Visitor Management Proposal

An Rath - Cahermore

BURREN AND CLIFFS OF MOHER GEOPARK
PEOPLE. PLACE. LEARNING. LIVELIHOOD.

GeoparkLIFE:
Tourism for Conservation

INTRODUCTION

Pressures on heritage attractions are increased through visitor promotion in tourism destinations.

Changes occur in visitor numbers, popularity of sites and pressures on attractions over time.

Good management must be able to recognise and measure these changes and adapt appropriately to implement effective conservation practice while ensuring visitor satisfaction.

Only through understanding all the pressures that impact on an attraction can effective management actions be designed and implemented.

Initial management decisions are often made with a degree of uncertainty as to the future impact of the action proposed. Adaptive management is a structured process which can reduce this uncertainty over time through continuous monitoring, reviewing of the changes and adaptation of actions where required. Through the implementation of this process the management team become very familiar with all the integrated aspects of the site and can adapt their actions quickly to address negative changes.

The Burren & Cliffs of Moher GeoparkLIFE programme developed a set of guides, toolkits and case studies to facilitate tourism destination managers to reconcile tourism development with the conservation of the natural and cultural heritage. Included in the toolkits are a Heritage Site Visitor Management Plan Template and a Heritage Site Monitoring app and portal website. http://www.burrengeopark.ie/geopark-life/guides-and-toolkits/

The Heritage Site Visitor Management toolkit development was based on practical application at seven demonstration sites within the Burren region. This document has been compiled to illustrate the practical use of the toolkit for the Blackhead- Fanore demonstration site and to provide a Visitor Management Planning Proposal for the attractions located within this site.

Zena Hoctor

GeoparkLIFE Sites and Monuments Co-Ordinator

May 2018.

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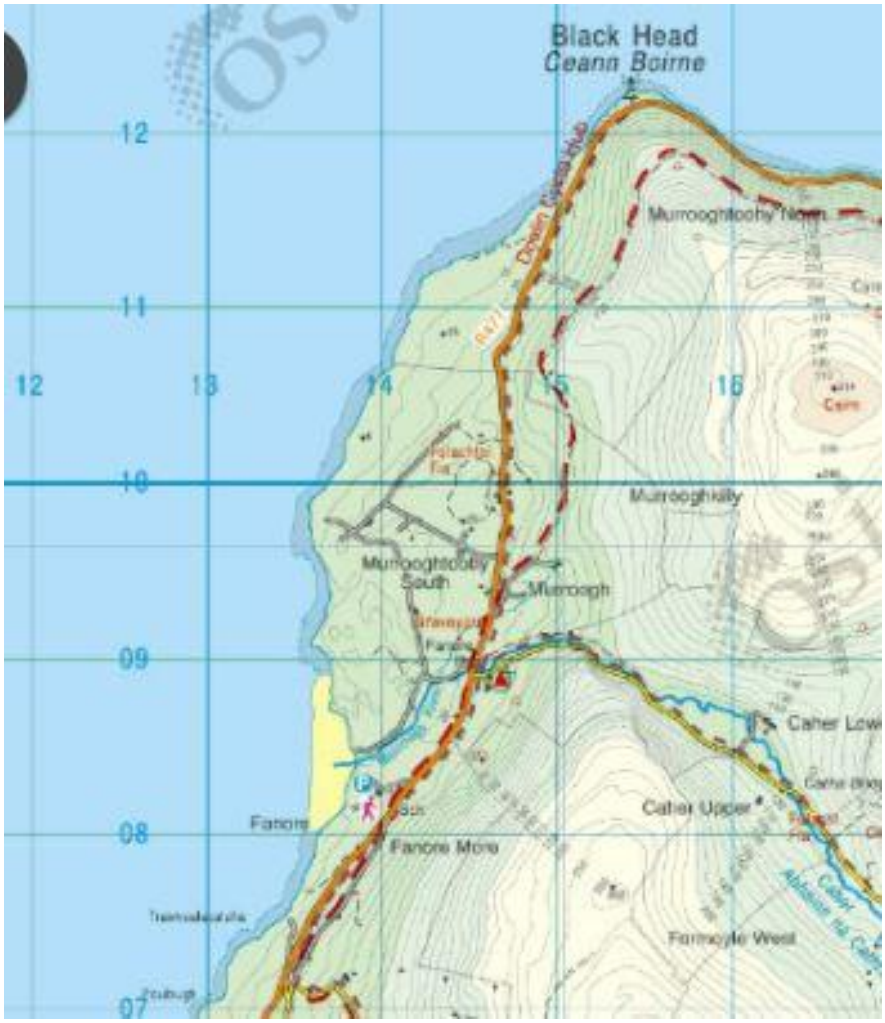
SECTION ONE: SITE IDENTIFICATION

1.1. Name and Location

Site Name	Blackhead - Fanore
Townland	Murrooghtoohy North and South, Murrooghkilly, Fanore More
ITM E	515210
ITM N	710393
OS Discovery Series Sheet No.	51
OS 6 - inch Series Sheet No.	CL001 and CL002



Map 1: Site location map of Blackhead-Fanore

SECTION TWO: SITE SIGNIFICANCE

2.1. Site type and features

The Black Head-Fanore area is located along the north-western tip of the Burren, County Clare. It rises steeply from sea level to an altitude of 314m at the summit of Murrooghkilly Mountain in the north with a gentler incline along the western coastline to the higher ground in the east.

Photograph 1: View south along the western coastline to Fanore from Murrooghkilly

The shoreline in this area has the best examples in Ireland of an important biogeographical variation of intertidal reefs extremely exposed to wave action, and these shores have been described as some of the most interesting open coast shores of both Britain and Ireland. The shores are gently sloping, stepped limestone pavements over most of the site, but at Black Head the shore is narrow and very steeply stepped.

Limestone pavement, including smooth, blocky and shattered types, with well-developed karst features is the main rock type. Erratics of Galway granite are commonly found sitting on top of the pavement. Interspersed among the bare pavement is species-rich, dry calcareous grassland. At higher altitudes, limestone heath is well developed, particularly on the summit areas where Bearberry (*Arctostaphylos uva-ursi*) occurs.

Along the southern boundary of the area, the Caher River, the only river found in the high Burren, flows into the sea at Fanore Beach. It is a shallow, spring-fed stream approximately 5 km long, which flows underground for some of its course during dry periods. The upper section is heavily shaded by Hazel (*Corylus avellana*) scrub, which in the vicinity of the channel bears a luxuriant lichen flora. The lower section of river is on limestone bedrock and periodically dries out. This part of the river is dominated by mosses and algal crusts, both of which are heavily calcified, and in some places form tufa deposits of considerable thickness.

Fanore dunes, one of the best dune systems in County Clare, extends 2km from the townlands of Murroughtoohy South in the north to Fanore More in the south. The dune system is divided into two sections by the Caher River. The area to the south of the River is in the ownership of Clare County

Council (approximately one-fifth of the entire dune system) while the remainder is in private ownership with a number of landowners. Clare County Council operates and manages the visitor recreational facilities at Fanore Beach to the south of the river. A privately owned and operated caravan park is located in the dunes immediately to the north of the Caher River.

The dunes consist of both mobile and stabilised areas. The foredunes are covered by a mixture of Marram Grass (*Ammophila arenaria*) and Sand Couch (*Elymus farctus*). The dune slack is unusual, with extensive exposed limestone pavement and erratics. Species recorded from the high dunes include Sea-holly (*Eryngium maritimum*), Sea Spurge (*Euphorbia paralias*) and Marram Grass. A small population of the rare liverwort *Petalophyllum ralfsii* occurs within a damp, grassy area of the dunes (www.npws.ie)

The northern shores of Black Head host approximately 25 breeding pairs of Black Guillemot while up to 15 Black-throated Divers winter there (this species is listed in Annex I of the E.U. Birds Directive). (Murphy, J. 2013)

Most of the terrestrial part of the site is grazed by cattle and sheep, particularly in winter, and by feral goats throughout the year.

The area is rich in archaeological remains from various historical periods, including Mesolithic middens to Early Medieval stone forts to 19th century turf stands.

Figure 1 illustrates the number and location of recorded archaeological monuments within the demonstration site. Each of these monuments is listed on the Record of Monuments and Places (RMP) which is a statutory record established under Section 12 of the National Monuments (Amendment) Act 1994.

Figure 1: Recorded monuments (www.archaeology.ie) in the Blackhead-Fanore demonstration site indicated with red dots.

2.2. Specific features of Visitor Interest

The popular scenic drive along the R477 coastal road from Blackhead south to Fanore beach is considered one of the top 10 most scenic routes in Europe by the Automobile Association and has recently been incorporated into the Wild Atlantic Way (WAW) driving route. It is heavily used by international and national tourists, coach operators and amenity users such as rock climbing and fishing clubs, walkers, cyclists and surfers.

The viewing point at Murrooghtoohy is a popular stopping point along the route where there is a panoramic view of Galway Bay and the Aran Islands. Many casual visitors who stop here, walk across the limestone pavement below the viewing point to the edge of the sea. Others walk inland and climb up the lower slopes.

Fanore Blue Flag Beach is a popular swimming and surfing destination. A surfing school operates at the beach on a seasonal basis. Recreational facilities provided and managed by Clare County Council include a car park, toilet block, shower, access boardwalk, sand ladder to the beach, viewing point and interpretive information. The dunes have a specialised ecology and a dune conservation project has been underway here since 2002 by Clare County Council. Adjacent to the beach is a privately-owned caravan and camping park. The trailhead for three long distance walking routes is located in the car park at Fanore and the whole area is very popular as a walking destination.

Visitor facilities in Fanore village include a public house serving food and drink, grocery/newsagent shop, post office and restaurant.

The most visited archaeological sites within the demonstration site are Caher Dun Irghuis and Murrooghkilly cairn at the summit above Blackhead. Both sites are regularly passed by hill walkers as they are close to the popular walking areas of Blackhead, Gleninagh and Cappanawalla Mountain.

2.3. Regional Context of the Site

The Blackhead-Fanore area is located in the north-west corner of the Burren and encompasses the most popular visitor touring route in the region – the R477, which is part of the Wild Atlantic Way touring route.

2.4. Associated local Folklore and /or Traditions

A large stone fort located on the north-western slope of Blackhead is known as Caher Dun Irghuis or Caherdoonfergus on the first and second edition six-inch Ordnance Survey maps. The owners of the land on which it is located refer to it as 'Caherchunarisa' which they translate as 'The Fort of the King'. The story relates that when this King died his son Irghus inherited the fort and hence the change in name.

Another local story related that Irghus was a great builder and that this impressive stone fort is a testament to his skill.

2.5. Associated Place names and their meanings

The study area contains the townlands of Murrooghtoohy North and South, Murrooghkilly and Fanore More.
Murrooghtoohy North in Irish is *Muiriúch Tuaithe Thuaidh*.
Murrooghtoohy or *Muiriúch Tuaithe* translates to 'the laity's *Muiriúch*'
Muiriúch is 'level land along the sea-coast'.

So this placename translates as 'the Laity's level land along the sea coast' with references to the north and south sections.
This is in contrast with the adjoining townland name of Murrooghkilly which translates as 'the church's *Muiriúch*'. This area belonged to the see of Kilfenora.

Fanore or *Fánóir* translates as 'golden slope'. Fanore More or *Fánóir Mhór* – is the big golden slope
Source: https://www.logainm.ie/en/ (the Irish Placenames Commission)

2.6. Reports/Research

Aegis Ltd. 2017 '*Archaeological recording of Murrooghkilly Cairn, Blackhead, The Burren, Co, Clare'* Burren & Cliffs of Moher GeoparkLIFE programme, Clare County Council.

Browne, A. (2003) '*Habitat Survey of Fanore Dunes'* Clare County Council.

CAAS Ltd. 2015 *'Pilot Visitor Observation Studies of Environmental Impacts at the Burren & Cliffs of Moher Geopark, Co. Clare'*. GeoparkLIFE project, Burren and Cliffs of Moher Geopark, Clare County Council.

Earthstone 2017 *'Murrooghkilly Cairn (Dry Stone) Conservation Report'* Burren & Cliffs of Moher GeoparkLIFE programme, Clare County Council.

Devoy, R. 2016 *'Fanore Beach and Dune Management Report: Current Problems and Planning for the Future'* MaREI, University College Cork http://www.burrengeopark.ie/wp-content/uploads/2016/05/Fanore-Beach-and-Dune-Management-Report_2016.pdf

Hoctor, Z. 2015 *'Fanore-Blackhead Site Assessment Report'* GeoparkLIFE, Burren and Cliffs of Moher Geopark, Clare County Council. http://www.burrengeopark.ie/wp-content/uploads/2016/05/Blackhead-Fanore-Site-Assessment-Report.pdf

Hoctor Z. 2016 *'Feasibility Report for the Development of Parking Lay-bys on the R477 at Blackhead'* Burren & Cliffs of Moher GeoparkLIFE Programme, Clare County Council.

Millward Brown 2015 '*Burren & Cliffs of Moher GeoparkLIFE programme Visitor Survey'* http://www.burrengeopark.ie/wp-content/uploads/2015/03/Milward-Brown-Visitor-Survey.pdf

Murphy, J. 2013 *'Birds of Fanore'* Burren & Cliffs of Moher Geopark, Ennistymon, Co. Clare.

Ryle, T. et al. 2009 '*Coastal Monitoring Project 2004-2006'* Report for NPWS.

