

SLIEVE CARRAN
SITE ASSESSMENT REPORT



Prepared by

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December 2014

(Updated February 2015 to include Visitor Survey data)

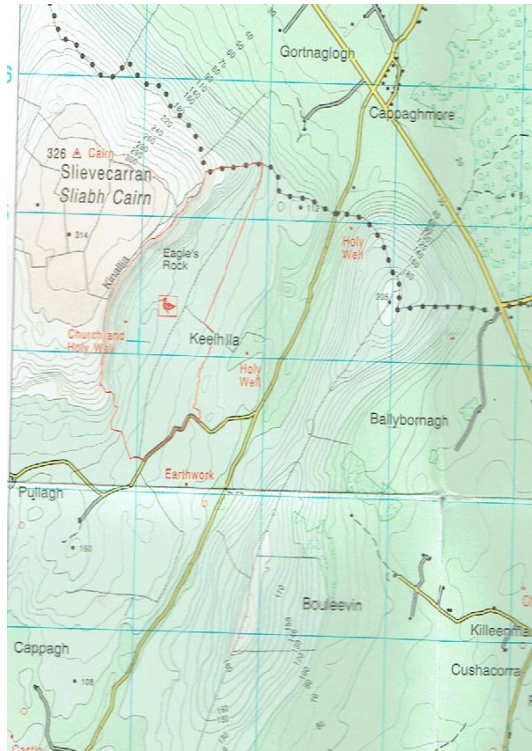
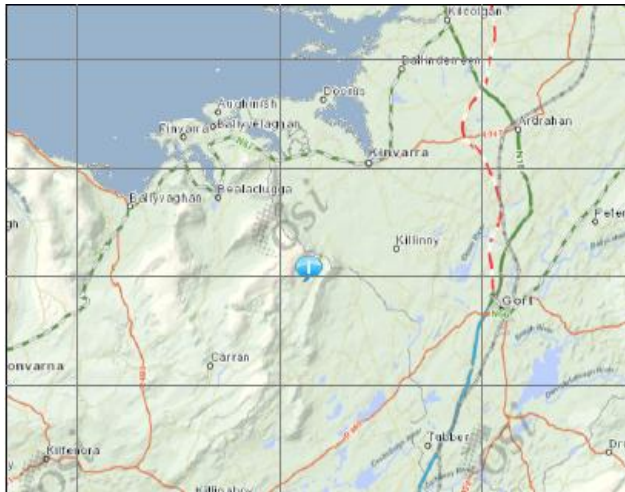
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1. SITE DESCRIPTION

1.1. LOCATION

The GeoparkLIFE demonstration site at Slieve Carran is situated in the eastern zone (Zone 3) as defined under this project. This area attracts specialist and academic tourists who have an in-depth interest in the area or are pursuing a specialised activity, such as studying the Burren flora. The area is characterised by stunning landscape, narrow roads, unspoilt upland regions, the National Park, a wide range of natural and cultural sites with little or no visitor facilities and a very small number of tourist attractions and services mainly located close to the village of Carran.

The demonstration site is comprised of two parcels of land, divided by a third-class road, running in an east-west direction, which connects Carran Village to Kinvara, at the north-east edge of the Burren plateau. Located on the west side of the road is Slieve Carran Nature Reserve. The parcel of land to the east of the road is part of the Burren National Park.



Figures 1 & 2: Location of Slieve Carran demonstration site
OS 1:50k Mapsheet: 52 Grid Reference: M32478 05443

1.2. LAND DESIGNATIONS

Both parcels of land which make up the demonstration site are state owned and managed by the NPWS and a local farmer holds the grazing rights. The parcel of land to the west of the road is designated as a National Nature Reserve (NNR) and classified Category 4.

The Slieve Carran Nature Reserve was declared under the Nature Reserve (Keelhilla, Slievecarran) Establishment Order of 1986 by Liam Kavanagh, Minister for Tourism, Fisheries and Forestry, ‘so that it can be managed in such a way as to ensure the conservation of the woodland, grassland and pavement ecosystems which it constitutes’. Covering an area of 145.5 hectares, it consists of karst

topography containing three distinct vegetation communities i.e. woodland, scrub grassland and pavement.

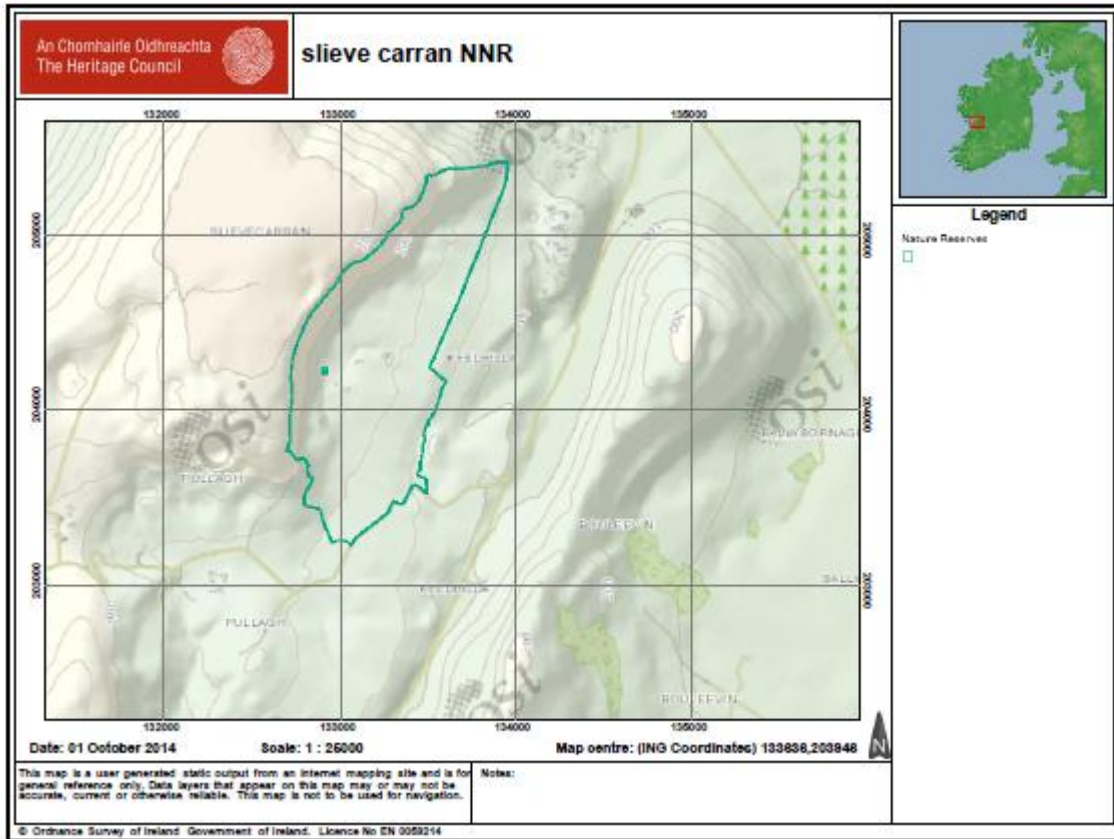


Figure 3: Boundary of Slieve Carran Nature Reserve (green outline)

The parcel of land, east of the road consisting of 45 hectares, is designated part of the Burren National Park and is Category 2. These lands were acquired on behalf of the State by the Office of Public Works (OPW) and are managed by the NPWS. This parcel of land was used as a demonstration site for the BurrenLIFE Farming for Conservation Project.

