.28%
Picking herbaceous vegetation	14	0.23%
Watching nature in hedges, woods, streams, pools and intertidal areas	11	0.18%
Fishing	10	0.17%
Disturbance of wildlife	4	0.07%
<b>Grand Total</b>	<b>6043</b>	<b>100%</b>

## Level of impact observed across all sites

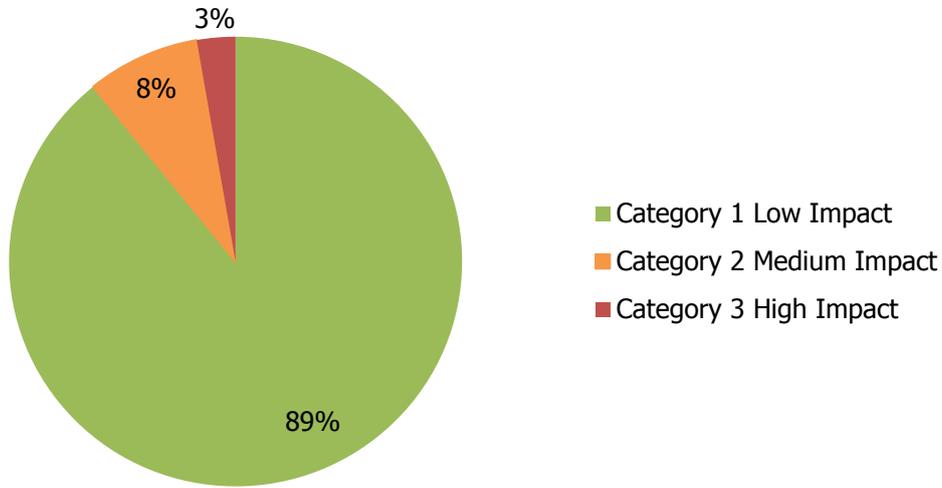