Saunders, J. 2015 '*Buses in the Burren 2014 – A study of the Impacts and Issues'* Burren & Cliffs of Moher Geopark http://www.burrengeopark.ie/wp-content/uploads/2015/03/Burren-Coach-Tourism-Study-Final-Report.pdf

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000020.pdf

Westropp T.J. 1916 '*Archaeology of the Burren – Prehistoric Forts and Dolmens in North Clare'*

SECTION THREE: BASELINE SITE CONDITION ASSESSMENT (2014)

The site condition data presented in this section was compiled through the GeoparkLIFE baseline survey of the Blackhead-Fanore area in 2014 http://www.burrengeopark.ie/wp-content/uploads/2016/05/Blackhead-Fanore-Site-Assessment-Report.pdf and is presented here in the format developed for the GeoparkLIFE Heritage Site Management Plan template

3.1 Approach to the Site

Describe the approach roads to the site	The R477 road runs along the scenic coastal route from Ballyvaughan through Blackhead and Fanore. This narrow road which hugs the cliffs around Blackhead is a very popular tourism route due to the spectacular viewing points across Galway Bay and out to the Aran Islands. The route is part of the long distance driving tourism route the 'Wild Atlantic Way' (WAW).
Is there directional road signage to the site?	Yes ✓ No ☐
If yes, enter the ITM co-ordinates for its location	523047 707847
What is the condition of the signage?	Good
Timescale for action required	Choose an item.
	Standard directional road signage is provided along the coastal route from Ballyvaughan to Fanore and the branded Wild Atlantic Way directional route signage is also found along the route.
Is there a roadside site name sign present?	Yes ✓ No ☐
If yes, enter the ITM co-ordinates for its location	514129 708324
What is the condition of the signage?	Good
Is the sign damaged?	Yes ☐ No ✓
If yes, describe the damage and its cause	Click here to enter text.
Timescale for action required	Choose an item.
	Fanore Beach is signposted from the R477 at the entrance to the car park adjacent to the beach.

Fanore Beach

Are there parking facilities available at the site?	Yes ✓ No ☐

There is an official car park at Fanore Beach which is managed by Clare County Council and accommodates approximately 40 cars. A barrier at the entrance to the car park from the R477 road prevents coaches from using this parking facility.

If yes, is it	Official ✓ Unauthorised ☐
How many spaces are currently available?	40
How many spaces are reserved for disabled visitors?	Click here to enter text.
Enter the number of spaces available for	Coaches 0
	Cars 40
	Motor Bikes 0
	Push bicycles 0

Are the current parking facilities adequate?	Yes ✓ No ☐

The parking facilities within the Fanore car park are adequate at normal times. Exceptional circumstances may occur on bank holidays in very fine weather when larger than normal numbers of visitors come to the beach and parking can overflow onto the grassy areas.

Other parking facilities within the Blackhead-Fanore Area:

Photograph 2: Parking at Murrooghtoohy Lay-by

An official viewing point with a small parking layby has been created at Murrooghtoohy, just south of Black Head. It can accommodate approximately 8 cars. During the summer months this area can become highly congested with cars and coaches parked on both sides of the road and visitors leaving their vehicles to walk across the pavement areas.

As the R477 is very narrow along most of its extent, there are problems with coaches passing each other and this often adds to the congestion problems when a large number of coaches are using the route during the high tourism season.

Fishing is popular along this stretch of coastline and recreationalists undertaking this activity tend to park their cars along the roadside between Gleninagh and Murroghtoohy. This can cause congestion and difficulties for passing coaches.

3.2. Site Entry

3.2.1. Site entrance types

Entry to Fanore Beach car park from the R477 is via an open gateway with a restriction barrier of 2 metres in height. Entry is purposely unavailable to coaches due to the presence of the height barrier.

Photograph 3: Barrier at entrance to Fanore Beach

The trailheads to each of the three long distance designated walking routes are located at Fanore Beach car park. Stiles are provided along each route to allow access through field wall boundaries.

There are several unofficial entry points from the R477 road unto privately owned land, especially in the area around Murrooghtoohy Viewing point.

These consist of gaps in the field wall boundaries.

3.2.2. Access Paths

Official access paths within the Blackhead-Fanore area consist of the three designated long distance walking routes – (1) the Black Head Loop (2) the Caher Valley Loop (3) Fanore to Ballyvaughan Trek and public access to Fanore Beach through the Local Authority owned car park. All other access is across privately owned land.

The terrain along the designated walking routes includes minor roads, green laneways, tracks and mountain paths. The surface covering can vary from limestone pavement to grass to bog. The incline varies from level to steep with a high/ascent of 300m-540m on the Blackhead Loop; 300m/340m on the Caher Valley loop and 260-800m on the Fanore to Ballyvaughan trek. The difficulty grade assigned is 'hard' on all routes and above average levels of fitness are required.

The access path to Fanore Beach from the car park is a wood boardwalk and a sand ladder which covers a distance of approximately 500m. The incline of the boardwalk is level while that of the sand ladder is steep but stepped.

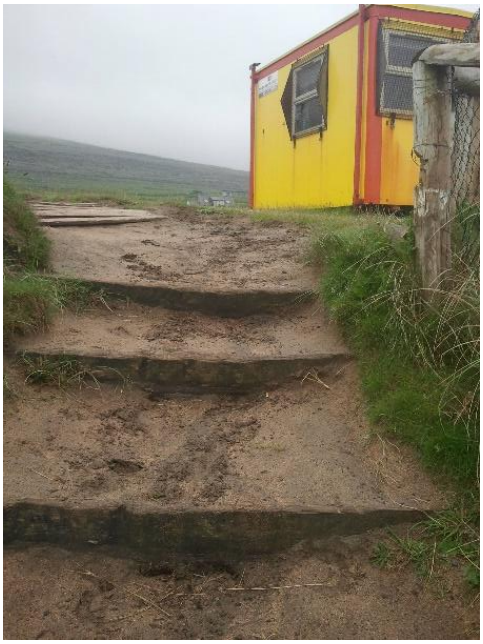
3.3.3. Access Paths Condition

3.3.3.1. Beach Access

The access boardwalk to Fanore Beach is worn and several of the boards are misshapen or missing in places causing a trip hazard. The sand ladder has been damaged in recent years due to storm events and natural wear. Repairs or replacement of the structures are now urgently required.

3.3.3.2. Long Distance Designated Walking Trails

The three long distance marked walking trails are monitored and managed by the Clare Rural Recreational Officer (RRO) working from Clare Local Development Company based in Ennis. All trails have been inspected and approved by the National Trails Office. The RRO works in conjunction with the landowners along each trail. Areas of erosion can occur at points along all of the trails, especially in areas of softer ground. The landowners are paid to carry out repair works along the trails under the National Walks Scheme in line with the results from monitoring carried out by the RRO.



Photographs 4-7: Boardwalk and sand ladder access to Fanore Beach (13-6-2014)

3.3.3.3. Murrooghtoohy Viewing Point and area around Blackhead Lighthouse

Due to the large number of passing visitors who stop at Murrooghtoohy Viewing point and then walk across the pavement to the sea edge and up onto the lower slopes of Blackhead, there is some footfall impact at this site and damage to the drystone boundary wall of the viewing point has caused collapse along its length.

Baseline habitat mapping was carried out in May and September 2014 as part of the *'Buses in the Burren 2014 – A study of the Impacts and Issues'* (Saunders, J. 2015) commissioned by the GeoparkLIFE project, to determine the impact or vulnerability to impact of stop-over activity on the ecological environment. A condition score was given to each site based on the level of negative impacts on habitats or other ecological features Murrooghtoohy lay-by at Blackhead was assessed

and rated as *'Localised degree of negative impact, but slight and capable of rapid recovery (Fair condition)'.*

The following is an extract from the report on the impacts and conditions at this site:

'The zone of influence at Murrooghtoohy is limited as most stop-over's appear to be brief photographic opportunities. People appear to walk on the exposed limestone pavement rather than on the areas of grassland though vegetation within the zone of impact shows some signs of compression and stunting due to trampling. There is no evidence of bare patches. Mini-dolmen building previously occurred in considerable amounts as there is abundant loose stone present, though the erection of signage appears to have reduced this considerably. Littering is prevalent though minor in scale. There are no bins provided and signage is limited to the prohibition on the building of mini-dolmens and the Burren Code. Overall the impacts at Murroughtoohy are rated as Localised but slight and capable of rapid recovery (Fair condition).'

As part of the GeoparkLIFE/CAAS Visitor Observation Study 2014, vegetation monitoring was undertaken between October 21, 2014 and December 2, 2014. Vegetation was analysed in $1m^2$ quadrats.

Four locations within the Blackhead-Fanore demonstration site were assessed as part of this study.

1. Blackhead Lighthouse – 13 quadrats
2. Murrooghtoohy lay-by – 15 quadrats
3. Fanore Beach plan 1 – 21 quadrats
4. Fanore Beach plan 2 - 5 quadrats
   (as illustrated in Figures 2-5).

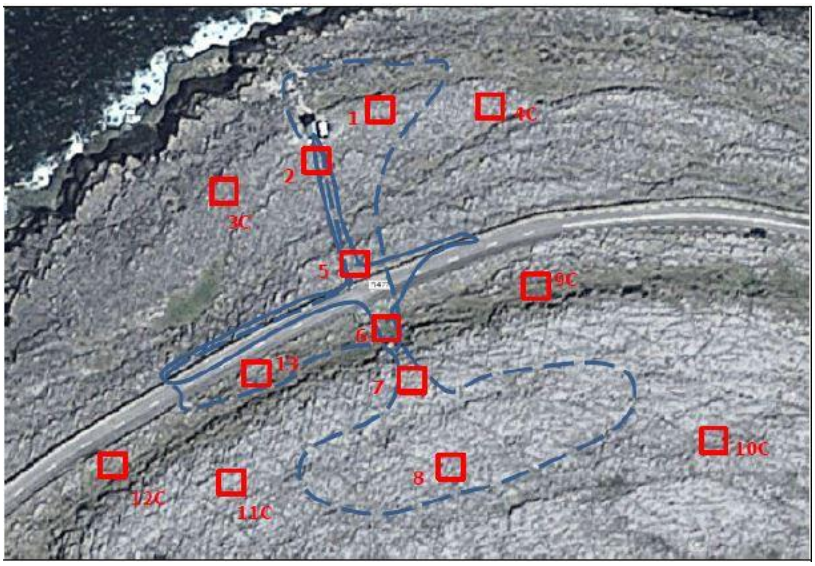


Figure 2: Location of ecological sampling quadrats at Blackhead Lighthouse

Extract from the report for Blackhead Lighthouse:

'The visual effect of tourist activity on the vegetation at this site is limited on the north of the road as the vegetation is sparse and visitors walk preferentially on the exposed limestone. To the south of the road a few desire lines lead inland to the higher ground though once above the terrace fringing the road, these become indistinct as visitors do not follow any specific route. There is a considerable

amount of mini-dolmen and cairn building on the higher ground south of the road. Litter is also evident in the area adjacent to the road and towards the lighthouse'.

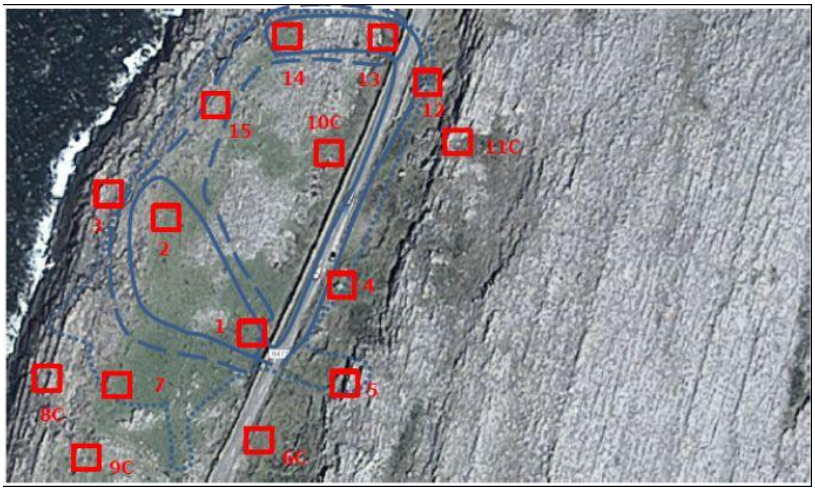


Figure 3: Murrooghtoohy lay-by location of quadrats

Extract from report for Murrooghtoohy lay-by (300m south of Blackhead lighthouse):

'The visual effect of tourist activity on the vegetation at this site is limited to the immediate vicinity of the access stile leading from the road to the coast and to a lesser extent, a few desire lines lead inland to the higher ground to the east. West of the road there is localised compaction of vegetation in the area immediately adjacent to the access stile. On the east of the road due to the presence of low cliffs, access is confined to a few obvious routes with localised compaction of vegetation. On top of the cliff the visitors spread out over a broader area and there are no discernible trails. As with many sites which have exposed limestone pavement, visitors tend to walk preferentially on the rock thus avoiding trampling the vegetation. Grazing and poaching by over-wintering cattle has a discernible impact on the vegetation at the higher levels. There is evidence of mini-dolmen and cairn building both to the east and west of the road. Litter is also evident along the coastal strip.'

