



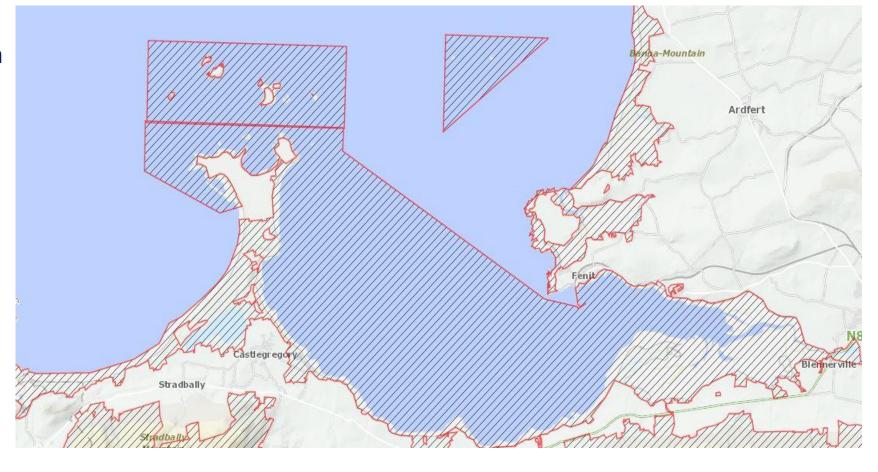
MAHAREES CONSERVATION ASSOCIATION CLG

Nature-based Solutions: Opportunities in a time of Biodiversity Crisis and Climate Emergency

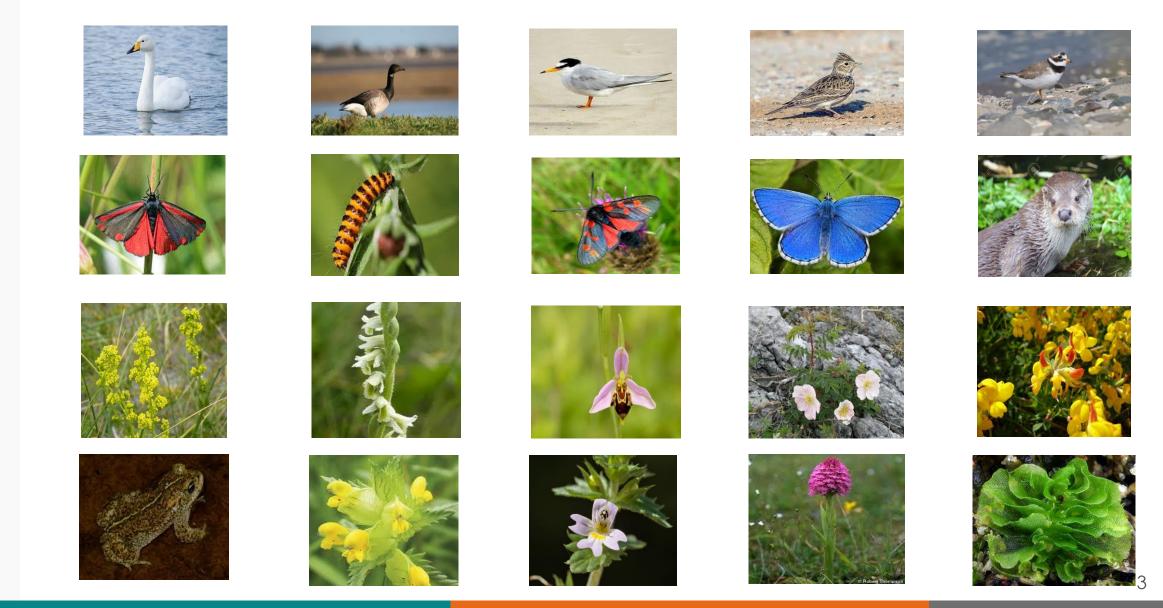
27 APRIL 2021

The Maharees is a "tombolo" or finger-like spit that connects several offshore islands with the mainland

- On Wild Atlantic Way
- The Longest Beach on the Wild Atlantic Way
- On Irish Times 'Best Beach in Ireland' list
- On Dingle Way
- Blue Flag Beach
- Surfing destination
- Wild Camping reputation
- Habitat designations
 - SAC
 - SPA
 - Ramsar site



Wildlife Protected via SAC and SPA designations



Our challenges;#1 Coastal Erosion



Coastal Erosion: from destructive waves, storm surges, wind etc.

- Loss of Land in <u>unprotected</u> areas
- Sand Deposition on roads
- Damage toInfrastructure/property

Our challenges; #2 Human Behaviour/ Lack of Awareness/ Lack of Facilities/ Lack of Coastal Management





Long-lasting impact of events each season. Cumulative damage mounting

Our challenges; #2 Human Behaviour/ Lack of Awareness/ Lack of Facilities/ Lack of Coastal Management

 KCC traffic counters recorded 23,040 cars on week beginning 05.08.19

Drone

footage of 3km of the road in Maharees on the afternoon of Sunday 09.08.20 showed 166 cars parked on roadsides or on privatelyowned land. Of these, 87 cars were parked on an area designated as a Special Area of Conservation. This was not the busiest day.





