

# Condition Assessment and Strategic Path Review



**Comhairle Contae  
Dhún na nGall**  
Donegal County Council



The ASCENT Site

## Errigal Mountain Co Donegal, Ireland

### T1.1

#### Research on the Impact of Unregulated Access to Upland Sites

By ASCENT Lead partner: Donegal County Council in cooperation with the Errigal Stakeholders Group



**ASCENT**  
Promoting Sustainable Access  
to Uplands & Natural Environments



**Northern Periphery and  
Arctic Programme**  
2014–2020



**EUROPEAN UNION**

Investing in your future  
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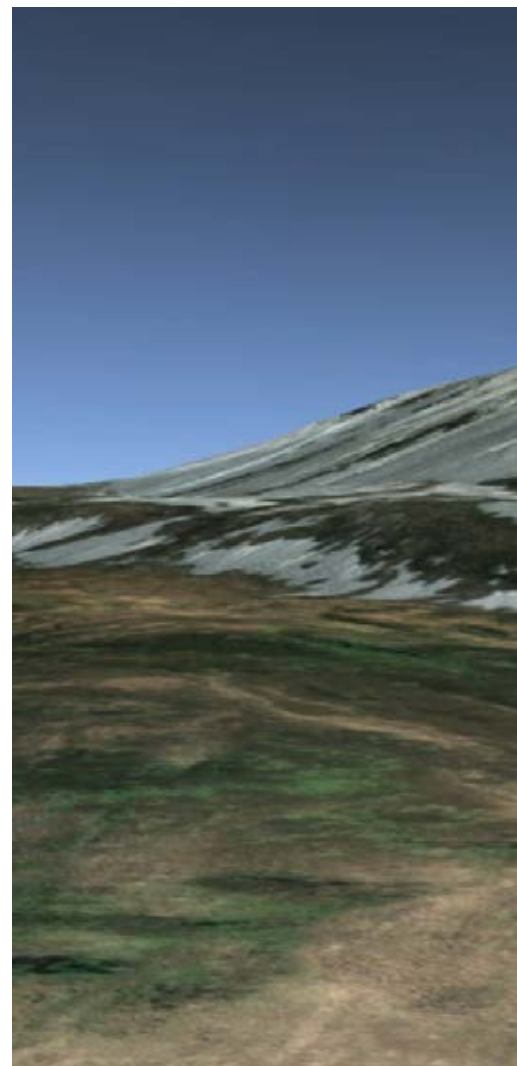
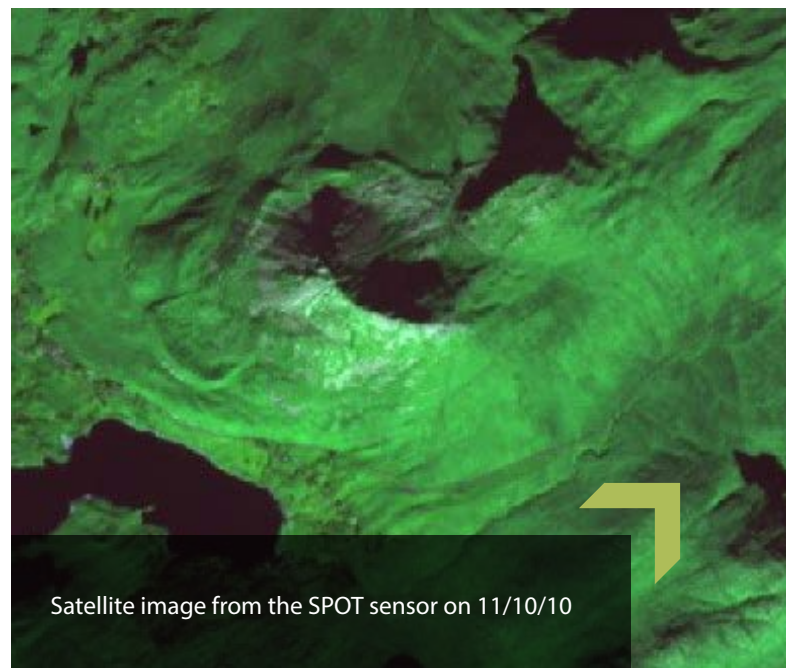
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To support this research report, a Story Map has been created to display much of the information referred to in the report :

To access the accompanying Story Map :

<http://arcg.is/1CTeOT>

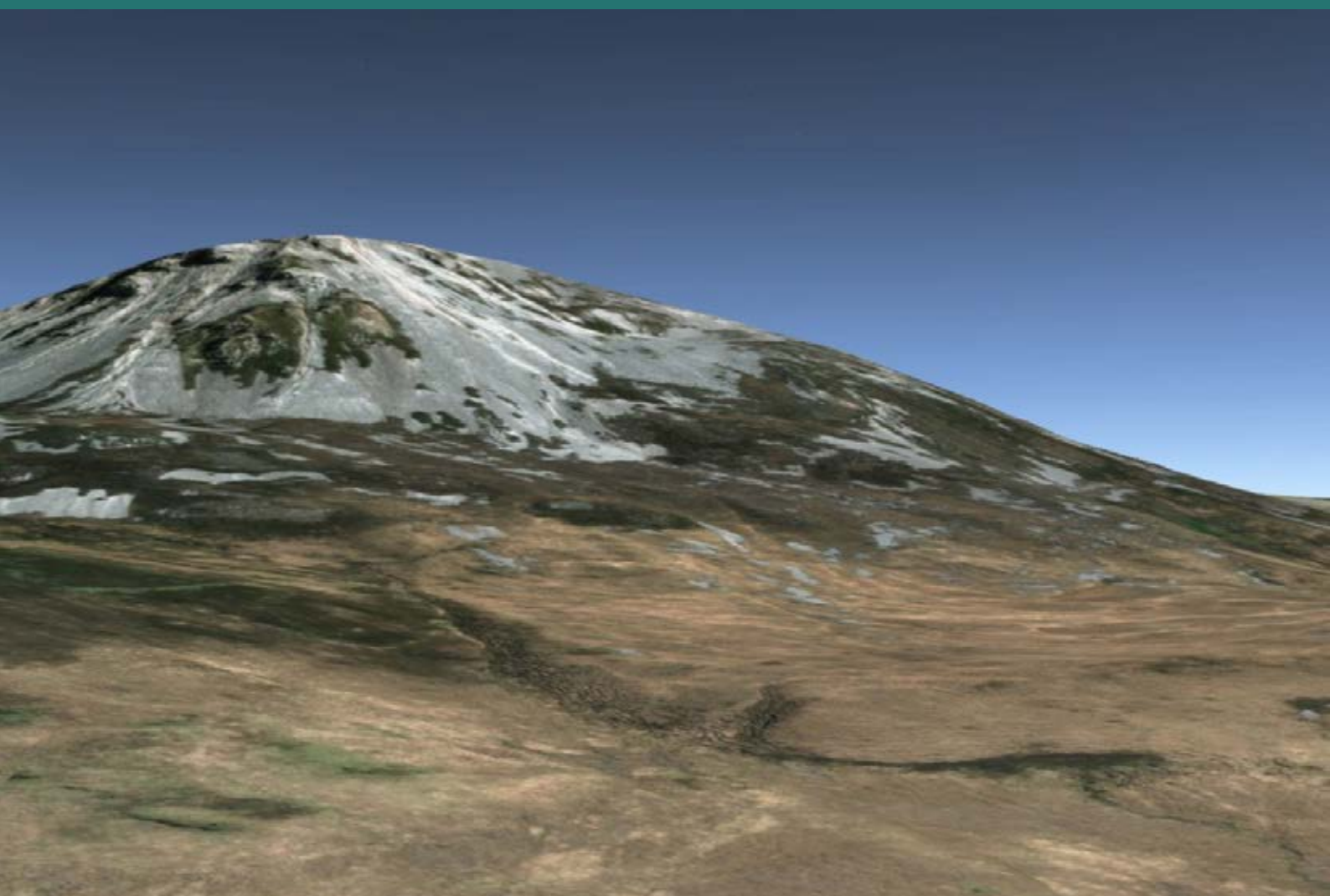




# **‘Dhá chéad slán ag an Earagail lár ina stua os cionn caor ‘s call’**

‘Two hundred farewells to Errigal standing  
regally in the hills & heather”

Gleanntáin Ghlas Gaoth Dobhair Francie Mooney



# PART 1

## 1.1

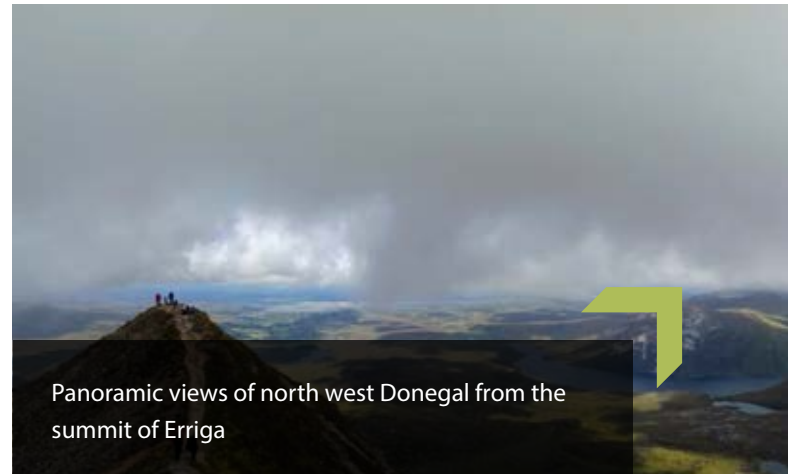
### Introduction

Errigal Mountain 'An Earagail' meaning 'the oratory' is derived from the Latin Oraculum, named from an oratory or a hermitage which stood near the mountain at an earlier date. Located in the north west of Ireland, in the townland of Beltany Mountain in the Donegal Gaeltacht, the quartzite peak is the most southern, steepest and highest of the Seven Sisters mountain chain in the Derryveagh Mountains, which also includes Muckish, Crocknalaragagh, Ardloughnabrackaddy, Aghla More Mackoght and Aghla Beg.

