



Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

MacGillycuddy's Reeks Upland Path Audit 2015



Upland Path Audit, Remedial Plan and Indicative Costings



MacGillycuddy's Reeks
Mountain Path Audit 2015

CONTENTS

Section Title

- | | |
|---|--|
| 1 | Background to the Path Audit |
| 2 | The MacGillycuddy Reeks |
| 3 | Upland Path Survey Techniques |
| 4 | Upland Path Construction Techniques |
| 5 | Key Findings |
| 6 | Recommendations |
| 7 | Path Audit Map |
| 8 | Path Condition Surveys |
| 9 | Appendix A – Path Condition Surveys – Measurements and Indices |

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MacGillicuddy Reeks Upland Path Audit 2015

1. Background To the Path Audit

The MacGillicuddy Reeks Mountain Access Forum was **established** in 2014 to implement the MacGillicuddy Reeks Mountain Access Project to develop a plan of action for the sustainable management of the MacGillicuddy Reeks. The MacGillicuddy Reeks is, along with Binn Shléibhe in Co. Galway, one of two pilot areas where a permissive access model is being piloted, based on awareness of and respect for private land.

Addressing the worsening path erosion on the Reeks is a recognized priority for the Forum and the MacGillicuddy Reeks Path Audit 2015 has been commissioned in recognition of concerns about the landscape impact and ecological damage associated with increased use of the mountain path network in the Reeks. A growing number of visitors come to enjoy the mountain landscape, either through recreational activity within the mountains themselves or through enjoying the spectacular views and scenery throughout the area. The Reeks are clearly special, but they are also fragile. Over recent decades the boots of those who have come to enjoy and celebrate the mountains has worn away and damaged the habitat and landscape. The erosion caused by walkers is exacerbated by climate, with heavy rainfall events and freeze thaw cycles punishing the inherent fragility and friability of vegetation, soils and sub-soils.

The Upland Path Audit is designed to capture objective baseline data on the condition of the path network, to prioritise paths and sections of paths where management is required, and to obtain indicative costings and recommendations on repair and maintenance works needed. The report will also consider potential constraints including land management, statutory designations and available skills to carry out mountain path work in the area.

2. MacGillycuddy Reeks

2.1 Physical Characteristics

The MacGillycuddy Reeks is the prominent mountain range on the Iveragh peninsula in County Kerry, southwestern Ireland. Its geological basis is a long anticlinal range of Devonian sandstones that was strongly glaciated, producing many valleys, serrated ridges, and peaks, including Carrauntoohill.

2.2 Natural Heritage

The entire range is encompassed within the MacGillycuddy Reeks and Caragh River Catchment SAC (SAC Site Code 000365). This large land management unit includes Oak Woodlands, Lakes and the mountainous areas of the Iveragh Peninsula. The SAC has been selected for 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):

- [3110] Oligotrophic Waters containing very few minerals
- [3130] Oligotrophic to Mesotrophic Standing Waters
- [3260] Floating River Vegetation
- [4010] Wet Heath
- [4030] Dry Heath
- [4060] Alpine and Subalpine Heaths
- [5130] Juniper Scrub
- [6130] Calaminarian Grassland
- [6410] Molinia Meadows
- [7130] Blanket Bogs (Active)*
- [7150] Rhynchosporion Vegetation
- [91A0] Old Oak Woodlands
- [91E0] Alluvial Forests*
- [91J0] Yew Woodlands*
- [1024] Kerry Slug (*Geomalacus maculosus*)
- [1029] Freshwater Pearl Mussel (*Margaritifera margaritifera*)
- [1065] Marsh Fritillary (*Euphydryas aurinia*)
- [1095] Sea Lamprey (*Petromyzon marinus*)
- [1096] Brook Lamprey (*Lampetra planeri*)
- [1099] River Lamprey (*Lampetra fluviatilis*)
- [1103] Twaite Shad (*Alosa fallax*)
- [1106] Atlantic Salmon (*Salmo salar*)
- [1303] Lesser Horseshoe Bat (*Rhinolophus hipposideros*)
- [1355] Otter (*Lutra lutra*)
- [1421] Killarney Fern (*Trichomanes speciosum*)
- [1833] Slender Naiad (*Najas flexilis*)

2.3 Land Management

The land is almost exclusively within private ownership, and access is tolerated within Ireland rather than protected by law or right. All of the paths surveyed go through a number of privately owned land holdings, and most of them contain a mixture of fields with enclosed livestock, and further up the hill *commonages*, where there is range grazing for livestock owned by a number of landowners, across the open mountain.

The mountain range is of considerable access and recreation value, with a growing numbers of visitors each year. This will help support a significant tourist industry for the area, including accommodation providers, restaurants, shops, mountain guides and related visitor attractions. The owners themselves may well not see financial benefits from access without diversification into some kind of service provision, such as accommodation, car parking, guiding, café/restaurant etc. An agri-environment scheme or output based environmental scheme could also be explored.

3. Upland Path Survey Techniques

The path condition survey was designed to provide an overall assessment of the current condition of the mountain paths and as such provides:

- A breakdown of costs required to bring the upland path resource to an acceptable standard,
- Estimates of work required to put in place an effective maintenance, repair/remedial regime

The audit used established Upland Path Advisory Group approved techniques as used by the Cairngorms Outdoor Access Trust

- Context based survey – or ‘green’ survey provides a desk-based evaluation of the context within which each route lies, including ownership, heritage designations etc.
- Condition Survey – or ‘amber’ survey provides an objective assessment of the physical condition of each footpath, based on physical and index based measurement. Costs and priorities are generated for the paths surveyed
- Maps of the routes, showing the location of each section.

4. Upland Path Construction Techniques

The techniques identified and recommended for works can be described in terms of ‘*Machine Built*’, ‘*Hand Built*’ and ‘*Light Touch*’

‘*Machine Built*’

This tends to refer either to a machine built ‘hi and dry’ footpath style whereby a path is raised using onsite material. Turved ditches are excavated to provide mineral material with a mixed sub-base and graded surface. Where necessary additional material can be sourced through excavation of a ‘borrow pit’ located at appropriate parts of the site. This type of technique is appropriate for uncontained peatland, and elsewhere when the landscape and habitats are comparatively robust and the site topography lends itself to access.

‘*Hand Build*’

This refers to a fully or part built, hardened footpath surface using either the established hand-built techniques highlighted in the Upland Path Advisory Group’s Techniques Manual. Where this has been recommended it indicates that the surveyor considers this approach to be appropriate for the proscribed length of path. These techniques are tried and tested, and construction costs tend to be high. This technique is suitable where the habitat is particularly fragile, slopes are steep, access is limited, and higher up the mountain where landscape values are particularly high. Due to the nature of mountains the bulk of the work falls into this category.

‘*Light Touch*’

This indicates a less intensive approach, with landscaping and definition used to narrow width, with little or no hardening of path surfaces. The management technique shows a profile of greatly reduced unit costs, but requires a higher maintenance commitment over the longer term. More importantly it shows a lighter touch in the wildest and most beautiful mountain landscapes, with reduced visual impact through the use of informal techniques. This approach builds on the plateau

techniques trialed successfully in Scotland during COAT's Cairngorms Mountain Heritage (2011-15) project, and the headwall techniques trialed at Torridon and Glencoe during the National Trust for Scotland's Mountain Heritage project (2003-8).

Whilst this management approach is by definition more difficult to specify, it does lend itself to a *process-led* construction method. This means that there will not be a universal technique, as site conditions and problem solving techniques will vary markedly from site to site. However, provided the basic principles are followed, the desired effect will be the production of low impact path-work on our most sensitive sites, with pre-emptive techniques largely based on:

- *Route Definition* whereby damage spread will be reduced to the narrowest width possible, and where there are a number of routes evolving that go to the same place, these will be reduced to the minimum number possible. This will require a mixture of off-path techniques such as blocking and landscaping, and a number of on-path techniques designed to make the surface easier to identify. The most important principle here is that by increasing the 'off-path' blocking, we can reduce the 'on-path' construction significantly.
- *Consolidation* whereby on- and immediately off-path techniques are geared towards stabilising slope failure. Techniques will focus on revetment and re-vegetation with emphasis on finding the appropriate blend to stabilise each individual slope failure.
- *Surface Drainage* whereby the emphasis is on shedding the water from the surface before it picks up sufficient momentum to move the slope materials. Water-bars are the traditional technique for this. However, by subtle shifting of path alignment, looking at off-path drainage, and by reducing the formality of water-bar construction, we will be able to produce well-drained slopes far out on the hill without intrusive drainage features.

5. Key Findings

The overall network is generally within the early stages of decline in condition due to path erosion. It may be that it has taken longer for hill walking to increase in popularity in Ireland than for example in Scotland, or the hill ground may be more robust (though it looks very similar to the surveyor!). Either way there is an excellent opportunity to manage the majority of the network with pre-emptive and light touch techniques only. This effectively will provide a 'stitch in time' to prevent decline requiring exponentially higher levels of expenditure in future years to reverse what looks to be inevitable decline.

That said there are paths within the Reeks that will require a full build solution already, and these are The Devil's Ladder, Cahir and the Hag's Glen.

- 12 paths were surveyed totaling 22,892m
- Total estimated cost of repair to these is €572,000 + VAT

- 1 of these was given Priority 1, the Main Path at Devil's Ladder
- 1 of the paths was given overall a Priority 2
- 5 paths were given Priority 3
- 5 paths were given Priority 4

5.1 Priority 1

The *MR4 Devil's Ladder* was clearly the highest priority, and certainly the one that everyone was talking about in terms of erosion. It has been suggested in some places that the path is dangerous, and should be avoided with use being moved onto ZigZag. The level of danger has been overstated in the surveyor's opinion, and avoiding the issue by spreading the problem elsewhere does not seem a sensible solution. The path is fixable and good similarities can be seen elsewhere, particularly in Glencoe and Torridon in the Scottish Highlands where solutions have been found that work without detracting from the landscape. It should be noted however that the evolution of upland path skills in Scotland was a slow and managed process with input from NGO's, Local Authorities and National Public Bodies, and the ability to carry out work of this complexity and challenge should not be attempted without a skilled work force with good experience of the techniques that will need to be used – pitching, revetment, alignment, light touch etc. The Devil's Ladder is sustainable however once fixed, as it is contained within a gully. This is not the case with the ZigZag, which is on open ground and has the potential to spread damage over a very wide area indeed in time.

5.2 Priority 2

The *MR3 Hag's Glen* path is almost opposite to the Devil's Ladder, in that the erosion is spread over a wide area on robust but worn terrain. The damage zone is well over 10 m wide in places and continuing to widen. The overall priority was 2, which is still very high, as the path is prominent, the damage is already high, and the dynamism is also high. Unlike the Devil's Ladder however, Hag's Glen can be repaired with well-established techniques, much of it by machine if this is permitted, and if not would certainly be an excellent site to develop path skills locally whilst repairing a highly visible scar on the landscape.

5.3 Priority 3

The Priority 3 paths are all routes that do need attention, but not a full build repair. *MR7 Caher* would be improved with construction of a good path on the shoulder, but the ground is reasonably robust, and so timing is less critical. *MR5 ZigZag* is a developing route, but in many ways a reaction

to the perceived dangers of Devil's Ladder. It would be better to invest in the Devil's Ladder and try to downplay the ZigZag route to see what happens to it. The top of the route is uncontained, and likely to have a serious erosion problem in time if use continues to grow. The route along the top is degrading slowly at *MR6 ZigZag to Carrauntoohil*, and light touch and definition only on the summit approach would help reduce future erosion and contain use onto a single line.