WILD PARKING and TRAFFIC CONGESTION

The health and safety of residents and visitors in areas like the Maharees is at serious risk as emergency services cannot access the area quickly during summer months.

166 cars wild parked on a 3km stretch on 9 August 2020

Our challenges; #2 Human Behaviour/ Lack of Awareness/ Lack of Facilities/ Lack of Coastal Management

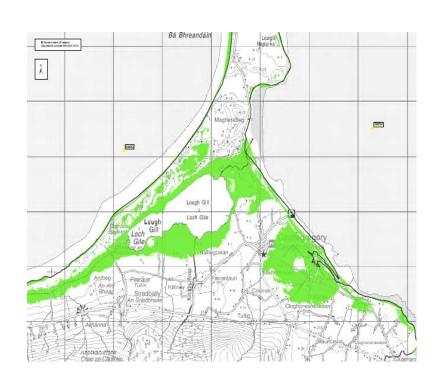


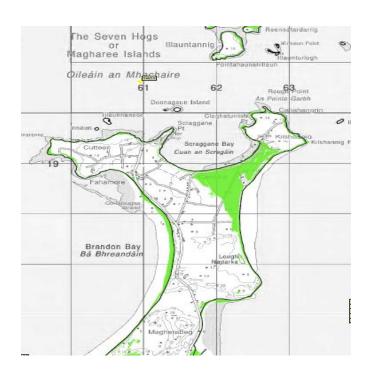


Magherabeg Cut

- trampling/ parking/ camping/unregulated access
- use of ATVs/dune scrambling
- fires on dune and beach

Long-range scenarios on sea-level rise to 2050 and 2100 are highly challenging. Our current approach is accelerating and worsening likely outcomes





Our impact on this environment matters. We can either accelerate these future impacts or buy ourselves time. Our environment is responsive to our choices. **Our actions in this time matter**.

Human behavior is a significant factor negating natural dune recovery processes and impacting on habitats



Over the winter of 2015-16, the only road in and out of the Maharees peninsula was impassable on 17 occasions.

We've already seen what the future could hold

Our actions now impact the range of tuture scenarios we will actually experience



Communitydriven formation of Maharees Conservation Association CLG in 2016. Now a registered charity





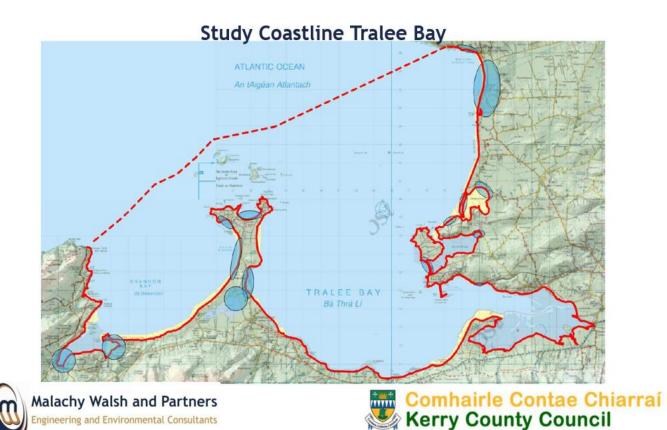
Associated Implementation Challenges of forming Maharees Conservation Association CLG and sustaining it over an extended period as scope of what needs to be addressed becomes clearer/grows

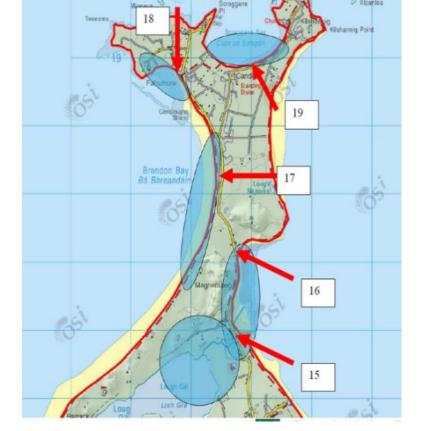
What we did	Associated Implementation Challenges
 Held a public meeting and from that formed a committee. Started with a Muintir na Tire Constitution. Set up as a Clean Coasts group so an Taisce could start engaging with us. Acquired insurance through BHP Insurance. Subsequently set up as a CLG 	 Public meeting held with expert view on what the community needed to do. Nominations sought from the floor on committee members and donations were collected taken to initiate action. Seeking landowner signatures on agreement to permit interventions. Seeking advice on how to set up from: Castlegregory Community Council, Muintir na Tire, The Wheel, Pierse McCarthy Lucey LLP, Solicitors Tralee. Researching insurance companies. Researching accountants. Convincing other committee members to become company directors. Understanding and applying the governance code. Reporting requirements associated with CLG. Funding the CLG – Costs: Initial Setup of CLG: €450 Insurance costs p.a. (2021): €850 Accountancy fees p.a. (2020) €750 Managing ongoing governance and cohesion Ensuring changeover in officer roles Managing disappointment and frustration at slow pace of delivery Managing range of different personalities, interests, viewpoints. Trying to ensure maximum participation and cohesion

Since our formation in 2016, we have engaged in an expansive range of actions with broad community participation across locals and visitors



A Flooding & Coastal Erosion Risk Mitigation Study has been commissioned by OPW and Kerry County Council. This will form the fundamental framework for long-term response.