All the site is located within the East Burren Complex Special Area of Conservation (SAC 001962) and has public access.

1.3. FEATURES OF VISITOR INTEREST

1.3.1. Built Heritage

Within the demonstration site a total of thirteen archaeological monuments have been recorded. These consist of:

- Church (CL006-023001)¹
- Graveyard (CL006-023002)
- Penitential Station (CL006-023003)
- Cave (CL006-023004)
- Ritual Site – Holy well (CL006-023005)
- Bullaun Stone (CL006-023006)
- Fulacht Fiadh (CL006-023007)
- Penitential Station (CL006-023009)
- Road/Trackway (CL006-024)
- Ritual Site – Holy well (CI006-025001)
- Penitential Station (CI006-025002)
- Penitential Station (CI006-025003)
- Fulacht Fiadh (CI006-068001)

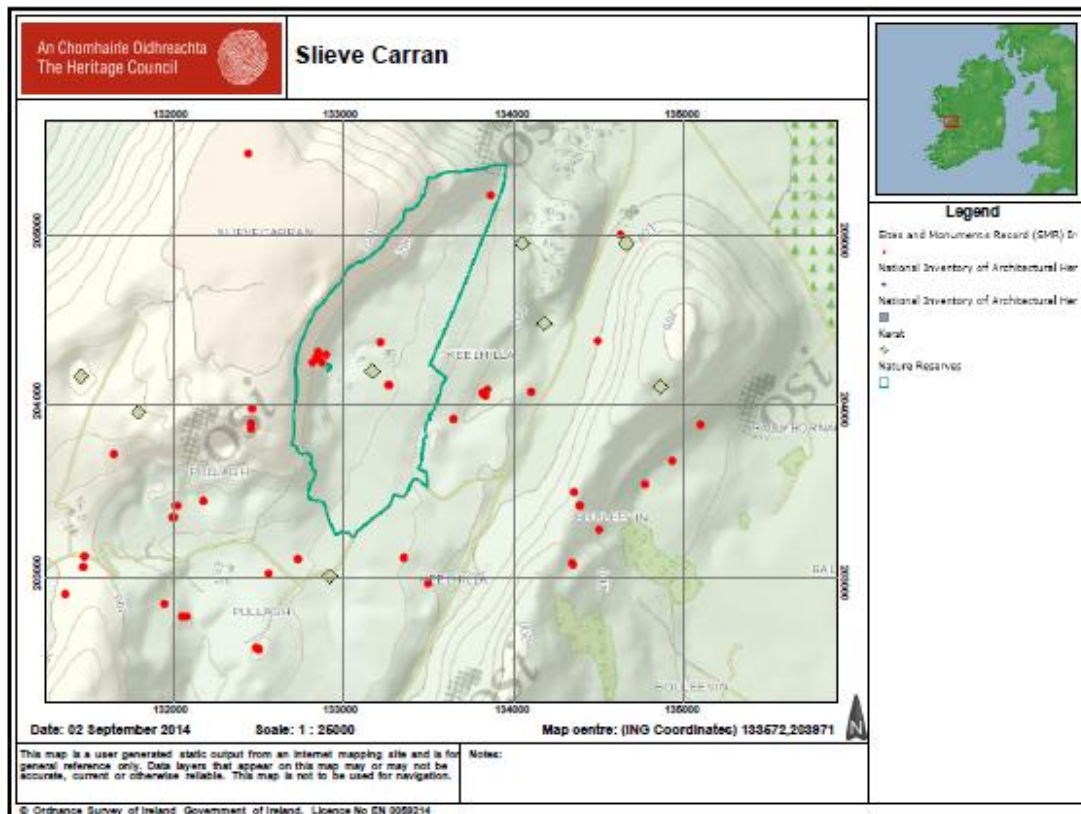


Figure 4: Recorded Archaeological Monuments at Slieve Carran site (courtesy of Heritage Map Viewer: Heritage Council 2014)

¹ Site numbers on National Monuments Service Record of Monuments and Places for County Clare)

The best known and most visited of the archaeological sites within the demonstration site are those located in the mid-west area. A cluster of monuments associated with the Early Christian monastic hermitage of St Colman MacDuagh and an associated story is found here. Tradition states that St Colman lived in a small cave here for seven years with his servant, fasting and mediating. One day his servant complained of hunger and St Colman replied that God would provide. At the same time a banquet was taking place in nearby Kinvara in the castle of King Guaire. The dishes of food suddenly rose from the table and floated out the window towards Slieve Carran. The King and his soldiers followed on horseback. However, when they came close to the site of the hermitage, their horse's hooves became embedded in the rocks. St Colman performed a miracle and freed them. Meanwhile the servant was eating the food and as he was used to such meagre rations, the overindulgence killed him. The archaeological sites associated with this story include the church (oratory), cave, holy well, the saint's grave and trackway (known as *Bothar na Mias* – the Road of the Dishes). This is a well-known story in the locality and many local people visit this site. The features at Slieve Carran all suggest that the site was an early hermitage site, possibly dating to the seventh century and had become a place of pilgrimage by the nineteenth century.²

1.3.2. Natural Heritage

All the demonstration site is managed as part of the Burren National Park and is within the East Burren Complex Special Area of Conservation. It consists of a mosaic of habitats.

The European 'priority Habitats' present are

- Orchid rich Calcareous (lime rich) Grassland
- Limestone Pavement
- Petrifying springs

Other habitats include

- Species rich neutral grassland (the meadows)
- Ash/Hazel woodland
- Scree slopes.

The quality of the habitats is dependent on a suitable level of grazing. This is most important on the grassland and limestone areas. The farmer whose stock (mainly cattle) grazes the land is a member of the Burren Farming for Conservation Programme (BFCP).

Choughs and peregrine falcons are often seen along the high ground and cliff face.

A large herd of feral goats also graze this area.

² Jones, C. 2004 'The Burren and the Aran Islands – Exploring the Archaeology' Collins Press Cork.

2. SITE CONDITION

2.1. Access

2.1.1. Approach Road

The approach road to the site is designated third class. It is narrow and winding. Cars approaching each other have difficulty in passing and there are several small areas where cars pull in to allow passage by others. The road is entirely unsuitable for coach traffic. Encroaching roadside vegetation in sections increases difficulty with sightlines.



Photo 1: Approach road to Slieve Carran (25-7-2014)

2.1.2. Directional Signage

There is no directional signage on the approach roads to the site.

The following directional information is carried on www.burrennationalpark.ie (27-7-14).