MR10 O Shea's Gully is broadly in good condition, but has some serious localized erosion that if addressed now, could be contained. The *MR12 Turf Path* is a bit of an outlier, and has a heavily built path up most of it. Effective drainage and smaller repairs would do a lot to help keep the path in order, and once repaired the route could easily be promoted to perhaps offset casual use of the upper mountain network.

5.4 Priority 4 Paths

The *MR1 Lisleibane Track* is broadly in good condition, and is the only track surveyed that gets regular vehicle use. The drainage could be improved substantially for relatively little money, and safeguard the infrastructure for future years, but on the whole it is robust and wearing away slowly. The path from *MR2 Cronins* yard is generally overall fine and as had substantial investment over the years, including path laying and bridges. The last section however is in terrible condition and could really do with rebuild from top to bottom. The *MR8 Beenkeragh* is mostly in very good condition and only requires small scale works at key points. The *MR9 Coumloughra* path is worn and in poor condition, but is eroding relatively slowly with robust ground on a shallow gradient. It would be inexpensive to build using machine techniques, but is not as vulnerable as the steeper path elsewhere. The *MR11 Heavenly Gates* path is mostly robust and fine, but may benefit from some small scale pre-emptive works at key points to prevent further damage.

5.5 Overall Condition of the MacGillycuddy Reeks Upland Path Network

Despite the heavy damage on the priority 1 and 2 paths at Devil's Ladder and Hag's Glen, the rest of the erosion at the moment is generally localized, and still very much in the development phase. A light touch and pre-emptive intervention in the next few years could well prevent the development of much heavier path erosion in future years, and the need for much heavier intervention! We did not have data on the rate of change of hill walking in the MacGillycuddy Reeks mountains, but if it follows trends elsewhere in Europe then it will be increasing, and likely to increase further as people become more aware of the mountain range and the recreation opportunities to be had there. The public bodies responsible for tourism in Ireland would likely wish the rest of the world to be aware of what Ireland has to offer, and these are the highest mountains in the country and well worth

exploring for anyone who loves the outdoors!

6. Recommendations

One of the major difficulties in tackling the type of erosion problems in wild and beautiful places such as the MacGillycuddy Reeks, is that poor standards of work can be just as detrimental to the landscape as the erosion itself, and some might argue more so!. One of the key lessons (possibly *the* key lesson!) we have learnt in Scotland over the last couple of decades has been that it is essential to develop a skilled workforce *in conjunction* with capital programmes, and to sustain this in the longer term through phasing into other areas. It is a process that needs constant attention and the delicate balance between phasing work from mountain areas in need, and developing and sustaining a skilled workforce to do the work does require local and national input. The MacGillycuddy Reeks could be a start point, but careful management of a workforce could easily provide a micro industry in a rural setting ready to look at programs further afield in Kerry and the rest of Ireland in future years.

6.1 - Capital Programme

Learning from mistakes and successes in Scotland the best way forward for addressing the erosion problems at the MacGillycuddy Reeks would be in a structured Capital programme of works over a number of years. There are funding streams available for this type of work and it may well be eligible for European Regional Development Funding under the new programme, assuming that there was public match funding available from the public bodies with an interest in conservation of the area and sustainable tourism. This would allow a phased and managed progression of works, with easier and more straightforward paths tackled initially to develop the necessary skills to tackle the worst problems. It also makes a lot of sense to include the pre-emptive works and light touch works on developing now, rather than bear the damage and cost to repair it in future years.

6.2 Development of a Skilled Workforce

Recent experience in Ireland would suggest that there is not yet a skilled workforce available to tackle the path erosion problems at the MacGillycuddy Reeks in Ireland. Importing skills from elsewhere is not a sustainable solution, and development of a skilled workforce locally may well help provide sustainable employment for a number of people. The best way to manage this from experience to date is in conjunction with a Capital Programme over a number of years. This offers a body of work for unemployed people and/or local businesses to diversify into, knowing that they will

have access to this work for a number of years in return for their time investment in going through an intensive training programme. The European Social Fund and LEADER would be excellent sources of funding for this, assuming that public match funding would be forthcoming from the public bodies with an interest in skills and employment development for the area.

6.3 Aftercare and Maintenance

Once the work has been completed at the MacGillycuddy Reeks there are recommendations in terms of 'person days' required to look after the mountain paths in the long term. The number of days can be multiplied by the going rate for this type of labour at the time of purchase to give a value. The maintenance programme would consist of drain clearing, topping up of surfaces, minor repairs etc. The other side of the maintenance programme the mountains would benefit from would be a few days light touch work per year on the high paths, just looking at minor tweaks to alignment or emerging drainage problems to prevent the need for major works further down.

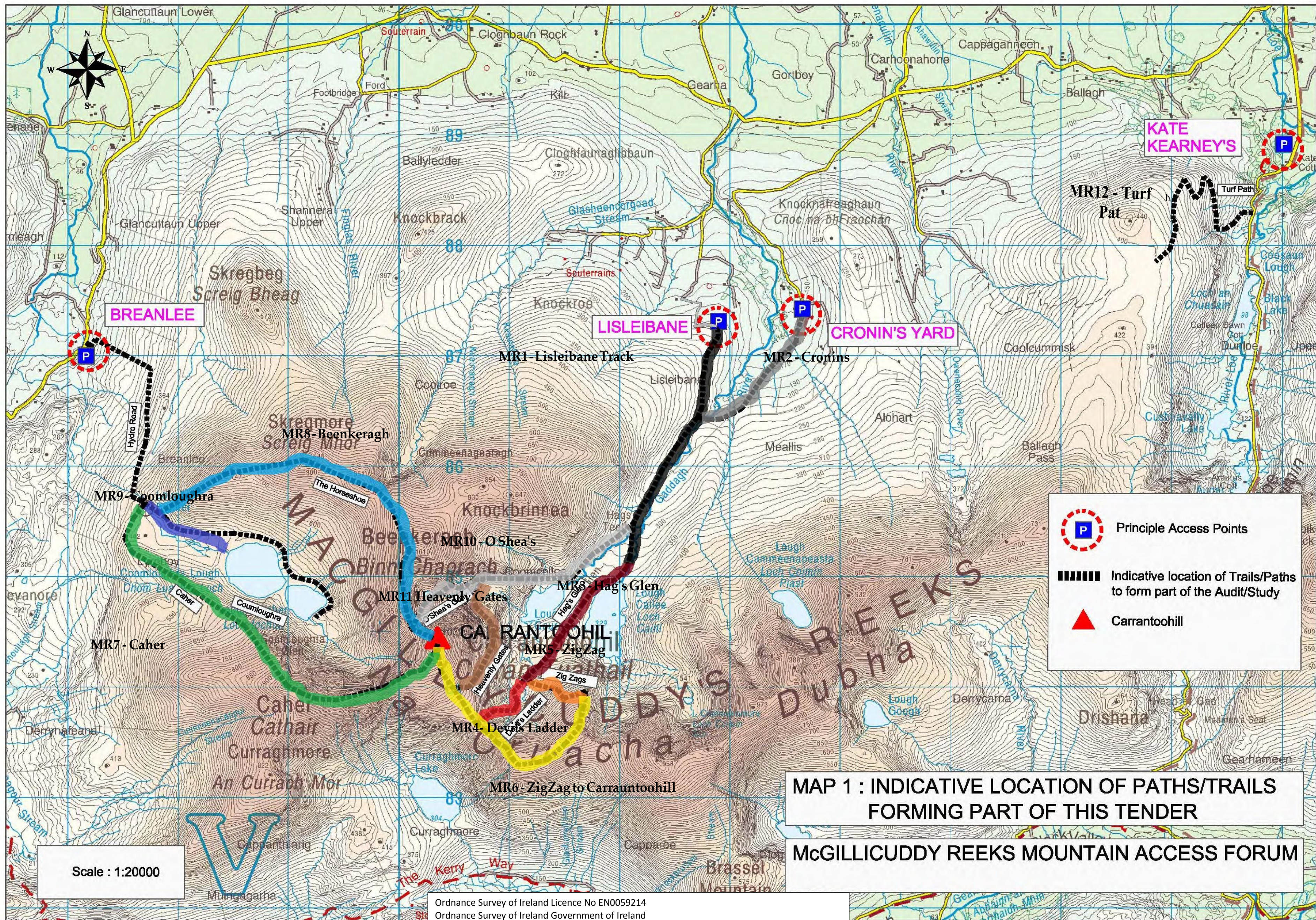
Sources of income for maintenance are always a challenge. From our point of view there are major untapped sources at the trail heads, with substantial car parks having been constructed but not charging for parking there. If the public were aware that their money was going to help look after the mountains then few are likely to resent it. Hill walkers often have nice cars, and expensive equipment and are likely to be able to spare 2 or 3 Euros to help look after the hills they have come to enjoy for the day.

Dougie Baird, May 2015

***NB: Figures given in the table below show two values for Hag's Glen and Cahir, the lower figure if a machine is permitted for appropriate sections, and the higher figure for hand build if not.**

Figures given do not include VAT, Contingency or any Management Costs

MacGillycuddy Reeks Paths		Distance (m)	Comment	Priority	Cost	Maintenance (m/d)
MR1	Lisliebane Track	2,663	Lisliebane Track appears to be a hand built road, currently used by Irish Water, Kerry Mountain Rescue and landowners. The track is basically still good but becoming eroded due to lack of maintenance and poor drainage with loss of surfacing.	4	€55,000	6
MR2	Cronins	1,395	The path from Cronins is mostly built using loose pebble aggregate. Sections 1 and 2 could really do with lateral ditching for most of the way to protect what is there. Section 3 is badly eroded and needs to be built by hand.	4	€38,000	1.5
MR3	Hags Glen	1,483	Hags Glen Path is generally a wide spread erosion problem, without too much gullying. Construction of a quality path would reduce this spread significantly.	2	€90,000/ 160,000*	4
MR4	Devil's Ladder	613	Devils Ladder is the main approach to Carrauntoohil and is heavily used. It is steep contained within a gully with multiple paths, braids and substantial erosion. The route could be repaired using heavy hand build techniques, but will require workers with proven expertise in pitching, revetment etc. in mountain environments to achieve this work to the correct and appropriate standards.	1	€125,000	5
MR5	ZigZag	1,183	ZigZag is a developing route in preference to the Devils Ladder. It would be better to deal with the Devils Ladder and treat this path in a more light touch and pre-emptive manner. Monitor to see if use can be moved back onto a repaired Devils Ladder for main Carrauntoohil approach in future.	3	€26,000	2
MR6	ZigZag to Carrauntoohil	1,787	The path from the top of Zig Zag to the Devils Ladder is peaty and wet, basically okay, the approach to Carrauntoohil has numerous paths and braids and would benefit from light touch and pre-emptive works to reduce future damage.	3	€13,000	5
MR7	Caher	2,664	The Caher Path is fairly robust, though the lower peaty section is in bad condition. Machine construction on the lower sections would be fine here if done sensitively – Further up light touch and pre-emptive work would prevent further erosion.	3	€73,000/ 280,000	5
MR8	Beenkeragh	3,733	Excellent ridge hike and scramble over Beenkeragh, minor issues until reaching junction with the top of O'Shea's Gully. Worth doing some light touch and pre-emptive works to prevent further erosion.	4	€11,000	2
MR9	Coomloughra	908	The Coomloughra Path is a worn and heavily used path as a viewpoint for the Caher Horseshoe, worn but fairly robust, would be easy to fix with a machine built path.	4	€28,000	1.5
MR10	O'Shea's	2,205	Lower sections from Hags Glen pretty good though spreading where path undefined/indistinct; V dynamic start to OSG proper at junction with Hags Glen path: Eroded, dynamic upper section	3	€54,000	3
MR11	Heavenly Gates	994	Majority of Heavenly Gates path in good condition (tight goat track) except for lower eroded section where joins OSG path; some work would be beneficial here with light touch only further up	4	€16,000	3
MR12	Turf Path	3,264	Hand Build track, with drainage largely slumped/blocked now, requiring repairs and drain excavated along full length. New from end of path to top	3	€83,000	5
	Totals	22,892			€612,000 /929,000	43