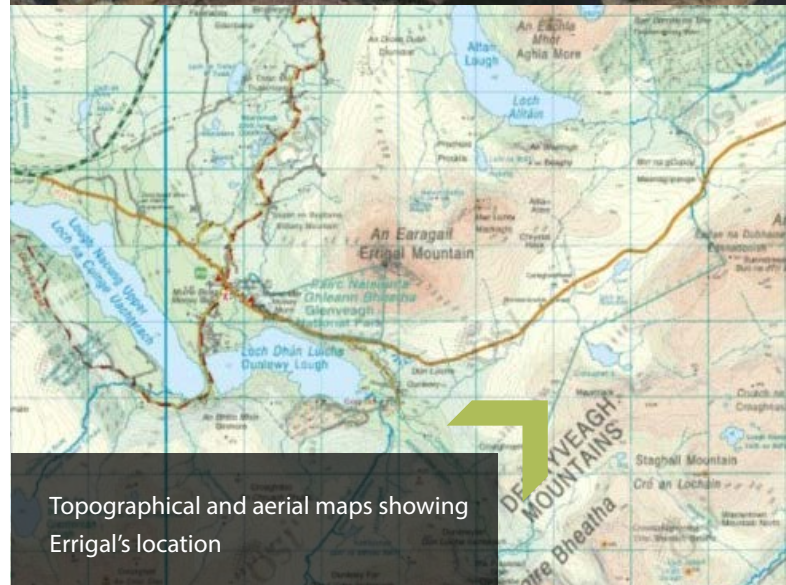
Errigal is indeed iconic in many ways – in its meaning, geography, height, location, age, formation, shape and climb. At 751 metres above sea level, Errigal which is the highest point in County Donegal, dominates the natural landscape of the north west of the county. Errigal is recognised nationally and internationally with its name and imagery used extensively in tourism promotion and through social media, raising the mountain's appeal and profile.

Below the ice carved cliffs of Errigal lies the Poisoned Glen, renowned for its sweeping valleys, imposing mountains and many natural lakes. Its name has various meanings with many citing the correct name as 'Heavenly Glen' from neamh meaning heaven in Irish as opposed to neimh, the Irish for poison.

Over the last 20 years, Errigal has become a popular destination for hill walkers to cross the blanket bog, to climb the scree slopes and to navigate along the ridge, to experience the panoramic views from its summit extending across the Derryveagh Mountains and the Poisoned Glen, to the Donegal Gaeltacht communities and its coastal villages dappled along the Wild Atlantic Way.



Panoramic views of north west Donegal from the summit of Errigal



Topographical and aerial maps showing Errigal's location

## 1.2

## Location

County Donegal is located in North West Ireland. It is bounded to the north, west and southwest by the Atlantic Ocean and has the longest coastline in the country. The Donegal landscape is very much dominated by mountainous areas including the Derryveagh Mountains or Cnoic Dhoire Bheatha.

Within the Derryveagh Mountains, standing at 751m / 2,466 ft above sea level, is Errigal Mountain the highest peak in County Donegal and the second highest peak in the province of Ulster. It is estimated there are over 15,000 visitors to Errigal per year.

Donegal County Council is the local authority for County Donegal and is made up of five Municipal Districts, for local governance at sub-county level to manage the delivery of the range of Council services. Errigal is contained within the Glenties Municipal District which has a representation of 6 elected members.

Donegal is home to the largest Gaeltacht area in the country, occupying almost one third of the county's total land area. Within An Gaeltacht, the Irish speaking region, resides Errigal Mountain. The regional authority responsible for the economic, social and cultural development of the Gaeltacht and to ensure that Irish remains the main communal language of the Gaeltacht is Údarás na Gaeltachta.

National Parks and Wildlife Service are responsible for the protection of the habitats and species identified for nature conservation in Special Areas of Conservation, Special Protection Areas and Natural Heritage Areas. There are 46 Special Areas of Conservation (SAC's) in Donegal<sup>1</sup>. SAC's are designated to protect and conserve habitats and species of importance in a European Union context. Errigal Mountain is contained within the designated Natura 2000 sites of Clogherhagore Bog and Glenveagh National Park Special Area of Conservation and Derryveagh and Glendowan Mountains Special Protected Area.

Access to Errigal is via the R251 regional road, colloquially known as the 'Back of Errigal' road. From Letterkenny and Glenveagh National Park, the R251 approaches Errigal mountain and then veers down the valley floor past

Dunlewey Lough and Lough Nacung Upper to where it meets the N56 in Dunlewey village. The N56 national secondary road, is the main channel of access to west Donegal.

Nestled at the foot of Errigal is the Poisoned Glen and the small Gaeltacht village of Dunlewey or Dún Lúiche. Dunlewey is a relatively recent settlement with the first edition of Ordnance Survey maps show Dunlewey as 'a clachan to the east of the Lough before the bridge was constructed crossing the Loughs' there<sup>2</sup>.

According to the Census of Population 2016, Dunlewey is within the Small Area (SA) of 05706001, which has a total population of 159 or 2.46 persons per square kilometre and a total housing stock of 108. There are a number of services and amenities in there including a petrol station, a shop, a tourist centre and a four star hotel in close proximity to the village.

See Errigal Location Map - <http://arcg.is/1CTeOT>

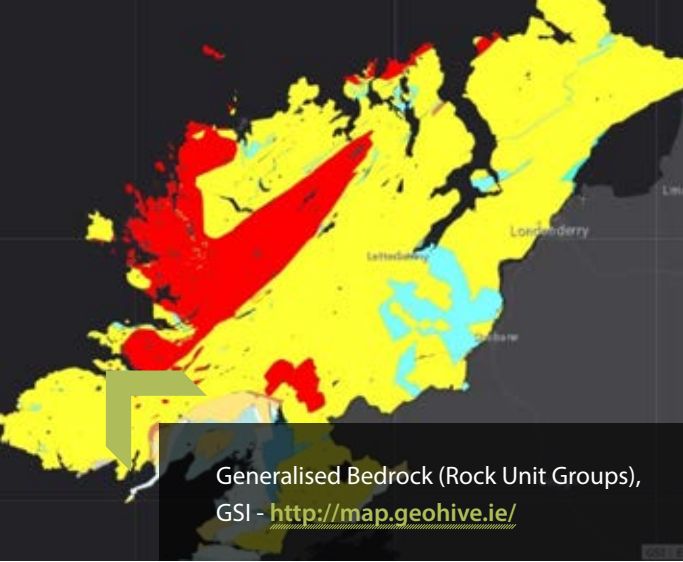


Location of Errigal Mountain, County Donegal, Ireland

<sup>1</sup> [www.npws.ie](http://www.npws.ie)

<sup>2</sup> Draft Landscape Character Assessment 2015





### 1.3

## Landscape and Geology

Donegal is renowned for its scenic and varied landscape, dominated by a mountainous ridge spanning from the south west to the north west; reflecting the diverse geology on which it has been shaped and later sculpted by ice sheets and glaciers.

The rocks of Donegal can be divided into two main subdivisions of metamorphic sediments mainly from the Dalradian Age and large igneous granite intrusions of Caledonian Age. The Derryveagh mountains were formed 430-400 million years ago and are an extension of the Highlands of Scotland formed during the late Caledonian Age, where along the Caledonian fold belt, two continents collided and the rocks were subjected to intense pressure and heat.

Errigal is a typical feature of this era with rock derived from beach sands on the margins of the ocean, metamorphised and converted from sandstones to quartzite and rising sharply from the lowlands due to further tectonic compression.

### 1.4

## Drift Geology Glaciation

During the last Ice Age, circa 26 to 21k years ago, the Derryveagh summits were buried under a sheet of ice. The extensive ice sheet radiated in a north to northwesterly direction, with the powerful erosive effects of the retreating ice further moulding the landscape. The Dalradian resistant ridge of Ards Quartzite across the Derryveagh Mountains was breached by ice in several places. Evidence of the passage of ice is apparent at the Poisoned Glen, where glaciers carved out the landscape to create a spectacular U-shaped valley there.

Today Errigal is underlaid predominantly by Ards quartzite. The geology of Errigal is complex with bands of schists, granodiorite and some outcrops of limestone occurring and pelite on lower ground to the south and west.

Its conical shaped peak was carved from Ard Quartzite during the last Ice Age. A ring of talus or scree remains around its peak, where bare rock is exposed to the elements and shatters, settling at 40 degrees to the horizontal and forming an unstable surface. The depression at the centre of the summit is known today as 'One Man's Pass' – mountain.