To get to Eagle's Rock/Slievecarran/Keelhilla Nature Reserve from Corofin take the R476 towards Kilinaboy. Drive through Kilinaboy and as far as Leamaneh Castle. Turn right here onto the R480. Then take another right onto L1014 (signposted Carran). Drive 5.3km to Carran and turn right when you see the church on the left. Slievecarran is 8.7km from here. Take the first left and keep driving until you see a parking area on the left. This is Slievecarran. Park here for Brown and Yellow Trails.

Alternatively you can take the R460 outside the Information Point. After 1.3km turn left to stay on R460, signed "Gort". Drive for 12.1km. After passing Lough Bunny on the left turn left at crossroads onto L1010, signed "Ballyvaughan". From the crossroads drive straight for 9.7km. Turn left at a crossroads, signed "Tea Rooms" and "Burren Perfumery". Drive for 2.5km. When the road forks turn right and drive for 600m down this road. You will see a parking area on the right. This is Slievecarran. Park here for Brown and Yellow Trails.

2.1.3. Parking

A small gravelled car park is located outside the entrance to the Nature Reserve on the west side of the road. It consists of a pull in area within the bell mouth of the gateway. There are no designated parking zones and parking can be haphazard. The area can accommodate approximately 20 cars if parking is orderly with all vehicles parked parallel with ends into the boundary wall. On occasion when an organised event is taking place, such as a guided walk, large numbers of vehicles are present at the site, parking extends along the roadside and can result in traffic disruption and ecological damage to the grass verge vegetation. This may occur once or twice a year. Coaches do not generally use this road or bus tours visit this site due to the narrow approach roads.

A second small pull-in area is located on the roadside at the southern entrance to the BNP parcel of land. It can accommodate approximately seven to eight cars maximum. This is sufficient space as very few vehicles park in this area.



Photo taken 25-7-2014



Photo taken 7-9-2014 (Burrenbeo walk event)



Photo taken 7-9-2014 (Burrenbeo walk event)

Photos 2, 3 &4: Parking at Slieve Carran

2.1.4. Site Entry

Proceeding from the car park, the visitor enters the Nature Reserve over a narrow stone stepped stile located to the left of the entrance gateway. The gate (absent at the time of survey – entrance temporarily blocked by wooden pallets) is kept locked and so is not an option for entry.



To enter the BNP land to the east of the road, the visitor crosses the road from the Slieve Carran car park and enters over a narrow stone 3-stepped stile into the field.

Photo 5: Entrance gate to Slieve Carran (photo taken 25-7-2014)

The second entrance to this parcel of land is located on its southern boundary and consists of a narrow stone stepped stile, from the parking pull-in area.



Photo 6: Lower parking lay-by entrance to Slieve Carran (photo taken 25-7-2014)

2.2. Visitor Facilities

2.2.1. Designated Walking Trails

There are two designated walking trails within the demonstration site, created and managed by the NPWS.

The Brown Route is located on the land to the west of the road. It is a 2.5km route, with a climb of 30 metres, which is graded moderate and has an estimated walking time of 1 hour and 30 minutes (information available on the Burren National Park website). The trail is described on www.burren as follows:

A 2.5km looped walk through open limestone pavement and passing through a small area of mature oak/ash/hazel woodland. Beautiful views of Eagle's Rock cliff. This site includes a stone oratory, cave and holy well associated with St. Colman MacDuagh, who reputedly set up a hermitage here in the 7th century. This route is not serviced by the National Park bus.

The second trail is located on the land to the east of the road. A series of yellow walking feet symbols mounted on concrete poles mark the route. These are well laid out and provide good direction. There is no on-site trail information. Information provided on the Burren National Park website, where it is labelled 'the Yellow Route', states that it is 2km in distance, has a climb of 20m, a walking time of 1 hour and is graded moderate.

The following description is provided on www.burrennationalpark.ie

On this 2km looped walk you can explore the limestone pavement and orchid-rich grasslands for which the Burren is famous. This site is owned by the State and managed by a local farmer who practices the traditional farming method of winter grazing. This method is the key to conserving the unique flora found in the region. After grazing on this 'winterage' throughout the winter the stock are taken off in the spring and the short grass enables the flowers to emerge without having to compete for space, light and resources.

Explanation of moderate grading for walks is provided on www.burrennationalpark.ie
Both trails have some climbs and an uneven surface where the going is rough underfoot with some obstacles such as protruding roots, rocks etc. The routes are appropriate for people with a moderate level of fitness and some walking experience. Specific outdoor walking footwear and clothing is recommended.

A web search showed that walking clubs are directing their members along the trail, to take a left in the second field and onto the mountain e.g. www.mountainviews.ie and www.hillwalkingireland.com

2.2.2. Interpretation

Located within the car park of the Nature Reserve are two interpretive panels set into the boundary wall to the right of the entrance gateway.

The first provides a description of Slieve Carran- Eagle's Rock (Keelhilla Nature Reserve), the origin of limestone and the formation of the Burren illustrated with geological maps of the area and photographs. The panel was created by the original Burren Geopark Committee in conjunction with Clare County Council, Shannon Development, the Heritage Council and the Geological Survey of Ireland. The graphics and text have faded. The interchanging use of three placenames – Slieve Carran, Eagle's Rock and Keelhilla may cause confusion without proper explanation. The information provided would benefit from updating and simplifying of geological language for general visitor use.



Photo 7: Interpretive panels at main parking lay-by Slieve Carran (photo taken 25-7-2014)

The second is a general BNP sign with a map of the Nature Reserve and descriptions of numbered ecological points of interest.

Both of these signs are degraded and damaged in places.

At the northern entrance to the land to the east of the road is a BurrenLIFE panel providing information with regard to the now completed Burren LIFE Farming for Conservation programme; the use of this parcel of land as a demonstration site for that project, the Natura 2000 network of sites and the ecological and archaeological features of interest present are indicated on a map of the site. This sign is in good condition.



Photo 8: Burren LIFE interpretive panel at Slieve Carran (photo taken 25-7-2014)



At the southern entrance is a BurrenLIFE panel (the panel insert had been removed at time of survey and only the panel frame remained) and a BNP Panel, both as described above.

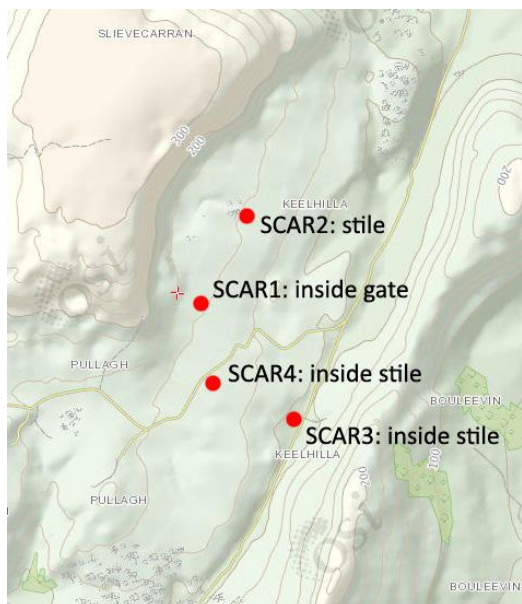
Photo 9: Interpretive panels at lower lay-by Slieve Carran (photo taken 25-7-2014)

In total, there are five interpretive panels currently at this demonstration site with information being duplicated in some of these.