Figure 3.127 Overall level of impact recorded

## Effect Level by Site

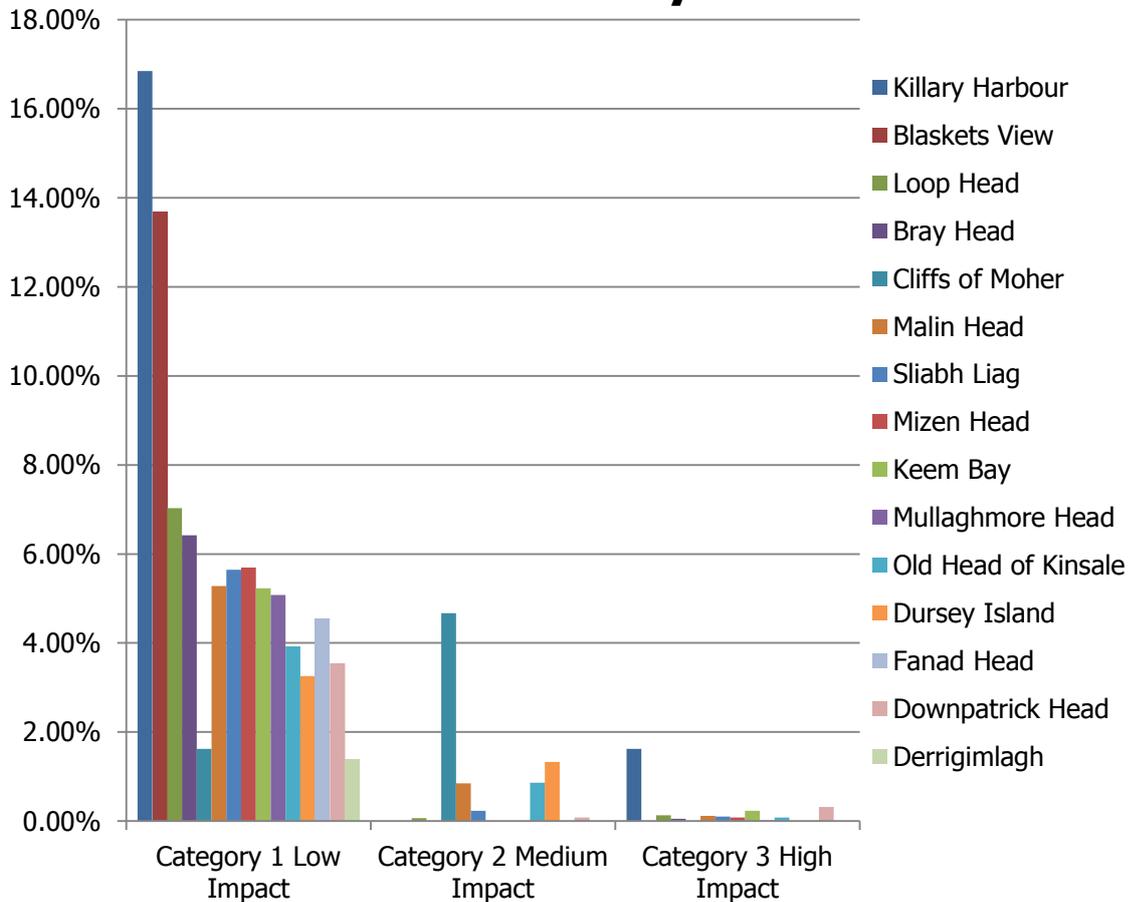


Figure 3.128 Level of Effect by Site

## Effects observed across all sites

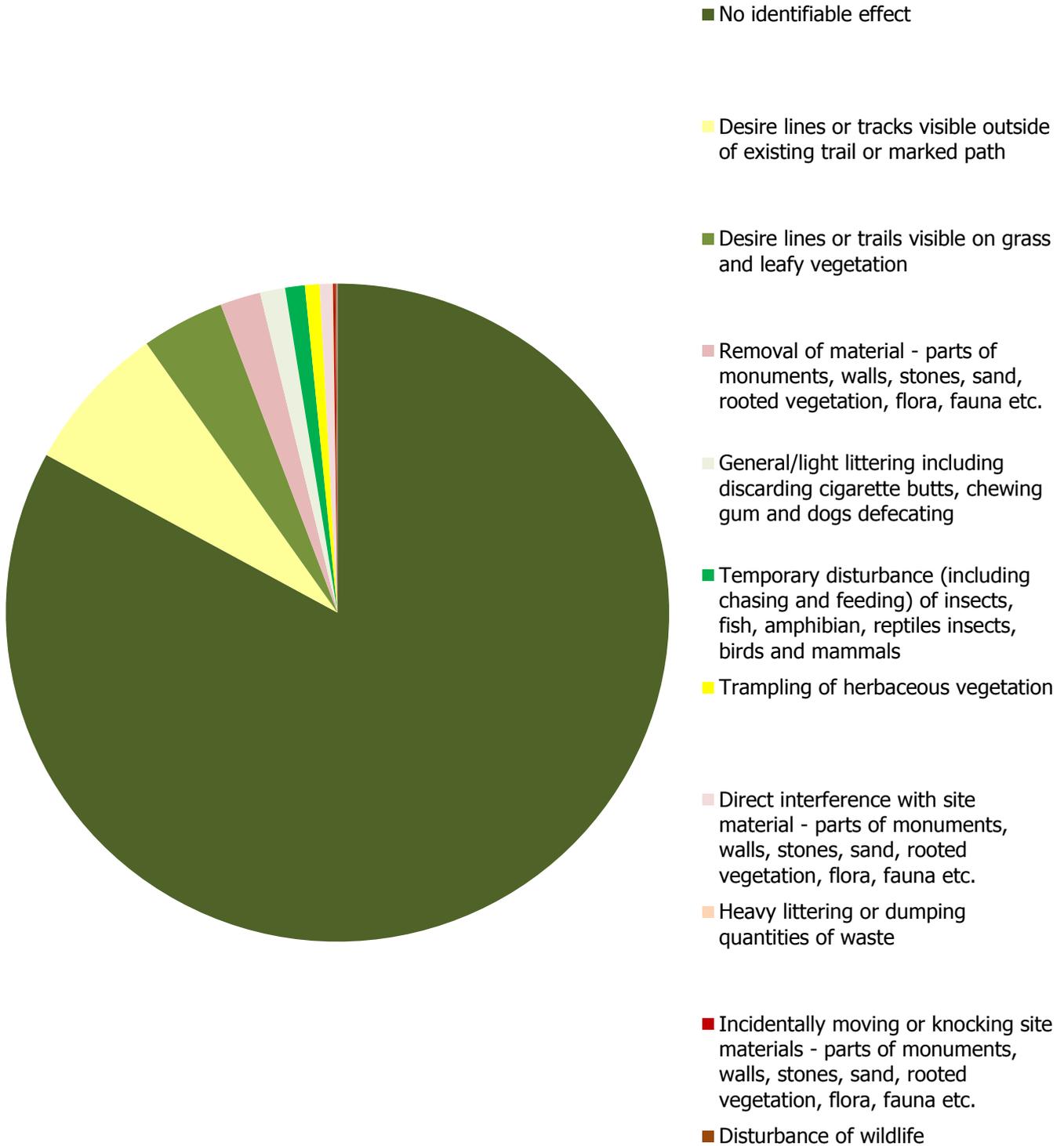
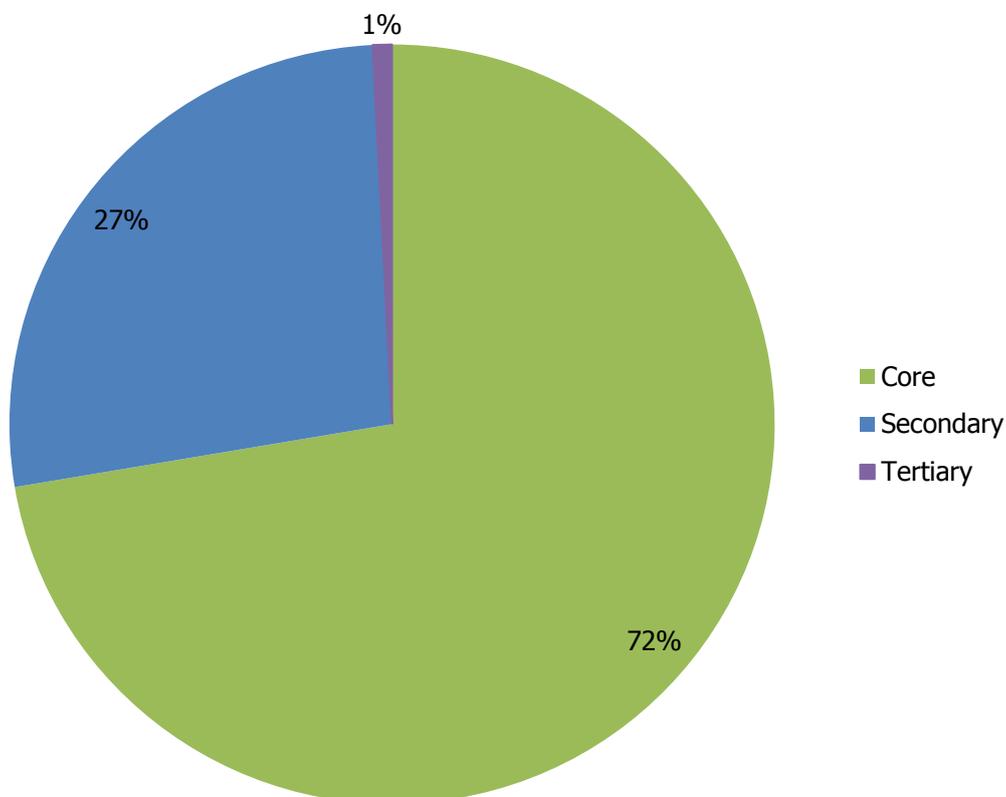