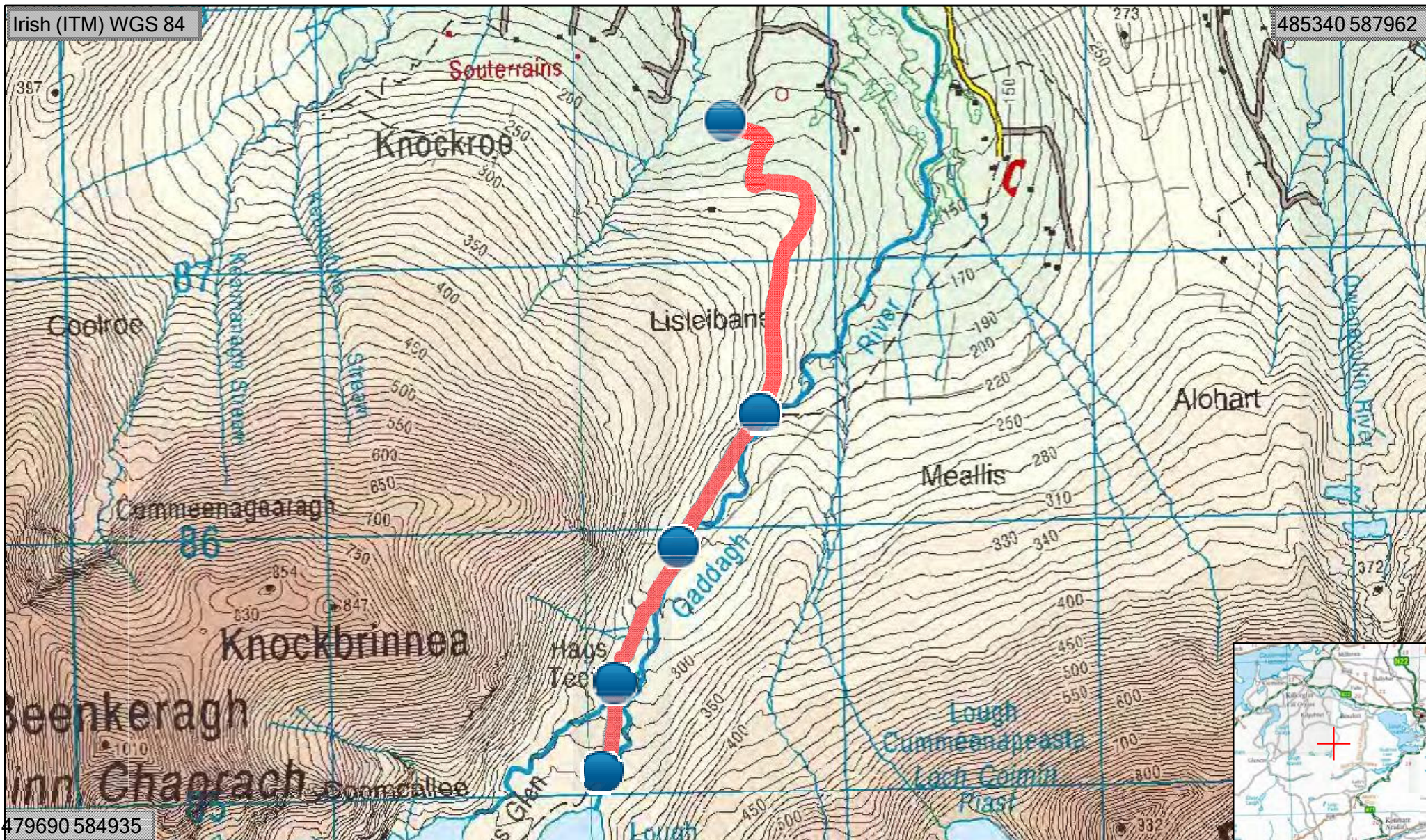
Path Number: MR1		Path Name: Lisleibane Track	Distance: 2,663m	Location: Start: 482564 ITM587598 End: 482024 ITM585152
Priority 4	Cost €55,000	Designations: Natura 2000, SAC		Land Management Priorities: Farming/Irish Water
<p>Use:</p> <p>The Track from Lisleibane is one of the major key access points for the MacGillycuddy Reeks, and is facilitated with a major car park on two tiers to accommodate parking for walkers. The track is used for vehicular access by the landowners for livestock farming and the Irish Water for access to plant and water courses, and for recreational use by walkers and climbers.</p>				
<p>Previous Path Management:</p> <ul style="list-style-type: none">- The Track appears to have been handbuilt, quite an undertaking for a road of this type in this type of environment. It is difficult to imagine that this would have been done without machinery had it been available and it may possibly be a Board of Works scheme dating back to the Great Famine, though records of these road schemes were largely lost in the 1960s.- The track has been built by clearing the route, building up weaker or lower edges with stone revetment and infilling with hand lain stone overlaid with aggregate. Drainage is generally facilitated by open and closed conduits.- The Track is eroding in places, due to poor or deteriorating drainage, and on one occasion poor alignment. Repairs to key weak points have been made with modern techniques including concrete pipe conduit (where the alignment has been poor), though this too has failed- A very substantial Car Park, on two tiers, has been recently built at the trail head, and would appear to be primarily aimed at recreational use. There are currently no charges for parking, which would be a potential revenue stream for not only maintenance of the car park, but also for the track and hill paths too.				
<p>Path Management Constraints:</p> <ul style="list-style-type: none">• The track is accessible by machinery along its entire length and all natural materials are readily available on-site• Repairs to the existing road may not be subject to planning as it has already been heavily engineered and the works would be minor, but the use of materials and techniques are likely to require mitigation due to natural heritage designations.				
<p>Path Condition:</p> <ul style="list-style-type: none">• The Track is broadly in good condition but would benefit from reinstatement of lateral drainage along its length• Sections 2 and 3 have conduit problems that need to be resolved with loss of aggregate fines in places, and the exposed rough cobbling underneath now being avoided by walkers.				
<p>Recommendations:</p> <ul style="list-style-type: none">• Excavate lateral drainage along length, and repair conduits• Once drainage has been resolved the track could be resurfaced in places• The potential for charges via ticket machines could be explored, as it is a potential revenue stream to look after the tracks in the long term.				
<p>Maintenance:</p> <p>Regular maintenance will be required once work has been completed, including drain clearing.</p>				



Figure 1 Lisleibane Track looking up Hags Glen



Figure 2 - Surface Loss and Drainage Problems



MR1 - Lisleibane

1400 m

MN
TN
-5.6°



Cairngorms Outdoor Access Trust

Weather	Date	Path Number	Path Name	Surveyor	Start	End
Wintry Showers	23rd March 2015	MR 1	Lisleibane Track	Dougie Baird	482564 ITM587598 482024 ITM585152	

Section	Length	Grid Ref	Surface Type	Features	Paths/ Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough-ness	Drain-age	Erosion	Cond-ition	Dyna-mism	Priority	Maint (md/py)	Capital Cost
1	1480	482564 ITM587598	Agg.	Car Park	1/0	2.50	2.5	0	8/12	4	3	4	4	4	4	2	€25,000

Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	1480	culvert	0	Culverts	0

Description

Hand built track, historical and still used by farmers and water board - drainage works and resurfacing along the length would protect the track from future erosion

2	638	482344 ITM585983	Agg.	Junction	1/1	2.50	2.80	0.1	5/9	4	2	4	4	4	4	2	€10,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	638	0	0

Description

The track is still strong, but lacking in lateral effective drainage. Drainage improvement and resurfacing along the length would help prevent future erosion

3	545	482084 ItM585491	Agg.	Gate	1/1	2.50	4.00	0.2	5/9	3	2	3	3	3	3	2	€20,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	545	0	0

Description

Track has serious drainage issues in places with integrity of surface broken and needs resurfacing and lateral drainage, plus conduits

TOTAL	2,663			March											4	6	€55,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	2,663	Other	0	Other	0

Description

Lisleibane Track appears to be a hand build road historically, that has since been adopted for use by the Irish Water and Landowners. The track is basically still good but becoming eroded due to lack of maintenance and poor lateral drainage with loss of surfacing due to this in numerous places

Path Number: MR2		Path Name: Cronins	Distance: 1,395m	Location: Start: 483585 ITM587397 End: 482679 ITM586496
Priority 4	Cost €38,000	Designations: Natura2000, SAC.		Land Management Priorities: Recreation/Livestock
<p>Use:</p> <p>The Track from Cronins is one of the major key access points for the MacGillycuddy Reeks, and the trail head is at Cronin’s Yard, which includes a car park, café/restaurant, toilet and camping facilities provided by the landowner. The path is used heavily by walkers and cyclists and looks wide enough for ATV use/land management purposes. The path has two options, one is to join the Lisleibane Track on the main approach to Carrauntoohill and it’s associated hill paths, the other is to remain on the eastern bank of the river for a more informal circular walk linking with the Lisleibane Track near the Lough.</p>				
<p>Previous Path Management:</p> <ul style="list-style-type: none">- The path looks to have been substantially upgraded using loose shingle, without a binding surface on top.- There are recently constructed bridges across the main water courses, which look to be of a substantial design, and made out of metal for durable use. They will presumably have a maintenance programme provided by the engineer, including regular inspections for engineering integrity, though this ought to be checked by those with liability for the structure.- While a good deal of work has been done in recent years on the surface and in particular the bridges, the path is largely lacking in lateral drainage and this leaves it prone to flooding and surface loss.				
<p>Path Management Constraints:</p> <ul style="list-style-type: none">• The track is accessible by small plant and natural materials are readily available on-site• Improvements to the drainage may not be subject to planning as it has already been heavily engineered and the works would be minor, but the use of materials and techniques are likely to require mitigation due to natural heritage designations.				
<p>Path Condition:</p> <ul style="list-style-type: none">• The Track is broadly in good condition but would benefit from reinstatement of lateral drainage along the length• Section 3 however is heavily eroded and widening as people avoid the damaged path in the middle				
<p>Recommendations:</p> <ul style="list-style-type: none">• Excavate lateral drainage along length,• Heavy build using hand built techniques at section 3 – would be an ideal training site for a developing area path crew, prior to tackling some of the tougher sites further up the hill!				
<p>Maintenance:</p> <p>Regular maintenance will be required once work has been completed, including drain clearing and topping up surfaces</p>				