3. CURRENT VISITOR USE OF SITE AND RESULTING IMPACTS

In September 2014, a number of GeoparkLIFE initiatives were undertaken to provide baseline data on visitor numbers at each of the demonstration sites and to develop a methodology to determine how visitors' behaviour is impacting on the natural and built heritage of sites. Previous to this baseline information was either non-existent or very sporadic.

3.1. Visitor Numbers



Through the GeoparkLIFE initiative four footfall counters were installed on September 11, 2014 two on the brown (SCAR 1 and SCAR 2) and two on the orange (SCAR 3 and SCAR 4) walking trails to measure visitor numbers and times of visit.

The following numbers were recorded between September 11, 2014 and February 13, 2015:

Figure 5: Location of footfall counters at Slieve Carran demonstrations site

Trail	Sept 2014	Oct 2014	Nov 2014	Dec 2014	Jan 2015	Feb 2015
SCAR 1	198	214	162	235	229	116
SCAR 2	1150*	49	281	138	70	86
SCAR 3	88	91	194	48	41	46
SCAR 4	201	158	117	60	49	26
Totals						

Table 1: Numbers recorded between Sept 2014 and February 2015 at Slieve Carran footfall counters.

Note: *The figure recorded for SCAR 2 during September is obsolete as a lot of activity occurred during night hours and is likely to have been caused by goat herds passing in front of the counter.

3.2. Visitor Attitudes Survey

A Visitor Survey was conducted at the site as part of a wider survey of the GeoparkLIFE demonstration sites by Millward Brown Ltd.. The purpose of this survey was to record Visitors attitudes to the infrastructure at these sites and to the Burren. A surveyor was placed at the car park of the Nature Reserve and a second at the lower car park. However, the second surveyor abandoned his post due to lack of visitors. The results indicate:

- 51% of visitors interviewed gave a rating of between 8-10 for signposting to the site (1 being poor and 10 high):
- 61% rated physical entry between 8 and 10
- 87% rated parking facilities between 8 and 10
- 81% arrived by car to the site and 9 % by bicycle. 12 % arrived on a coach day tour.
- 86% noticed the information; 68% read them entirely and 16% partially; of those that read the boards 97% felt that they added to their understanding of the Burren.
- 67% were very satisfied with the site and the remaining 28% were satisfied. The remaining 5% were neither satisfied or dissatisfied.

The full results of the interviews at Slieve Carran are contained in Appendix II.

3.3. Visitor Observation Studies

Two sets of Visitor observations were carried out at the site to determine visitor movement around the site and how visitor behaviour is impacting on the site.

- On the 25 July and 7 August 2014 visitor observations were carried out as part of the site appraisal which is the basis of this report. Observations were made from the main layby at the entrance to the Slieve Carran Nature Reserve between the hours of 10am and 5pm on the 25th July and between 2pm and 5pm on August 7th. Nineteen people were observed. The results indicate that:
 - 68% of visitors arrived by car; 26% on push bike and 6% (i.e. 1 visitor) on motorbike. No coaches/buses were observed
 - 100% of visitors were involved in low impact activities³ - Walking (35%) Photography (27%) Viewing landscape (18%) Picnicking (9%)
 - Effects observed: 1 Car parked on grass verge (14% of car owners) 1 couple went off designated trail to sit on rock (approx. distance 20m)
 - The average time spent on site was 1 hour 30 minutes.

The results of these observations are provided in Appendix II.

- On Sept 6, 2014 Visitor Observations were carried out at Slieve Carran, as part of the CAAS Ltd. study to assist GeoparkLIFE to develop a survey methodology for assessing environmental impacts at the demonstration sites.⁴ Three surveyors observed the site for one day (Saturday September 6, 2014). One surveyor was present at the lower layby of the land to the east of the road. Two surveyors were located at the main layby at the entrance to Slieve Carran Nature Reserve on the west side of the road. One surveyor observed activities from the main layby while the other observed visitors who extended along the brown walking trail (Figs. 1 and 2). The surveyor at the lower layby abandoned observation due to lack of activity at the site.



Figure 6: Surveyor stations at Slieve Carran NNR

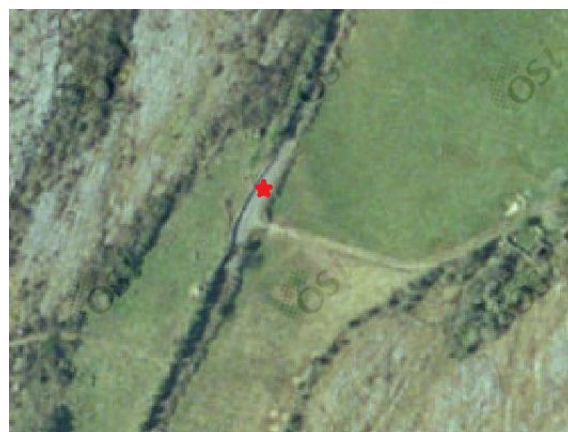


Figure 7: Surveyor location at lower layby which was abandoned due to inactivity on Sept 6th.

³ Activities categorisation: Low Level – activity for which the site was intended; Medium Level – activities, often incidental, depending on site management whereby the visitor engages in behaviour that may result in an effect; High Level – Activity where visitors engage in behaviour that is likely to have an effect on the site but may not be directly linked to a high impact.

⁴ CAAS Ltd. 2015 ‘Pilot Visitor Observation Studies of Environmental Impacts at the Burren & Cliffs of Moher Geopark, Co. Clare’.

- A total of 56 visitors were observed during the study. The results of the survey indicate
- 30% of visitors arrived by car and 38% by bus
 - 32% read the information boards
 - 98% were involved in low impact activities
 - 36% of visitors had no impact on the site and 62% left trails newly visible on the grass; 2% were involved in the removal of material (stones, rooted vegetation, fauna)

3.4. Ecological Study of Visitor Movement

As part of the CAAS Visitor Observation Study, EirEco Environmental Consultants were commissioned to carry out vegetation monitoring at the GeoparkLIFE demonstrations sites between October 21, 2014 and December 2, 2014. Vegetation was analysed in 1m² quadrats at pre-selected locations identified by CAAS in each site.

Ten quadrat surveys were conducted at the Slieve Carran Nature Reserve as illustrated in Figure 8.

The following is an extract from the ecological survey report for Slieve Carran demonstration site (EirEco 2014):

'The main trail is a well defined track that leads across limestone pavement where vegetation is primarily confined to within the grikes. Some compaction of vegetation and bare soil is evident along the trail though elsewhere there is no evidence of impact on the vegetation by visitors.'