Associated Implementation Challenges of the Flooding and Coastal Erosion Risk Mitigation Study

What we did

- Raised awareness of the need for a FCERM study in the Castlegregory Maharees area.
- Engaged with: the local community, the media, Local politicians, OPW, Kerry County Council staff including Senior Engineer, Kerry County Council – with responsibility for coastal erosion, flooding and climate adaptation.
- Engaging with and informing the assigned consultant.

Associated Implementation Challenges

- Understanding and explaining to the community in public meetings and social media posts why the FCERM study was necessary ("it seems like a lot of money to spend on a report to tell us what we know, when the money could be spent on defences").
- Understanding who the correct officials responsible were.
- Engaging in many, many meetings and phone calls to raise awareness of the issues and identify the barriers and to try to convince the Council to send an application for the Castlegregory Maharees Cell Case to the OPW to be funded.
- Extensive media campaign to raise awareness of the issues.
- Engagement with the assigned Consultants (and those tendering) – sending images, information, locations. Site visits and tours showing areas of concern.
- Arranging for public presentations of progress reports.
- Forming a sub-committee of community tasked to stay in touch with study and act as liaison. Challenges to secure participation from LA and consultants in this approach.
 Managing community frustration at lack of engagement with the community and progressively extending timelines

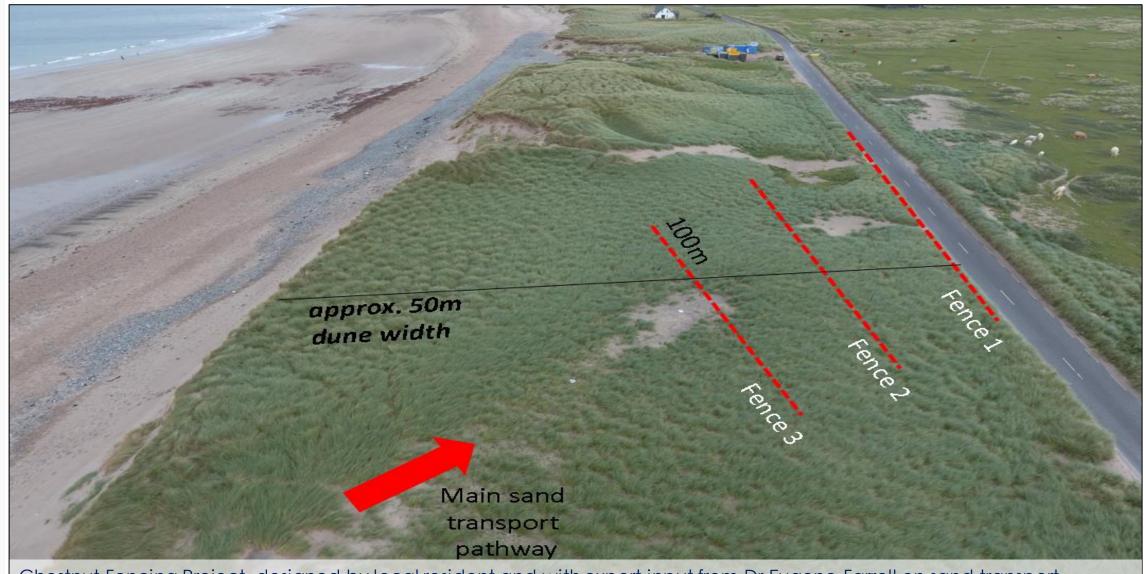
The range of nature-based solutions (NbS) we have deployed

		Neces	ssary	Needed in sc	ome circumstar	nces No	t necessary
Intervention type to assist dune self-recovery and natural processes	Awareness	Signage	Fencing	Sand refill	Marram planting	Bales/ Christmas Trees	Revetments (timber posts)
Work on 'human nature' first – stay off them							
Managed access to beach through dunes							
Addressing general areas of vegetation loss on dunes							
Plugging blowouts							
Managing sand-deposition onto roads/carparks							

NbS; Controlling sand deposition on access road (1/5)



NbS; Controlling sand deposition on access road (2/5)



Chestnut Fencing Project, designed by local resident and with expert input from Dr Eugene Farrell on sand transport pathway approved by Kerry County Council and National Parks and Wildlife Service. Fencing materials funded by KCC. Fencing installed by local community

NbS; Controlling sand deposition on access road (3/5)

















NbS; Controlling sand deposition on access road (4/5)



NbS; Controlling sand deposition on access road (5/5)



Oct 2016. Meeting

Nov 2016. Proposal

Apr 2017. Installation

Jan 2018. Dug out

Jul 2019. Dug out

Feb 2020. New fence

Road clear since April 2017.

Nature-based Solutions (NbS) work.

Community effort rewarded (attainable goals).

Stakeholders communicating.

Building awareness and education.