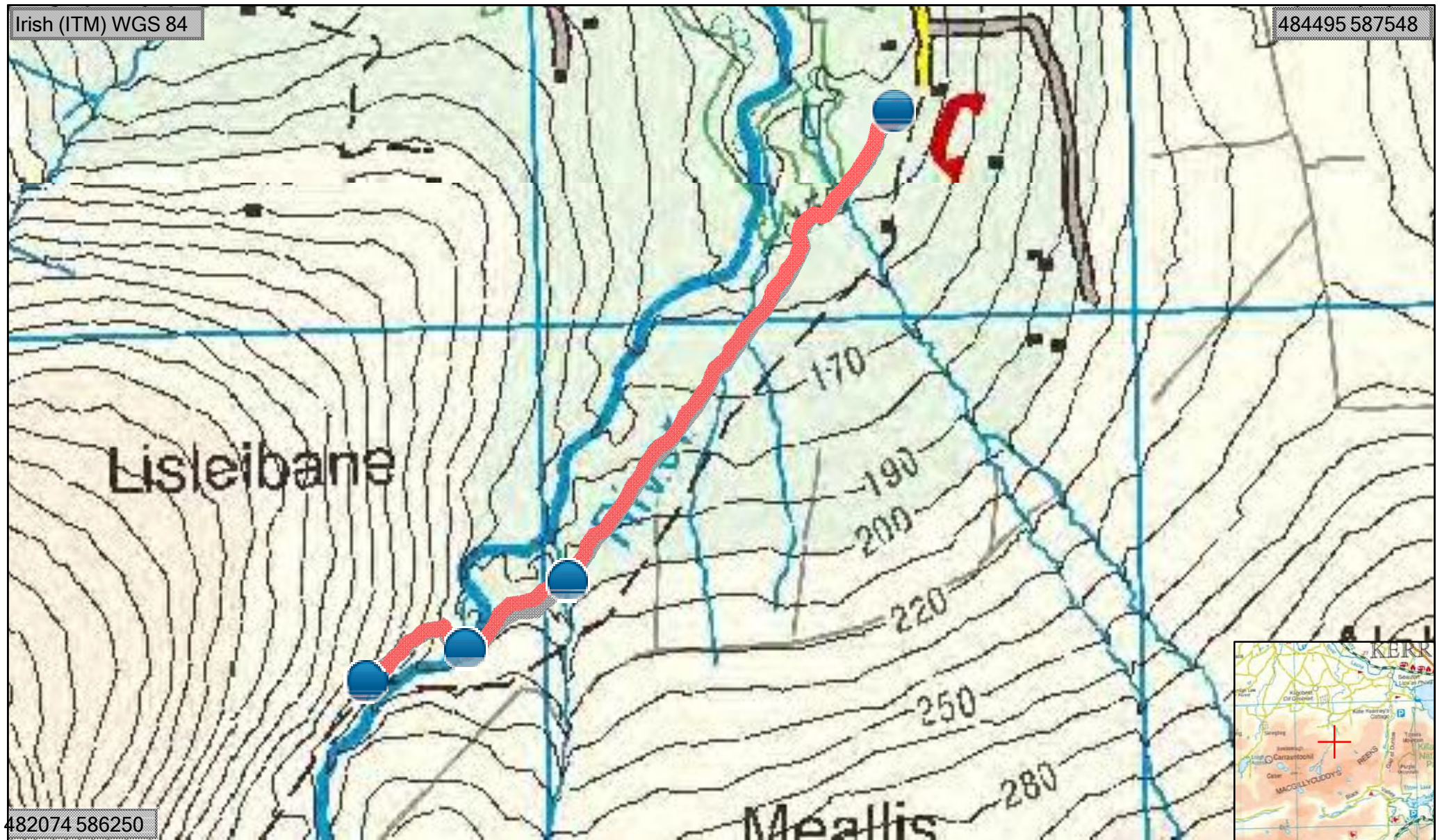
Fig 1 – Lateral Drainage required on section 1



Figure 2 – Badly eroded path at Section 3

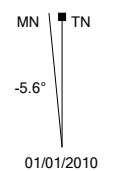
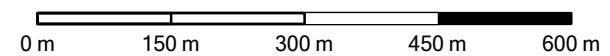
Irish (ITM) WGS 84

484495 587548



482074 586250

MR2 - Cronins



Cairngorms Outdoor Access Trust

Weather	Date	Path Number	Path Name	Surveyor	Start	483585
						ITM587397
						482679
Torrential rain	26th March 2015	MR 2	Cronins	Dougie Baird	End	ITM586496

Section	Length	Grid Ref	Surface Type	Features	Paths/ Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough- ness	Drain- age	Erosion	Cond- ition	Dyna- mism	Priority	Maint (md/py)	Capital Cost
1	918	483585 ITM587397	Agg.	Gate	1/0	1.20	1.2	0	6/11	4	2	4	4	4	4	0.5	€10,000

Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	918	culvert	0	...	0

Description

The Path from Cronins Yard has been laid with loose burn wash. It is not very eroded but really needs lateral drainage along most of the length to protect it - machine work

2	249	483022 ITM586651	Agg.	bridge 1	1/0	1.20	1.20	0	10/14	4	4	4	4	4	4	0.5	€3,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	0	Bridge	1

Description

built path, though needing lateral drainage to protect to protect it - easy to access with small machine

3	228	482847 ITM586565	Agg.	bridge 2	1/4	1.20	3.00	0.2	16/18	2	3	2	3	2	2	0.5	€25000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	0	Bridge	1

Description

Steep pull up to link with Lisleibane track, very eroded needing full build using hand built techniques, aggregate and revetment with pitched corners

TOTAL	1,395														4	1.5	€38,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	918	Other	0	Bridge	2

Description

The path from Cronins is mostly built using loose pebble aggregate. Sections 1 and 2 could really do with lateral ditching for most of the way to protect what is there Section 3 is badly eroded and needs built completely by hand

Path Number: MR3		Path Name: Hags Glen	Distance: 1,395m	Location: Start: 482024 ITM585152 End: 481077 ITM584074
Priority 2	Cost €90/160k	Designations: Natura 2000, SAC		Land Management Priorities: Livestock/grazing
<p>Use:</p> <p>The path starts at the end of the Lisleibane Track, and is used as the main access point to Carrauntoohill from this side of the hill. The path skirts the Lough before going through rough boulder debris to the Devil’s Ladder, with the ZigZag branching off just before. It may also get some use from people who just wish to access the Lough as part of the circular route from Cronin’s.</p>				
<p>Previous Path Management:</p> <ul style="list-style-type: none">- The path does not appear to have any path construction work done on it, though it has been waymarked at the start				
<p>Path Management Constraints:</p> <ul style="list-style-type: none">• The track is accessible by small plant and all natural materials required for repair and upgrade are readily available on-site• Kerry Council will need to be consulted as to whether or not there is a requirement for planning, and the area has Natura 2000 Designations, so any work would be considered as an operation requiring Appropriate Assessment Screening / consent under Irish and European statutory nature conservation law				
<p>Path Condition:</p> <ul style="list-style-type: none">• The Track is badly eroded, with damage to habitat spread up to 20 meters wide, as people try to avoid the roughest and wettest parts• Whilst most of the erosion is due to ‘path spread’ on what is mostly a robust environment, there is a short steep section in the middle with severe gullyng.• The upper section is more robust on the whole with an intact contained path going through boulder fields, with peat erosion in between.				
<p>Recommendations:</p> <ul style="list-style-type: none">• Most of the site is accessible by machine, and if used sensitively a ‘high and dry’ machine built solution would make a huge difference, with recovery of the habitat on the desired line likely to be quite rapid at that elevation in comparison with higher up the hill.• The upper sections would need to be done by hand, and would consist of light touch definition works, with some path building and drainage works in the wet peaty sections				
<p>Maintenance:</p> <p>Regular maintenance will be required once work has been completed, including drain clearing and topping up surfaces</p>				



Fig 1 – Path Spread on section 1



Figure 2 – Gullied Section

Irish (ITM) WGS 84



MR3 -Hag's Glen

0 m 100 m 200 m 300 m 400 m

MN TN
-5.6°

01/01/2010

Cairngorms Outdoor Access Trust

Weather	Date	Path Number	Path Name	Surveyor	Start	End
Wintry Showers	24th March 2015	MR3	Hags Glen Path	Dougie Baird	482024 ITM585152 481077	ITM584074

Section	Length	Grid Ref	Surface Type	Features	Paths/ Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough- ness	Drain- age	Erosion	Cond- ition	Dyna- mism	Priority	Maint (md/py)	Capital Cost
1	613	482024 ITM585152	Agg.	SIGNPOST	2/3	3.00	12	0.2	4/7	2	3	2	2	2	2	1	€25,000/ 95,000

Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	culvert	0	...	0

Description

Broad eroded path with use spread over a wide corridor. Mostly robust but requires path built to reduce the 12m spread down to 1m. Full build machine path

2	312	481573 ITM584714	Agg.	HAGS/CAIRN	3/5	4.50	13.00	0.4	11/14	2	3	2	2	2	2	2	€40,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

Wide erosion on steepening slope, with some severe gully in places
Needs full Hand Build to repair - good availability of materials

3	558	481443 ITM584962	Agg.	CAIRN	3/3	1.00	5.00	0	6/19	2	4	4	4	4	4	1	€25000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

Definition, Light Touch on through boulder field, with more substantial construction required further on in the wet boggy and eroded sections

TOTAL	1,483			March						2	3	3	3	3	3	2	€90,000/ 160,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	Other	0	Other	0

Description

Hags Glen Path is generally a wide spread erosion problem, without too much gully in places.
Construction of a quality path would reduce this spread significantly.

Path Condition Survey

Path Number: MR4		Path Name: Devil's Ladder	Distance: 613m	Location: Start: 481077 ITM584074 End: 480688 ITM583743
Priority 1	Cost €125,000	Designations: Natura, SAC		Land Management Priorities: Livestock/grazing
<p>Use:</p> <p>The path starts at the burn crossing at the top of the Hag's Glen Path. This is the main path to access Carrauntoohill, the highest mountain in Ireland, and is popular with walkers of all ages and abilities. At the same time the path is very steep, ascending a boulder scree gully to the main ridge, and is very badly eroded. The route has been described as dangerous by a number of organisations, with some use being encouraged away to a new and rapidly developing path adjacent (ZigZag), though this may have been overstated and it is obvious that Devil's Ladder remains the primary access route for the upper mountain.</p>				
<p>Previous Path Management:</p> <ul style="list-style-type: none">- The path does not appear to have had any path construction work done on it.- There has been some assessment work previously, with a report on the route available from Mountain Meathall				
<p>Path Management Constraints:</p> <ul style="list-style-type: none">• The site is approachable only on foot, and there is no place or desire for plant on this route.• All necessary materials are available on site and within the wide damage zone• Managing access on such a steep route whilst work is underway is likely to be problematic and it would be better to shut it at these times, with people directed on to ZigZag until the work is complete• Kerry Council will need to be consulted as to whether or not there is a requirement for planning, and the area has Natura 2000 Designations, so any work would be considered as an operation requiring Appropriate Assessment Screening /consent under Irish and European statutory nature conservation law				
<p>Path Condition:</p> <ul style="list-style-type: none">• The path is dreadfully eroded, with wide spread on steep boulder scree, and some very heavy gullying particularly at the top• The site is mobile, and highly contained within the gully, so care is needed when in close proximity to others above• It is not as dangerous as has been expressed by some, given that it is in the upper mountain and therefore a dangerous environment for the inexperienced and ill-prepared in many ways, and provides the most contained and obvious line to the summit in the range. If repaired it could be promoted as the main access route and used to deflect use away from the more vulnerable paths at ZigZag and O Sheas Gully.				
<p>Recommendations:</p> <ul style="list-style-type: none">• The path can be repaired borrowing techniques tried and tested in the Highlands of Scotland. A mixture of careful definition, substantial revetment and mixed pitched and aggregate path would provide a sustainable route to the summit ridge that was in keeping with the surrounding environment• The site is extremely challenging, with works likely to be based on similar styles achieved (over time) in Glencoe and Torridon in the Scottish Highlands. This is work for people with expertise in this technical upland path work only, and should not be attempted by workers without a good deal of experience, technical ability and a proven track record on handling health and safety in such a contained and steep site! If a local work force had built up experience on other paths in the area first then after a year or two they may be ready to tackle it				
<p>Maintenance:</p> <p>Regular maintenance will be required once work has been completed in an iterative manner, including clearing lines, repairs to structures and definition work to retain the line</p>				