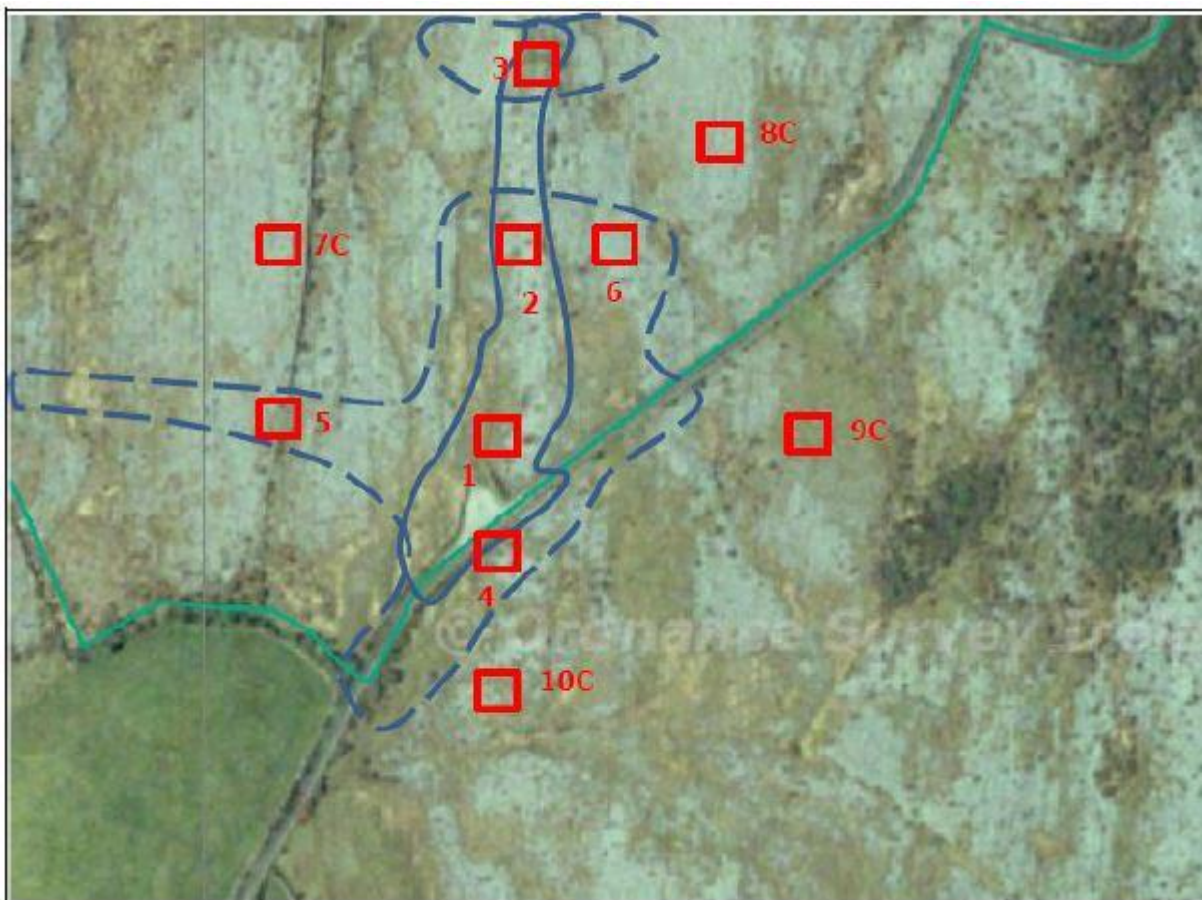


Figure 8 : Location of quadrats for ecological sampling at Slieve Carran Nature Reserve (EirEco 2014)

3.5. Community Consultation

B2 working group Site Visit

The B2 working group visited the Slieve Carran demonstration site on Wednesday, September 3, 2014 to assess the issues and discuss possible solutions. Members of the group include the site managers from the National Parks and Wildlife Service and managers from the National Monuments Service and Office of Public works.

Issues which were highlighted and agreements reached included:

- the interpretation at the site was dated and in need of updating and replacement
- trail signage was confusing and needed review and enhancement
- damage to the walking trail surface was minimal and the habitat has a chance to recover when the cattle are removed from these areas, as is the practice under the agreed grazing regime with both the NPWS and the Burren Farming for Conservation Programme (BFCP).
- where soil cover is deeper on certain sections of the trail, there has been erosion due to visitors in the past. A gravel path was laid approx. 4-5 years ago, and this has alleviated the problem. However, there are no 'before' or 'after' photographs/surveys for this work and so the improvement is based on verbal record. In order to obtain baseline ecological information on the condition of the trail which will inform future monitoring to measure visitor impact, it is recommended that fixed point photography methodology is used in preference to quadrat surveying as this is more cost effective, less time consuming and can be repeated more easily.
- The cluster of monuments surrounding MacDuagh's Oratory appears to be within an area of the Reserve that has been omitted from the site boundary maps. Ownership of this parcel of land and its exact location is uncertain at present. The monuments are recorded monuments and as such have a level of protection under the National Monuments Act. However, neither the OPW nor NMS have any responsibility in the maintenance of these monuments at present.
- Access to the cluster of monuments is along a narrow access path under a copse of hazel and then a short ascent through rock outcrop. This area is mucky underfoot, eroding and in need of management action. A staged approach has been suggested in which each stage is implemented and monitored to determine whether the impact has been lessened and whether there is a need to move onto the next stage: (Stage 1) cutting back the surrounding hazel to let light and air in to dry out the soil of the pathway (Stage 2) installation of a narrow path with geotextile base and gravel top layer (Stage 3) widening of path if necessary. Any management action to be taken has to be agreed by all partners and receive departmental approval.

Public Workshop

A 'Pilgrimage in the Burren' Workshop took organised by GeoparkLIFE in the Michael Cusack Centre, Carron on Saturday October 18, 2014 between 9am and 4pm. Invitations to attend were sent to groups and individuals interested in the development of pilgrimage as a tourism experience in the Burren. Land owners, guides, researchers and promoters of pilgrimage locations were among the invitees. The purpose of the workshop was to explore good practice around the development and promotion of sites and routes associated with pilgrimage in the Burren. One of the sites under consideration was Mac Duagh's Oratory at Slieve Carran and a field trip was led to this site in the afternoon to discuss attitudes to the use of the site as a visitor attraction and the practice of depositing votive offerings at the site.

During the field trip the following question were asked on the issues of access and management:

- How difficult do you find access to this site?
- Would you bring a group here?
- If yes – are there any safety issues that may affect you and your group?
- What negative impacts do you think leading groups of people to and into this site may have?

- What do you think of the overall condition of the site; including the condition of the monuments and the practice of leaving votive offerings at the well and on surrounding trees
- Would you like to see it improved and if yes, how?
- How do you think this site should be maintained and managed into the future?