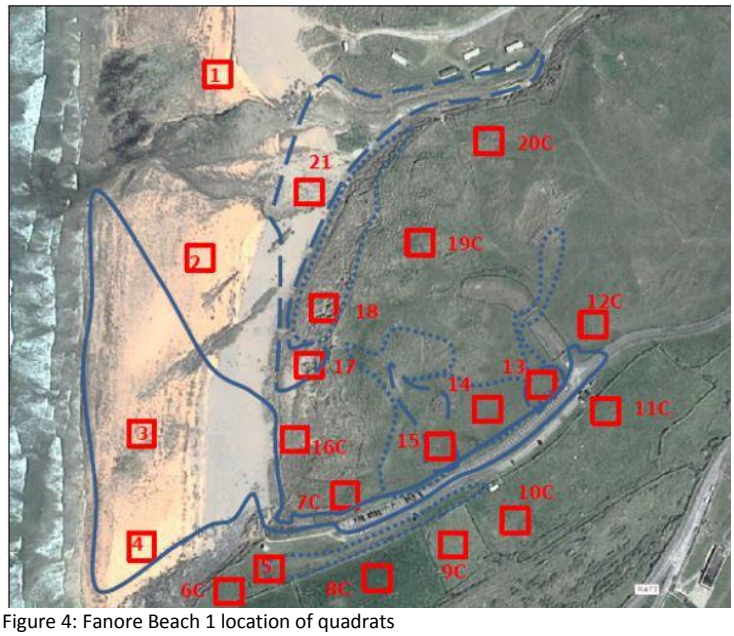


Figure 4: Fanore Beach 1 location of quadrats

Extract from Report for Fanore Beach 1:
'Vegetation at Fanore varies according to the location within the dune system, with marram dominated communities along the dune front, and species rich calcareous grasslands further inland.

Fields of managed grassland to the south of the carpark also vary in composition dependant on the management and grazing levels. The dune system and inland grasslands are grazed by cattle over the winter months and there is a large population of rabbits which maintain the inland areas as a short sward. Visitor activity has an evident effect on the grasslands fringing the carpark where there is compaction and occasional small areas of exposed soil. There are desire lines leading through the dune system though the fencing appears to limit the numbers of people using this area. The dune front was heavily eroded during the extreme storms of January and February 2014. There are a number of blowouts with wind eroded gullies extending into the dunes and their recovery is heavily dependent on preventing access by people or livestock. The shoreline consists of mobile sands with some areas of exposed rock in the mid shore. The river forms a braided and dynamic channel within the beach consisting of gravels and cobbles'.

Figure 5: Fanore Beach 2 location of quadrats

Extract from report for Fanore beach 2 area:

'*Vegetation within the dune system follows the same pattern as to the south of the river with marram dominated communities along the dune front, and species rich calcareous grasslands further inland.*

The dune system and inland grasslands are grazed by cattle over the winter months and there is a large population of rabbits which maintain the inland areas as a short sward. The dunes are unfenced and there is a higher level of visitor activity with numerous desire lines leading through the dune system. The dune front was heavily eroded during the extreme storms of January and February 2014 and consists of a uniform steep and sparsely vegetated face of 4-6m in height. The shoreline consists of mobile sands with some areas of exposed rock in the mid shore zone close to the river mouth and at the northern end.

Petalwort (Petalophyllum ralfsii), an Annex I listed liverwort under the EU Habitats Directive, is recorded from the dunes at Fanore. It is a qualifying interest for the Blackhead – Poulsallagh Complex SAC which encompasses the entire dune system'.

3.3. Way Finding

3.3.1. Site Signage

Specify the type of **on-site signage** present

Directional	Interpretive	Health & Safety	Fógra	Private Property	Environmental Information	Other
✓	✓	✓			✓	If other, please specify

Murrooghtoohy Viewing Point

A lectern style interpretive panel at Murroughtoohy viewing point provides a panoramic image of the seascape, with points of interest highlighted and named in both English and Irish. Interpretation of the local placenames is provided and the Burren Code in several languages. This panel was erected under the Burren Connect project. The sign has damage in the top right hand corner and is scratched in places.

Photograph 8: Burren Connect interpretive panel at Murrooghtoohy lay by

Two signs mounted on an upright pole both erected under the Burren Connect programme. The upper sign carries the Burren Code in several languages while the lower is a 'Move No stones, build no cairns' preservation sign installed as an awareness strategy to control the building of 'mini-dolmens' by visitors on the limestone pavement.

On the opposite side of the road the same Burren Code and preservation sign is repeated.

Photograph 9: Burren Code and 'Move no stones' signs at Murrooghtoohy

A Wild Atlantic Way (WAW) destination pole and a WAW interpretive panel upright (insert not yet installed 2014) are also located at the viewing point.

Photograph 10: Signage at Murrooghtoohy Lay-by

Fanore Beach

Three directional road signs are located at the entrance to Fanore Beach from the R477.

Inside the entrance gateway to the beach, three signs mounted on a pole carry 'No camping, overnight parking, dumping and bonfires' messages. The two upper signs are damaged with text scratched out. To the right of these signs is a second upright pole with a blank A4 size panel attached.

On the approach to the parking area a Wild Atlantic Way site name sign is located to the left.

Opposite the toilet block on the boundary of an area fenced off for conservation purposes are two different designs of Conservation signs one at each end of the fence. Attached to the lower section of the pole supporting the sign to the rear of the fence is a 'No Camping/overnight parking' sign which is damaged.

To the front of this fenced area, a 'No camping/Bonfire' sign is attached to the lower section of a pole which supports the 'Mutt Mitt' collection point

Three upright poles with 2 signs attached to each are located along the rear of the parking area adjacent to the toilet block. The top sign is a parking symbol/arrow and the lower are three conservation biodiversity panels illustrated with photographic images and text of plants and birds of the area. These were installed under the Burren Connect Project. The panels are in very good condition.

Adjacent to the south side of the car parking area on the grass verge are a line of 5 upright interpretive panels and one lectern style.

Two of the uprights carry the mapboards for the three designated walking routes within the surrounding area (installed by Fáilte Ireland/Shannon Trails).

One carries the mapboard for a North Clare cycle route (installed by Fáilte Ireland/National Cycle Network).

The fourth carries information about the birds, plants and animals to be found in the Fanore region (installed by Burren Connect).
The fifth carries a conservation message and information about the conservation project being undertaken at the dunes (erected by Burren Connect).
The lectern style panel describes the geology and geomorphology of Fanore (installed by Burren Connect)

At the start of the boardwalk from the car park to the beach is an upright double sided panel. During the summer season information with regard to water quality and blue flag beach educational and awareness information is posted here by Clare County Council.

On the opposite side of the shower unit is a double poled upright sign. This carries information on the County Council bye-laws and penalties for non-compliance. This sign is badly damaged with most of the symbols scratched out (13-6-2014)

Close to the boundary fence which surrounds the sand dunes, are three pole mounted conservation signs on upright metal panels. These provide information on the dune protection project carried out by Clare County Council. These signs are in good condition. A further 3 poles without panels possibly indicate 'removed' signs.

Close to the board walk entrance to the beach is a pole mounted sign indicating that this is a Special Area of Conservation and use of all-terrain vehicles is prohibited. This sign is badly damaged. It carries the NPWS name and logo.

Photographs 11-23: Signage at Fanore Beach

Damaged signs

Type of sign	Location (ITM E; ITM N)	Damage description	Source of Damage	Action Required	Timescale for Action
Burren Connect panoramic interpretive panel at Murrooghtoohy viewing point	514612 710752	Worn damage in top right hand corner and scratching on surface	Human	Update and replace with GeoparkLIFE/Geosite panel	6-12 months
Information signs inside entrance gate to Fanore Beach	514119 708335	Top two of three signs are damaged with text and symbols scratched out. Blank panel on second pole	Human	Revise signage and duplication of information provided. Replace with rationalised signage. Remove blank panel and pole.	6-12 months
Conservation signs on fence boundary opposite toilet block	513886 708341	The No camping or overnight parking sign is damaged with yellow paint smeared on the sign	Human	Replace sign	6-12 months
County Council bye-laws and penalties for non-compliance sign	513800 708178	This sign is badly damaged with most of the symbols scratched out.	Human	Replace sign	Immediate
NPWS Special Area of Conservation sign	513797 708184	This sign is badly damaged with text obliterated.	Human	Remove and explore necessity of the information on this sign and whether it requires replacement	Immediate

Additional Comments re on-site signage

At present (June 2014), there is a large amount of signage present in the Fanore Beach area, which has been installed by several groups including Clare County Council, NPWS, Fáilte Ireland, Shannon Development and the Burren Connect project. It is recommended that a full signage review is undertaken with the objective of rationalising and reorganising the level of current signage so that damaged signs are replaced where necessary, duplication of information provided is avoided and outdated signage is removed.

3.3.2. Restrictions to Visitor Access

Description of restriction to access	Location (ITM E; ITM N)	Difficulty caused	Action Required	Timescale for Action
Damaged access boardwalk and sand ladder to beach		The current condition of the access boardwalk and sand ladder to Fanore Beach can cause access difficulties for the less abled bodied and can be a trip hazard.	Review of condition of structures and the effectiveness of their function. If replacement structures are deemed necessary - exploration of suitable replacement types and installation of same	Immediate

Photograph 24: View of bottom section of sand ladder Following storm damage in Jan 2014 (photo taken 13-6-2104)

Photograph 25: Horses leaving beach via sand ladder (13-6-2014)

Photograph 26: Elderly visitor accessing beach by sand ladder (7-8-2014)

3.3.3 On-Site Visitor Facilities

List any **on-site visitor facilities**

Guides	Site Warden	Toilets	Coffee Shop	Viewing Platform	Other
		✓		✓	If other, please specify

At Fanore Beach, recreational facilities include a toilet block, car park, shower, access boardwalk and sand ladder to beach, lifeguards during summer season and informational signage on water quality, blue flag beach information and County Council bye-laws. All are managed by Clare County Council.

Damaged facilities

Facility type	Location (ITM E; ITM N)	Description of damage	Action Required	Timescale for Action
Access boardwalk and sand ladder	513773 708175	Missing and worn boards on boardwalk. Worn sections on sand ladder (Photographs 4-7)	Replacement	Immediate
Fencing around the sand dunes to prevent human access as part of conservation programme	513817 708235	Several of the posts have been damaged or removed and the net wiring has been damaged in several places (Photographs 27-29)	Review of necessity for fencing in light of improving condition of dunes since original installation (see Section 4.5) and replacement if necessary	Immediate

Photographs 27-29: Damaged fencing at Fanore Dunes (13-6-2014)

Additional Comments re on-site visitor facilities

The condition and effectiveness of the measures which were put in place for the conservation of the dune system at Fanore and visitor access need to be monitored and analysed on a regular basis. The results of the monitoring programme should then be used to inform a proactive management strategy and plan. The current approach to conservation and visitor management at Fanore beach is reactive and piecemeal.

3.4 Structural Condition

The most visited archaeological sites within the demonstration site are Caher Dun Irghuis and Murrooghkilly cairn at the summit above Blackhead. Both sites are regularly passed by hill walkers as they are close to the popular walking areas of Blackhead, Gleninagh and Cappanawalla Mountain.

Through the GeoparkLIFE project consultation with landowners at Blackhead and Fanore, the issue of damage to the Caher and cairn at Murrooghkilly by walkers was raised. The landowners are concerned about the perceived increasing damage to these monuments and they would like to see action being taken with regard to their conservation.

At present there is no existing reports as to the condition of these monuments. A baseline archaeological assessment is required from which conservation actions can be agreed and undertaken.

The boundary wall of the Viewing Point at Murrooghtoohy has been badly damaged due to visitor impact and has largely collapsed along its length.

Photographs 30-31: Collapsed wall at Murrooghtoohy Viewing Point

Due to the popularity of this viewing point it is necessary to provide a boundary wall that is fit for purpose. There is a 1m to 2m drop inside the wall; therefore this work is intended to keep the tourist safe while viewing the area. The wall also deters tourists from jumping down onto the Limestone pavement at this location. The current unstable wall needs to be dismantled and replaced with a secure semi-dry wall using the original stone.

3.5. Visitor Numbers

3.5.1. Bus Survey

'Buses in the Burren 2014 – A study of the Impacts and Issues' (Saunders, J. 2015) a study commissioned by the Burren & Cliffs of Moher Geopark indicates that an estimated 25,000 visitors on bus tours stopped at Murrooghtoohy viewing point in 2014. This estimate is based on (a) 3 days of counting across seasons for this study and (b) analysis of day trip bus figures.

The access routes and direction of travel of buses in the Burren was determined for July 17, 2014 by undertaking a driver/guide survey at the Cliffs of Moher and combining the results with data from a Clare County Council Road Traffic Census carried out on the same day. The results showed that 67 buses travelled along the R477 on this day (15 public day trips, 52 private tours).

This data however does not include the number of visitors travelling by other means of transport and stopping at Murrooghtoohy viewing point. It is estimated that 94% of visitors travel this route by car. Therefore the numbers stopping at this viewing point on an annual basis could be up to 400,000. http://www.burrengeopark.ie/wp-content/uploads/2015/03/Burren-Coach-Tourism-Study-Final-Report.pdf

3.5.2. Footfall Counters

The GeoparkLIFE project installed a footfall counter at the top of the sand ladder to Fanore Beach on September 11, 2014 and on the Blackhead long distance walking trail on November 5, 2014 to measure visitor numbers and times of visit. Data is collected and analysed on a regular basis by GeoparkLIFE staff. An estimated 60,000 to 70,000 people visit Fanore Beach annually and approximately 7,500 use the Blackhead Loop walking trail. (Detailed numbers in Table 4 page 35for Fanore Beach and Table 5 page 42 for Blackhead walking trail). Previous to this initiative there were no official visitor numbers to this area.