Fig 1 – Looking down the damaged path to Hag's Glen



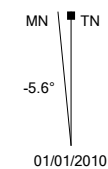
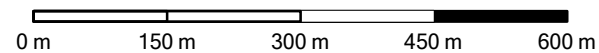
Figure 2 – Severe Gullying beneath the Summit Ridge

Irish (ITM) WGS 84

482137 584662



MR4- Devil's Ladder



Cairngorms Outdoor Access Trust

Weather	Date	Path Number	Path Name	Surveyor	Start	End
High winds - Heavy Rain/S now S Showers	24th March 2015	MR 4	Devils Ladder	Dougie Baird	481077 ITM584074 480688	ITM583743

Section	Length	Grid Ref	Surface Type	Features	Paths/ Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough-ness	Drain-age	Erosion	Cond-ition	Dyna-mism	Priority	Maint (md/py)	Capital Cost
1	168	481147 ITM584140	peat/agg	Burn Crossing	2/3	2.00	11	0.2	14/18	1	2	2	2	1	1	1	€35,000

Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	culvert	0	...	0

Description

Wet peaty path at start then steeper boulder scree and gullied path
Full Hand build with clever alignment required - pitching revetment etc

2	185	481387 ITM584129	boulder/scree	bedrock step	3/5	10.00	22.00	0.4	18/29	1	1	2	1	1	1	2	€40,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

Boulder scree with multiple routes and a lot of erosion and gullyng
Full Build hand build repairs required, pitching revetment and alignment

3	260	480880 ITM583868	scree/rock	Bedrock	3/5	11.00	22.00	2.2	19/32	1	1	1	1	1	1	2	€50000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

Badly gullied steep approach to the ridge with multiple paths,
loose debris and deep gullyng. Full Build hand-build path required

TOTAL	613			March											1	5	€125,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	Other	0	Other	0

Description

Devils Ladder is the main approach to Carrauntoohill and is heavily used. It is steep contained within a gully with multiple paths, braids and substantial erosion The route could be repaired using heavy hand build techniques, but will require workers with proven expertise in pitching, revetment etc in mountain environment to achieve this work to the correct and appropriate standards

Path Number: MR5		Path Name: ZigZag	Distance: 909m	Location: Start: 481147 ITM584140 End: 481570 ITM583621
Priority 3	Cost €26,000	Designations: Natura 2000, SAC		Land Management Priorities: Hill Farming
<p>Use:</p> <p>The path starts just before the Devil’s Ladder near the top of the Hag’s Glen path. The route is being promoted as a ‘safe’ alternative to Devil’s Ladder, though it is also eroding and Kerry Mountain Rescue, amongst others, are currently speculating as to whether or not it is not just as dangerous as the Ladder. Users are of all ability, and with the path now visible from the summit ridge it probably offers quite an attractive round trip for those who have gone up the Devil’s Ladder and are looking for an alternative descent.</p>				
<p>Previous Path Management:</p> <ul style="list-style-type: none">- The path does not appear to have had any path construction work done on it, and appears to have evolved through use				
<p>Path Management Constraints:</p> <ul style="list-style-type: none">• The site is approachable only on foot, and there is no place or desire for machinery on this route.• All necessary materials are available on site and within the wide damage zone• Managing access on such a steep route whilst work is underway is likely to be problematic and it would be better to shut it at these times, with people directed on to Devil’s Ladder when work is being carried out• Kerry Council will need to be consulted as to whether or not there is a requirement for planning, and the area has Natura 2000 Designations, so any work would be considered as an operation requiring Appropriate Assessment Screening /consent under Irish and European statutory nature conservation law.				
<p>Path Condition:</p> <ul style="list-style-type: none">• The path is very wet, peaty and badly eroded on the first section• Beyond this the path traverses a steep cross slope with free drainage, and is generally in good condition though the surface is beginning to come undone in places• The path is now visible from the summit ridge so is now ‘self-advertised’ as a descent route				
<p>Recommendations:</p> <ul style="list-style-type: none">• The path can be repaired, and could easily be upgraded along it’s length. This would possibly create further issues with long term sustainability, as use would likely increase, and the upper site in particular is open and uncontained.• It would be better to repair the Devil’s ladder and promote as the main route, with ZigZag reverting to an informal alternative. The first section could easily be repaired with standard hand build techniques, with pre-emptive work and monitoring only for further up				
<p>Maintenance:</p> <p>Drain clearing and topping up surfaces on the first section, some pre-emptive work and monitoring work on an annual basis above this.</p>				



Fig 1 – Erosion on Section 1



Figure 2 – Narrow path traversing the slope

Irish (ITM) WGS 84

482604 584901



480181 583605

MR5-ZigZag

0 m 150 m 300 m 450 m 600 m

MN TN
-5.6°
01/01/2010

Cairngorms Outdoor Access Trust

Weather	Date	Path Number	Path Name	Surveyor	Start	End
Heavy Rain/S now	25th March 2015	MR5	ZigZag	Dougie Baird	481147 ITM584140 481570 ITM583621	

Section	Length	Grid Ref	Surface Type	Features	Paths/ Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough-ness	Drain-age	Erosion	Cond-ition	Dyna-mism	Priority	Maint (md/py)	Capital Cost
1	295	481147 ITM584140	peat/grass	J unction	2/3	2.00	7	0.2	14/18	2	2	2	2	2	2	2	€18,000

Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	culvert	0	...	0

Description

Very wet, peaty and badly eroding path from Junction with Hags Glen
Full build work required but may encourage further use

2	198	481387 ITM584129	Agg.	Corner	1/2	0.80	2.00	0.1	18/27	3	4	4	3	3	3	1	€3,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

Narrow zig zag path, beginning to gully in places
Some key pre-emptive work here would save a lot of work in the longer term

3	416	481414 ITM584009	Agg.	Traverse	1/1	0.80	1.50	0.1	16/24	3	4	4	4	4	4	1	€5000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

Long traverse over robust ground to the ridge, getting a bit worn with increased use, light touch and pre-emptive works only

TOTAL	909			March											3	4	€26,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	Other	0	Other	0

Description

ZigZag is a developing route in preference to Devils Ladder. It would be better to deal with Devils and treat this path in a more light touch and pre-emptive manner
Carrauntoohil approach in future years Monitor to see if use can be moved back onto a repaired Devils for main

Path Number: MR6	Path Name: ZigZag to Carrauntoohill	Distance: 1,787m	Location: Start: 481590 ITM585647 End: 480336 ITM584481
Priority 3	Cost €13,000	Designations: Natura 2000, SAC	Land Management Priorities: Hill Farming
<p>Use:</p> <p>The path traverses the high ground linking the tops of ZigZag, Devil's Ladder and Heavenly Gates to the summit approach for Carrauntoohil. The path is used by walkers of all ages and experience, and is in the busiest part of the MacGillycuddy Reeks range. The ridge is broad and uncontained, and is a mixture of ridge peats and dry exposed ground.</p>			
<p>Previous Path Management:</p> <ul style="list-style-type: none"> - The path does not appear to have had any path construction work done on it, and has evolved through use 			
<p>Path Management Constraints:</p> <ul style="list-style-type: none"> • The site is approachable only on foot, and there is no place or desire for machinery on this route. • All necessary materials are available on site and within the wide damage zone • The path is at high altitude, between 800 and 1000 meters asl, and is very exposed to the elements. • The path is in the high part of the mountains and any repair works would have to be light touch and meticulous in not negating the quality or wild land experience • Any work carried out would be light touch and definition and non-constructive in nature, and therefore not requiring planning consent. The area has Natura 2000 designations, so any work would be considered as an operation requiring Appropriate Assessment Screening /consent under Irish and European statutory nature conservation law. 			
<p>Path Condition:</p> <ul style="list-style-type: none"> • Section 1 is occasionally peaty wet and spreading though on the whole not a problem • The approach to Carrauntoohill has become worn and spread with multiple routes, but on the whole is robust. 			
<p>Recommendations:</p> <ul style="list-style-type: none"> • Some light touch and pre-emptive definition work would do a lot to prevent further erosion with a low input only required at present. 			
<p>Maintenance:</p> <p>A couple of days effort per year on pre-emptives and monitoring would be enough to sustain this route without any major intervention</p>			



Fig 1 – Peat erosion on the ridge at Section 1



Figure 2 – The approach to Carrauntoohil is becoming spread out with a number of paths and braids

Cairngorms Outdoor Access Trust

Weather	Date	Path Number	Path Name	Surveyor	Start	481590
						ITM585647
						480336
Torrential rain	26th March 2015	MR 6	ZigZag to Carrauntoohil	Dougie Baird	End	ITM584481

Section	Length	Grid Ref	Surface Type	Features	Paths/ Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough-ness	Drain-age	Erosion	Cond-ition	Dyna-mism	Priority	Maint (md/py)	Capital Cost
1	918	481590 ITM585647	Peat/gras	top of zigzag	2/2	0.80	3	0.2	8/18	4	2	3	3	3	3	2	€10,000

Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	culvert	0	...	0

Description

Peaty wet track from top of Zig Zag to top of Devils Ladder. Light touch and pre-emptive works would prevent further deterioration without any intensive works

2	869	480672 ITM 583726	peat/agg	top of devils	3/4	0.80	20.00	0.1	18/28	3	4	3	3	3	3	3	€8,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	0	...	0

Description

Summit approach from top of Devils, peaty path going to steep robust slope with multiple paths and braids, Light touch and definition work only required

TOTAL	1,787														3	5	€18,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	Other	0	Bridge	0

Description

The path from the top of Zig Zag to Devil's is peaty and wet, basically OK, the approach to Carrauntoohil has numerous paths and braids and would benefit from light touch and pre-emptive works to reduce future damage

Path Number: MR7		Path Name: Caher	Distance: 2,664m	Location: Start: 477698 ITM585637 End: 478972 ITM584076
Priority 3	Cost €73k/193k	Designations: Natura2000, SAC		Land Management Priorities: Hill Farming/ Irish Water
<p>Use:</p> <p>The path is the easiest way up to Carrauntoohil, and also offers one leg of the Coumloughra Horseshoe, one of Ireland’s finest hill walks. It starts from the dam at the top of the track and ascends the wet, but easy slope to Caher summit. The path is used by walkers of all ages and experience, and the site is likely used for summer grazing as it is open, wide and well vegetated.</p>				
<p>Previous Path Management:</p> <ul style="list-style-type: none">- The path does not appear to have had any path construction work done on it, and has evolved through use				
<p>Path Management Constraints:</p> <ul style="list-style-type: none">• It would be easy to get small machinery onto site via the hill track, and this would be fine on the broad wet slope in section 1 and 2 provided it was used sensitively.• All necessary materials are available on site and within wide damage zone• Any work may require planning consent and Kerry Council would need to be consulted about this in the development phase. The area has natural heritage designations, so any work would be considered as an operation requiring Appropriate Assessment Screening /consent under Irish and European statutory nature conservation law.				
<p>Path Condition:</p> <ul style="list-style-type: none">• Section 1 is wet peat with a wide spread and numerous paths. Section 2 is a broad and widening path on a wet, though reasonably robust slope• The summit approach is steeper and would only really require quite light touch work on it to prevent further deterioration				
<p>Recommendations:</p> <ul style="list-style-type: none">• Machine path construction on sections 1 and 2, but with sensitivity to the landscape• Hand built work on the summit approach, using light touch and pre-emptive techniques to prevent further erosion.				
<p>Maintenance:</p> <p>Annual maintenance on drains and topping up surfaces, with small scale pre-emptives and monitoring only further up</p>				