Figure 3.129 Range of effects recorded across all sites

**Table 3.33 Breakdown of effects recorded across all sites**

<b>Effects Observed</b>	<b>No. of People</b>	<b>% of People</b>
No identifiable effect	5013	82.96%
Desire lines or tracks visible outside of existing trail or marked path	440	7.28%
Desire lines or trails visible on grass and leafy vegetation	244	4.04%
Removal of material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	119	1.97%
General/light littering including discarding cigarette butts, chewing gum and dogs defecating	74	1.22%
Temporary disturbance (including chasing and feeding) of insects, fish, amphibian, reptiles insects, birds and mammals	58	0.96%
Trampling of herbaceous vegetation	43	0.71%
Direct interference with site material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	34	0.56%
Incidentally moving or knocking site materials - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.	5	0.08%
Heavy littering or dumping quantities of waste	5	0.08%
Disturbance of wildlife	4	0.07%
Destruction of structures, vegetation or fauna	2	0.03%
Vandalism or Graffiti	2	0.03%
<b>Grand Total</b>	<b>6043</b>	<b>100%</b>

## Zones Trafficked by Visitors



**Figure 3.130 Zones trafficked by visitors at 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, 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**

Of the 6043 visitors observed during the study, 89% were reported to have a low impact on the sites. 8% of visitors were reported to have a medium impacts, these effects were not reported to result in any significant, long term adverse effects. 3% of visitors were recorded to have high impact on sites. When this is further analysed (See Table 3.33) it emerged that this was a very small number of people from larger groups and that their activities did not result in any measurable effects.