See Errigal : Geology Map - <http://arcg.is/1CTeOT>



## 1.5

### Soils

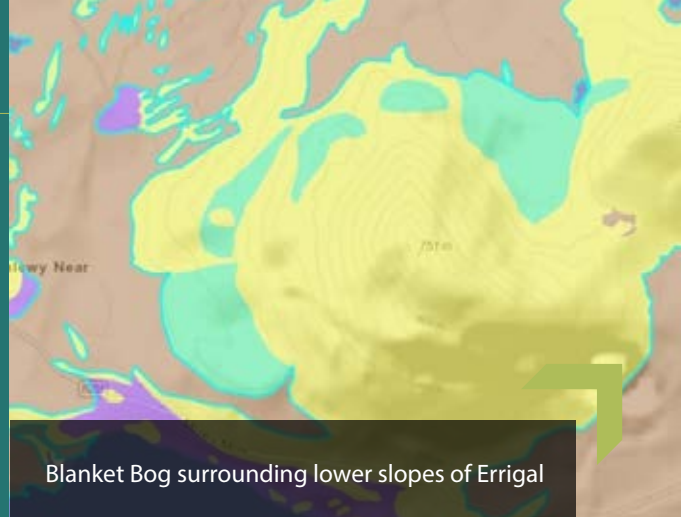
After the ice age, a number of processes and factors determined the formation of soil, namely geological material, climate change, vegetation growth, topography, plants and animals, relief and time<sup>3</sup>. There is a diverse range of soil types in Donegal although three types predominate including :

- **Podzolic soils** – which are associated with free-draining areas and are suitable for arable land use
- **Gleyed soils** - found mostly in low lying areas close to the water table or in areas of high rainfall
- **Blanket Peats** - are found in both lowland and upland areas where poor drainage leads to considerable depth of peat to form. Exposure to the wind and in areas of high precipitation have resulted in a blanket bogs landscape.

The topography of west Donegal is characterised by upland areas of varying slopes. On Errigal the subsoil comprises of blanket peat (shown), mostly bedrock on steeper slopes and Quartzite till on the northern peripheries of Errigal's footprint. It is likely that overgrazing in commonage areas has exposed the peat to further precipitation, frost and snow causing further fragmentation of the blanket bog.

The soils on Errigal vary from shallow lithosols podzolic type, to some gleys, to the wet highly organic blanket bogs.

See Errigal : Soil & Landcover Map - <http://arcg.is/1CTeOT>



Description	Type	Soil group
Acid Shallow, lithosolic or podzolic type soils potentially with peaty topsoil	Predominantly shallow soils derived from non-calcareous rock or gravels with/without peaty surface horizon	Podzols (Peaty), Lithosols, Peats, Some outcropping rock
Acid Deep Poorly Drained Mineral	Derived from mainly non-calcareous parent materials	Surface water Gleys, Ground water Gleys
Acid Shallow Well Drained Minera	Derived from mainly non-calcareous parent materials	Shallow Acid Brown, Earths/Brown Podzolics, Lithosols, Regosols, Some Outcropping rock
Blanket Peats	Peats	Blanket Peats



## 1.7

## Land Cover

Corine Land Cover is a map of the Irish environmental landscape based on an interpretation of satellite images. The Corine classification uses a hierarchical structure disaggregated into five categories namely urban areas, agricultural areas, forests, wetlands and water bodies. The most recent Corine classification was undertaken in 2012 and provides a useful baseline of landcover classes for Errigal.

For the purposes of the report, Errigal Mountain's footprint was defined along natural contours above 100m and bounded by Dunlewey Lake to the south west and Altan Lough to the north east and includes Mackoght or 'little Errigal'.

The footprint covers an area 19.57sqkm / 1957 ha and is spread across Agriculture, Forestry, Wetlands and Water bodies land cover types which are disaggregated into 8 classes.

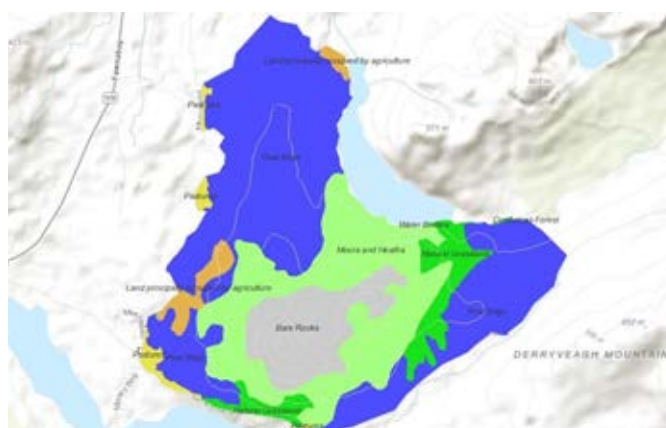
Over 50% of Errigal is made up of peat bogs (412) on lower altitudes, 26% by Moors and Heathland (322) and 11% of Bare Rocks (332) on elevations greater than 400 metres. Agricultural lands including pastures and land principally occupied by agriculture/natural vegetation account for only 4% of the total footprint, while natural grassland covers 6%.

Historically sheep grazed on Errigal with evidence of old 'sheep routes' visible across the mountain and likely to have defined some current routes the summit. However there are very few livestock on the mountain today. The land used for recreational activity crosses commonage areas, with many landowners having a share in the plots of land there. Many land parcels are showing the impact of recreational induced erosion. For any planned sustainable interventions at Errigal consultations with landowner is therefore required<sup>4</sup>.

See Errigal : Soil & Landcover Map - <http://arccg.is/1CTeOT>

CODE_12	Landcover_Type	Area (ha)	Area (sqkm)
231	Pastures	12.3	0.1233
231	Pastures	18.5	0.185007
243	Land principally occupied	9.7	0.096886
243	Land principally occupied	39.8	0.398169
312	Coniferous Forest	0.1	0.000686
321	Natural Grassland	91	0.909944
321	Natural Grassland	32.1	0.320989
322	Moors and Heaths	508.8	5.087594
332	Bare Rocks	214	2.139743
412	Peat Bogs	1031.4	10.314214
512	Water Bodies	0.2	0.001967

Corine 2012 Landcover types



Natural Heritage – [www.npws.ie/protectedsites](http://www.npws.ie/protectedsites)



## 1.8

## Natural Heritage

In Ireland measures for the protection and conservation of the natural environment and assets are enshrined in national and EU legislation. Natural heritage sites of environmental, archaeological and architectural significance are protected by law with any proposals for intervention assessed to ensure the integrity of the site is retained by appropriate bodies.

Errigal Mountain is contained within the designated Natura 2000 sites of Derryveagh and Glendowan Mountains Special Protected Area (site code 004039) under the EU birds directive for migrating birds and Clogherhagore Bog and Glenveagh National Park Special Area of Conservation under the EU Habitats Directive (Site No. SAC 002047).

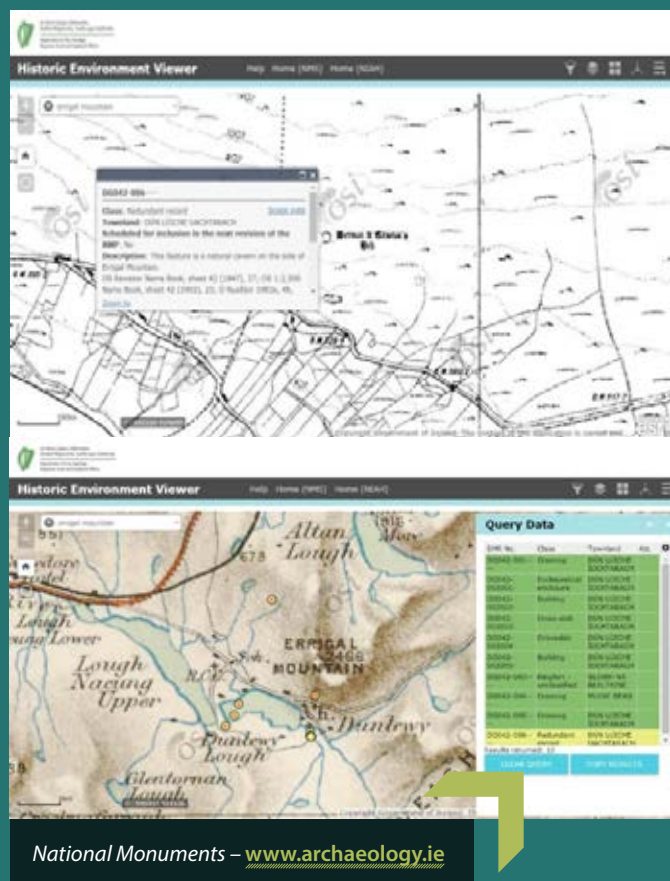
The site synopsis for the SAC establishes that 'good examples of Wet Heaths (4010) can be found on the south-eastern slopes of Errigal's. Wet Heaths (4010) is an Annex I habitat and it is a conservation objective of this Natura 2000 site to 'restore the favourable conservation condition of wet heaths'. The designation of the SAC therefore brings a legal duty to ensure that habitats and species are kept in a 'favourable condition'.

Errigal is also designated as a proposed Natural Heritage Area, under the Wildlife Acts 1976 & 2010 as an important habitat for plants and animals.

See Errigal : Natural Heritage Map - <http://arcg.is/1CTeOT>

National Parks and Wildlife Service are responsible for the protection of the habitats and species identified for nature conservations for SAC's, SPA's and NHA's and also for the implementation of the Irish and EU legislations, including the EU Habitats and Bird Directives.

Furthermore there are 10 national monuments of archaeology in the vicinity ranging from Crannogs to early ecclesiastical sites. A natural cavern called Leaba Dhiarmuid and Oilean Grainne/Dermot and Grainne's bed is located on the side of the mountain which originates from the Megalithic Age.



5 <https://www.npws.ie/protected-sites/sac/002047>

## 1.9

## Spatial Planning & Development Strategies

In the EU national policies are set within the framework for Europe 2020: Smart Sustainable and Inclusive Growth, while here in Ireland, national policies are consistent with the National Biodiversity Plan 2011- 2016.

The Draft County Donegal Development Plan (2018-2024) which is the principal statutory land use plan for the County, sets out a clear key objective to *'protect, enhance and appropriately harness the unique quality and diversity of the environment, through a wide range of measures, supported by proper planning and sustainable development'*.