Associated Implementation Challenges of using NbS to Control Sand Deposition

What we did	Associated Implementation Challenges
Installation of 3 lines of Chestnut Fencing to Control Sand Deposition	 Researching and designing a Solution ourselves – a local resident did the research and proposed the design of the three-row approach informed by sediment transport path information from Dr Eugene Farrell, NUIG - because no one else had one! Documenting the proposal Gaining permission separately for the approach from NPWS (Natura 2000 site) Kerry County Council (planning permission) Funding the purchase of the fences €5000 – from Kerry County Council Developing a works plan and securing the necessary expertise locally. Erecting the fencing – community event Adjusting the fencing as required on a number of occasions since then

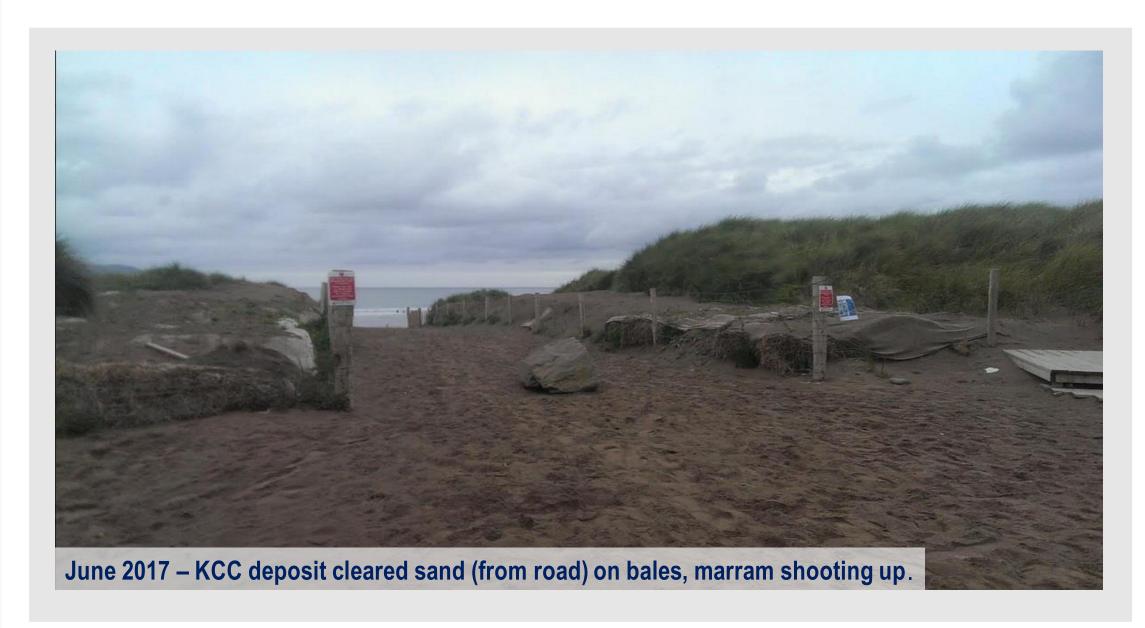
NbS; Dune protection and regeneration (1/3)





April 2016 - Fencing of vulnerable areas to protect dunes and encourage dune regeneration. Straw Bales used to 'fill void.'

NbS; Dune protection and regeneration (2/3)



NbS; Dune protection and regeneration (3/3)



Managed access and restoration activity has supported significant regeneration at this beach access point



Associated Implementation Challenges of Using NbS to Regenerate the Dune at Magherabeg Cut

What we did	Associated Implementation Challenges
 Installed fences to control access Managed the area to maximise dune recovery. Fundraising 	 Designing the fencing pathway approach Seeking advice on what materials we were allowed to use from NPWS and Kerry County Council Biodiversity Officer Used Sheep Wire Fencing and Straw Bales. Funded by local contributions Developing a works plan and securing the necessary expertise locally. Installing the fences and bales on a community work day. Erecting signage to explain about the dune protection work and why parking and access was being restricted. Enduring the vitriol of those who prefer to park on the beach/ camp on the dunes on social media channels. Seeking advice from the Biodiversity Officer on whether cleared sand from the road could be used to cover decomposing bales (aesthetic considerations) and on how the dry sand could be kept from blowing if it was permitted. Weeding out alien species (e.g. dock leaves) from decomposing bales. Planting Marram to expedite re-establishment of sand dune vegetation. We have since deployed bales in other hotpsot areas to deliver critical foredune protection. Key challenges here involved funding (local councillors allocations), securing permissions from all parties (KCC, NPWS, Foreshore) and timely delivery of bales pre storm season

NbS; Blowout recovery (1/2)



How to fill the blowout?

Too inaccessible to be filled with sand from road clearance.
Christmas trees trialled in 2019

NbS; Blowout recovery (2/2)

Associated Implementation Challenges of Using NbS to Fill a Large Blowout in the Dune

What we did	Associated Implementation Challenges
Placed Christmas Trees in a very large blowout.	 Sourcing Christmas Trees: created a social media post and arranged an agreed drop off point. Developing a works plan and securing the necessary expertise locally. Arranging for a community work day to place the trees. Keeping the public off the dune blowout by fencing the foredune.