Transient short stay visitors were largely observed to be careful and aware of site sensitivities. The majority of visitors were primarily found to engage in low level activities such as sightseeing and photographing before moving on quickly. It was noted that as visitors spent more time on site, the likelihood of effects increased. In most cases, effects were caused by a small minority of visitors who carried out more significant harm. Almost 97% of visitors across all sites engaged in low or medium level activities i.e. walking on paths, mown grass, hard surfaces and sand, resting, reading, looking, photographing (all low level activity) or moving through leafy vegetation by leaving the pathway where a walking trail wasn't established (medium level activity).

The most consistent evidence that emerged from the survey is that there is a direct relationship between the degree of site management and the likelihood of environmental effects arising. Blaskets View displayed an example of best practice management at a layby type site and as a result recorded the least amount of impacts. Mizen Head displayed best practice management among the larger, more complex sites that have visitor centres and onsite personnel.

As the level of management decreased, visitors were more likely to engage in medium or high level activities. This was evident in the Cliffs of Moher where visitors left the pathways at the earliest opportunity and followed eroded tracks when walking along the less managed trails. In contrast, visitors around the centre and viewing platforms appeared to be aware of visitor management regimes and engaged in largely low level activities. Malin Head, a site with minimal visitor management in place, displayed a situation where visitors parked sporadically and walked off paved areas frequently.

Evidence of effects was less apparent at layby sites where visitors engaged in low levels of activity. A correlation between the amount of time spent on site and the likelihood of effects occurring was identified. At layby sites, visitors were observed to spend the least amount of time. Visitors spent less than five minutes at Blaskets View and Killary Harbour. Blaskets View recorded the least amount of time spent and recorded no effects. This was also evident for Derrigimlagh and Fanad Head. It is apparent that visitors to layby type sites are likely to engage in low level activities including walking on paved areas, hard surfaces, resting, reading, looking, photographing. Killary Harbour and Blaskets View recorded the highest volume of visitors overall.

Visitors spent the most time at locations where activities, trails or looped walks were available such as Downpatrick Head (53 minutes), Keem Bay (52 minutes) and Dursey Island/Garnish Point (46 minutes). These sites recorded more Category 3 High Impacts – all of which resulted in no discernible effects.

Derrigimlagh recorded the least amount of visitors overall. The site is very remote and difficult to find. Volumes of rental cars and cars with overseas registrations were noted passing by the turn for the site. Fanad Head and Mullaghmore Head recorded a high volume of visitors not exiting their vehicles.

Where impacts did occur they were not reported to give rise to any significant, long term adverse effects.

## Section 4 Conclusion and Recommendations

A total of 6,043 visitors were observed across fifteen candidate Signature Discovery Points in seven counties along the Wild Atlantic Way. The majority of visitors to these sites stay within designated areas and are very careful to respect the natural environment.

Of the 6043 visitors observed during the study, 89% were reported to have a low impact on the sites. 8% of visitors reported to have a medium impacts, these effects were not reported to result in any significant, long term adverse effects. 3% of visitors were recorded to have high impact on sites. When this is further analysed (See Table 3.33) it emerged that this was a very small number of people from larger groups and that their activities did not result in any measurable effects.

The most consistent evidence that emerged from the survey is that there is a direct relationship between the degree of site management and the likelihood of environmental effects arising. It was also evident that as visitors spend more time on site, the likelihood of effects increased. Site management is recommended for sites where visitors are spending time in excess of approximately 15 minutes to control the flow of traffic and ensure good visitor behaviour.

Site management can range for intense management that includes site presence of personnel, through intermediate levels where there are site facilities that include signs and interpretative material to sites with no management. The size and scale of the site should be considered when deciding the level of site management required particularly at layby sites where typically visitors spends short amount of time and engage in low levels of activity.

All sites should be evaluated and developed using guidelines provided to ensure that facilities are put in place to manage the effects of visitor numbers without causing more harm. The option of doing nothing in most cases would cause any effects to continue and worsen. Careful consideration of the appropriateness of the proposed site management is recommended to ensure it does not result in continued or worsened effects.

All sites should give careful consideration to the following issues:

- Implementation of uniform signage maintaining consideration of site sensitivities during installation
- Clear signage to the entrances of all sites
- Careful consideration when proposing facilities such as toilet blocks and car parks
- Measures to improve the flow of visitor traffic, vehicles and parking issues

Research at candidate Signature Discovery Points shows that the average duration on site is less than 30 minutes. Blustery and unpredictable weather at these sites appears to be a major determinant in limiting the duration of stay. Visitors who remain on site longer may a snack or picnic, often in or beside their car due to wind and weather.