3.6. Visitor Attitudes

A Visitor Attitudes Survey was conducted at Caher Dun Irghuis archaeological site and Fanore Dunes between 5th September and 11th October 2014 as part of a wider survey of all seven GeoparkLIFE project demonstration sites. http://www.burrengeopark.ie/wp-content/uploads/2015/03/Milward-Brown-Visitor-Survey.pdf

The surveyor at the Caher abandoned his site after the first day due to lack of visitors and the altitude, distance and difficulty of climbing to the site. 82 people were interviewed at Fanore. The purpose of this survey was to record Visitors attitudes to the infrastructure at these sites and to the wider Burren region. The results of the interviews conducted at Fanore Beach indicate:

- 91% of visitors interviewed gave a rating of between 8-10 for signposting to the site (1 being poor and 10 high):
- 98% rated physical entry between 8and 10
- 97% rated parking facilities between 8 and 10
- 99% arrived by car to the site
- 87% noticed the information boards; 59% read them entirely and 23% partially; of those that read the boards 97% felt that they added to their understanding of the Burren.
- 46% were very satisfied with the site and the remaining 51% were satisfied.

The full results of the interviews at the demonstration site are contained in Appendix I.

3.7. Visitor Behaviour and Impacts

Visitor observations were carried out in September 2014 under the GeoparkLIFE project in the Blackhead-Fanore area to determine visitor movement and how visitor behaviour is impacting on the site.

On Saturday 6th and Sunday 7th of September 2014 one surveyor was stationed at Blackhead Lighthouse and one at the nearest layby south of the lighthouse and on Sunday September 7th, four were stationed at Fanore Beach. http://www.burrengeopark.ie/wp-content/uploads/2015/03/CAAS-Monitoring-Report.pdf

Two of the surveyors at Fanore Beach observed visitors in the car park, one surveyor observed the beach from the lifeguard hut as far as the River Caher while the fourth surveyor was stationed at the River Caher observing activities north of the beach (Figures 6-8: Observer locations)

Figure 6: Observer location at Blackhead lighthouse

Figure 7: Observer location at layby south of Blackhead lighthouse

Figure 8: Observer locations at Fanore Beach

674 visitors were observed at Fanore Beach and the results indicate that:

- 87% of visitors engaged in low and medium level activities[1]. Of the high level activities reported, these included off road vehicular movement where cars were forced to park on the grass during busy periods and visitors or their pets scrambling

[1] 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.

through the loose sandy dunes. Children and dogs appeared to be the most likely to walk to dunes or scramble on the loose dune slopes.

- However, 94% of visitors to the site appeared to have no discernible impact on the site.
- A range of effects were observed for the remaining 6% ranging from movement and interference with site materials to light littering.
- 87% of visitors engaged in low and medium level activities with low levels of impact
- Of the 13% of visitors to Fanore Beach involved in high level impact activities – these included lighting a fire; directly interfering with, moving, destructing site materials, light littering and disturbance of wildlife.
- Approx. 6% of visitors read the information boards

114 visitors were observed at Blackhead and the results indicate that:

- 71% of the visitors to Blackhead Lighthouse and the nearby layby were adults and 94% of all visitors arrived by car or van.
- 64% engaged in walking on pathways or sightseeing activities. Some visitors were observed to climb over the gate or low wall and walked across the limestone pavement. The shore was a popular choice for families to stop and picnic.
- The average time spent per group was 25 minutes at the site.
- The most significant impact observed was one visitor picking vegetation.
- Traffic congestion was identified as an issue. Each layby has the capacity to accommodate a maximum of one or two cars. One side of the road was completely blocked off during busy periods and buses in particular struggled to pass. This was evident for the entire stretch of the road around Blackhead.
- 72% undertook low level impact activities; 26% medium level impact and 2% high level impact activities
- High level effects observed included disturbance of wildlife and removal of stones.

On 13 September 2014 further visitor observations were carried out in the area around Caher Dun Irghuis between the hours of 11.30am and 4pm. 44 visitors were observed at the site during this time.

The results indicate that

- Average time spent at the site was six minutes
- All visitors were involved in low level activities (i.e. activity for which the site is intended)– walking, viewing the fort and the landscape
- Four visitors were involved in high level activities (i.e. activity that may have effect on site) - Two visitors walked on the caher walls and sat on them while viewing the landscape; two other visitors sat on a the field boundary wall
- Potential Impacts observed: dislodgement of stone in caher walls and boundary walls (High impact effect)

(Full data sheet of results in Appendix II)

SECTION FOUR: SITE MANAGEMENT

4.1. Ownership

Name of Site Owner(s)	The land in the Blackhead - Fanore area belongs to various private landowners. Fanore Beach car park is in the ownership of Clare County Council
Name of Site Manager(s)	Clare County Council Private landowners

4.2. Legal Properties

Are there any Rights of Way on the site?	Yes ☐ No ☐
Provide detail	Unknown
Are there any Legal Burdens on the site?	Yes ☐ No ☐
Provide detail	Unknown

4.3. Protective Designations

Is the site a designated National Monument?	Yes ☐ No ✓
If yes, what is its Monument Number?	Click here to enter text.
If yes, what is its status?	Choose an item.

Are any feature(s) of your site recorded in the:

(a)Record of Monument and Places (RMP)	Yes ✓ No ☐
If yes, insert its Registration Number	

RMP Number	Townland	Monument Type
CL001-001	Murrooghtoohy South	Hut site
CL001-002	Murrooghtoohy South	Fulacht fia
Cl001-002002	Murrooghtoohy South	Lime kiln
CL001- 004	Murrooghkilly	Childrens Burial Ground
CL001-005	Murrooghtoohy South	Fulacht fia
CL001-006	Murrooghtoohy North	Ringfort-Cashel
CL001-007002	Murrooghtoohy North	Fulacht fia
CL001-008	Murrooghkilly	Enclosure
CL001-009	Murrooghtoohy North	Ringfort-Cashel
CL001-010	Murrooghtoohy North	Ringfort-Cashel
CL001-013001	Fanore More	Ringfort-cashel
CL001-013002	Fanore More	Hut site
CL001-013003	Fanore More	Hut site

CL001-013004	Fanore More	House – indeterminate age
CL001-013005	Fanore More	House- indeterminate age
CL001-016001	Fanore More	Industrial site
CL001-016002	Fanore More	Turf stand
CL001-016003	Fanore More	House- indeterminate age
CL001-016004	Fanore More	Turf stand
CL001-016005	Fanore More	Turf stand
CL001-016006	Fanore More	Turf stand
CL001-016007	Fanore More	Turf stand
CL001-019	Fanore More	Midden
CL001-021	Fanore More	Midden
CL001-022	Fanore More	Enclosure
CL002-001	Murrooghkilly	Cairn
CL002-003	Murrooghkilly	Enclosure
CL002-004	Murrooghkilly	Enclosure
CL002-071001	Murrooghkilly	Field system
CL002-071002	Murrooghkilly	Turf Stand

Table 1: List of archaeological sites in Blackhead-Fanore area

Table 1 illustrates the number, location and variety of the recorded archaeological monuments within the demonstration site. Figure 1 provided a spatial view of these sites. Each of these monuments is listed on the Record of Monuments and Places (RMP) which is a statutory record established under Section 12 of the National Monuments (Amendment) Act 1994.

(b) Record of Protected Structure (RPS) Yes ✓ No ☐

If yes, insert its Registration Number

RPS No.	Townland	Site type
335	Murrooghtoohy North	Blackhead Lighthouse
667	Fanore More	St Patricks Church
204	Murrooghkilly	Fanore Bridge
555	Murrooghtoohy North	Stone Éire signs

Table 2: List of sites on the Record of Protected structures in the Blackhead-Fanore area

(c)National Inventory of Architectural Heritage (NIAH) Yes ✓ No ☐

If yes, insert its Registration Number

NIAH No.	Townland	Site type
20400105	Murrooghtoohy North	Blackhead Lighthouse
20400104	Fanore More	The Bridge House Hostel
201400101	Murrooghkilly	Fanore Bridge

Table 3: List of sites on the National Inventory of Architectural Heritage in the Blackhead-Fanore area

Is the site located within an Architectural Conservation Area (ACA)? Yes ☐ No ✓

If yes, insert the name of the ACA Click here to enter text.

If your site contains natural heritage features are they within the following designated areas?

(a) Special Area of Conservation (SAC) Yes ✓ No ☐

If yes, insert the Site Name and Code Blackhead-Poulsallagh Complex

(SAC Site Code: 000020)

Approximately 95% of the demonstration site is located within the Blackhead-Poulsallagh Complex Special Area of Conservation (SAC Site Code: 000020) and therefore protected under the EU Habitats Directive.

The site is designated a Special Area of Conservation (SAC) due to the presence of the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

[1170] Reefs
[1220] Perennial Vegetation of Stony Banks
[3260] Floating River Vegetation
[4060] Alpine and Subalpine Heaths
[5130] Juniper Scrub
[6210] Orchid-rich Calcareous Grassland*
[6510] Lowland Hay Meadows
[7220] Petrifying Springs*
[8240] Limestone Pavement*
[8330] Sea Caves
[1395] Petalwort (*Petalophyllum ralfsii*)

Fanore dunes system supports the Annex I habitat 'fixed coastal dunes with herbaceous vegetation ("grey dunes")' (2130), as well as the other Annex I habitats 'Embryonic shifting dunes'(2110), and 'Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes") (2120).

Site-specific conservation objectives were developed in 2014 by the National Parks and Wildlife Service (NPWS) for the Blackhead-Poulsallagh Complex SAC with the aim of defining favourable conservation conditions for the particular habitats or species at the site.
https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000020.pdf

(b) Special Protection Area (SPA) Yes ✓ No ☐

If yes, insert the Site Name and Code Inner Galway Bay SPA Site Code: 004031

(c) Natural Heritage Area (NHA or pNHA) Yes ✓ No ☐

If yes, insert the Site Name and Code Click here to enter text.

The area around Blackhead has been designated of County Geological Site importance and may be proposed for NHA designation under the Irish Geological Heritage (IGH) 3 Carboniferous-Pliocene Palaeontology theme and the IGH 8 Lower Carboniferous theme of the Geological Survey of Ireland's IGH Programme.

4.4. Current Visitor Management Structure

The majority of land is in private ownership and managed by the landowners.

The public roads through the area are managed by the National Roads Authority and Clare County Council. The viewing point at Murrooghtoohy is under the management of Clare County council.

Clare County Council owns and manages the car park and access area to Fanore Beach. A local caretaker is employed to periodically inspect the site, carry out any minor repairs required and report any major maintenance necessary to the County Council.

The archaeological monuments within the area are all located on private land and are the property of the landowner. Those listed on the Record of Monuments and Places have statutory protection under the National Monuments Act and the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht advise on the protection applying to these sites. When the owner or occupier of a property, or any other person proposes to carry out, or to cause, or to permit the carrying out of any work at or in relation to a Recorded Monument they are required to give notice in writing to the Minister 2 months before commencing that work. This is to allow the National Monuments Service time to consider the proposed works and how best to proceed to further the protection of the monument.

The land within the Blackhead-Poulsallagh Complex Special Area of Conservation (SAC Site Code: 000020) has legal protection under the EU Habitats Directive and the coastal area included within the Inner Galway Bay SPA (site Code: 004031) is protected under the EU Birds Directive. The environmental implications of any development likely to have an impact on the SAC or SPA must be assessed through an initial screening process. In some cases the outcome of the screening process may be the requirement of a full Appropriate Assessment. The National Parks and Wildlife Service provide advise on the necessary procedures and assess the impact of any proposed project.

4.5. Potential Future Visitor Management Issues

4.5.1. Lack of parking facilities along the R477

The R477 is designated a regional road and as such has a speed limit of 80km per hour. Clare County Council is responsible for the management of this road. Traffic congestion occurs along this road during the peak summer visitor months as visitors congregate at Murrooghtoohy Viewing point and park along the verges of the road at several points.

In March 2010 Burren Connect (forerunner to the Burren and Cliffs of Moher Geopark) received a Ministerial grant of consent through the NPWS for the development of 14 parking bays subject to conditions. On the strength of this approval land acquisition went ahead with the purchase of 0.262 acres of land in May 2010.

Following a successful application for funding under the Fáilte Ireland Tourism Capital Investment programme the documentation of Part 8 Notice of the proposed development was submitted on February 7th 2012 by Clare County Council (CCC).

This application resulted in submissions being received from An Taisce and the Department of Arts, Heritage and the Gaeltacht (DAHG) requesting Appropriate Assessment Screening. An Appropriate Assessment Screening (Natura Impact Report) was submitted on 19 April 2012 and following a response in which the DAHG found the Screening report to be deficient in addressing the fact that

there would be permanent loss of Annexed habitats a revised Screening report was submitted in November 2012.

In November 2013, Clare County Council (CCC) were advised by the DAHG that the screening process had become complex in light of the European Court of Justice Case C-258/11- Peter Sweetman and others v An Bord Pleanála, and that CCC should make an application to An Bord Pleanála under Section 177AE of the Planning and Development Act, 2000, as amended. Following this advice, CCC did not proceed with the Part 8 Planning Application.

The current situation (2014) is that there are 14 small parcels of land, covering in total 0.262 acres, along the R477 to the east and west of Blackhead lighthouse, owned by CCC which are used informally by recreationalists as pull-in and parking lay-bys. Due to the limited width of these areas, vehicles often protrude out onto the road and cause congestion.

4.5.2. Visitor Impact on Archaeological Monuments

The archaeological monuments of Caher Dun Irghuis and the summit cairn at Murrooghkilly which have been identified as under pressure from recreationalists by the local community are located on privately owned land, each with a separate landowner.