NbS; Dune protection and regeneration (1/4)



NbS; Dune protection and regeneration (2/4)



NbS; Dune protection and regeneration (3/4)











Photo: Dr Eugene Farrell

NbS; Dune protection and regeneration (4/4)



Original breach due to unmanaged foot traffic accessing beach through dune and wild camping. Dune Recovering post intervention.







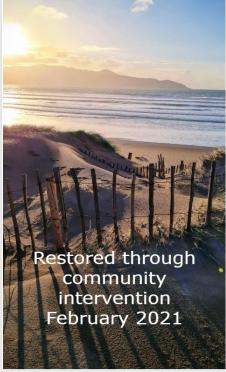


Photo: Dr Eugene Farrell

Progressive development of our signage content and messaging since we started



Welcome to Maharees

Please respect this special area of conservation and use official camp sites.

No unofficial camping permitted.

Thank you for your cooperation



Welcome to the Maharees

THE MAHAREES SAND DUNE SYSTEM IS DESIGNATED AS A SPECIAL AREA OF CONSERVATION
AND IS PROTECTED UNDER THE EU HABITATS DIRECTIVE

All sand dunes are environmentally sensitive areas which support a rich variety of wildlife.

The marram grass which stabilises the sand dunes is fragile.

Please help us to protect this important habitat and coastal defence: do not light fires or camp on the dunes; do not walk or climb on the dunes - please use designated beach access paths and official campsites.

As plastic has a detrimental effect on our wildlife, please bring your litter home with you.

Thank you for your help in preserving this important natural feature of the Maharees.





Associated Implementation Challenges of using NbS to regenerate the Dune Vegetation

What we did	Associated Implementation Challenges
 Planted marram grass to regenerate the dune. Erected fencing to keep the public off the dune. Erected signage to notify the public regarding the dune protection work in operation. 	 Became a Clean Coasts group and arranged for Clean Coasts Rep to demonstrate Marram Planting skills Arranged several community planting events. Learning where and how to source the Marram slips. Learning how to plant the Marram grass. Funding application for trowels and signage for the planting works Creating and erecting signage to explain the work and access restrictions. Drafting the right message! Erecting fencing to keep the public off the dune. Engaging in repeat planting where footfall prevailed. Fencing off further areas of dune as more breaches form from public walking up the dune.

Community beach cleans and marram planting events build broad awareness damaging impacts of human behaviors













SURVEY OF OUR MARINE LITTER (OVER 11 BAGS) BY STUDENTS OF MEAN SCOIL NUA AN LEITHRIUIGH CASTLEGREGORY 25TH SEPTEMBER

In conjunction with partners including Clean Coasts, Camp Juniors FC, Castlegregory Community Council, Castlegregory Celtic, Castlegregory Community Games, Maharees Regatta, Castlegregory GAA, Dingle Oceanworld, the Maharees & Castlegregory community and visitors





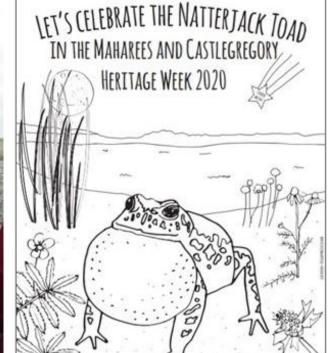




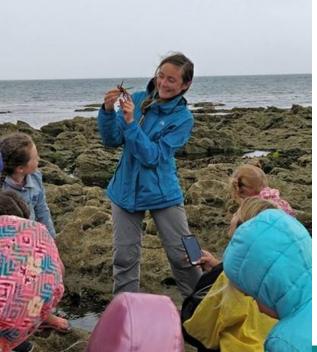


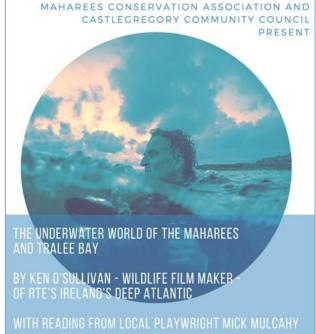












Range of Biodiversity experiences and events











Start at Béal Geal/Sandy Bay carpark, Walk northwards along the shor Proceed westwards along the beach at Scraggane Bay. Walk for 100m al Fahamore village. Head southwards along the road to the Point Gan wh

- Site of the old village of Magherabeg, finally abandoned c. 1916.
- Scairt beach where the sail ship the Industry, with its cargo of flour
- 1 Imilleach, a wintering site for Brent Geese and other birdlife.
- Oileán Domhnaill where the East Indiaman, the York, was deliberate
- 6 The site of the Signal Tower built between 1813 and 1816
- 6 200m north of the gravevard on the rocky shore lies Cloch a' Turais
- 1 The ruin of the 7th century St. Seanach's Church, Within the walls The building acted as a parish church during the 1300's.
- The Nuestra Senora del Soccorro, a boat attached to the Internation.
- The 5th century Monastic site on Oileán tSeannaigh founded by St. a souterrain and wall chamber, three leachts, a stone cross and a but
- The Aud, with a consignment of German arms for the Easter Rising Attempts to land the arms failed and the Aud was captured by the B
- 1 The 3.8 metre Standing Stone or Gallán. Local folklore maintained
- (B) On 24 November 1890, the Charger, a 174ft, barque containing 29, (I) For hundreds of years Corralougha Strand provided the inhabitants
- The collection of Carrigeen Moss, Agar and seaweed for kelp manu (B) Traigh Dhíomhaoin (The Idle Strand) whose name derives from the