The discussion covered the following points:

- Access to the site (over stile) is difficult for some. This could be improved.
- With regard to the immediate access to the church site, there were differing opinions as to balancing the improvement of access in terms of the wet underfoot conditions and maintenance of the atmosphere of the site provided by its closed in nature. Some felt the trees provided a closed peaceful atmosphere while others saw the benefit of improving the safety of the entrance path and opening out the view as was more likely the situation in the past. Safety was not thought to be a major problem – as the pilgrims are used to visiting old ruined sites and have an awareness of the hazards.
- A local landowner stated that the votive offerings around the well were not present up to about 10 years ago and that they have no relevance and should be removed. Others commented that there may be genuine reasons for the leaving of offerings and this must be respected.
- It was generally felt that the building could do with some consolidation but overall its condition added to the atmosphere of the site and should not be sanitised.
- The clearance of scrub through the application of herbicides (Round-up) was again raised and there was a strong opposition voiced against its use.
- Overall it was felt that this was a very special site and should not be over promoted nor should access be made very easy. The site should not be over sanitised.

(A full report of the Workshop proceedings is contained in Appendix III)

3.5. Conclusions: Site Recreational Pressure Points

During the field study undertaken as part of this site appraisal the following recreational pressures at the site were identified:

- The approach roads to the site are extremely narrow with limited sightlines. Management issues need to be considered about whether the site should be signposted and visitors directed here and the carrying capacity of the site.



Photo 10: Erosion on path possibly due to combination of both human and livestock footfall (photo taken 18-10-2014).

- Footfall – some eroded areas are visible along sections of the walking trails. However, these areas are minimal and seasonal, with ground cover generally improving during the dry weather. As this site is also used for grazing by cattle, it is difficult to determine how much disturbance on trails is caused by visitors as opposed to livestock. At present very little baseline information is available to assess the effectiveness of works carried out on the trail e.g. gravel laying. The footfall counters, visitor observations and ecological survey undertaken by GeoparkLIFE will help to inform this process and develop a site monitoring system.

- The entrance to MacDuagh’s oratory site is eroded in places and can be muddy and slippery during wet weather. This can make access difficult for certain visitors.
- The site is grazed by livestock and the visitor should be informed as how to behave when agricultural animals are present.
- Directional signage along the walking trails can be confusing and needs review and upgrading.



Photo 11: Entrance to MacDuagh oratory site (photo taken 18-10-2014).

- The five interpretive panels located around the site provide duplication of some information. Some are in bad condition. A review of signage and a rationalisation should be considered.



Photo 12: Detail of votive offerings on tree at Slieve Carran (photo taken 18-10-2014)

- Several Votive offerings are attached to several trees in the oratory complex surrounding the holy well and in the woodland area approaching St Colman's Cave.



Photo 13: Votive offering deposition on tree adjacent to Holy Well at Slieve Carran (photo taken 18-10-2014)



Photo 14: Mantra stone Mac Duagh's Oratory site Slieve Carran (photo taken 7-8-2014)

- A stone inscribed with a 'Mantra' 'was placed adjacent to the Holy well in the late summer of 2014. It was uncertain who placed the stone but it was done so without the site management approval.
- The NPWS manage the demonstration site but the ownership and management of the important cluster of archaeological sites around MacDuagh's Oratory is unclear. This needs to be clarified and an integrated management plan developed.

4. SITE MANAGEMENT

4.1. Current Management

The Slieve Carran demonstration site is managed as part of the Burren National Park by NPWS. The NPWS are the organisation within the Department of Arts, Heritage and the Gaeltacht tasked with the protection of natural heritage. At this site the numerous and important archaeological monuments are also under their management although built heritage is not part of their recognised remit.

The site is managed, through grazing (predominantly by cattle), manual cutting and treatment of encroaching hazel and scrub to maintain the habitat and species diversity. The farmer whose stock grazes the land is a member of the Burren Farming for Conservation Programme (BFCP).

The brown and yellow walking trails are also monitored by the Conservation Ranger at regular intervals and maintained by the NPWS general operatives.

The access route to Mac Duagh's church has in recent times been from the roadside car park along a hard surfaced track as far as 'the meadows', then crossing 'the meadows' to a small hazel woodland and into the Oratory site. The path across the meadows is also used by cattle in winter. Due to this continuous usage the path within the meadow (which was grass on soil) has extended in width and continues to do so when visitors walk on the grass verges to avoid muddy sections. Over the past 5 years the NPWS gravelled about two thirds of the track and this has resulted in a decrease in impact of trampling by visitors and cattle along this access trail. (NPWS comment – no baseline information available).

The archaeological monuments at this site are incorporated under the NPWS management regime and are not included in the OPW portfolio.

Visitor orientation and information provision is currently supplied by NPWS, the former Burren LIFE programme and the Burren & Cliffs of Moher Geopark.

5. CONCLUSIONS AND RECOMMENDATIONS

Issues	Recommended actions
Responsibility for the consolidation and future management of the archaeological monuments at this site needs to be determined and consideration of the natural, built and cultural attributes of the site need to be included in any future management plan.	Discussion needs to take place within the Department of Arts, Heritage and Gaeltacht about the management responsibility for Mac Duagh's oratory complex. It is recommended that an integrated management strategy and plan should be developed for this site involving all three agencies – NPWS, NMS and OPW
Lack of baseline information on the archaeological monuments at oratory complex	Prepare archaeological and architectural condition report on Oratory site
To maintain ecological diversity the site must be grazed. Visitors must be made aware of presence of stock and how to behave while visiting the site.	Include information on presence of stock and expected visitor behaviours on all signage and informational/interpretive materials.
Narrow approach roads to site	<p>A management decision is required on</p> <ul style="list-style-type: none"> • whether or not there should be directional signage to the site • whether coach traffic should be discouraged due to narrow approach road and difficult sightlines • what level of visitors should be encouraged in terms of the carrying capacity of the site - natural, built and cultural heritage <p>Regular maintenance of roadside hedges on approach roads should be undertaken on an annual basis.</p>
Parking space is currently adequate (with the exception of occasional 'event' days) if vehicles park in an parallel manner	Mark out lined parking spaces. Encourage carpooling when organised events are occurring.
Universal Design of Facilities. The nature of the site terrain is very limiting for Universal Access.	<p>To allow a strategy of 'least restrictive access - All future signage and interpretation for the site should follow an 'easy read' format.</p> <p>A stile design, which could be used at all sites within the Burren and allow easier access to sites for the less physically disabled should be researched.</p>
On-site trail signage. There is no trailhead information and directional signage is non-uniform and confusing at times	Carry out review of directional trail signage. Provide Trail information with regard to the length, type of terrain, difficulty or points of interest on the trail should be provided at the trailhead (car park)
Interpretive panels. There are an excessive number of panels and duplication of information.	Review all on-site interpretation. Remove excess panels and compact required information into a smaller number of panels with same basic design layout to provide uniformity and recognition through all Burren sites.
Votive Offerings at Mac Duagh's Oratory	Research the perceived tradition of deposition of votive offerings at this site and create awareness around the principles of 'Leave NO Trace' to visitors and tour guides.
Potential erosion due to trampling of the habitat and avoiding muddy areas along the designated trails by visitors needs to be monitored	Remove encroaching hazel on either side of access point into MacDuagh's oratory to allow possible drying of poached area. Continue monitoring of condition of designated walking trails (as previously carried out by Conservation Ranger) and research development of improved system for collection and presentation of data using IT.