In the Plan, the Donegal landscape is categorised into three types with Errigal located within an area of Especially High Scenic Amenity (EHSA) described as :

*'a sublime natural landscape of the highest quality synonymous with the identity of County Donegal, where there is extremely limited capacity for additional development'*

Using a combined demographic, social and physical analysis Errigal is part of a structurally weak rural area that :

*'exhibits characteristics of persistent and significant population decline as well as a weaker economic structure based on indices of income, employment and economic growth'*

One of the primary goals of the Donegal Local Economic and Community Plan (2016-2022) is to 'protect, enhance and promote the natural environment of County Donegal'. Errigal is referenced within the high level objectives of the plan specifically:

- **2.4** - to realise the sustainable development of our natural asset with an action to work cooperatively to promote Donegal's natural landscape and its range of world class iconic and strategic tourism products including Errigal Mountain
- **7.6.** - to collaboratively develop and promote the full potential of the tourism sector and specifically to work co-operatively to further develop and promote Donegal's range of world class iconic and strategic tourism products including Errigal Mountain
- **7.7.** - to collaboratively develop and promote the value of the Wild Atlantic Way to enhance and promote Donegal's coastal landscape world class iconic and strategic tourism products, such as Errigal Mountain

Errigal - a sublime natural landscape of the highest quality





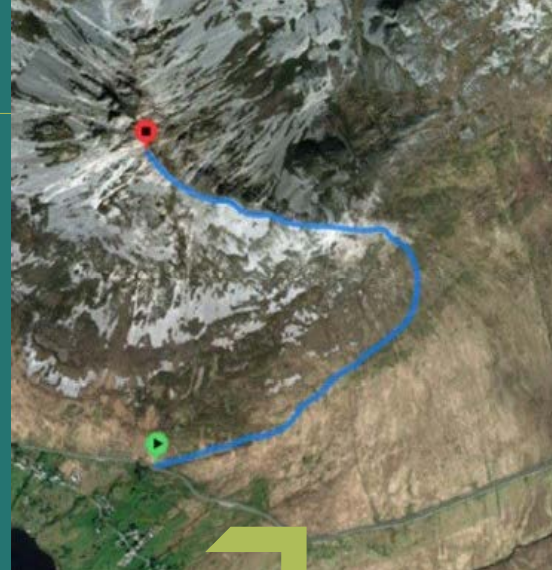
## 1.10

### Historical Use & Development of Routes

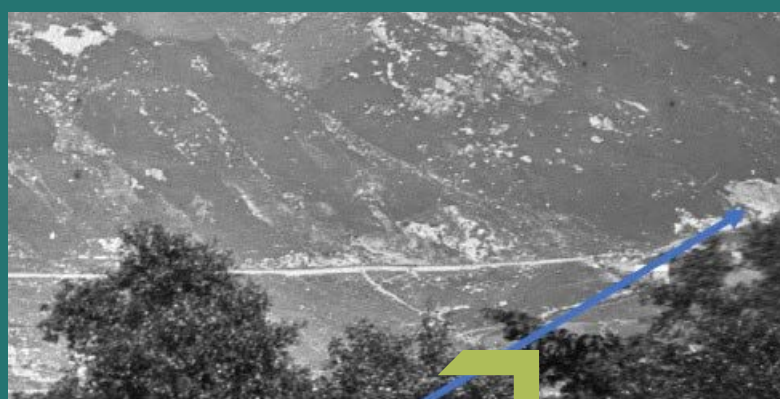
Climbing Errigal to take in the spectacular views from the summit isn't a recent occurrence. The oldest known route is the Old Quarry route aptly named as its passage was through the quarry on the south facing slope. This quarry was utilised in the mid 1890's as a source of material for the construction of what is now the R251 access road from Dunlewey to Letterkenny.

Another route colloquially known as Paddy's Bridge was popular with climbers for many years. Drainage channels were constructed along the route, which took a direct line to join the 'Old Quarry'. In the early 1990's the bridge was demolished at a time that the new car park was constructed further east on the R251, which had the net effect of concentrating hill walkers along a number of routes on the south eastern side of Errigal.

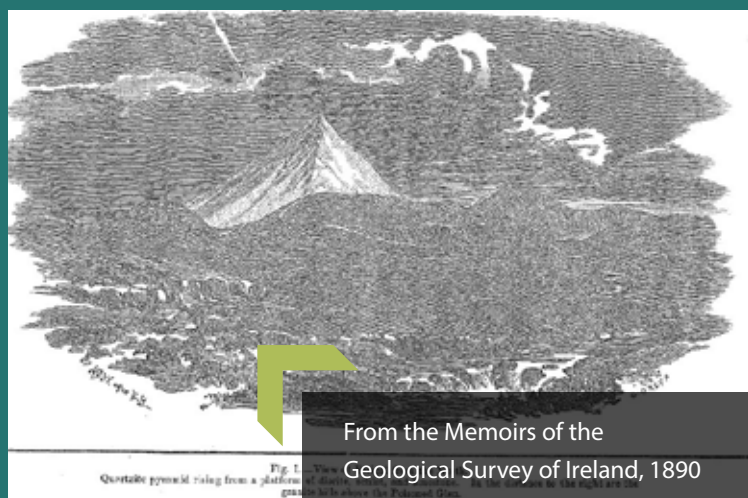
The mountain has played host to many events including the 'Glover Walk' a popular hill walking event which began in 1979, with participants traversing eight peaks in the Derryveagh Mountains with the final ascent of Errigal. Despite its suspension in 1998 owing to concerns regarding the impact on upland paths, the Glover Walk returned in 2010 and again in 2015. Gael Force North began in 2012 with Stage 4 involving a 4km run/walk up and down Errigal where 'terrain is varied, including bog nearer the base and scree further up'. The viewing area was constructed in 2016 and is now the transition point where participants start their mountain climb for Gael Force.



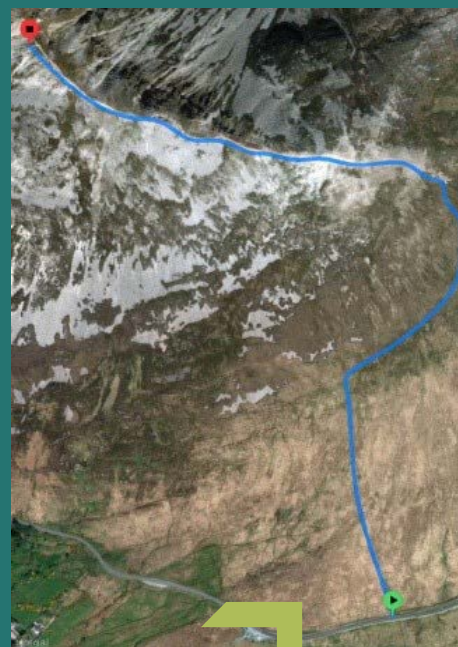
The Old Quarry Route



From c. mid 1890 the Route showing the Quarry



From the Memoirs of the Geological Survey of Ireland, 1890



Paddy's Bridge Route

## 1.11

## Changes over time

Over the last 20 years Errigal has and is continuing to experience erosion associated with unregulated access and increased recreational activity on a number of routes to the summit.

To measure and quantify the level of change, visual and spatial analysis exercises were conducted by the ASCENT project team based on historical aerial photography from 1995, 2005 to 2015 using GIS technology.

Firstly on visual examination of black and white orthophotography from 1995, a number of access routes are apparent including Paddys Bridge, the emerging stream side route and an original route approximately 1km further east on the R251. Notably in 1995, the car park was not yet constructed.

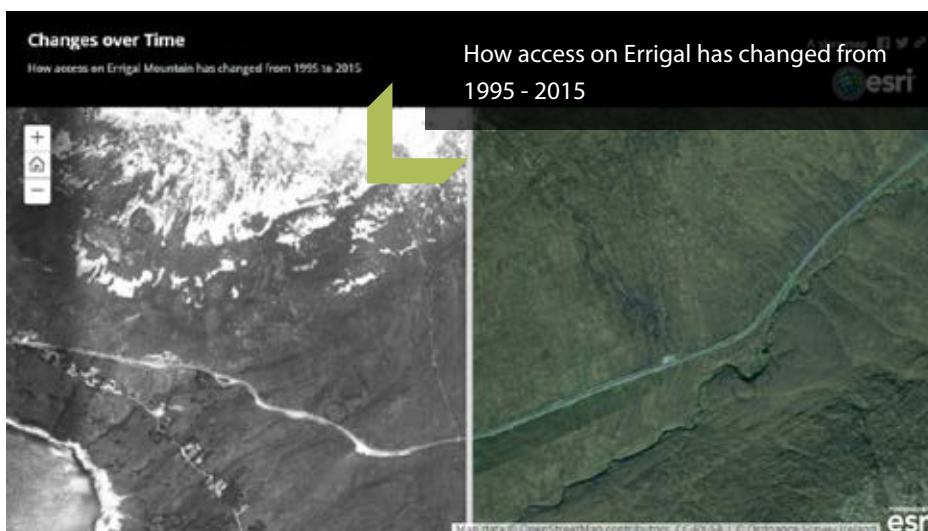
In compare to 2015, the Paddys Bridge route had a less visual intrusion on the landscape, the extent of the current use and damaged area is very evident along the stream side route and the scar line along the main ridge.

See Errigal : Change over Time Map - <http://arcg.is/1CTeOT>

By digitising the visible scar lines on the landscape for 1995, 2005 and again for 2015, a time enabled map was created using GIS, to depict the changes over time. A significant network of access routes have emerged predominantly on the south eastern side of the mountain, traversing blanket bogs and also along the ridge to the summit.

See Errigal :Time Lapse Map- <http://arcg.is/1CTeOT>

Through the visual and spatial analysis undertaken, it is therefore conclusive that there has been significant change over time to access on Errigal since 1995, due to recreational induced erosion with a universal acceptance that repair and restoration of the habitat to protect the mountain is imperative.