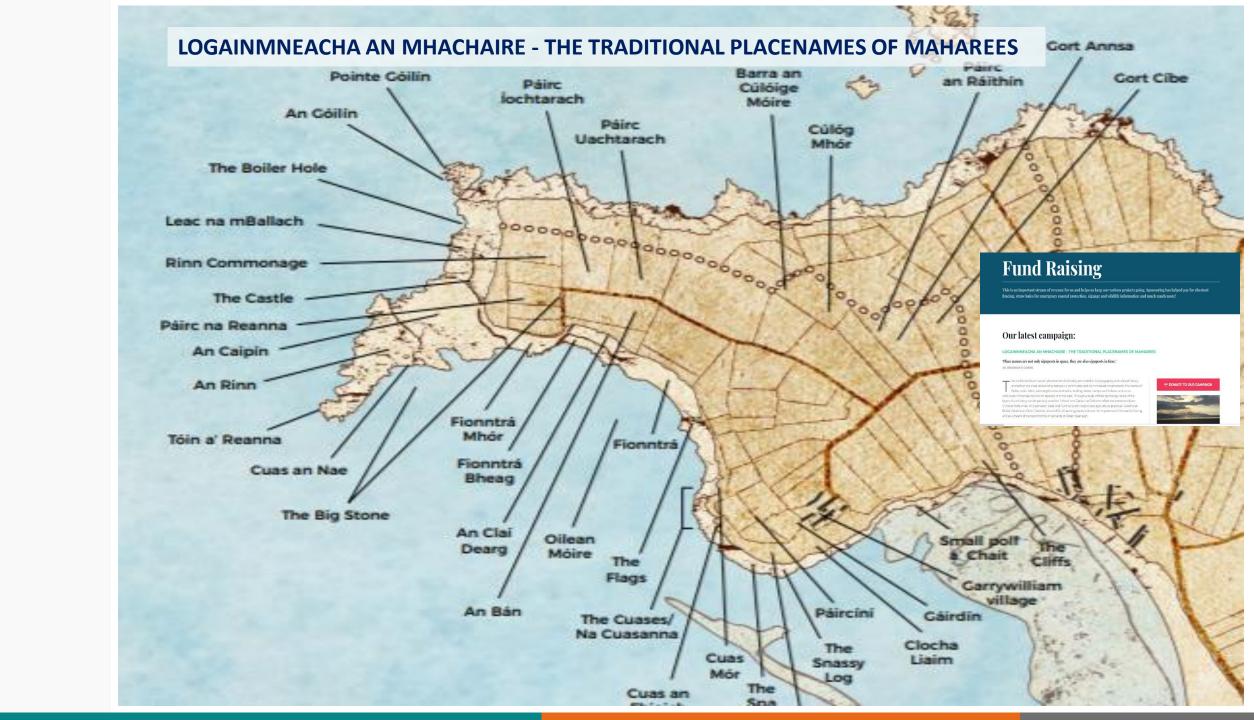








Additional materials detailing our unique biodiversity and heritage



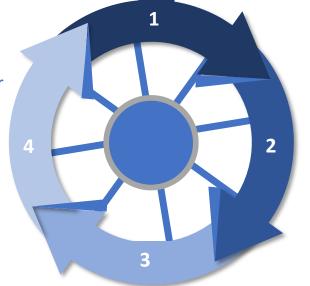
Hugely beneficial academic collaborations have been key to all this



Huge expert support and guidance to our efforts



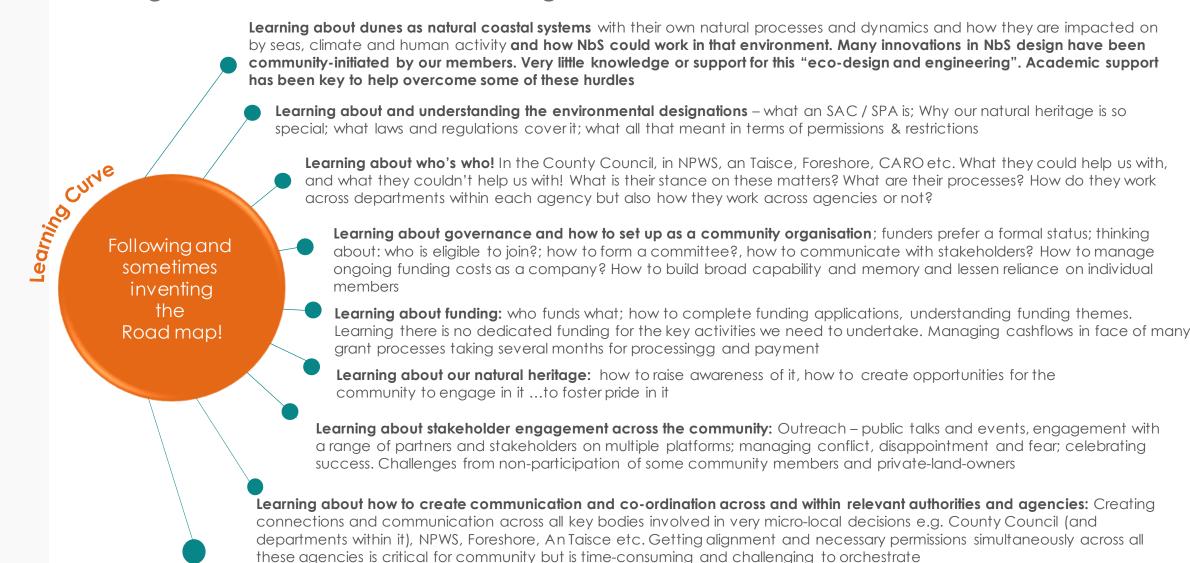
Their students help to deliver our community and visitor-engagement experiences