APPENDIX I

VISITOR ATTITUDES SURVEY Slieve Carran 2014 (MWB)

1. How long do you intend visiting this site?

Less than 1 hour	1-2 hours	3-4 hours	5-6 hours	Full day
35	19	35	7	5

2. How would you rate the signposting for directions to this site on a scale of 1-10
(1=poor; 10=very good)

1	2	3	4	5	6	7	8	9	10
5	7	5	7	14	5	7	23	12	16

3. How would you rate the physical entry to this site (including stiles and footpaths)

1	2	3	4	5	6	7	8	9	10
0	0	2	0	5	7	26	23	26	12

4. How would you rate the parking facilities at this site? (Scale 1-10)

1	2	3	4	5	6	7	8	9	10
2	0	0	2	2	2	5	40	19	28

5. Have you noticed any information boards at this site/location?

Yes	No
86	14

6. Have you read the information on them?

Yes	Partially	No
68	16	16

7. Did the information add to your understanding of the Burren?

Yes	No
97	3

8. How would you rate your overall satisfaction with your visit to this site?

Very dissatisfied	Dissatisfied	Neither satisfied or dissatisfied	Satisfied	Very satisfied
0	0	5	28	67

9. What is the main type of transport you are using to travel within the Burren?

Own car	Hired/rented	Public transport	Motorbike	Coach day tour	Coach guided tour	Private chauffeur tour	Bicycle	Other
51	30	0	0	12	0	0	9	0

APPENDIX II

VISITOR OBSERVATIONS AT SLIEVE CARRAN

(Zena Hctor)

1. Survey Detail

Site Id : SIC	Date Of Survey	Day of Week	Duration of Survey	Weather	No of people observed
	25-7-14	Friday	10am-5pm (7 hours)	Hot and Sunny	13
	7-8-14	Thursday	2pm-5pm (3 hours)	Hot and Sunny	6

2. Number of Observations, gender and group breakdown

Number of people observed	Total number of females	Total number of males	Number of observations	Average group size
19	8	11	11	2

Comment: Group size did not exceed 2.

3. Age demographic

All adults

4. Mode of transport

Car	Coach	Push Bicycle	Motorbike	Motorhome
13	0	5	1	0

5. Mode of transport, Time Spent on Site and Main activity type based on group and age demographic

Date of observation	Obs group id	Time spent on site (hours:minutes)	Group type	Age demographic	Mode of transport	Main activity
25-7-14	SIC1	4:00	M/F	20-25	Car	Long distance walking
25-7-14	SIC2	0:22	M/F	35-40	Car	Photography and viewing landscape
25-7-14	SIC3	2:08	M/F	40-45	Car	Photographing vegetation
25-7-14	SIC4	0:27	F/F	40-45	Car	Picnic
25-7-14	SIC5	0:02	M/F	45-55	Car	Quick photograph
25-7-14	SIC6	1:15	F	65-70	Car	Walking
25-7-14	SIC7	0:01	M	25-30	Push bike	Pauses as cycles by
25-7-14	SIC8	1:00	M	45-50	Motorbike	Walking
7-8-14	SIC9	1:10	M/M	40-45	Car	Walking
7-8-14	SIC10	0:01	M/M	25-30	Push bikes	Pause as cycle by
7-8-14	SIC11	0:15	M/F	40-45	Push bikes	Reading panels and viewing landscape

Average time spent on site: 1 hour 60 mins.

6. Level of Activity

Walking (35%)

Comment: a larger sample size will allow sub division of this category down into distance walked (short/medium/long for example)

Photography (27%)

Viewing landscape (18%)

Picnicking (9%)

7. Time spent reading Information Boards

Obs group ID	SIC1	SIC2	SIC3	SIC4	SIC5	SIC6	SIC7	SIC8	SIC9	SIC10	SIC11
Time spent reading panels (mins:secs)	02:00	01:40	01:30	00:30	00:00	03:00	00:00	00.30	00:00	00.00	09.00

Average time spent reading panel: 2.5 minutes

8. Effects Observed

1 Car park on grass verge (14% of car owners)

1 couple went off designated trail to sit on rock (approx. distance 20m) – (2 out of six walkers: 33%)

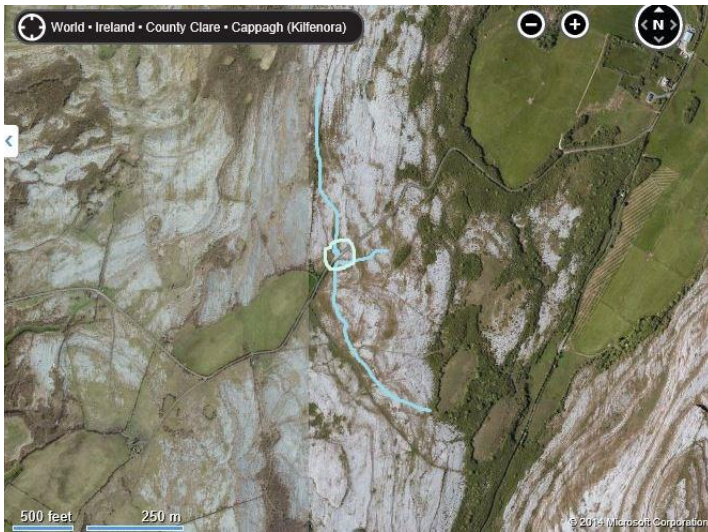
Comment: Sample size is too small to use percentage as result.

9. Time of day of arrival at site

		Observer group ID										
		SIC1	SIC2	SIC3	SIC4	SIC5	SIC6	SIC7	SIC8	SIC9	SIC10	SIC11
Time of arrival	25-7-14	11.40	11.43	12.23	13.45	15.47	16.00	12.05				
	7-8-14								14.16	14.45	15.15	15.34

This will provide an indication of the main times of impact at the site

10. Visitor Movement Pattern



Observed movement patterns
Most activity occurred in the central area.

APPENDIX III



<p>TITLE 'Pilgrimage in the Burren' Workshop Report</p>
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<p>Date 18-10-14</p>

1. Introduction

The 'Pilgrimage in the Burren' Workshop took place in the Michael Cusack Centre, Carron on Saturday October 18, 2014 between 9am and 4pm. Its purpose was to explore good practice around the development and promotion of sites and routes associated with pilgrimage in the Burren. Invitations to attend were sent to groups and individuals interested in the development of pilgrimage as a tourism experience in the Burren. Land owners, guides, researchers and promoters of pilgrimage locations were among the invitees.

2. Programme of Events

The day began with registration and introductions at 9am followed by three presentations on aspects of pilgrimage and its promotion/development as a of tourism enterprise. A facilitate discussion was then held which was further developed during the afternoon field trip to the nearby pilgrimage site of St MacDuagh's Oratory at Slieve Carran.