Both monuments are listed on the Record of Monuments and Places (RMP), which is compiled by the National Monuments Section of the Department of Arts, Heritage and the Gaeltacht. Section 12 (3) of the National Monuments Act provides for the protection of the monuments and places included in the record. The National Monuments Service (NMS) of the Department of the Arts, Heritage and the Gaeltacht advise on the protection applying to recorded monuments.

There is some historical information on the site in the writings of 18th century antiquarians such as Thomas J. Westropp (Appendix III), but there is no up-to-date information with regard to the condition of these sites or their perceived (as reported by landowners and walking guides) deterioration in recent years. As there is no baseline information available on the monuments condition it is not possible to measure change occurring at these sites or the nature of any potential damaging impacts.

If visitor access is to continue to these monuments a baseline condition survey must be carried out in order to assess current damage and from which to measure the effectiveness of any future management actions taken. From the condition survey, a conservation plan should be developed and a method statement for any recommended actions to be implemented. Implementation of structural actions will require Ministerial consent and must be carried out by an approved professional archaeologist.

4.5.3. Protection of Fanore Sand dunes and sustainable visitor access to the beach

Fanore Dunes system extends 2km from the townlands of Murroughtoohy South in the north to Fanore More in the south. The dune system is divided into two sections by the Caher River. The area to the south of the River is in the ownership of Clare County Council (approximately one-fifth of the entire dune system) while the remainder is in private ownership with a number of landowners. Clare County Council operates and manages the visitor recreational facilities at Fanore Beach to the south of the river. A privately owned and operated caravan park is located in the dunes immediately to the north of the Caher River.

In 2003 a baseline study of the dunes was commissioned by Clare County Council and recommendations for interventions made (Dr Amanda Browne (2003) '*Habitat Survey of Fanore Dunes'* Clare County Council). Ecological survey work was carried out in July 2003, consisting of 8 quadrats (GPS and photographs) using Braun-Blanquet approach.

An extract from the findings of that study states:

'*Embryo dune development is absent and marram dune vegetation is patchy along the top of the dune ridge, while the seaward side of the dune consists of a sheer cliff of bare eroding sand. This topographical situation, however is not widespread throughout the surrounding dune hinterland where active dune accretion, embryo dune formation and significant marram dune development is ongoing…the natural occurring processes of erosion have been augmented by pedestrian pressure on the dunes'.*

Photograph 32: View of dunes from entrance to beach (March 2003)

The following recommendations were made to limit the public's access through the sensitive dune area:

- The periphery of the dunes to be fenced to prevent walking and pony trekking access. Sand fence to be erected on seaward side of dunes to trap sand. Photos to be taken and regular monitoring and maintenance to be undertaken. Marram planting to accompany fencing. '*In the future if sand fencing has not been effective in encouraging dune building, further coastal protection measures may be required. In order to effectively decide on the most appropriate measures to be employed a number of analyses on the physical environment of the beach need to be undertaken. Such analyses include sediment flow, wave action and beach profiling'.*

- Single point access to be provided for pedestrians. Fencing along access point may be necessary to prevent straying off path.
- Public awareness campaign with regard to importance of dune resource and necessity of the dune protection measures.

The recommendations of the 2003 report were implemented in 2004/2005 when periphery fencing was put around the dune; sand trap fencing was put in place along the seaward side of the dunes and a sand ladder was put in place to provide single point access to the beach by the County Council's Local Area Office.

Photograph 33: Fencing at base of dunes (January 2004)

Photograph 34: Sand ladder and fencing (March 2005)

Photograph 35: Sand trap fencing along gully at north end of beach (2005)

Photograph 36: Boardwalk access to beach dune constructed 2005

Photograph 37: View of dunes from beach entrance (January 2006)

In 2006 the dunes were surveyed under the Coastal Monitoring Project commissioned by the NPWS (Tim Ryle et al. 2009 'Coastal Monitoring Project 2004-2006' Report for NPWS). This survey found the sand dune system at Fanore to *be a relatively intact dune system despite recreational pressures*.

Photograph 38: Shower Unit (2007)

In 2007, as part of the Burren Connect Project (forerunner to the Burren & Cliffs of Moher Geopark), conservation works were planned and implemented at Fanore Beach in conjunction with the County Council's Environment Section, Local Area Office and Heritage Office and the National Parks and Wildlife Service (NPWS) The programme included the replacement and reinforcement of the protective fencing and the installation of sand matting to encourage the re-colonisation of marram grass. A new parking area was developed to compensate for the closure of a relief car park, which was encouraging access to the beach through breaches in the protective fencing. A viewing platform was installed for those who cannot access the beach. The sand ladder, which gives pedestrian access only, to the beach, was repaired and extended. A shower unit was installed at the edge of the car park to facilitate swimmers and surfers.

An informative signage system was developed to explain the need for the conservation project and to highlight the extensive biodiversity value of the site.

Dr Amanda Browne was commissioned to develop a monitoring programme for the dune system and the interventions which had been put in place. The resulting programme and indicator system was loosely based on the Ryle et al. Coastal Monitoring Project of 2006, using habitat mapping and fixed points (reflecting changes in morphology) plus transects (at intervals quadrat and Braun-Banquet) sampling. A reassessment of the relevés recorded in 2003 was also carried out. The recommendation was made for this survey to be completed on an annual basis during the month of July, suggesting 10 person days for survey and analysis and for additional days to be allocated to monitoring the cattle grazing regime during the winter months as well as surveying the site after major storm events.

A Schools Conservation Project was developed in partnership with Mary Immaculate Secondary School, Lisdoonvarna and Fanore National School and the Heritage office of Clare County Council. Workshops and site visits were organised for the local community to provide information on the Dunes habitat, and the conservation and monitoring programmes.

In January and February 2008 some additional areas were fenced off where damage had occurred due to fires and one area which had previously been used for parking. In September and October new information and wildlife signs were put in place

In December 2008 a new fence was erected between the river and the dunes in an attempt to help prevent further access with trampling that leads to erosion in this area.

Monitoring was carried out in 2008 using 41 quadrats. However no further monitoring occurred until GeoparkLIFE project monitoring in 2014 (outlined in Section 3.3.3.3).

The conservation project to protect Fanore Dunes which was initiated in 2003 by Clare County Council resulted in a baseline ecological study of the dunes and the implementation of recommendations with regard to visitor access and dune protection in 2004/5 and 2007. These measures proved to be effective in dune protection from visitor impact. Unfortunately natural causes (extreme storm events in 2014) and some visitor behaviour have damaged the fencing, signage and access structures which were put in place. A monitoring programme was commissioned in 2006 with recommendations for repeat monitoring each July thereafter. Monitoring was undertaken in 2008 but not to the same system.

At present the response to damage and change at Fanore Beach in terms of dune conservation and visitor access/facilities is piecemeal and reactive.

SECTION FIVE: SUMMARY OF SITE VISITOR MANAGEMENT ISSUES

Through the GeoparkLIFE project baseline studies (2014) and working group consultation, the following issues for visitor management at the Blackhead-Fanore site were identified in 2015.

	Issue	Detail
1	Lack of official parking areas on the R477	There is currently a lack of organised parking facilities along the popular coastal route the R477. Large numbers of tourist coaches and private cars use this route throughout the year with major peaks during the summer months (May-September). The area attracts walkers, adventure tourists (climbing, orienteering, rock climbing) and fishermen. Vehicles are often parked along the road verges impacting on the limestone pavement in places, which can result in erosion of the rock and vegetation. The route is now part of the designated Wild Atlantic Way long distance driving route. If further on-site interpretation, signage and promotion are provided this could lead to increased congestion.
2	Erosion of Fanore sand dunes	The Fanore sand dune system has been impacted upon through visitor behaviour and natural causes. Interventions were put in place (2004/2005 and 2007) to alleviate this problem but impacts still occur in places and major impacts have occurred through storm damage in recent years (most notably Jan/Feb 2014). Although an ecological monitoring programme was developed for Fanore Dunes in 2007, which recommended annual monitoring, ecological monitoring work had been undertaken since 2008 up to GeoparkLIFE monitoring in 2014.
3	Visitor impact on archaeological sites	Caher Dun Irghuis stone fort and the summit Cairn at Murrooghkilly are deteriorating. This damage is perceived to being caused by recreationalists. There is currently no baseline condition data available for either of these monuments from which a conservation programme could be planned.
4	Visitor impact at Murroghtoohy Viewing Point	Due to the large number of visitors that park at this viewing point and walk across the limestone pavement to access the coastal edge, the viewing point drystone boundary wall has collapsed almost along its entire length. There is a 1m to 2m drop inside the wall; therefore this wall is necessary to keep the visitor safe while viewing the area. To date the local community group have attempted to repair sections of the wall on a seasonal basis but their resources are very limited. The wall needs to be reconstructed with a strong mortared core which can take the required pressure.
5	Excessive signage at Fanore Beach	A very large number of signs are present in the car park and beach area at Fanore. Many are damaged and duplication of information is common. Removal of damaged signs and a rationalisation of the content and number of signs is required.
6	Walking Trail monitoring and maintenance	There are areas of erosion along some of the long distance walking trails. The trails are currently monitored by the Rural Recreation Officer and maintained in conjunction with local landowners. Due to the extent of these trails, it is difficult for one person to monitor all of the trails and maintain up-to-date records. An easy to use, comprehensive, digitally based monitoring data collection and analysis system is required which could involve several trained users inputting data to a central management system.

SECTION SIX: ACTION AGREEMENTS AND IMPLEMENTATION

The following section details the actions agreed through the GeoparkLIFE project to address the issues identified in the Blackhead – Fanore area (Section Five); how and when those actions were implemented between 2015 and 2017and who was responsible for their implementation.

Issue 1	**Lack of official parking facilities on R477**
Agreed Action	The proposed traffic lay-bys project that had commenced in 2010 (detail provided in Section 45.1.) would be re-visited to determine whether it was feasible to develop parking facilities along this route and to explore how National and EU habitats policy affects such local development initiatives.
Tasks	1. Review all files concerning the past actions carried out for this development 2. Obtain original maps and site co-ordinates for the 14 areas of land purchased by Clare County Council in 2010 for the provision of parking lay-bys 3. Inspect each purchased area in terms of extent of limestone pavement and habitat present. 4. Carry out survey to determine length and depth of area purchased and sightlines for the purpose of pulling in and out of vehicles. 5. Identify areas suitable for development and further assessments required for planning purposes. 6. Deliver all findings to Clare County Council for decision on potential development
Responsible person/group	GeoparkLIFE
Date Action Completed	29-8-2016
Results	The land purchase made by Clare County Council in 2010 was 1060.80m^2 (0.262 acres) of land along the R477 for the purpose of developing 14 parking lay-bys which would accommodate an estimated 40 car parking spaces over a 2.7km length of roadway. In October 2013 this was revised to 559.25m^2 under the addendum to AA screening with a possible 10 parking lay-bys to be developed. The results of the GeoparkLIFE feasibility study carried out in 2016 showed that of the original 14 proposed lay-bys, three are suitable in terms of space and sightlines for development (potential 7-10 car spaces) but of these three, two require infilling which would interfere with dry calcareous grassland habitat and therefore a full habitat survey and Appropriate Assessment screening would be required as part of the Planning Process. The feasibility study was assessed by Gerard Dollard Director of Services and the decision was taken not to proceed with this development as it would not be economically viable. (Full feasibility report Appendix IV)

Issue 2	**Erosion of Fanore sand dunes**
Agreed Action	To employ a professional marine sand dunes consultant to carry out a study of the Fanore beach and dunes area and produce a management plan to inform future actions by Clare County Council at this site. To record the number of visitors to Fanore Beach.
Tasks	1. Prepare Brief of work and circulate request for tender to suitable agencies/individuals 2. Assess tenders and assign consultant 3. Provide all background and necessary information to consultants 4. Review progress at regular intervals and comment on draft reports. 5. Agree finalised report and circulate to the Planning and Environmental sections of Clare County Council. 6. Install footfall counter at entrance to beach, collect and analyse data on a regular basis.
Responsible person/group	GeoparkLIFE. Contracted consultant: Dr Robert Devoy, MaREI (Marine Renewable Energy Ireland) University College Cork.
Date Action Completed	4-8-2016
Results	The 'Fanore Beach and Dune Management Report: Current Problems and Planning for the Future' was completed in August 2016 and copies were set to the relevant sections within Clare County Council. (Available for download at http://www.burrengeopark.ie/wp-content/uploads/2016/05/Fanore-Beach-and-Dune-Management-Report_2016.pdf) Meetings were subsequently held with the Environment Section of CCC on February 20th, May 9th and October 20th 2017 to discuss the recommendations of the report and how they could be implemented. The main focus of the meetings was on the removal of damaged fencing on the dunes, repair or possible removal of the boardwalk and replacement of fencing and the access sand ladder in line with the reports recommendation. It was agreed that a topographical survey of the current fencing and the condition of the boardwalk and sand ladder would be carried out by CCC engineers to determine the current condition and the type and cost for suitable replacement materials. To date none of the recommended actions have been implemented. Visitor numbers to Fanore Beach were collected from September 2014 to December 2017 and this recording is ongoing. Detail on the monthly figures are illustrated in Table 4 below. Further hourly and daily breakdown is available from the GeoparkLIFE project.