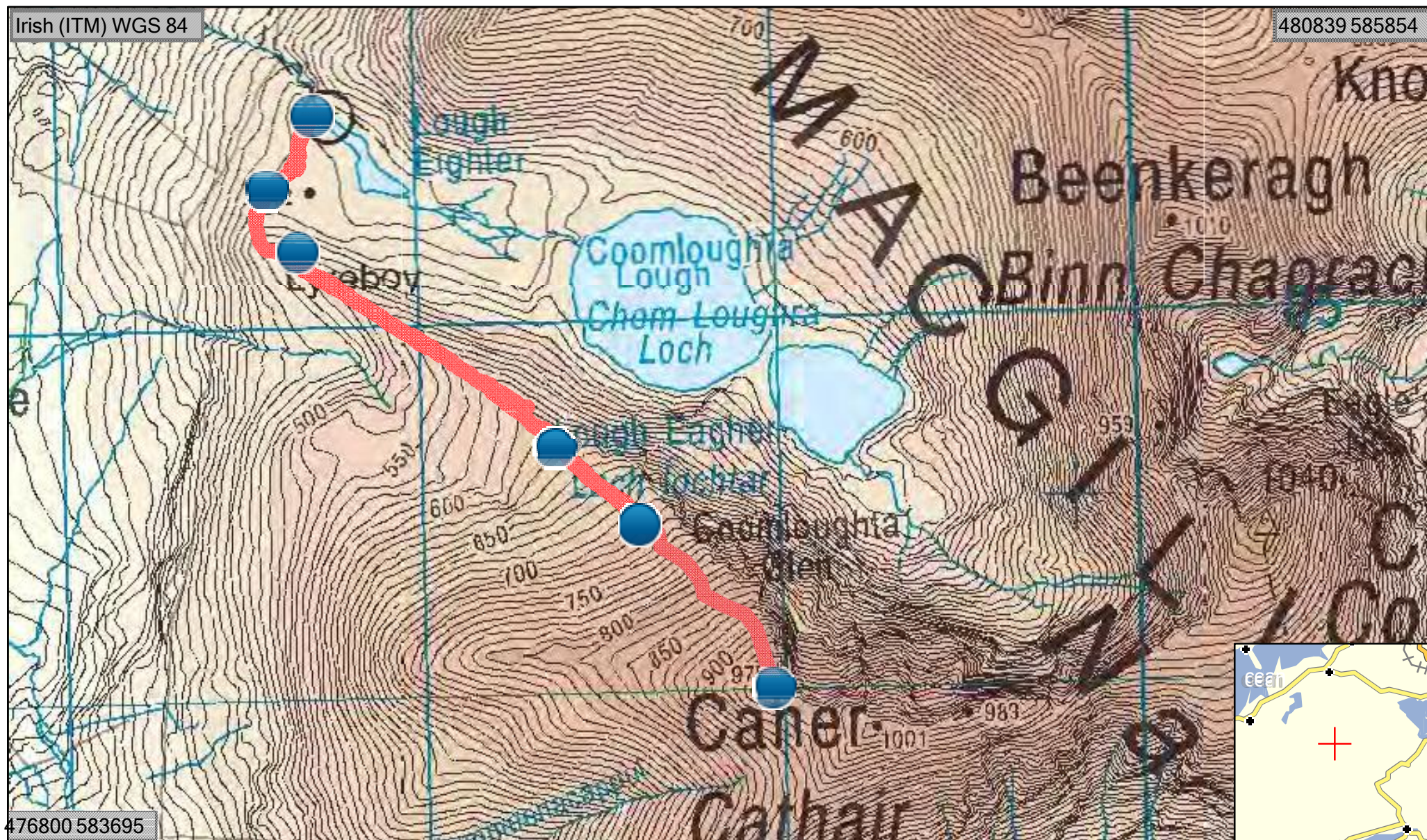
Fig 1 – One of the numerous paths through the peat hags at Section 1



Figure 2 – Small scale path erosion and spread on the summit approach

Irish (ITM) WGS 84

480839 585854



476800 583695

MR7 - Caher

0 m 250 m 500 m 750 m 1000 m

MN TN
-5.7°
01/01/2010

Cairngorms Outdoor Access Trust

Weather	Date	Path Number	Path Name	Surveyor	Start	End
Light Showers	26th March 2015	MR 7	Caher	Dougie Baird	477698 ITM585637 478972 ITM584076	

Section	Length	Grid Ref	Surface Type	Features	Paths/ Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough-ness	Drain-age	Erosion	Cond-ition	Dyna-mism	Priority	Maint (md/py)	Capital Cost
1	288	477698 ITM585637	peat	dam	2/5	1.20	12	0.4	4/6	2	1	3	2	2	2	0.5	€8,000/ 28,000

Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	culvert	0	...	0

Description

Wet, Peaty and wide path from dam across the bog - multiple paths and braids
Full Build machine constructed path, raised Hi and Dry with soil inversion

2	1350	477566 ITM585438	peat/agg	shoulder	2/3	0.80	10.00	0.2	8/12	3	2	4	3	3	3	1	€30,000/ 135,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

The path ascends the shoulder of C
aher, and is generally with path spread on a

3	414	478359 ITM584511	Agg.	lope steepen	1/3	0.80	3.00	0.2	16/18	3	3	3	3	3	3	1	€25000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

Steepening slope ascending Caher, widening on robust ground
Hand build path work only here - aggregate with pitched corners and anchor bars

4	612	478585 ITM584511	Agg.	mmit appoa	2/3	0.80	3.50	0.3	19/24	3	4	3	3	3	3	2	€10000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

summit approach on steepening ground worn and spreading
some light touch work here would save a lot of work in future years

TOTAL	2,664														3	5	€73,000/ 193,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	Other	0	Other	0

Description

The Caher Path is fairly robust, though the lower peaty section is in bad condition Machine construction on the lower sections would be fine here if done sensitively. Further up light touch and pre-emptive work would prevent further erosion

Path Number: MR8		Path Name: Beenkeragh	Distance: 3,733m	Location: Start: 477755 ITM585637 End: 480301 ITM584490
Priority 4	Cost €11,000	Designations: Natura, SAC		Land Management Priorities: Hill Farming/ Irish Water
<p>Use:</p> <p>The path is the approach to Carrauntoohill via the Beenkeragh ridge, and is one of the legs of the Coumloughra horseshoe, providing one of the finest hill walks in Ireland. The ridge itself acts as a bit of a filter, and the route is predominantly used by more experienced walkers with a reasonable head for heights. The hill is open and looks to be used for open hill grazing, and the water board clearly have an interest in the lough and the water from it.</p>				
<p>Previous Path Management:</p> <ul style="list-style-type: none">- The path does not appear to have had any path construction work done on it, and has evolved through use				
<p>Path Management Constraints:</p> <ul style="list-style-type: none">• The approach to the path is narrow and steep, and any work would need to be done by hand only• Any necessary materials are available on site.• Any work required would be light touch and so small scale so would not require planning consent. The area has natural heritage designations, so any work would be considered as an operation requiring Appropriate Assessment Screening /consent under Irish and European statutory nature conservation law.				
<p>Path Condition:</p> <ul style="list-style-type: none">• The lower section is a bit worn and peaty, and the very upper part near O Sheas has some rapidly deteriorating erosion• The vast majority of the path is fine and requires no work at all.				
<p>Recommendations:</p> <ul style="list-style-type: none">• Some light touch work would help at top and bottom of the path. The path around the junction with O Shea’s gully in particular would benefit from some light touch and pre-emptive work to prevent any further erosion.• The vast majority of the route requires nothing, but would be worth monitoring from time to time in future years				
<p>Maintenance:</p> <p>A couple of days pre-emptive work and light touch each year would be sufficient to keep this route sustainable</p>				



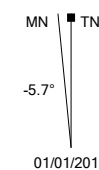
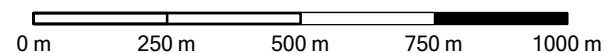
Fig 1 – Narrow peaty path at section 1



Figure 2 – Narrow and robust approach Ridge path



MR8 - Beenkeragh



Weather	Date	Path Number	Path Name	Surveyor	Start	477755 ITM585637
Sunny, clear, calm	21st April 2015	MR 8	Beenkeragh Ridge	Allan Mee	End	480301 ITM584490

Section	Length	Grid Ref	Surface Type	Features	Paths/ Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough-ness	Drain-age	Erosion	Con-dition	Dyna-mism	Priority	Maint (md/py)	Capital Cost
1	603	477755 ITM585637	peat/agg	Ridge cairns	2/0	1.00	2	0	14/19	3	4	4	5	3	4	1	€6,000

Built Features

XD								
WB								

Description

Start of Beenkeragh, initially exposed peat onto main ridge,steep start; path indistinct until on ridge,tending to take diff routes as undefined; Light touch definition works only

2	917	478284 ITM586089	grass/agg	Ridge cairns	1/2	1.00	2.00	0	11/18	3	5	4	5	4	5	0	0
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Built Features

XD								
WB								

Description

main Beenkeragh ridge, traverses number of minor peaks, summit cairns, path often indistinct on ridge, No Work Required

3	1,200	479170 ITM586107	grass/agg	Stone wall	1	0.50	1.00	0	10/19	3	5	4	5	4	5	0	0
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Built Features

XD								
WB								

Description

Main ridge, intact dry stone wall on ridge before Beenkeragh slope; path indistinct over large parts but path skirts this - No Work Required

4	702	480113 ITM585275	scree/rock	Beenkeragh summit	1	0.50	1.00	0	18/24	2	5	5	4	4	5	0	0
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Built Features

XD								
WB								

Description

Summit ridge over Beenkeragh and descent to top of O'S hea's Gully; scrambling avoidance path for the most part narrow, excellent condition, No Work Required

5	311	480077 ITM584631		Summit cair	3	1.00	10 to 15	0		2	4	2	3	2	2	1	€5000
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Built Features Index = 2

XD								
WB								

Description

Eroded boulder ridge, cairn at end; OS G to summit; heavily used but not as badly eroded as main summit approach; Light touch, pre-emptive works only

TOTAL	3,733														4	2	€11,000
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Built Features

XD								
WB								

Description

Excellent ridge hike and scramble over Beenkeragh, minor issues until reach jnct with top of O'Shea's Gully,Worth doing some light touch and pre-emptive works to prevent further erosion in the future