The results also show that if interpretative material/signs are present, approximately one third of visitors will take the time to read them.

### **Recommendations for future surveys**

Repeat observation study for candidate Signature Discovery Points where sensitivities were identified during ecological study

Repeat observation study for candidate Signature Discovery Points where site dynamics have changed i.e. where a new car park or feature has been added since 2015 study

Carry out the monitoring and surveying strategy for new candidate Discovery Points (Fifteen minus the number of sites that do not require repeat surveys or the number of studies approved by Fáilte Ireland)

## Appendix I: Example of Completed Survey Sheet for Visitor Observation Study



Site	Date	Name	Station
Loop Head 52.560901, -9.9304605	03/05/2015	BOD	Carpark 1 <input checked="" type="checkbox"/>
	04/05/2015	SMC	Carpark 2 <input checked="" type="checkbox"/>

Total No. of people	Gender		Age			
	M	F	Kids	Teens	Adults	Elderly
4	2	2	2		2	

Mode of Transport	Arrival Time	Departure Time	Read Info Boards?	
			Yes	No
CAR	13:44	14:19	<input checked="" type="checkbox"/>	

Activities
<ul style="list-style-type: none"> <li>- WALKED INTO LIGHTHOUSE - TOOK TOUR (30 MINS)</li> <li>- WALKED NORTH OF LIGHTHOUSE ON WET SOIL/GRASS + DOWN TO 'EIRE' SIGN.</li> <li>- CHILD (FEMALE) PICKED FLOWERS.</li> <li>- RETURNED TO CAR + DEPARTED.</li> </ul>

Effects	Comments
<ul style="list-style-type: none"> <li>- CHILD PICKED VEGETATION.</li> <li>- WALKING ON WET/MUDDY SOIL.</li> </ul>	SILVER NJENSIS. FEMALE ADULT IN BRIGHT BLUE COAT.

# Appendix II: Key for completing Observation Survey Sheet

**Site map**  
Use to illustrate areas trafficked by visitors

Note site, date, name and survey station if not filled in previously

How many in the group? Are they male or female?

Site	Date	Name	Station

-Children  
-Teenagers  
-Adults  
-Elderly

Total No. of people	Gender		Age			
	M	F	Kids	Teens	Adults	Elderly

Only applies in car park or layby  
-Car  
-Bus  
-Motorbike  
-Bike  
-On foot  
-Other (specify)

Mode of Transport	Arrival Time	Departure Time	Read Info Boards?	
			Yes	No

Note time of entry and exit from your observation area.

Activities

-Walking,  
-Climbing  
-Sitting  
-Picnicking  
-Playing  
-Filming,  
-Photography  
-Drawing,  
-Writing  
-Other (Specify)

Note in particular any interaction with site features  
-Picking flowers  
-Moving stones  
-Catching wildlife  
-Leaving litter  
-Lighting fires  
-Chasing animals  
-Leaving gates open

USE LIST OF ACTIVITIES  
USE MAP

Effects	Comments

Note any after-effects of interaction with site features  
-Visible vegetation marks  
-Visible litter  
-Visible footprints  
-Visible tire-marks  
-Visible disturbance of fences, walls, monuments, etc.

USE LIST OF ACTIVITIES  
USE MAP

Use this section to note identifying features of visitors e.g. 'Pink Coat'  
Or  
When interactions and effects occur for example:  
'Two teens wandered off from main group and climbed onto the walls dislodging loose stones'  
Or  
'The couple had a small bucket that they used to store the slips of flowering plants that they gathered'  
Or  
'The campervan backed onto the grassy area while trying to turn - resulting in a muddy patch where the wheels spun on the wet grass'

## Appendix III: List of Activities and Effects by Category

<b>Activities</b>
<b>Category 1 Low Level</b>
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, boating (in water)
Resting, reading, looking, picnicking, sightseeing, painting, photographing, kite surfing
Vehicular movement on roads and parking areas
Watching nature in hedges, woods, streams, pools and intertidal areas
<b>Category 2 Medium Level</b>
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
<b>Category 3 High Level</b>
Walking through wet/muddy/sandy 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

## Observation Study Results

<b>Effects</b>
<b>Category 1 Low Impact</b>
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/pet fouling
<b>Category 2 Medium Impact</b>
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
<b>Category 3 High/Severe Impact</b>
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