## 1.12

### Responding to Challenges past, present and future

In response the Errigal Stakeholders Committee was established in 2012 to consider and investigate options to address the condition and on-going erosion of the mountain. The committee has adopted a partnership approach for balancing tourism, cultural, social and economic interests with environmental needs to ensure the long term sustainable management for Errigal Mountain.

The multi agency committee has representation from the following organisations including Donegal County Council, Cosite Forbartha Dhun Luiche, National Parks and Wildlife Service, An Taisce, Mountaineering Ireland, Gartan Outdoor Education and Training Centre, Failte Ireland, Udaras na Gaeltachta, Roinn na Gaeltachta and Donegal Local Development Company (Rural Recreation Officer).

In 2015, the Errigal Stakeholders commissioned a condition assessment of the route network with the associated mapping of existing upland routes to make prioritised recommendations for the management, repair and maintenance of the path network.

The stakeholder's mission is to achieve the recommendations of that Path Study Report. A shared vision 'to facilitate the responsible enjoyment of Errigal in a manner that protects the mountains special qualities and benefits the local community' was agreed in 2016 as the framework for advancing future plans for Errigal and Dunlewey.

The range of recommendations from the Path Study formed the basis of an application for funding under the INTERREG VB programme. In 2016 Donegal County Council successfully secured funding for ASCENT (Apply Skills and Conserve our Environment with New Tools) under the Northern Periphery and Arctic Programme (NPA) 2014-2020.



ASCENT brings together local and environmental authorities to collectively address the environmental challenges in seven Northern European upland sites, all of which face challenges associated with increased visitor numbers and unregulated access.

Donegal County Council as lead partner is working collaboratively with project partners in Iceland, Finland, Northern Ireland and Norway, in delivering the project objectives and a range of outputs from September 2016 to August 2019. Errigal is one of 7 project sites on ASCENT.

See <http://arcg.is/2xjtqxE>

To locate ASCENT's project sites

## 1.13

## The mountain as a recreational area

Errigal Mountain is a significant contributor to Donegal's rural tourism offering. With domestic and international visitor numbers increasing significantly year on year; coupled with the exponential growth in walking and hiking activities and the promotion of the Wild Atlantic Way touring route; Errigal has become a 'honey pot' destination for various types of visitors, with a desire to climb Donegal's highest peak and to enjoy 'the glittering lakes, an indented coastline, the stark beauty fo the Poisoned Glen, drumlin studded screes and a suite of crenelated peaks that dance like waves to the horizon'<sup>7</sup>.

Technology advancements like fixed point photography, GoPro cameras, drone footage and YouTube videos are captured, shared online and promoted through social media, with the net result of making Errigal more accessible to an international audience, well beyond the traditional hill walker.

The profile of visitors to Errigal varies greatly with differing abilities; from experienced hikers and triathletes taking part in endurance events to families and dog owners, with the relatively reasonable climb from the car park, making it an achievable goal for beginners. However many are not accustomed to the upland environment when arriving on site and are often ill-equipped with appropriate gear and equipment to withstand temperture variations. Deterred by the challenges of crossing the blanket bog on lower terrain, many return to the car park. Anecdotal evidence suggests that more skilled hikers tend to avoid Errigal especially over Summer months preferring to explore other 'unspoilt' upland areas elsewhere. The current recreational use of Errigal is dependent on the goodwill and tolerance of the landowners there.



<sup>7</sup> Irish Independent, 26/12/17



There are currently multiple access points towards the mountain; from Dunlewey village which is more consistent with local footfall, from the viewing point and more so from the car park. The many access routes to the summit converge on the eastern side before ascent along the main ridge to the twin summits across 'One Man's Pass' narrow ridge. Since a single upland path is not defined, visitors are using multiple routes – the stream side, direct ascent, old route and gael force routes.

See Errigal as a Recreational Area Map

<http://arcg.is/1CTeOT>

There is growing concern about Errigal's ability to withstand the pressures from increased visitors and unregulated access among the network of routes. There is universal agreement among all relevant agencies and bodies, for a sustainable solution for the repair and restoration of the habitats through the ASCENT project.

See more photos here:

<https://photos.app.goo.gl/atlNKVjlqUeZrjhT2>

Ascending the main ridge



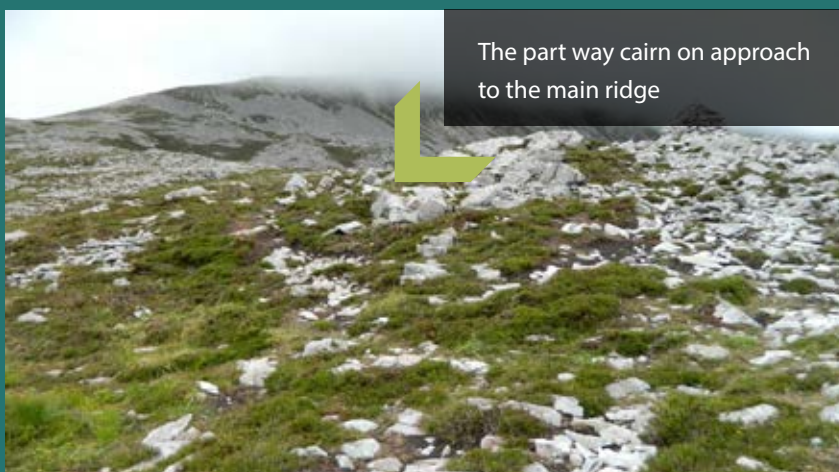
Counting directional footfall on the upper pedestrian counter



A busy August day on Errigal



The part way cairn on approach to the main ridge



## PART 2 : Strategic Path Review

### 2.1 Measuring the Overall Impact

#### 2.1.1 Visitor Monitoring Equipment

### 2.2 Analysis of the Route Network

### 2.3 Description and Sustainability of Existing Routes

#### 2.3.1 Direct Ascent

#### 2.3.2 Stream Side

#### 2.3.3 Old Route

#### 2.3.3 Gael Force

#### 2.3.4 Main Ridge

### 2.4 Specific Path Recommendations

### 2.5 Specific Site Management Recommendations

### 2.6 Measuring change over time

### 2.7 Future Goals

**"Errigal is a valuable yet vulnerable natural asset that requires sustainable management to retain, conserve and protect the mountain's character, high quality landscape for future generation."**

**Mr Seamus Neely**

Chief Executive Donegal County Council



## 2.1

### Measuring the overall impact

From the visual evidence and spatial analysis undertaken, the impact of recreationally induced erosion is very apparent from 1995 to 2015. In addition to the visual and spatial analysis undertaken, a number of methods are adopted to measure and research the impacts of unregulated access including :

1. Visitor monitoring equipment to quantify the pressure on the environment
2. An amber field path survey to assess the current condition of the path network
3. 1 to 1 structured surveys to analyse path users and to discover visitor perceptions and experiences (Summer 2018)
4. A desktop habitat review regarding the mountain's ecology (Spring 2018)
5. Stage 1 Appropriate Assessment to determine impacts if any on the habitats (Spring 2018)
6. Drone & GIS technology to capture a digital map and to assess and display changes over time (Summer 2018)

#### 2.1.1

### Visitor monitoring equipment

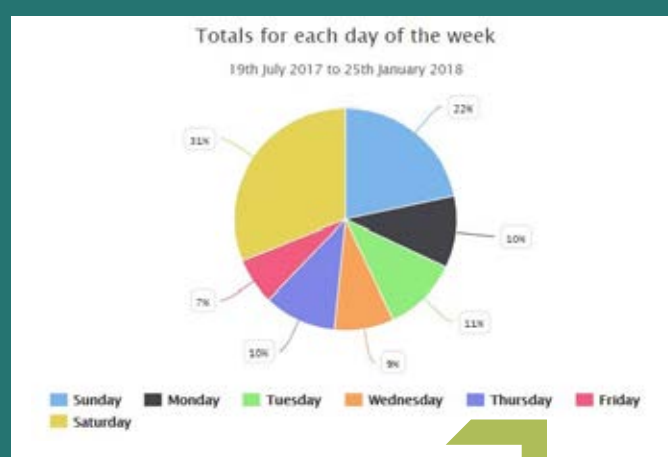
Installed in July 2017, at two locations - beyond the car park and on the eastern side of the mountain where a number of routes converge, at an elevation of approximately 460 metres. The data provides insights into the overall usage but also permits visitor numbers to be monitored over time and to support the future management planning at Errigal.

Over 50% of visitors climb Errigal at the weekend

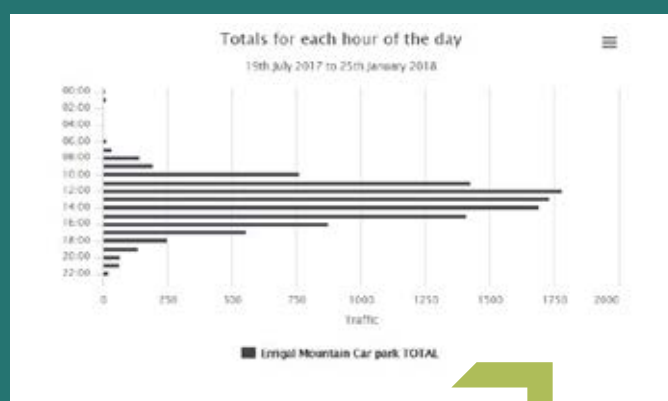
On analysis of footfall data for the 6 month period from installation on, the total footfall traffic passing both counters was 16,376, mostly taking place over the months of July, August and September. With calibration applied it is estimated that 12 -15k visit Errigal Mountain annually.