9.00 -9.30	Coffee, Registration and Introductions	Carol Gleeson, Manager of GeoparkLIFE
9.30 -10.15	The historical practice of pilgrimage	Louise Nugent, Archaeologist and researcher on pilgrimage in Ireland
10.15 – 11.00	Pilgrim Paths Ireland; a reawakening	John G. O'Dwyer, Chairman of Pilgrim Paths Ireland and author of "Pilgrim Paths In Ireland - a Journey from Slieve Mish to Skellig Michael."
11.00 – 11.15	Coffee break	
11.15 – 12.00	Developing trails and access in the Burren	Eoin Hogan, Rural Recreation Officer, Clare Local Development Company
12.00 – 1.00	Discussion groups/feedback/next steps	Facilitated by Dr Gabriel Cooney (UCD) and Zena Hctor, Heritage Consultant
1.00 – 1.45	Lunch	
1.45	Bus to Slieve Carran Nature Reserve	
2.00 -4.00	Walk to St. MacDuach's Church and Well; Applying the morning's discussions to a pilgrimage site.	Facilitated by Zena Hctor and Carol Gleeson

3. Feedback Session

The objective of the workshop was to investigate, discuss and agree good practice which addresses the sensitivities and practicalities surrounding the promotion and development of pilgrimage as a tourism enterprise. A discussion to explore these topics was facilitated by Dr Gabriel Cooney and recorded by Zena Hctor. The following is a compilation of the issues raised during the discussion.

3.1. Management Issues

- Genuine pilgrims sometimes feel they are on show for tourists – how can this be managed?
- Pilgrimage tourism has the potential to increase visitor numbers and disturb the peacefulness and sense of a holy place.
- The idea of a pilgrim's path is about moving towards a destination. Does tourism destroy what attracted in the first place? It must be managed in a very sensitive way e.g. how we bring people in and in what numbers.
- Invest in the locals who love their landscape and will act to protect it. Spread the route with points where there is a person as well as a place. Local voices telling the story.
- If you develop in this way and are successful, outside tour operators will come in and replicate your methodology – how do we manage this?
- Interfering with the landscape - for example Slieve Carron is on NPWS land – gravel paths are taking from the landscape as does the boardwalk at Cahercommaun.
- But we must be aware of health and safety – where do we find the balance?
- At Mullaghmore sections of the trail are eroding.
- Great view of the Mullaghmore from Lough Avalla - therefore maybe it's best to market the Lough Avalla walk and take some of the visitor pressure from Mullaghmore.
- Unless there are real dangers do we need interventions? Take the genuine pilgrims experience. There is minimum intervention. Use of a pilgrim's passport would spread the load.
- Must monitor to get the balance right between promotion and protection of the environment. More research needed with regards to stiles and path types. Keep numbers small. No large buses.
- Need conservation for local people who have connections to the sites and for visitors with perhaps spiritual reasons.
- Scrub encroachment needs clearance – but herbicides such as 'Round – Up' should not be used. This is currently being used on the Burren by certain agencies and its use should be banned to protect the environment and most especially the groundwater.
- Votive offerings – remove all of them (Leave No Trace policy)
- Adopt – A – Monument – use this process to involve the local community
- Must decide on management before promotion. Very useful expertise already exists here on the Burren for proper management.
- Sensitivity is key/ Already have a number of sacrificial sites.
- Small groups are key. Will control access, peace etc.
- A **Cuimhneamh an Chláir** recording tells of a woman who was the caretaker of a holy well. She held responsibility for cleaning it out and taking care of the statues. She had a great knowledge of the ecology and awareness of the spirituality of the site. This could be the way to manage such sites.

3.2 Existing trails

- Clare Pilgrims Way already has a route established from West Clare up around Kilmacduagh to Kilfenora. Have been at it for 3 years. Need help with mapping, signage etc. Usually cater for groups of 10-15 for 2-3 days. The motivation is to explore where and how the church evolved in County Clare. Incorporates theology and ecology. Desire to dig into human history. Tourism is not the major concern.

3.3 Developing New Trails and Sites

- The high Crosses at Kilfenora – could there possibly be replicates placed on the landscape to replace the originals which are now housed in the Cathedral?
- Possibility of developing a Pilgrims path across the Burren from the Aran Islands to Kilmacduagh, incorporating MacDuagh's Church, Oughtmama and Corcomroe.
- Aran Islands community being part of the Pilgrims route – maybe get away from commercialism?
- The question of insurance – self guided walk or guided require different types of insurance.
- Many of the sites are on private land therefore there is limited access.
- There are enough trails in the Burren – why develop more? To develop a new route you need to do historical research to show that it's a genuine pilgrims route and negotiate with landowners for access to land. There could be several landowners and community groups involved – this is a massive hurdle. It would involve huge commitment and resources. There is a very serious Appropriate Assessment (AA) process to be undertaken and planning permission to be obtained for new trails. Future maintenance and monitoring programmes also have to be developed and implemented. If the route is to be guided – how does this affect the landowner – do they benefit? Recommendation: try a pilot – road test a small section first.
- A pilgrimage doesn't have to be a long journey – it can be short and local.
- Local guiding is best as opposed to Apps/maps etc.
- There is room for both – different markets must be catered for.

4. Discussion at Slieve Carron

The discussion continued as the workshop participants visited the pilgrimage site of St. MacDuagh's Oratory. Zena Hctor led the walk through the site asking the following question on the issues of access and management:

- How difficult do you find access to this site?
- Would you bring a group here?
- If yes – are there any safety issues that may affect you and your group?
- What negative impacts do you think leading groups of people to and into this site may have?
- What do you think of the overall condition of the site; including the condition of the monuments and the practice of leaving votive offerings at the well and on surrounding trees
- Would you like to see it improved and if yes, how?
- How do you think this site should be maintained and managed into the future?

The discussion covered the following points:

- Access to the site (over stile) is difficult for some. This could be improved.
- With regard to the immediate access to the church site, there were differing opinions as to balancing the improvement of access in terms of the wet underfoot conditions and maintenance of the atmosphere of the site provided by its closed in nature. Some felt the trees provided a closed peaceful atmosphere while others saw the benefit of improving the safety of the entrance path and opening out the view as was more likely the situation in the past. Safety was not thought to be a major problem – as the pilgrims are used to visiting old ruined sites and have an awareness of the hazards.
- A local landowner stated that the votive offerings around the well were not present up to about 10 years ago and that they have no relevance and should be removed. Others

commented that there may be genuine reasons for the leaving of offerings and this must be respected.

- It was generally felt that the building could do with some consolidation but overall its condition added to the atmosphere of the site and should not be sanitised.
- The clearance of scrub through the application of herbicides (Round-up) was again raised and there was a strong opposition voiced against its use.
- Overall it was felt that this was a very special site and should not be over promoted nor should access be made very easy. The site should not be over sanitised.

5. Wrap-up

The workshop ended with several participants expressing their interest in continuing the process of discussion and exploration around the topic at a future workshop.