Table 4: Visitor Numbers to Fanore Beach recorded by the GeoparkLIFE footfall counter

	Year			
Month	**2014**	**2015**	**2016**	**2017**
January		1528	1299	2041
February		1628	1697	1468
March		2582	4291	3244
April		7393	3899	6330
May		4248	8907	8277
June		6892	11275	8905
July		11976	13385	14621
August		14728	15468	14403
September	3662	4218	3933	4840
October	2528	3093	3733	3316
November	1399	1309	1662	1844
December	1158	1140	1707	1592
	8,747	**60,735**	**71,256**	**70,881**

Issue 3	**Visitor impact on archaeological sites**
Agreed Action	Following an on-site inspection of both archaeological monuments - Caher Dun Irghuis and Murrooghkilly cairn it was agreed by the GeoparkLIFE project working group to concentrate on the possible conservation of the cairn as the level of work required for the Caher would be beyond the resources available to the GeoparkLIFE project (September 2015). A brief of work would be prepared and a profession archaeologist employed to carry out a baseline condition survey of the cairn, followed by a method statement and implementation of the agreed conservation actions.
Tasks	1. Completion of a comprehensive measured survey of the cairn, to include A) A detailed scaled plan of the cairn annotated to indicate the various features of the cairn, including vulnerable and eroded areas; a series of profiles of the cairn including profiles of any visible structural features. B) A detailed photographic survey of the cairn using GPS labelled fixed point photography and cross referenced to features shown on the plan prior to and on completion of conservation works using the same fixed points. C) A detailed written inventory of the cairn and its features. 2. Development of a detailed method statement for the conservation works including A) Identification of exposed areas where stones from the modern cairn can be placed onto the prehistoric cairn to aid preservation of the cairn with an annotated copy of the site plan. B) A methodology for dismantling of the modern cairn and placement of the stones back onto the prehistoric cairn. 3. Once the methodology has been agreed the preparation and submission of notification to the National Monuments Service and arrangement of any licences required. 4. Implementation of conservation work. 5. Implement visitor awareness programme for future protection of monument
Responsible person/group	GeoparkLIFE and landowner
Date Action Completed	December 2017
Results	Awareness signs manufactured by GeoparkLIFE and placed at each monument by the landowner (October 2015) Brief of work for baseline condition report prepared, request for tender circulated (June 2016) Aegis Archaeology Ltd. contracted (September 2016) Survey of cairn completed and method statement agreed (May 2017) Permission sought and received from NMS to erect temporary fence around monument while undergoing repairs (June 2017) Method statement for repair of upper cairn stonework prepared and professional stone mason (Ken Curran- Earthstone) contracted (August 2017) Repairs to upper cairn completed and report delivered (by Earthstone) (September 2017) Archaeology repairs to lower cairn completed by Aegis Archaeology and final report delivered (December 2017) Report available for download at GeoparkLIFE Interpretive signage for cairn installed ???

Photograph 39: Visitor awareness sign installed at Murrooghkilly cairn (October 2015)

Photograph 40: Site meeting between landowners,
Archaeologists and GeoparkLIFE team at Murrooghkilly cairn
to agree proposed method statement for repair work (June 29, 2017)

Photograph 41: Drone survey of Murrooghkilly cairn (September 29,2016)

Photograph 42: Site meeting with landowner and stone mason to discuss repair of upper cairn July 2017

Photograph 43: Stone mason working on Murrooghkilly cairn (September 18,2017)

Photograph 44: Upper cairn before repair (August 2017)

Photograph 45: Upper cairn after repair (September 2017)

Photograph 46: Archaeologists at work on lower cairn (November 20, 2017)

Issue 4	**Visitor impact at Murroghtoohy Viewing Point**
Agreed Action	Removal of the current unsecure unstable loose stone boundary wall at the edge of the Murrough Viewing Point. Replacement with a wider limestone semi dry wall (front face and back) and a dry concrete infill to provide stability. Stone to be sourced from the existing wall along with a gathering of loose limestone rocks that surround the general area. The wall will be approximately 40m in length and 1.1m in height above the existing ground.
Tasks	1. Carry out Appropriate Assessment screening 2. Notify NPWS with regard to proposed project within SAC and obtain permission to proceed 3. Circulate request for quotations 4. Assess quotations and employ suitable contractor 5. Complete building work
Responsible person/group	GeoparkLIFE/Engineer Roads Section CCC/Environment section CCC
Date Action Completed	October 2017
Results	Screening for Appropriate Assessment for the project was completed in February 2017 by the Environmental Assessment Officer of Clare County Council. A notifiable Action report was sent to the NPWS and permission to proceed (subject to conditions) was received on March 3, 2017. Three quotations were sought by the Senior Executive Technician Clare County Council and received from specialist drystone walling contractors. (July 2017) and a contractor was employed by GeoparkLIFE (August 2017). Works were completed (October 2017)

Photograph 47: Murrooghtoohy wall before repair (May 11, 2017)

Photograph 48: Murrooghtoohy Wall under repair (October 17, 2017)

Photographs 49-50: Murroghtoohy wall after repair (November 7, 2017)

Issue 5	**Excessive signage at Fanore Beach**
Agreed Action	Review all signage on site. Prepare report and deliver to Environment Section of Clare County Council for implementation of recommended actions.
Tasks	1. Carry out on site review 2. Prepare report detailing location and condition of all signage including photographs of each sign 3. Send report to County Council Environment Section.
Responsible person/group	GeoparkLIFE
Date Action Completed	October 2017
Results	Item discussed with Environment and Roads sections of Clare County Council at meeting on 9-5-2017 when Fanore Dunes report was being reviewed (see Issue 2 above). It was agreed at this meeting that a signage review would be undertaken by GeoparkLIFE and results sent to the relevant section within Clare County Council. Signage review undertaken and report completed 11-5-2017. Report forwarded to Roads Section Ennistymon and Environment Section Ennis 12-5-2017. Resent to Road section Ennistymon following 2nd meeting in October 2017 to discuss issues at Fanore Beach. No action has been taken to date (December 2017)

Issue 6	**Walking Trails monitoring and maintenance**
Agreed Action	Develop a digitally based monitoring system to measure changes in the path condition on the designated walking trails which could be used for data collection by monitors under the supervision of the Rural Recreation Officer. Install footfall counter on walking trail, collect and analyse data on a regular basis.
Tasks	1. Agree specification for app development to allow collection of trail data and to operate in both online and offline scenarios 2. Identify and supply functional requirements for the app to technical consultants (MAC Ltd) 3. Field test prototype 4. Refine as required 5. Field test and refine 6. Develop web portal for viewing of uploaded data to agreed specification 7. Install footfall counter on trails
Responsible person/group	GeoparkLIFE in consultation with Rural Recreation Officer and NPWS Conservation Ranger
Date Action Completed	November 2017
Results	The working app and portal were completed to the agreed specification for the GeoparkLIFE project and demonstrated at the end of project Conference in November 2017. Data collected during the testing phase for walking trails is uploaded to the portal. Agreements must now be finalised between Clare County Council and the RRO as to the future management of this tool in terms of trail management and the future storage of data. Visitor numbers along the Blackhead Loop walking trail were collected from September 2014 to December 2017 and this recording is ongoing. Detail on the monthly figures are illustrated in Table 5 below. Further hourly and daily breakdown is available from the GeoparkLIFE project.

Table 5: Visitor Numbers on Blackhead trail recorded by the GeoparkLIFE footfall counter

	Year			
Month	**2014**	**2015**	**2016**	**2017**
January		741	0	190
February		503	0	439
March		665	0	260
April		1037	548	856
May		1293	1437	1296
June		0	1150	1023
July		101	1366	1110
August		1489	1520	1195
September	0	483	536	529
October	0	403	577	289
November	588	154	245	202
December	987	36	264	217
	1575	6905	7643	7606

SECTION SEVEN: MONITORING PLAN

The following plan details where future monitoring is required to inform the ongoing adaptive visitor management of the Blackhead-Fanore area

Issue	Action taken	Monitoring data to be collected	Monitoring tool to be used	Frequency of monitoring	Responsibility for monitoring
Erosion of Fanore sand dunes	Fanore Dunes and Beach Management plan prepared. Discussed with relevant sections within Clare County Council re implementation of recommendations.	Effectiveness of fencing in prevention of visitor impact on dunes environment	Fixed point ecological survey	Every two years	Clare County Council
Visitor impact on archaeological sites	Conservation works on Murrooghkilly cairn. Installation of awareness signage at cairn and Caher Dun Irghuis.	Changes in structural condition of monuments based on baseline conservation report prepared in 2016	Fixed point photography and archaeological assessment as per baseline methodology	Every two years	National Monument Service and landowner
Visitor impact at Murroghtoohy Viewing Point	Reconstruction of boundary wall at Viewing Point	Structural condition changes to wall	Fixed point photography (GeoparkLIFE Monitoring app)	Annual – at end of season	Clare County Council
Excessive signage at Fanore Beach	None to date	Damage to signage	Review process as per baseline (2017)	Annual	Clare County Council
Walking Trail monitoring and maintenance	GeoparkLIFE app developed for monitoring trails	Trail condition	GeoparkLIFE monitoring app	Annual	Rural Recreation Officer

SECTION EIGHT: ADAPTIVE VISITOR MANAGEMENT PLANNING

Initial management decisions are often made with a degree of uncertainty as to the future impact of the action proposed.

To ensure that the site visitor management process is 'adaptive' the results of the site assessments and monitoring sessions must be evaluated and management actions adjusted on the basis of what is learnt.

ACTION	METHODOLOGY	RESPONSIBILITY
Analysis and Evaluation of Data collected	All data collected with regard to the condition of the site should be stored in a central depository such as the GeoparkLIFE monitoring web portal	Clare County Council
Data Storage	It is recommended that data collected be stored on the GeoparkLIFE monitoring app web portal. Management agreements have yet to be made as to who will have access to this data and how it will be managed.	Clare County Council/NMS/NPWS/OPW
Feedback to Management Group	It is recommended that site details and monitoring activity be made available through the GeoparkLIFE Burren Map Viewer created in conjunction with and hosted by the Heritage Council. Data to be updated must be forwarded to the Heritage Council for upload.	All relevant site stakeholders
Review of effect of actions taken by Management Group	It is recommended that the various section of Clare County Council involved in the maintenance of the Blackhead-Fanore area meet on an annual basis for review of actions taken, monitoring results and future planning.	Clare County Council
Agree strategy for adjustment of actions when and where required	A strategy to be agreed	Clare County Council/NMS/NPWS/OPW

APPENDIX I:

VISITOR ATTITUDES SURVEY Blackhead 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
44%	31	15	8	2

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
19	6	6	4	12	4	29	12	4	6

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
4	6	2	0	2	10	38	21	15	2

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

1	2	3	4	5	6	7	8	9	10
6	2	4	6	17	10	23	21	12	0

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

Yes	No
50	50

6. Have you read the information on them?

Yes	Partially	No
92	4	4

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

Yes	No
100%	0

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	0	37	63

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
31	44	2	0	8	2	2	4	10

VISITOR ATTITUDES SURVEY FANORE 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
45%	30%	11%	4%	10%

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
0	0	0	0	1%	1%	6%	24%	29%	38%

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	0	0	0	0	2%	21%	32%	45%

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

1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	1%	1%	17%	29%	51%

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

Yes	No
87%	13%

6. Have you read the information on them?

Yes	Partially	No
59%	23%	18%

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
1%	0	1%	51%	46%

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
67%	32%	0	0	0	0	0	1%	0%

APPENDIX II

Visitor Observations at Caher Dun Irghuis (ZH)

1. Survey Detail

Site Id : CDI	Date Of Survey	Day of Week	Duration of Survey	Weather	No of people observed
	13-9-14	Saturday	11.30- 16.00 (4.5 hours)	Hot and Sunny	44

2. Number of Observations, gender and group breakdown

Number of people observed	Total number of females	Total number of males	Number of observations (groups)	Size of groups
44	17	27	6	Average 1-2 Skewed by walking festival group of 33

3. Age demographic – All Adult

4. Mode of transport – all on foot

5. Time Spent on Site, Main activity type and impact caused with group and age demographic

Date of observation	Obs group id	Time spent on site (hours:minutes)	Group type	Mode of transport	Main activity	Impact
13-9-14	CDI1	00:07	M/F	N/A	Walking, viewing landscape	Walked on wall of fort and sat on it viewing landscape
	CDI2	00:16	2M/2F		Walking, viewing fort interior	Walking in fort interior
	CDI3	00:11	21M/12F		Walking, small number viewed fort interior	Walking in fort interior
	CDI4	00:03	M/F		Walking	None
	CDI5	00:05	M/F		Walking, sitting on field boundary walls	Climbing walls and sitting on wall
	CDI6	00:01	M		Walking	

Average time spent on site: 6 minutes

6. Level of Activity

Walking
Viewing the fort
Viewing the landscape
Sitting on walls
Walking on fort walls

7. Time spent reading Information Boards – N/A

8. Effects Observed

Two visitors walked on the fort walls and sat on them while viewing the landscape.
Two other visitors sat on a the field boundary wall
Accidental movement of stones while walking on the limestone pavement
Climbing over boundary walls
Comment: the size of the walking festival group skew results.

Time of day of arrival at site

Observation group id	Time of arrival
CDI1	12.20
CDI2	13.11
CDI3	13.57
CDI4	14.42
CDI5	15.30
CDI6	15.20

Visitor Movement Pattern

Observed movement patterns

Most activity occurred in the central area.