- A different route is taken on ascent to descent, with both directional counters showing variations in 'up' and 'down' figures

- On average 3 – 5 hours is spent on the mountain
- August is the most popular month
- Saturday is the busiest day of the week followed by Sunday
- The busiest hours of the day are between 12-1pm
- Weekends are busy generally with small groups and occasionally with larger groups greater than 20 people
- Saturday 12th of August 2017 was the busiest day of the year, co-inciding with two charity event held that day
- The majority of people travel to Errigal by car
- Every 1:3 visitors climb Errigal



Over 50% of visitors climb Errigal at the weekend



The Car Park counter reveals that midday is the busiest time of the day

## 2.2

### Analysis of the Route Network

Those who wish to climb Errigal from the eastern and south eastern sides, can choose between a network of routes of varying gradients, distance and levels of difficulty. It is important to note that access is currently via a network of routes which converge at 500m altitude where the main ridge provides access to the summit.

See Errigal :The Upland Path Network Map-

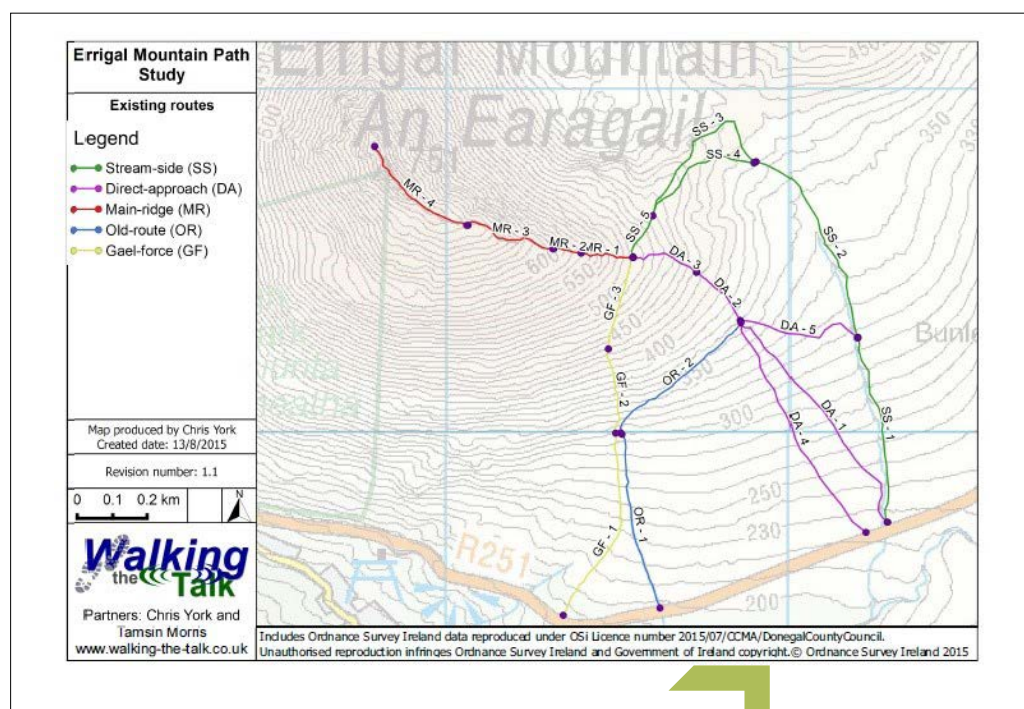
<http://arcg.is/1CTeOT>

Field surveying for upland path management is effective in assessing where priority routes or sections need repair or re-alignment. An amber survey or a condition assessment is the first stage in the process, which is followed by a red detailed specification. The amber survey includes a meter by metre survey to identify and prioritise in a hierarchical fashion, its condition using roughness, drainage and erosion aspects. The technique allows for a consistent approach and methodology, to set a baseline to monitor change. In 2015 the Errigal Stakeholders Committee commissioned the Errigal Mountain Path Study report to :

- Assess and systematically record the condition of each section of the path network
- Map the upland path network on the eastern and south eastern sides of Errigal
- Make prioritised recommendations for the repair, management and maintenance of the path network

In addition a partial assesement of the condition of the stream side, direct ascent and old routes was conducted in 2017, as part of an exercise to gain consensus for a robust and sustainable single upland path at Errigal to withstand the pressures from visitors and to ensure the conservation of the natural environment in the long term.

This report will present a synopsis of the findings from the condition assesement in 2015 included in the Errigal Mountain Path study report, and will also report on the repeat assessment findings from 2017 for measurable change. For fuller detail, it is recommended to refer to the Errigal Mountain Path Study 2015<sup>8</sup>



Existing routes on the eastern and south eastern sides of Errigal in 2015



## 2.3

# Description and Sustainability of Existing Routes

## 2.3.1

### Direct Ascent

The direct ascent route (DA) is the shortest of all routes surveyed but the most commonly used. The route comprises of 5 sections beginning with sections 1 and just 4 beyond the car park, with an immediate immersion in deep peat. Sections 1, 4 & 5 converge with old route at 500m elevation with access the along sections 2 and 3.

New routes along the direct approach are being actively developed with visitors traversing the wet peaty areas, which is leading to significant expansion of the trampled area. Many are deterred from continuing their ascent at this point.

The condition of section 2 is deteriorating rapidly due to water and footfall erosion and the extent of damage is evidently spreading. Section 3 has a broad damage zone with exposed scree, where a spring line is causing further water erosion. The assessment states that due to the steepness of sections 2 and 3, with gradients of 25% and 41% respectively, the condition will continue to deteriorate with an anticipated long period of recovery in the event that visitor pressure were removed.

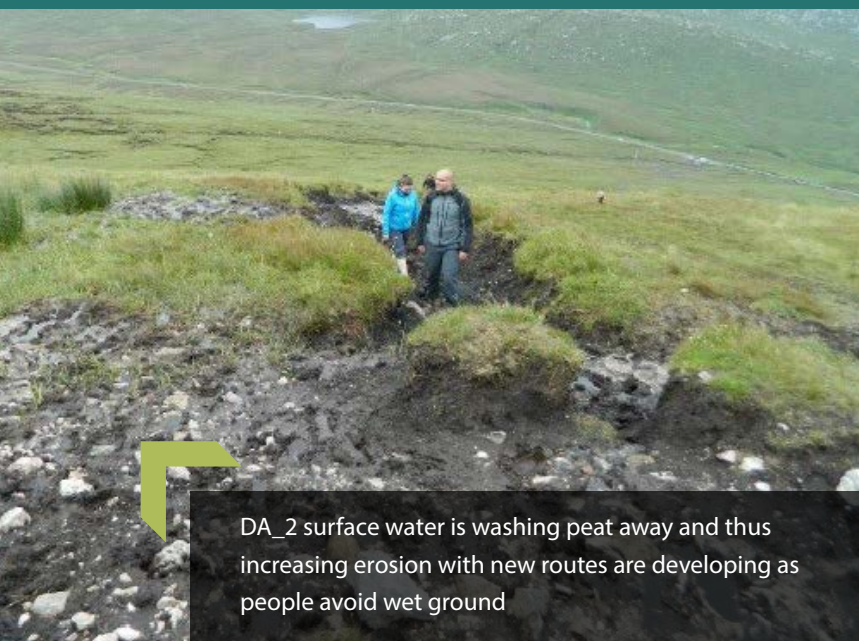
DA\_1 where 'people are avoiding the bare peat and forging new routes on 'drier' ground'



DA\_3 'Highly mobile surface with fine material washed out and highly visible from the road'



DA\_2 surface water is washing peat away and thus increasing erosion with new routes are developing as people avoid wet ground





### 2.3.2

## Stream Side

A series of fence posts demarcate the stream running parallel to this route towards the col. The stream side (referred to the burnside route in the Condition Assessment), presents a slight diversion by comparison to the direct line of the direct ascent route. It is also less steep maintaining a gradient of less than 15% from sections 1 to 4, although the total route length is slightly longer compared to all other routes surveyed. The route passes through an extensive area of peat bog of variable depth, however further along the route with the stream capturing run off from Errigal, the peat is drier there.

It is stated that if the stream side were to emerge as the proposed route of access, then with the subsequent footfall increase, there is potential for rapid deterioration and further damage.

Should all visitor pressure be removed, it is likely that the vegetation there would gradually recover.



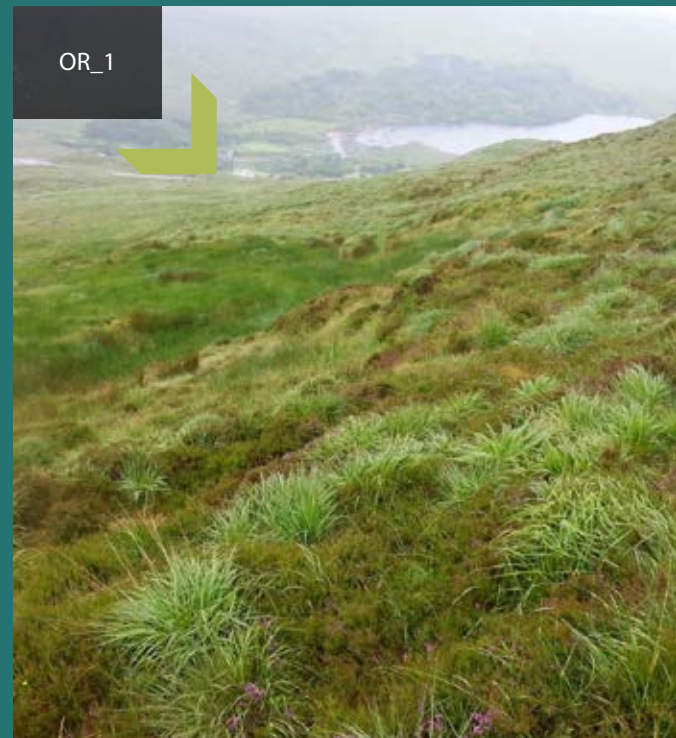
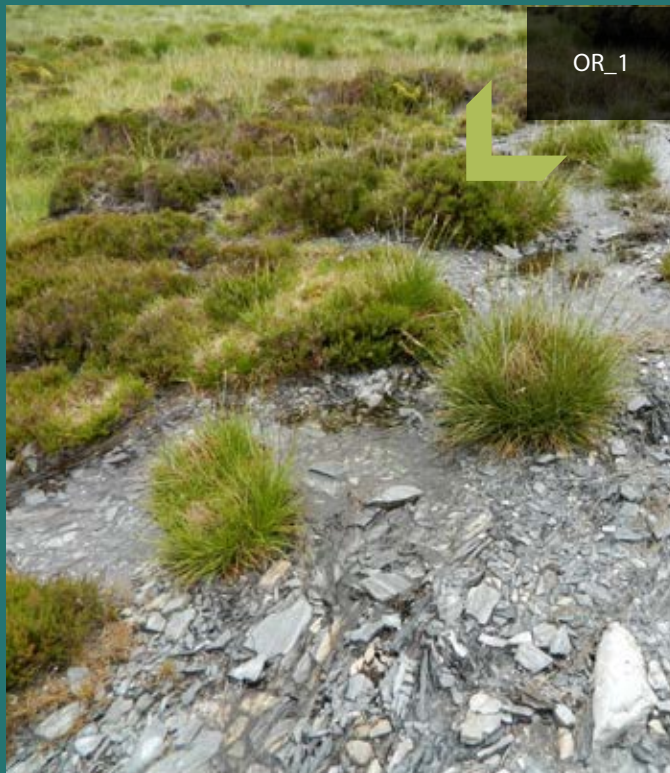