We support them in their use of our community as living laboratory and living classrom

They generate applied academic research on our issues and evaluate the results of our efforts. Their research groups are embedded

We have undergone massive learnings over the last number of years. It is now very evident to us the types of challenges inhibiting efforts in other communities that our learnings could be useful in addressing



Summer-long weekly rostering of community dune-patrol and carparkgate locking; >400+ hours of voluntary community life in summer

Cross-community participation



Weekly rostering

Moving on and Gate Roster 2020

Moving on and Gale Rosler 2020		
22-Jun Mo	oving on	FM
29-Jun Mo	oving on	SK and RH
06-JulMa	oving on	CM and FM
13-JulMo	oving on	FM and FG
G	ate	
20-JulMo	oving on	COM
Go	ate	
	oving on	LM
Go	ate	
03-AugMo	oving on	COA
G	ate	
10-AugMo	oving on	BP
	ate	
17-AugMo	oving on	BR
G	ate	
24-AugMo	<u> </u>	FM and FG
	ate	
31-AugMo	oving on	SK and RH
G	ate	

Please vacate requests



NO CAMPING ALLOWED ON THE MAHAREES DUNES

Welcome to the Maharees.

The Maharees sand dune system is a privately-owned commonage. It is designated as a Special Area of Conservation and is protected under the EU Habitats Directive.

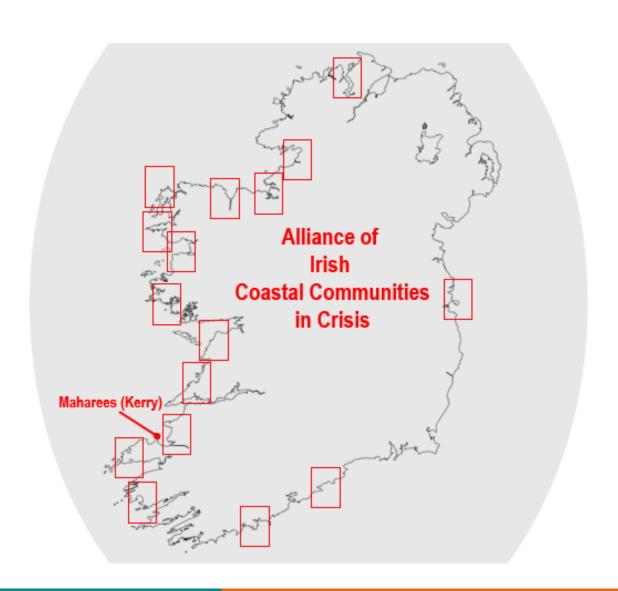
Overnight parking/ camping is not permitted on a special area of conservation. Please move to an official camp site as you will be moved on. The Gardai are fully cooperating with this dune protection measure.

All sand dunes are environmentally sensitive areas which support a rich variety of wildlife. The Maharees sand dunes support rare and endangered species such as the Natterjack Toad (80% of Ireland's population); Bee Orchid, Cowslip and Petalwort. The marram grass, which stabilises the sand dunes and allows other species to exist, is fragile and cannot withstand trampling or burning.

Thank you for your help in preserving this important natural feature of the Maharees.

Maharees Conservation Association CLG

We have validated our experiences with other communities. We are not alone. We are many.



What outcomes are needed: high level one-pager summary

In local areas

This summer

- Traffic & footfall management proper resourcing of services and temporary facilities to minimize harmful impact of the surge and current practices and to provide a more positive experience for all
- Temporary car parks with managed access onto beaches while protecting dunes
- Temporary toilets to avoid use of dunes and afford visitors / beach users some dignity
- Restrictions and enforcement of laws and bye-laws on littering, illegal parking, camping, access on dunes/ salt marsh/ beach areas with environmental designation with visible presence from Gardai, Local Authority wardens, NPWS. The times and areas requiring additional services are highly predictable in what is a relatively short season
- Dune fencing to protect sensitive areas with large visitor numbers from damage from trampling
- SAC/SPA signage on habitats, restrictions and visitor behaviors
- Crowd management and dispersal to alternative attractions in area
- Awareness-building of dune restoration and biodiversity experiences