APPENDIX III

Westropp's account of Caher Dun Irghuis (1901)

The fort is an irregular enclosure, D-shaped in plan, forming almost a right angle at its south-west corner - an actual corner [7] such as we only see elsewhere in the presumably late rectangular forts or mohers - this, with the poor and small masonry adjoining, suggests a rebuilding of the older fort. The garth measures internally 65 feet, north and south, and 69 feet, east and west. The rampart is, indeed, for the most part of that inferior masonry found above the 'cyclopean' stonework in some of our forts. There is a large breach to the south-east, and another to the east, where the old gateway is still to be traced; between these gaps stands the highest piece of wall. I have failed to get an accurate measurement; but it may be 15 or 16 feet high; the masonry in the lower part, to the north and east, is better and larger than the upper part, and, perhaps, may mark a much older foundation, though it is equally probable that the larger and better stones may have been reserved for the lower, and the smaller and more portable blocks for the upper wall. The gateway was only 32 inches wide, the smallest I have measured in Clare (the next smallest being Ballyelly, 34 in., lying a few miles to the south, and Cahercommane, 36 inches). It had no corner posts, only one stone, 39 inches long, lies in the débris. A wider passage runs through the thickness of the wall and terrace from the gateway (as at Doon Aenghus, and Ballykinvarga). The outer section of the wall measures about 6 feet, and the terrace 5 feet; but the wall is often 13 feet thick. The masonry is irregular and poor, laid as headers, with no structural batter and leaning out in parts. Traces of distorted upright joints seem to remain, one to the north-west, and at least three others, for about a third of the height of the wall, along the northern segment; two of these diverge and are about 10 feet apart, as if built by a small gang; they all begin above the large stonework, and have unjointed masonry above them, as if more than one rebuilding had taken place. There is a short joint running for 4 or 5 feet up the wall to the south, and two more to the west, but wavy and distorted. I call these 'upright joints' with reserve; they are not as well marked as those in Dun Conor, Cahercommane, Ballykinvarga, Staigue, and other forts, and we shall see in the far better masonry of Cahercloggaun how careless the old builders were about breaking joint. Between the western joints, the stones are larger; but have been in some cases set on a steep slope, as at Cahercommane,[8] which doubtless (as there) implies a hasty rebuilding. In short, the masonry is far inferior to the usually excellent coursed and 'cyclopean' stonework of other forts in the limestone districts.

A terrace, 3 to 4 feet high, runs round the inside of the wall; there is some appearance of a flight of steps, rising from the left and the right, to the summit of the wall from the terrace.[9] Lord Dunraven found them to be 2 feet 6 inches long; but I found no indisputable trace. There are no old structures in the fort or on the crags near it. The approach from the north is so steep as to be practically inaccessible; indeed, it seems wonderful that anyone took such a wind-swept, waterless brow for a residence, or, having done so, took pains to strengthen almost impassable crags and grassy slopes of rock, with a wall 12 feet high, on a ridge 647 feet above a harbourless and stormy shore.

APPENDIX IV

Feasibility Report for the Development of Parking Lay-bys on the R477 at Blackhead

1. Background

In **March 2010** Burren Connect received a Ministerial grant of consent through the National Parks and Wildlife Service for the development of 14 parking bays on the R477 in the townlands Aghaglinny North and Murrooghtoohy North subject to conditions. On the strength of this approval land acquisition went ahead by Clare County Council with the purchase of 0.262 acres of land in **May 2010**.

Following a successful application for funding under the Fáilte Ireland Tourism Capital Investment programme the documentation of Part 8 Notice of the proposed development was submitted on **February 7th 2012** by Clare County Council (CCC).

The Notice of Development resulted in submissions being received from An Taisce and the Department of Arts, Heritage and An Gaeltacht (DAHG).

On **March 30th 2012,** An Taisce requested:

- an Appropriate Assessment (AA) be put forward on both ecological and hydrological grounds;
- the design be in keeping with the landscape and County guidelines;
- that the development should not impact the unique plant life along the roadside and
- water management be adequate under the EU Water framework Directive for surface and ground water protection, recommending a surface that is approximate to permeable.

A Submission was made by the DAHG to CCC on **13 April 2012** requesting an Appropriate Assessment Screening report.

'Due to the location of the proposed development this Department consider that the information submitted does not allay our concerns and we are of the opinion that there is insufficient information in the application submitted to allay our concerns. Therefore, prior to making a decision on this application, it is recommended that the council seek further information in the form of a Natura Impact Statement or an appropriate assessment screening from the applicant. The DAHG should be provided with a copy of this report.'

In response, an Appropriate Assessment Screening (Natura Impact Report) was prepared by the Heritage Officer of CCC and submitted on **19 April 2012.**

A submission was subsequently received from the DAHG on **May 28th 2012**. The DAHG observation stated:

'Due to the location of the proposed development the Department considers that the information submitted does not allay our concerns and deem the attached Appropriate Assessment Screening report to be deficient. The report does not address the fact that there will be permanent loss of

Priority/Annex I habitats, nor does it break down or address the individual parking/passing in size, habitat, proposed construction methods. In light of the fact that there will be permanent loss of annexed habitats under the current proposal, the Department is of the opinion that a full Natura Impact Statement would have been necessary. As there will be permanent loss of Priority habitats, it may be the case that this application will be subject to a full Appropriate Assessment and it may be necessary to recommend that this application be referred to An Bord Pleanála.'

On **November 23, 2012**, a revised AA Screening report was submitted by CCC.

In response, a submission was received by CCC on **December 28, 2012** from the DAHG

'*The Department notes that your report confirms that minor direct losses of Annex I priority habitat and Annex I habitats that are qualifying interests of Black Head-Poulsallagh Complex cSAC (site code (000020) will result from this project. The question of whether such minor losses are allowable under Article 6(3) of the Habitats Directive is currently under consideration in the European Court of Justice Case C-258/11- Peter Sweetman and others v An Bord Pleanála, Clearly therefore the question of whether such losses can be deemed to be an insignificant effect on a site in view of its conservation objectives is also an issue. The advice of the Department therefore is that no decision should be made by the Council to authorise or proceed with this proposed project until the Supreme Court's ruling on the above case and until the legal issue is determined.'*

In **October 2013,** an addendum to the AA report and planning application was compiled by CCC with the aim of removing any potential for habitat loss to comply with the European Court of Justice Case C-258/11. The area proposed was reduced from the original 1060.80m^2 to 559.25m^2 resulting in the number of parking lay-bys being reduced from 14 to 10. This new information was submitted under a Part 8 application.

In **November 2013,** a further submission was received by CCC from DAHG:

'Based on the information now provided in the addendum, the screening process has become complex, and is reliant on mitigation which has been used to avoid adverse effects on the integrity of a European site. It is also noted that, other than direct habitat losses, there is little consideration of indirect effects of the proposal, or of the potential in combination effects of other plans and projects. The Council is reminded that, under Section 177U of the Planning and Development Act, 2000, as amended, screening for appropriate assessment must be carried out in view of best scientific knowledge. The precautionary principle should also be applied in this process. This Department remains of the view that appropriate assessment and a Natura Impact Statement are required.....In this case an application should be made to An Bord Pleanála under Section 177AE of the Planning and Development Act, 2000, as amended'.

Following this submission, CCC did not proceed with the Part 8 Planning Application.

2. Action under the GeoparkLIFE project

Blackhead/Fanore is one of the seven demonstration sites of the GeoparkLIFE programme.

Under this programme, the continuing issue of the lack of adequate formal parking facilities for visitors along the R477 and the inherent safety problems was again identified. It was decided that the proposed lay-by project that had commenced in 2010 would be re-visited to determine whether it was feasible to develop parking facilities along this route and to explore how National and EU policy affects such local development initiatives.

2.1. Initial Site Visit

In September 2015, Zena Hoctor (GeoparkLIFE), Congella McGuire (Heritage Officer, Clare County Council) and Dr. Enda Mooney (NPWS) all members of the GeoparkLIFE B2 working group, carried out a site visit, to review the original proposed locations in terms of habitat types present and how many parking spaces might actually be available without the necessity for the removal of limestone pavement.

2.1.1. Findings of Initial Site Visit

It became evident from this site visit that the maps prepared for the Part 8 application (dated 2010) did not contain adequate detail with regard to the exact location and size of the proposed parking lay-bys. This lack of detail made it difficult to determine exactly how many car parking spaces would be viable if the proposed development were to proceed. The total number 'guesstimated' on the day of the site visit, with regard to the presence of limestone pavement, was approximately 25 car spaces.

Several of the original proposed lay-bys appeared to have a very small amount of Priority/Annex I habitat within the area that was shown on the site maps (however as stated previously exact size of lay-by detail on these maps is lacking). Several of the proposed areas were covered by bramble and scrub on the day of inspection. Dr Enda Mooney (NPWS) suggested that this vegetation be removed by hand to allow for a more detailed examination of the habitats beneath.

2.1.2. Recommendations of Initial Site Visit

To explore the feasibility of bringing the project to planning application stage, the following actions were recommended to be undertaken for the 10 proposed parking lay-bys as indicated in the Addendum document to the AA in 2012. It was emphasised that on completion of any of the identified steps the results may reveal that the project is not feasible and a management decision will be required as to whether it should proceed any further.

STEPS	RESPONSIBILITY	ESTIMATED COST
1. Full detail for each of the proposed 10 parking lay-bys to be developed, including precise locations (GPS co-ordinates), scaled drawings, detailed measurements and photographic record.	Technical surveyors	€250 +VAT for each site Cost based on 150m (75m each side of centre of site) total full strip survey of road, walls and surrounding terrain, based on centre line. Total estimated cost for 10 sites= €2,500 plus VAT (23%)
2. (a) Clearance of existing scrub vegetation where required (b) Preparation of habitat map for each of the proposed 10 parking lay-bys including detailed species lists and identification of any adverse impact on Priority/Annex I habitat.	Previous landowners Ecological consultant	€500 €3000 plus VAT
3. Review and possible elimination of any proposed lay-bys which will have adverse impact on Priority/Annex I habitat as identified in Step 2.	In house – Geopark office and NPWS advice	NA
4. Preparation of maps, scaled drawings and detail of proposed construction methods and water management for	Engineer	The cost will be based on results of survey carried out in step 1.

	each of the agreed parking lay-bys following step 3.		
5.	Preparation of a fully detailed Appropriate Assessment and Natura Impact Statement which details the indirect as well as the direct impacts of the proposal and the potential impacts of a combination effect from other plans and projects.	Ecological consultant	€6,000 plus VAT
NB. All of the above are estimated costs – not actual quotations of work.			

Based on these recommendations approval was received from CCC to proceed with the feasibility study on 18 January 2016.

2.2. Identification of exact location co-ordinates and scrub removal

9th of February 2016: Zena Hoctor obtained the exact grid co-ordinates from Barry McRory of the Roads section of CCC for the original 14 proposed lay-bys from the computer based CCC files.

12th February 2016: Zena Hoctor carried out a site visit to identify the exact ground location of each of the 14 lay-bys and where scrub clearance would be required before habitat identification could be completed. The results of this visit are contained in Appendix I.

24th February 2016: Congella McGuire, Heritage Office CCC completed a screening report for scrub removal at the relevant locations. This scrub removal was completed by a CCC operative on 26th February 2016.

2.3. Technical Survey

Following discussion with the Roads Section of Clare County Council Ennistymon Office, with regard to the content of a brief of work for a technical survey of the proposed lay-bys, PJ Carmody Engineer CCC offered to assess the proposed locations in terms of accurate measurement, space available and sightlines. This work was carried out 21 April 2016.

Each of the 10 lay-bys proposed under the AA addendum document of 2012 was measured and assessed for suitability under the regulations that the minimum space required of parallel parking is 6m length x 2.4m width and a 215m sightline is required for National Roads with a speed limit of 100km.

- Four of the original 10 proposed lay-bys were eliminated on the basis of inadequate sightlines;
- two on space limitations due to limestone pavement and
- one on both sightlines and space limitations.

Of the remaining three,

- one has the potential to provide one car parking space while
- two require infilling to bring the surface to road level and this would involve interference with the dry calcareous grassland habitat present at both of these sites. Development would therefore very likely require habitat survey and the subsequent compilation of a full AA.

If the three sites were developed they could provide maximum parking for 10 cars. One of these spaces would be in the highly pressurised zone on the approach road from Ballyvaughan to Blackhead lighthouse (in the townland of Aghaglinny North), while the remaining nine would be to the south of

the lighthouse (Murrooghtoohy North townland) in an area where the current visitor demand for roadside parking is less.

The full table of results is contained in Appendix I

3. Conclusions

The land purchase made by Clare County Council in 2010 was 1060.80m^2 (0.262 acres) of land along the R477 for the purpose of developing 14 parking lay-bys which would accommodate an estimated 40 car parking spaces over a 2.7km length of roadway.

In October 2013 this was revised to 559.25m^2 under the addendum to AA screening with a possible 10 parking lay-bys to be developed.

The results of the GeoparkLIFE feasibility study carried out to date in 2016 shows that of the original 14 proposed lay-bys, three are suitable in terms of space and sightlines (potential 7-10 car spaces) but of these three, two require infilling which would interfere with dry calcareous grassland habitat and therefore full habitat survey and Appropriate Assessment screening would be required as part of the Planning Process.