### 2.3.3

## The Old Route

Known locally as Paddy's Bridge, the old route was a popular route in the past before construction of the car park. The route of approximately 1km, crosses blanket bog, wet heaths on the lower elevations and then changes direction to join the direct ascent route at an elevation of 370 metres.

Relatively low levels of current usage have meant the route has recovered well. However from a sustainability perspective, should usage increase this route would deteriorate quickly.





### 2.3.4

## Gael Force Route

The Gael Force North event began in 2012 involving a 4km ascent and descent of Errigal. The viewing area along the R251 is where participants start their mountain climb taking an almost direct line to the part way cairn at 500m altitude, at gradients of 50%, for 580 metres of the 1100m length.

Gael Force is a one day event held in September of every year. The assesement states that the damage is significant and likely to cause major erosion with continued use especially along section 2. This route is very visible from the viewing area.

It is envisaged that section 1 would recover if visitor pressure were removed however, section 2 is likely to take longer to revegetate.





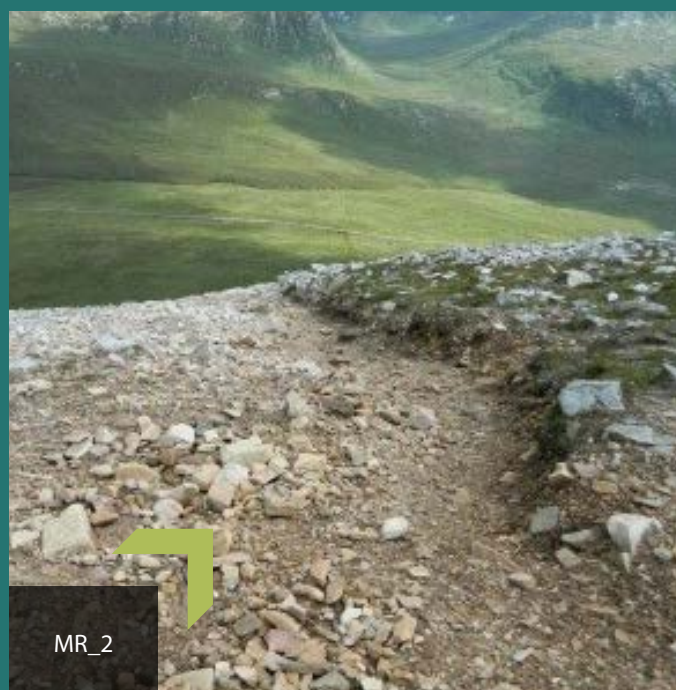
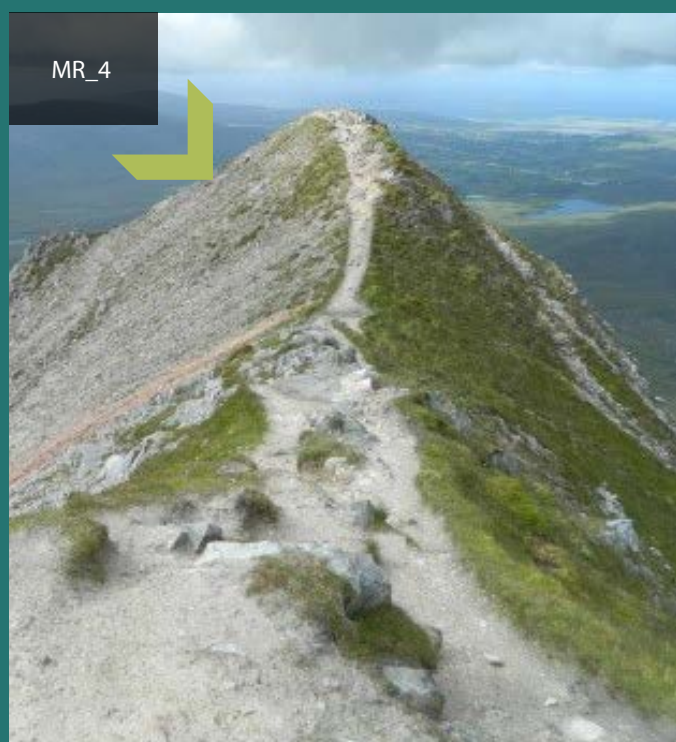
## 2.3.5

**The Main Ridge**

From an altitude of 500m the main ridge follows the shoulder of the mountain to the summit at 751m. The total route length of almost 1km is spread across four sections ranging in gradients between 30 to 51% and upto 30m wide in parts.

The assessment reveals significant levels of erosion with braids merging to form a wide damaged zone. The level of damage is constant over time. Sections 1 to 3 are susceptible to more erosion, while section 4 unlikely to deteriorate rapidly.

Recovery time along this route would be significantly longer owing to poorer growing conditions at higher altitudes and it would be expected to take many decades for the route to re-vegetate with the scar line unlikely to recover



## 2.4

## Specific Path Recommendations

The Amber Survey assessed the route according to five factors including roughness, drainage, erosion, dynamism and condition. A scale of 1–5 is applied to score each section across the five indices, with 1 being the most severely damaged to 5 with minimal damage.

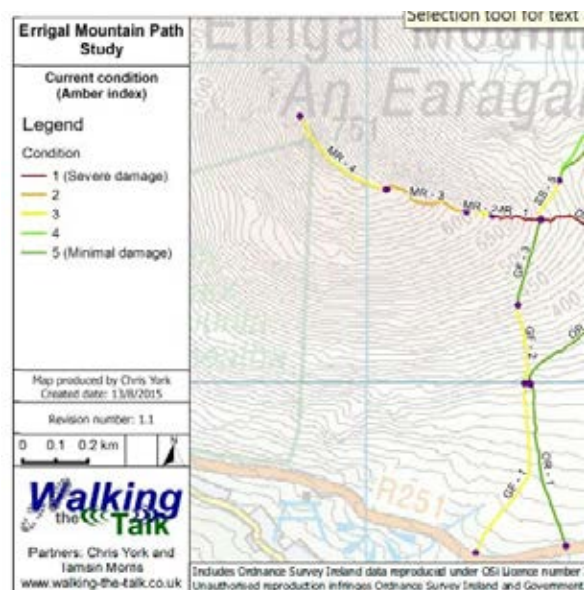
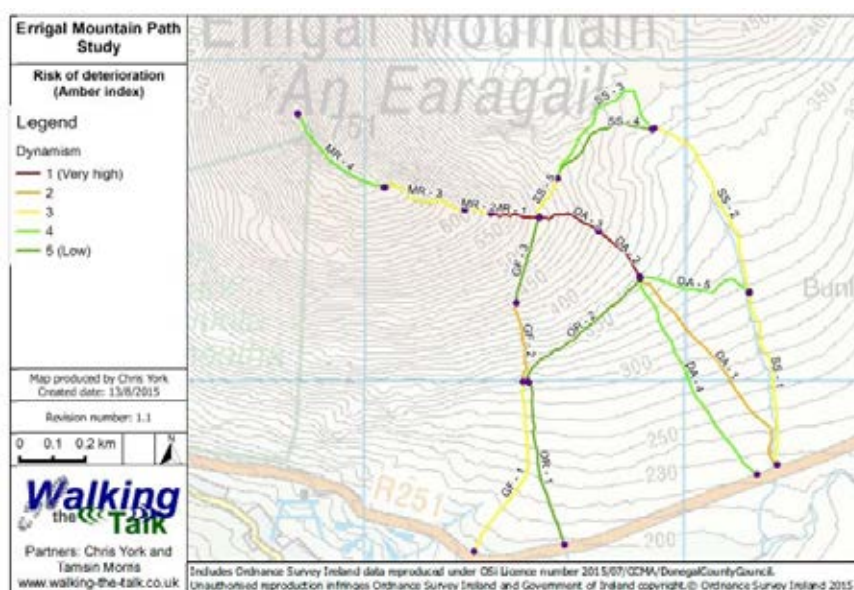
The severely damaged sections include the upper sections of the direct ascent and on the main ridge, followed by lower sections of the stream side and direct ascent routes beyond the car park.

Dynamism is a measure of how rapidly the path can be expected to deteriorate, where 1 indicates the route is very likely to deteriorate rapidly and 5 indicates change is unlikely. The findings confirm that the rate of deterioration is very likely on the direct ascent route and on the first section of the main ridge. The middle section of the gael force routes was also likely to deteriorate.