Continuing beyond the summer into the next decade

- Seasonal surge in infrastructure facilities and services at peak every peak with long-term investments in capacity management, mobility and dispersal in area-based visitor management
- Hierarchy of signage in all SAC/SPAs (akin to Nature Reserves or National Parks) with content on value of and behaviours re dunes
- Develop integrated coastal zone management plans for each of our areas with our communities and with all the relevant parties across local authorities and agencies agreeing the most appropriate approach to manage and address coastal resilience in each area
- Incorporate sustainability requirements and opportunities in local tourism strategy
- Develop **community and visitor awareness of our natural heritage and biodiversity** with pride-building community participation in conservation and restoration measures
- Enforce protections on illegal activity on dunes and beaches inclillegal parking, camping, fires, sand-mining, etc.
- Broader **deployment of nature-based solutions** at key hotspots across SAC/SPA (incl. dune fencing) with a key role for the funding and upskilling of community groups in doing this work. Support in the engagement of private landowners. Continue build of evidence base and train planners in how to integrate these solutions into their approaches
- Engage communities in OPW /LA studies on longer-term strategies to coastal resilience
- Support communities to secure scale national and EU funding on climate adaptation and management measures and programs

Nationally

This summer

- Set expectations in advance for visitors with tourism-oriented info and education campaign on appropriate behaviours in SAC/SPA areas: unauthorized parking, litter, fires, long-term damaging impact of dune access and wild-camping, toileting, biodiversity and wildlife impact etc
- Set expectations on arrival with nationally-aligned SAC/SPA signage recode of conduct and content re protected biodiversity, local protection and conservation measures and impacts, conservation & recovery measures underway etc
- Prepare for the knowable now with temporary infrastructure & mobility solutions to address crowding management incl. dispersal, as well as deployment now of protective measures e.g. fencing of dunes to protect from trampling in most sensitive areas with high visitor numbers
- Provide surge funding to services for surge numbers e.g. SAC/SPA protection and enforcement with additional Gardai, as well as Local Authority presence and activity especially re Beach Stewards

Continuing beyond the summer into the next decade

- National multi-year commitment to culture change, awareness-build and communications strategy re. dune
 habitats with SAC designation and appropriate behaviours that is fully integrated with other tourism messages.
 Underlining their role in Climate Risk Adaptation and the restorative actions we can take and that work
- Invest in **knowledge-building and deployment of Integrated Coastal Zone Management**, including governance and strategic frameworks for use nationally, regionally and area-level with all the relevant parties across local authorities, agencies and communities. Engaging with Engineering Consultancies is also key
- Address challenges posed by complex ownership/regulations of the narrow strip of ocean-land called the coast.
- Develop expertise and fund nature-based solutions, across land and sea, most appropriate to Irish situation.
 Engage in European-wide programs. Integrate nature-based solutions into OPW and LA planning. Train up the
 planners and the engineers (public and private). Deploy results-based approach to support local
 communities, private landowners and farmers
- Better-resourced, more proactive and community-embedded NPWS and An Taisce resource base year-round that incorporates harm avoidance, nature-based solutions and action re IAS. Guiding local voluntary actions in nature-based, temporary protections & conservation measures including citizen science initiatives
- Tourism strategies take cognisance of SAC/SPA & Climate Risk. Support development of ecology and natural culture tourism
- · Seasonally-responsive surge in basic infrastructure, facilities and services to align with surge in visitor numbers
- National seasonal Beach Steward initiative to deliver education, experience and first line of enforcement during the tourist season with back up enforcement from Gardai & Local Authority Enforcement Officers. Akin to Lifeguards e.g., a national scheme delivered through Local Authorities
- · Proactive multi-agency action on enforcement
- Establish **exemplar communities** to piloting key approaches
- Scale drawdown of **EU** funds for Climate Risk Transition, Adaptation and Management for dunes and impacted coastal communities nationally

The 2020s could be the decade in which we safeguard the viability of our community for coming decades. Our successes and learnings are scalable



The fruits of our efforts with dunes re-rising, blow-outs recovering and lower levels of sand deposition due to very simple and cost-effective fencing and planting measures. **These nature-based solutions are working for us in climate adaptation**



The evidence base, via applied research in Ireland and beyond, on what works in effective coastal resilience is getting slowly built. We can accelerate this



Changes in visitor behaviour can happen when they are informed and guided. For most part, they stay on paths, they desist from illegal camping, they stay off dunes, they will use temporary car-parking facilities. Simple interventions can be very effective



Community buy-in and engagement and appetite for more. **Hope and agency rising!** Spillover benefits in community cohesion and agency. **More hope and agency rising!**



Growing community interest in the biodiversity and natural processes at play around us. Individuals impassioned! Multigenerational interest and commitment is possible



Demonstrated visitor interest in biodiversity-based and natural heritage tourism experiences



Farming interest in results-based ecology-friendly farming and land stewardship



Demonstrated examples of integrated coastal zone resilience management and other parallel examples elsewhere could be deployed here. We have so many relevant and capable resources here. We just need to organise what we have better



Individual officials who go above and beyond to help us notwithstanding the constraints they work within

Contact us:

on Facebook: Maharees Heritage and Conservation

on email: mahareesconservation@gmail.com

Thank you for engaging with us

Is there anyone else you think would like to become involved?

Please invite them to join us