Report prepared by

Zena Hoctor

B2 Conservation Co-ordinator

GeoparkLIFE

29-8-2016

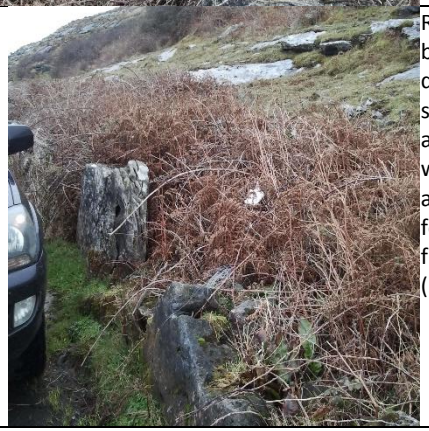
APPENDIX I: RESULTS OF FEASIBILITY SURVEY FOR THE DEVELOPMENT OF 10 PROPOSED PARKING LAY-BY LOCATIONS ON THE R477 AT BLACKHEAD, CO. CLARE

GEOPARKLIFE PROJECT

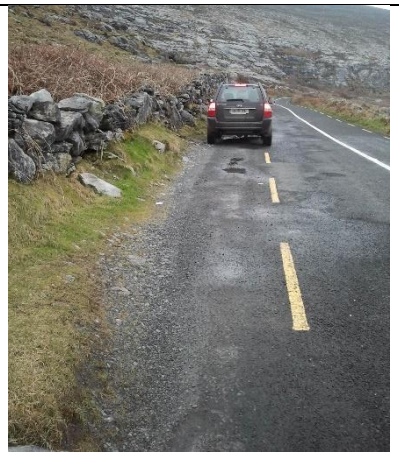
29-9-2016

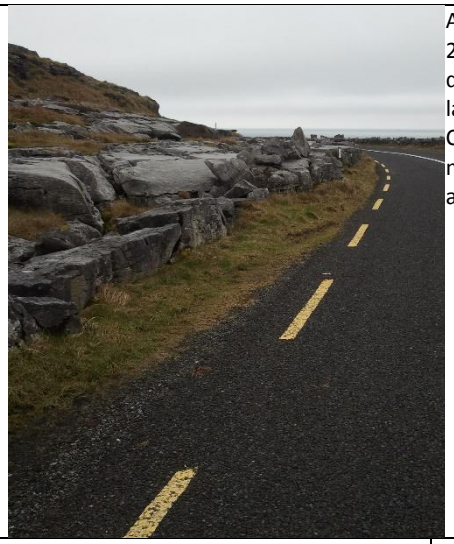
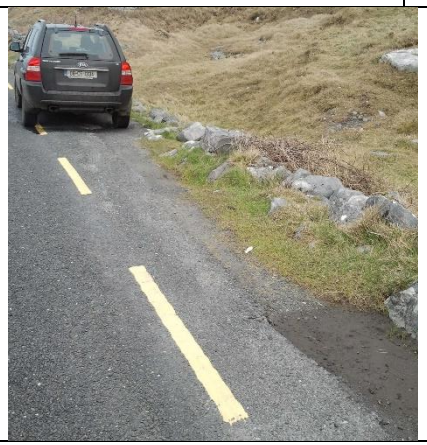
Note: the original planning application for 14 lay-bys in 2012 was reduced to 10 lay-bys in October 2013 following the 'Sweetman Ruling' (European court of Justice C-258/11 in order 'to remove any potential for habitat loss'. Sites removed at this time are referred to in the table below as 'eliminated 2013'

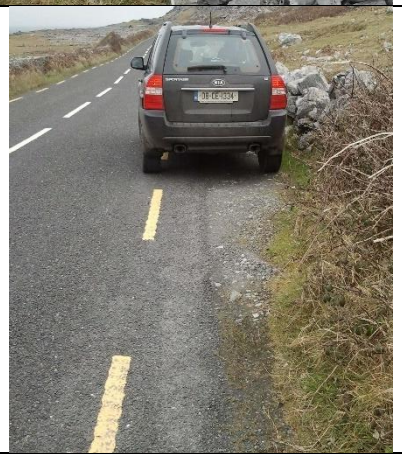
Assigned Number	ITM co-ordinates	Original mapped area	Original Length at road edge mapped	Geology/habitat site description (ZH 12-2-16)	Photo 12-2-16	Action undertaken	Technical survey results (PJ Carmody CCC)		
							Road measurement	Sightlines	Conclusion
1	517169 711502	45.82m^2	9m	Dip with loose rock, bracken and blackthorn scrub behind drystone wall. No limestone pavement visible in area of length 6m roadside and within depth of 3m from existing road edge. Pavement on either side of this area.		Clearance of bracken scrub to allow further examination of habitat (26-2-16)	Only 6m road length available, due to limestone pavement.	Ok	Unsuitable due to space limitation.
2	517151 711533	48.79m^2	14.5m	Area of bramble and loose rock – with one large boulder covered in vegetation. Not clear whether this is part of pavement or loose.		Clearance of bramble to determine extent of pavement (26-2-16)	11m road length available, only 2m width to rock pavement.	Ok	Unsuitable due to width space limitation.

3	517011 711643	49.95m^2	13m	Bramble scrub behind drystone wall.		Removal of bramble to determine pavement extent (26-2-16)	25m road length available, 4m width.	Sightlines of 160m West and 70m East.	Unsuitable location due to sightlines.
4(a)	516947 711672	79.19m^2	22m	Bramble scrub behind drystone wall. Depth from road edge limited before start of pavement.		Removal of brambles to determine exact start of pavement and determine whether there is adequate depth for parking bay from road edge (26-2-16)	27m road length available, 2.5m width. Adequate space. .	Sightlines of 130m West and 150m East.	Unsuitable location due to sightlines

4(b)	516908 711692	22.62m^2	7m	Large blocks of limestone very close to road edge. May be adequate depth for 1 car space but sightlines would appear to make pulling in and out very dangerous.				Sightlines of 70m West and 200m East.	Unsuitable location due to sightlines.
5(a)	516839 711721	25.37m^2	8m			Eliminated 2013 Due to potential habitat loss			
5(b)	516798 711738	89.31m^2	25m			Eliminated 2013			

6	516557 711764	89.31m^2	19.5m	Existing space being used for parking. No obvious habitat interference necessary to develop.			25m road length, 2m width.	Sightlines of 150m West and 83m East.	Unsuitable location due to sightlines and limited amount of width space.
7	515984 711913	63.86m^2	20m			Eliminated 2013 - habitat			
8	515967 711933	54m^2	16m	Apparent space for one car. No pavement obvious			16m road length, 2.5m width.	Sightlines of 180m West and 200m East.	Maybe suitable for 1 car space.
9	515500 712202	54m^2	41m	Eliminated		Eliminated 2013			

10	515462 712197	51m^2	31m	Limestone pavement present to wall		Area moved in 2013 (addendum doc) – but is this land owned by CO CO – proposed move after acquisition??		Located on a bend. No sightlines available.	Unsuitable location due to bend and lack of sightlines.
11	515152 711914	49.78m^2	16m	Eliminated		Eliminated 2013			
12	515119 711839	76.87m^2	23m	Dry calcareous grassland. Would need to fill in dips on top of grassland to get 2.5m depth from road edge.			34m road length, 3m width.	Sightlines of 300m+ South and 210m North.	Difference in level of over 400mm. Maybe suitable subject to fill being allowed on top of protected. Further action required: habitat survey and AA grassland. Potential for 4-5 spaces.

13	515070 711758	74.83m^2	22m	Dry calcareous grassland. Potential length of 9m roadside - pavement beyond this.		27m road length, 2.3m – 3m width.	Sightlines of 250m South and 290m North.	Maybe suitable but subject to filling and habitat as for No. 12. Possible 3-4 spaces if infill allowed. Further action required: habitat survey and AA grassland. There appears to be some water movement in this area and this would require further investigation.
14	514995 711593	68.09m^2	18.5m	Space from road edge to wall 1.8m. Pavement behind wall			Only 50m sightline available South.	Unsuitable due to sightline.

APPENDIX V

Review of Clare County Council Signage at Fanore Beach

Zena Hoctor

GeoparkLIFE project

11-5-2017

- Three directional signs at entrance
  Can these be amalgamated? Are all three required?

- Entrance gate – overhead sign badly damaged ‘Max Height 2m’

- Three signs on one pole inside entrance gate to left

Top sign: No Camping or Overnight parking (45cm X60cm aluminium) – damaged.

Middle sign: Camping & Bonfires are strictly prohibited in this area (60cmx60cm aluminium) damaged

Bottom sign: No dumping (60cmx60cm aluminium) OK condition.

Can these signs be amalgamated?

Adjacent to these signs is an upright pole with a blank aluminium panel attached – **can this pole and panel be removed?**

In grassland on right hand side of approach road to car park single pole with two signs attached.

Top sign: Camping & Bonfires strictly prohibited (60X60CMS – aluminium) – slight damage
Bottom sign: Entrance to Beach (60x60cms aluminium) – damaged
Signs twisted in opposite directions.

The location of these signs is off the beaten track and they do not serve much purpose at the moment. They could be moved closer to the road – or removed altogether?

- Conservation sign opposite toilet block at front of fence that encloses the former parking area. **Leave as is.**

- Sign at rear of fenced off former parking area opposite toilet block.

  Top sign: Conservation message about dunes. In good condition. **Leave as is.**

  Bottom sign: No Camping or overnight parking (45cmX60cm) – damaged. **Replace**

- Opposite toilet block.
  Dog gloves box on top of pole.
  Bottom sign: Camping& bonfires are strictly prohibited (60cmX60cm aluminium)– damaged.
  Replace.

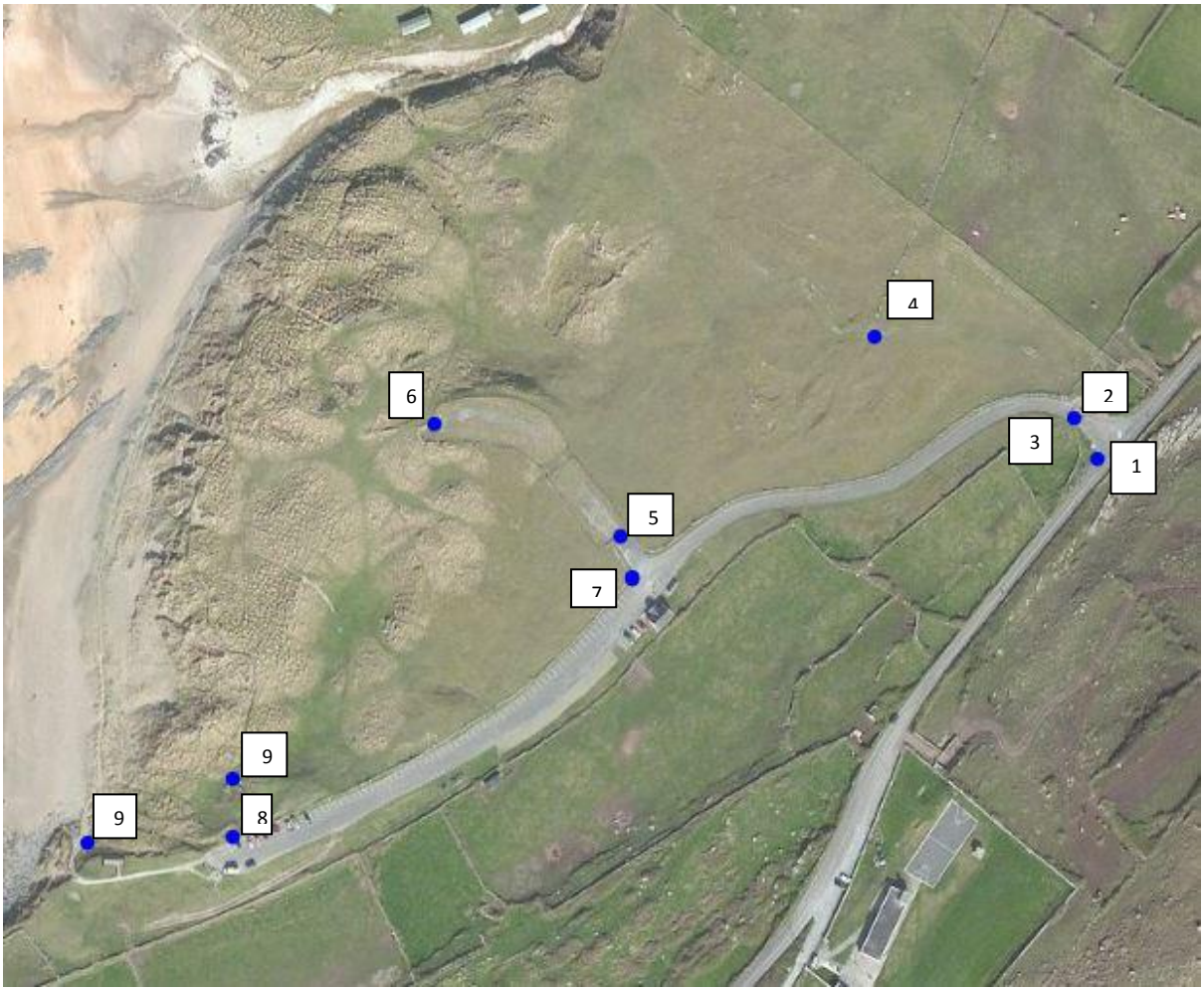
- Near the start of the boardwalk is a badly damaged Special Area of Conservation sign which is badly damaged. This was a joint sign between NPWS and Burren Connect (project prievious to Burren Geopark).
We have permission from NPWS to remove this – can the County Council operatives remove the sign and pole?

Photo:NPWS/Burren Connect badly damaged conservation sign in car park - to be removed.

- Fencing around the dunes – to be removed as replaced as specified in MaREI report.

  Existing signs around the fencing – there are 2 Clare County Council Dunes conservation signs along the fence. **Both are in good condition and can be re-used and placed along new fence line when constructed.**

There are 8 poles with no signs attached along the existing fence line. **These should be removed and possibly reused for new signage when new fence is constructed.**



Locations of signage referred to in Audit.