A combination of current condition and dynamism is used to prioritise work to prevent severe damage. A score of 1 indicates a very high priority and work is recommended within the next year, with 5 being very low priority and work is unlikely to be needed for 10 years.

The Errigal Mountain Path Study highlights that of all options considered, an upland style path is the recommended path repair technique to repair the current damaged area. Using natural aggregate for path construction materials is preferable on a path with low visual impact. The width of the upland path should be sufficient to permit visitors to walk side by side. On steeper slopes a pitched path is recommended, while drainage features should be incorporated into the path to reduce the impact of water erosion.

All of the route options were considered and analysed according to their long term sustainability, conservation impacts, visitor management and cost effectiveness, in order to make prioritised recommendations for a preferred route. Despite risks associated with the stream side route, it is cited that ‘with careful planning and implementation it should be possible to mitigate the risks and take advantage of the positive aspects of the route to provide a sustainable, high quality path’. Using natural aggregate and with careful design and competent contractors, it is deemed possible to have a sustainable route along the main ridge. A ‘light touch’ option is recommended along the ridge to ensure low visual impact.





## 2.5

## Specific Site Management Recommendations

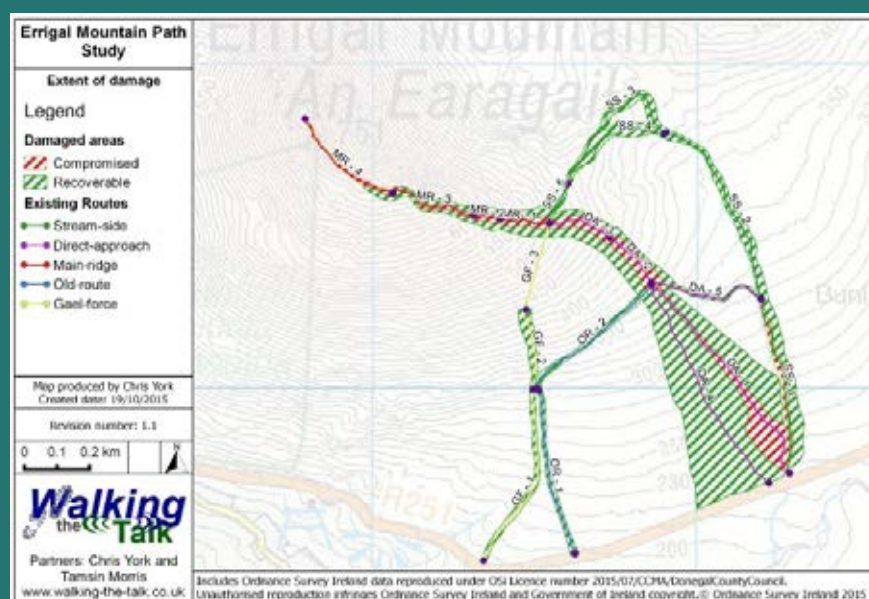
Complimentary recommendations for the management of Errigal were explored to include the options of providing a link from Dunlewey to Errigal via path construction and/or a shuttle bus service. Alternative opportunities for recreation should be considered in the surrounding area in an effort to advance visitor experience and resulting economic spin offs.

Finally to best inform visitors of the impact on the environment it was recommended the clear information digitally and in print formats should be provided. The development of a dedicated website for Errigal mountain is recommended to communicate with the target audience.

With specific reference to the habitats on Errigal, the condition assesement stated the extent of damage as follows:

- Approximately 7 hectares of land are severely impacted
- 26 hectares are moderately impacted
- 30 hectares of damage is occurring on blanket bog

In light of the findings from the condition assessment, where the damage caused by visitors and subsequent erosion by surface water will increase, a number of recommendations were offered which formed the basis of the activities to be delivered for Errigal as part of the ASCENT project. Each recommendation is detailed, the ASCENT activity it relates to and the current status is listed in Appendix 1.



## 2.6

### Measuring change over time

In 2017 the repeat amber survey was repeated provided an evidence base from a technical perspective to support an agreement for a single line upland path for Errigal. This assessment included the Direct Ascent, Old Route and Stream Side routes (proposed routes for consideration) and the assessment permitted research into measurable change, if any, across those three routes.

The results show the condition rating for all sections of the three routes was consistent with those recorded in 2015, meaning that there was no change in the condition of three routes surveyed.

There were however noticeable visual changes. Between the stream side and the direct ascent routes a number of white marker posts have appeared recently.

The net result is that a new 'line' (DA-6) at approximately 2m in width has been created.

Along section 1 of the stream side route, the trampled area at the start of the route has expanded due to the appearance of the white markers. It is expected however that if pressure was removed the damage would recover along DA\_6.

For section 3 along the direct ascent route, changes are apparent since 2015. The assessment recorded more people on section 2 of the stream side route than before.

In summary the three routes surveyed in 2017 did not demonstrate dramatic change and therefore the results of the 2015 condition assessment still stood.





2015



DA3\_2

2017



2015



DA3\_13

2017



2015



DA3\_14

2017





## 2.7

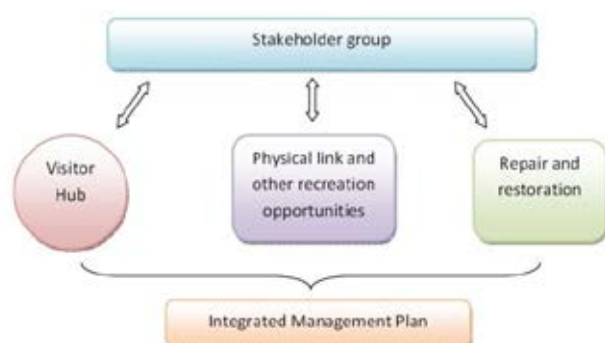
## Future Goals

A three phase process was agreed to progress a sustainable solution for the repair and restoration of the habitat on Errigal.

1. After a period of extensive consultation with the Errigal Stakeholders Committee, involving a number of site visits, an evaluation exercise using a SWOT analysis and a technical assessment and taking planning and environmental designations into consideration, the Stream Side route was accepted as the agreed line for a managed route.
2. The Stage 1 screening report would then be completed for proposed route to determine the impacts of any on the habitats, in line with the current conservation objectives and to inform of the necessary permissions required
3. Finally, a detailed design specification (red survey) for Errigal will be completed to progress to planning consent.

In addition it was agreed that a number of themes would be developed as part of an integrated programme to include a visitor hub, a physical link (greenway) and other recreation opportunities and the repair and restoration of Errigal, which would culminate in the development of an integrated Management Plan for Errigal as part of ASCENT.

It was proposed for Errigal to be included as the Mountain Access Project which seeks to indemnify landowners against claims by those who are accessing the mountain. A formalised management structure was discussed, a number of early interventions and the identification of trial sites were proposed as part of the future goals under the ASCENT project to be delivered by August 2019.



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# Appendix 1

Recommendation	Description	ASCENT Activity	Current Status
6.1 Developing a shared vision	A shared vision was agreed as the framework for advancing future plans for Errigal and Dunlewey		Completed in 2016
6.2 A robust and sustainable path	The stream side route was the preferred route to withstand the pressures from visitors to ensure the conservation of the natural environment in the long term.	T2.1	Completed with consensus agreed by the Errigal Stakeholders Committee in December 2017 through a structured consultation and evaluation process
6.3 Implications for land Managers	Land owners and shareholders consulted throughout	T3.4	On-going through Forbairt Dhún Lúiche
6.4 A programme of physical works	Upland path development and habitat restoration	T2.1	Stage 1 Screening Report and Habitat Review completed in March 2018 to progress to planning consent
6.6 Awareness raising activities	Clear consistent message	T3.1	On-going communication of clear messages of sustainability and conservation of natural environment across ASCENT project materials, press release and social media posts
	Registration of website domain	C2.5	Completed registration of <a href="http://www.errigalmountain.ie">www.errigalmountain.ie</a>
	For organised events an events register compiled		Completed event register part and on-going monitor of events. Register to be incorporated into <a href="http://www.errigalmountain.ie">www.errigalmountain.ie</a>

6.7 Develop Dunlewey as Recreation Hub	Development of Integrated Management Plan for Errigal to explore visitor hub, physical link to Dunlewey and Repair and Restoration of Erriga	T2.1	<p>To be completed as part of ASCENT across three themes: Visitor Hub sub group formed in February 2018-02- 21 Physical Link sub group formed in January 2018</p> <p>Repair and Restoration Stage 1 completed in March 2018 &amp; Detailed specification to commence when appropriate assessment concluded in Summer 2018-02-21 Management Plan in tandem with Repair and Restoration</p>
6.8 Monitoring and Maintenance	Retention of skills and capacity with the local area	T3	<p>Completions of upskilling training courses with representatives from local community attended Path Construction Techniques course in June 2017 at Lough Key &amp; three members of community attend upskilling training event on Sliabh Liag January 2018</p>
	Monitoring Data	T1.1 & T3.1	<p>Completion of Partial assessment of route conditions in 2017, capture of imagery, Completed GIS exercise to chart and monitor changes over time</p>
6.8 Path Management Capacity	Developing local skills	T3.3	<p>Completion of Upskilling training courses as above</p>
	Identify Trail study sites to repair and restore upland path on Errigal	T3.2	<p>Identification of two demonstration sites at two sections along the stream side route to be progresses as part of the detailed specification</p>



Recommendation	Description	ASCENT Activity	Current Status
6.10 Priorities for Implementation	In creating a sustainable route with an implementation programme	T2.1	The developed of the detailed specification will include an implementation model and bill of quantities to inform the capital costs for the repair and restoration of Errigal Mountain

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