Path Number: MR9		Path Name: Coumloughra	Distance: 902m	Location: Start: 477728 ITM585634 End: 478454 ITM585315
Priority 4	Cost €28,000	Designations: Natura 2000, SAC		Land Management Priorities: Hill Farming / Water Board
<p>Use:</p> <p>The path leads from the dam up to the lough shore, which is a lovely viewpoint for the Coumloughra horseshoe. It is a welcome break spot for any walkers on the way up or down the mountains. The Lough itself is an end point for some users, who will enjoy the walk from the sizeable car park at the bottom of the hill track.</p>				
<p>Previous Path Management:</p> <ul style="list-style-type: none">The path does not appear to have had any management, with the route looking very much one that has evolved through use over a long period of time.				
<p>Path Management Constraints:</p> <ul style="list-style-type: none">The track is easily accessible by small plant and natural materials are readily available on-site for path construction.Any path upgrade may require planning consent, and Kerry Council should be consulted about this. Any work would require mitigation due to Natura 2000 designations.				
<p>Path Condition:</p> <ul style="list-style-type: none">The track is worn but fairly robust, and deteriorating slowly.				
<p>Recommendations:</p> <ul style="list-style-type: none">The path is fairly robust, and certainly not a high priority, but would be easy and inexpensive to upgrade with construction of a machine built path. This would be a raised aggregate surface with lateral drainage and all materials won on site.				
<p>Maintenance:</p> <ul style="list-style-type: none">Regular maintenance will be required once work has been completed, including drain clearing and topping up surfaces				



Fig 1 – Worn spread out path on section 1



Figure 2 – Spread erosion approaching the Lough

Irish (ITM) WGS 84

479758 586112



MR9-Coumloughra

0 m 150 m 300 m 450 m 600 m

MN TN
-5.7°
01/01/2010

Cairngorms Outdoor Access Trust

Weather	Date	Path Number	Path Name	Surveyor	Start	End
Light Showers	27th March 2015	MR 9	Coumloughra	Dougie Baird	477728 ITM0585634 0478454	ITM0585315

Section	Length	Grid Ref	Surface Type	Features	Paths/ Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough-ness	Drain-age	Erosion	Cond-ition	Dyna-mism	Priority	Maint (md/py)	Capital Cost
1	262	477728 ITM0585634	Agg.	dam	1/2	1.10	2.8	0.2	3/7	3	2	3	3	4	3	0.5	€8,000

Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	culvert	0	...	0

Description

Worn and spreading path from dam, robust but very wet in places and widening
Full Build machine constructed path, raised Hi and Dry with soil inversion

2	312	477919 ITM0585535	grass/peat	bog	2/1	0.50	3.50	0.1	3/6	4	2	4	4	4	4	0.5	€10,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

Very wet section of path, faint in places and worn in others
Full Build Machine Constructed required, Hi and Dry

3	328	478194 ITM585379	Agg.	burn	2/1	0.90	2.10	0.2	6/8	3	2	3	4	3	3	0.5	€10000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

Steepening path to lough shore, spreading, widening erosion
Full build Machine Construction, Hi and Dry with soil inversion/ditching

TOTAL	902														3	1.5	€28,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	Other	0	Other	0

Description

The Coumloughra Path is a worn and heavily used path to viewpoint for the Caher Horseshoe, worn but fairly robust, would be easy to fix with a machine built path

Path Number: MR10		Path Name: O Shea's Gully	Distance: 2,205m	Location: Start: 482077 ITM585470 End: 480063 ITM584614
Priority 3	Cost €54,000	Designations: Natura2000, SAC		Land Management Priorities: Livestock/grazing
<p>Use:</p> <p>The path departs the Lisleibane Track at the major river ford heading up Hag's Glen. The path is steep and rugged and is suitable for the more experienced walkers. Nevertheless it does get it's fair share of less experienced groups, and the use has led to some quite localised erosion in vulnerable parts of the path.</p> <p>The route is used an alternative to Devil's Ladder, and is probably more used an uphill route than a downhill one, and offers an exhilarating walk through the wilder part of the massif, with stunning views of the Reeks on the way up, and an exit onto the top of the Beenkeragh ridge.</p>				
<p>Previous Path Management:</p> <ul style="list-style-type: none">The path does not appear to have had any path construction work done on it.				
<p>Path Management Constraints:</p> <ul style="list-style-type: none">The site is approachable only on foot, and there is no place or desire for machinery on this route.All necessary materials are available on site and within the damage zoneManaging access on such a steep route whilst work is underway is likely to be problematic and it would be better to shut it at these times, with people directed on to Devil's Ladder or ZigZag until the work is complete. The site is also rugged steep and goes to high altitude.Kerry Council will need to be consulted as to whether or not there is a requirement for planning, and the area has Natura Designations, so any work would be considered as an operation requiring Appropriate Assessment Screening /consent under Irish and European statutory nature conservation law.				
<p>Path Condition:</p> <ul style="list-style-type: none">The path is generally pretty good, but each section has short sections of vulnerable path that are eroding quite badlyThe steep top section is the one that has the most problems				
<p>Recommendations:</p> <ul style="list-style-type: none">The path can be repaired with short sections of upgrade at the few places where the path is vulnerable and eroding. Light touch and pre-emptive techniques could be utilised well on this site to address immediate erosion and prevent the further deterioration that seems inevitable.				
<p>Maintenance:</p> <p>The path will require a few days pre-emptive and maintenance work to prevent future deterioration on an annual basis.</p>				



Fig 1 – Localised erosion approaching the first bedrock 'step'



Figure 2 – Gullying on the vulnerable final approach to the summit ridge

Irish (ITM) WGS 84

482346 585555



0 m 150 m 300 m 450 m 600 m

MN TN
-5.6°
01/01/2010

MR10-O'Shea's Gully

Cairngorms Outdoor Access Trust

Weather	Date	Path Number	Path Name	Surveyor	Start	End
Sunny, clear, calm	20/04/2015	MR 10	O Sheas Gully	Allan Mee	482077 ITM585470 480063 ITM584614	

Section	Length	Grid Ref	Surface Type	Features	Paths/ Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough-ness	Drain-age	Erosion	Cond-ition	Dyna-mism	Priority	Maint (md/py)	Capital Cost
1	298	482077 ITM585470	agg	J nct with HG	1/2	1.00	2	0	5/8	3	3	3	4	3	3	0.5	€7,000
Built Features										Description							
XD									start Jnct with Hags Glen; 'path' indistinct thru boulder field; flat gradient trample width 8m around wet boggy patch, hand built path repair								
WB																	
2	768	481648 ITM585172	agg/rock	3 Rock Steps	1/3	2.50	8.00	0	11/18	2	3	3	4	3	3	0.5	€16,000
Built Features										Description							
XD									mostly fairly tight path, 3 rock 'steps'; track eroded to 8m just above step, Partial Hand Built repair required towards top of section								
WB																	
3	215	480931 ITM584897	grass/agg		1/2	2.00	5.00	0	5/7	3	4	3	4	3	3	0.5	€3000
Built Features										Description							
XD									Path levels off, relatively flat, open bowl below scree slope; Path requires light touch/pre-emptive works and definition								
WB																	
4	151	480723 ITM584840	agg/scree	J nct with HG	1	1.50	2.00	0	12/23	3	5	3	4	3	4	0.5	€3,000
Built Features										Description							
XD									J unction with Heavenly Gates path; extensive shingle slope, tight path for most part; Light touch and definition only required								
WB																	
5	257	480572 ITM584829	grass/agg	OS G start	1/2	1.50	2.00	0	8/11	2	5	4	3	2	3	0.5	€15000
Built Features										Description							
XD									Flat bowl then rough steepish climb on eroded path, small lochan at end of section; Some definition and repairs at end of section								
WB																	

Cairngorms Outdoor Access Trust

6	516	480322 IT M584992	scree/agg	Lochan	1/2	1.50	6.00	0	16/28	2	5	3	3	2	3	0.5	€10,000
Built Features										Description							
XD										Steep pull up to ridge, loose and gullied in places and badly damaged at top Definition work in mid gully with more substantial repairs at the top							
WB																	
TOTAL	2,205														3	3	€54,000
Built Features										Description							
XD										Lower sections from Hags Glen pretty good though spreading where path undefined/indistinct; V dynamic start to OS G proper at Jnct with HG path; Eroded, dynamic upper section							
WB																	

Path Number: MR11		Path Name: Heavenly Gates	Distance: 994m	Location: Start: 480658 ITM584787 End: 480345 ITM584478
Priority 4	Cost €16,000	Designations: Natura2000, SAC		Land Management Priorities: Livestock/grazing
<p>Use:</p> <p>The path leaves the O Shea’s Gully path underneath the Eagle’s Nest, and pulls up to join with the summit approach to Carrantoohill above the top of the Devil’s Ladder. The route is steep and rugged, with is mostly used by the more experienced walkers and mountaineers. It does, however get its fair share of less experienced groups, and the level of use has led to small areas of heavy localised erosion in vulnerable parts of the path.</p> <p>The route is a nice alternative to the Devil’s Ladder and provides stunning views of the Reeks massif on a challenging but rewarding hike.</p>				
<p>Previous Path Management:</p> <ul style="list-style-type: none">The path has had no work done to it.				
<p>Path Management Constraints:</p> <ul style="list-style-type: none">The site is approachable only on foot, and there is no place or desire for plant on this route.All necessary materials are available on site and within the damage zoneManaging access on such a steep route whilst work is underway is likely to be problematic and it would be better to shut it at these times, with people directed on to O Shea’s Gully, Devil’s Ladder or ZigZag until the work is complete. The site is also rugged steep and goes to high altitude.Any work carried out would be so low scale and in the pre-emptive/light touch category that it is unlikely to require planning consent. Any work would be considered as an operation requiring Appropriate Assessment Screening /consent under Irish and European statutory nature conservation law.				
<p>Path Condition:</p> <ul style="list-style-type: none">The path is generally pretty good, but there are sections of localised erosion on each section.				
<p>Recommendations:</p> <ul style="list-style-type: none">The path can be repaired with short sections of upgrade at the few places where the path is vulnerable and eroding. Light touch and pre-emptive techniques could be utilised well on this site to address immediate erosion and prevent the further deterioration that might require heavier intervention in the future.				
<p>Maintenance:</p> <p>The path will require a few days pre-emptive and maintenance work to prevent future deterioration on an annual basis.</p>				



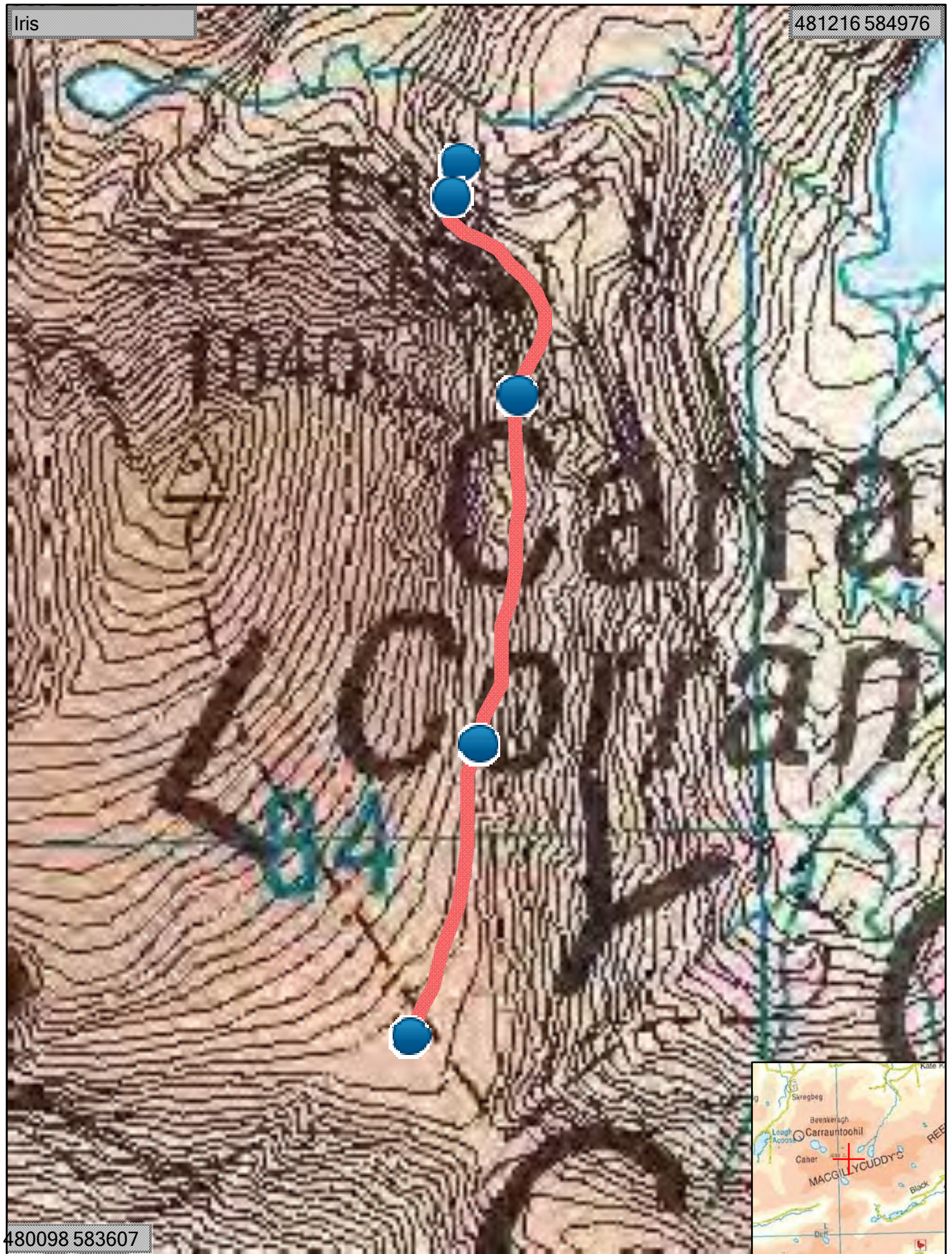
Fig 1 – Localised erosion around the bedrock 'step'



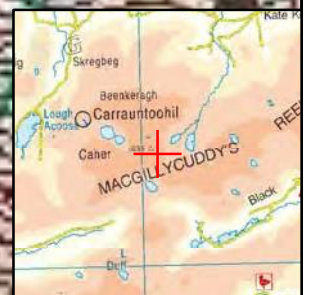
Figure 2 – Scree chute at section 3

Iris

481216 584976



480098 583607



0 m 100 m 200 m 300 m 400 m

MN TN
-5.6°
01/01/2010

Weather		Date		Path Number		Path Name		Surveyor		Start							
Sunny, clear, calm		20th March 2015		MR 11		Heavenly Gates		Allan Mee		End		480658 ITM584787					
Section	Length	Grid Ref	Surface Type	Features	Paths/Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough-ness	Drain-age	Erosion	Cond-ition	Dyna-mism	Priority	Maint (md/py)	Capital Cost
1	26	480658 ITM584787	grass/scree	ect with OS	1/3	1.00	3	0	18/25	2	5	3	4	1	3	1	€1,000
Built Features									Description								
XD									Eroded steep slope where joins O'Shea's Gully path, shortcuts being created								
WB									across scree Light touch and pre-emptive works								
2	121	480649 ITM584765	grass/scree		1/0	0.50	1.00	0	16/26	3	4	2	4	3	4	0.5	€2,000
Built Features									Description								
XD									S small path along slope joining OS G track, splits into 2 at end; people going straight								
WB									down slope Light touch works to prevent further erosion								
3	141	480747 ITM584682	rok/scree	roded gully	1/2	1.00	5.00	2	19/28	1	4	2	2	2	2	0.5	€10000
Built Features									Description								
XD									Deeply eroded, steep gully, dangerous in parts (bedrock)								
WB									repair works required between bedrock and gully, plus some light touch works								
4	369	480717 ITM584545	agg	goat track	1/0	1.00	1.50	0	20/29	3	4	4	4	3	4	0.5	€1,000
Built Features									Description								
XD									Very steep drop to Hags Glen, goat track, largely in excellent condition								
WB									Light touc Irish Grid IV 80674 84121								
5	337	480650 ITM584147	agg/scree	Plateau	1/1	0.50	1.00	0	16/19	3	4	3	4	4	4	0.5	€2000
Built Features									Description								
XD									On summit plateau, dry heath, little/no erosion as yet, 'path' indistinct across								
WB									plateau to join eroded summit ascent. Light touch and a little definition work only								
TOTAL	994														4	3	16,000
Built Features									Description								
XD									Majority of Heavenly Gates path in good condition (tight goat track) except for								
WB									eroded lower sec where joins OSG path; walkers tending to take alternative route								
									down at condition in lower sec, gullying and erosion resulting in widening								
									trample/eroded								
									area; bottom of sec 3 (stone hut or bothan),start of the track in poor condition								

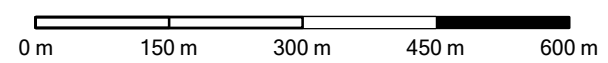
Irish (ITM) WGS 84

488629 589004

Kate Kearne
Cottage

Cassau
Lough

486210 587705



	MN	TN
1	0.00	0.00
2	0.00	0.00
3	0.00	0.00
4	0.00	0.00
5	0.00	0.00
6	0.00	0.00
7	0.00	0.00
8	0.00	0.00
9	0.00	0.00
10	0.00	0.00
11	0.00	0.00
12	0.00	0.00
13	0.00	0.00
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86	0.00	0.00
87	0.00	0.00
88	0.00	0.00
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93	0.00	0.00
94	0.00	0.00
95	0.00	0.00
96	0.00	0.00
97	0.00	0.00
98	0.00	0.00
99	0.00	0.00
100	0.00	0.00

-5.6°

01/01/2010

Path Number: MR12		Path Name: Turf Path	Distance: 3,264m	Location: Start: 487723 ITM388358 End: 486607 ITM588301
Priority 3	Cost €83,000	Designations: Natura2000, SAC		Land Management Priorities: Livestock/Hill farming
<p>Use:</p> <p>The Turf Path has been intensively constructed quite some time ago using hand built techniques, and is wide enough to have been some kind of cart track onto the upper peatland, presumably for turf. It is an extraordinary level of labour for this type of purpose, and there is little evidence of pony or vehicle use now, and appears to be used predominantly as a walker’s path to what is a fantastic viewpoint into the MacGillycuddy Reeks, as well as out onto the flatter lands of eastern Kerry.</p>				
<p>Previous Path Management:</p> <ul style="list-style-type: none">- The Track appears to have been hand-built to a high standard, using revetment, laid paved/pitched sub-base with aggregate on top, and conduit and lateral drainage.- This would have been a massive piece of infrastructure of its time in the area, for extraction of peat, and one wonders if it may have been built via Board of Works scheme, though records of these road schemes were largely lost in the 1960s. If so it is a poignant reminder etched on the landscape of the people of the time, and it is built with real quality in what may have been the very worst of circumstances.				
<p>Path Management Constraints:</p> <ul style="list-style-type: none">• The track is accessible by small machinery along its entire length and all natural materials are readily available on-site• Repairs to the existing road may not be subject to planning as it has already been heavily engineered and the works would be minor, but the use of materials and techniques are likely to require mitigation due to natural heritage designations. If the path was extended to the viewpoint this may require planning consent and Kerry County Council should be consulted.				
<p>Path Condition:</p> <ul style="list-style-type: none">• The integrity of the Track surface is still broadly intact, despite no apparent maintenance in a very long time, and this is testament to the quality of build. However the lateral drainage is now subsumed and with use picking up the surface has begun to be penetrated in a number of places, and the route is reaching a critical point whereby a major storm could cause substantial damage to the built route.• The traverse to the top of the track is still in pretty good condition, but the lateral drain has slumped.• The route from the top of the built track to the viewpoint is now wide and eroded across raised peat bog.				
<p>Recommendations:</p> <ul style="list-style-type: none">• Drainage repair to the existing track, including excavation of lateral drains, construction of cross drains and water bars would largely preserve the track for future use. Lost surfacing could then be replaced.• Extension of the path to the viewpoint would narrow erosion on the developing path, and provide a very good alternative walk for people who do not necessarily wish to climb Carrauntoohil but with to experience the mountains and the area, especially if promoted.				
<p>Maintenance:</p> <p>Regular maintenance will be required once work has been completed.</p>				



Figure 1 and 2 – Built surface breaking down on zig zags due to collapse of drainage systems



Figure 3 – Viewpoint for the Reeks

Cairngorms Outdoor Access Trust

Weather	Date	Path Number	Path Name	Surveyor	Start	End
Wintry Showers	23rd March 2015	MR 1	Turf Path	Dougie Baird	487723 ITM388358 486607 ITM588301	

Section	Length	Grid Ref	Surface Type	Features	Paths/ Braids	Bare Width	Tramp Width	Gully Depth	LG/ XF	Rough-ness	Drain-age	Erosion	Cond-ition	Dyna-mism	Priority	Maint (md/py)	Capital Cost
1	392	487723 ITM388358	Agg.	start	1/0	2.00	2	0.1	6/12	4	4	4	4	3	4	1	€10,000

Built Features

XD	0	Pitching	0	SD	390	Revet	390
WB	0	Agg.	390	culvert	0	...	0

Description

Old hand built track, using revetment, side drain, hand placed sub-base and aggregate surfacing. Drainage blocked and beginning to break down

2	1232	487460 ITM588210	Agg.	Left Corner	1/0	1.50	2.00	0.5	10/18	3	2	3	3	2	3	1	€30,000
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Built Features

XD	0	Pitching	0	SD	1232	Revet	1232
WB	4	Agg.	1232	...	0	...	0

Description

Hand built track, with drainage now ineffective and surface beginning to break down affecting the integrity of the surface - 30% resurface and excavate all drains

3	846	487077 ITM588662	Agg.	Right Corner	1/0	1.50	2.00	0.3	11/21	4	2	4	4	4	4	1	€12,000
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Built Features

XD		Pitching	0	SD	0	Revet	846
WB		Agg.	846	...	0	...	0

Description

Excavate Drain along full length and Resurface 10% plus water bars

4	643	486850 ITM587917	peat	End Track	1/2	1.30	4	0.1	5/8	4	2	3	3	3	3	1	€25,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

Boggy peaty path with wide spread in places. Full build aggregate path, machine appropriate using soil reversal

5	151	486610 ITM588172	Peat/bedrock	to top	1/2	2.00	5	0.5	14/18	3	3	3	3	3	3	1	€18,000
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Built Features

XD	0	Pitching	0	SD	0	Revet	0
WB	0	Agg.	0	...	0	...	0

Description

Short steep and badly eroded section to top. Requires full hand-build using revett aggregate and pitching

TOTAL	3,264			March											3	5	€83,000
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Built Features

XD	0	Pitching	0	SD	1,622	Revet	2,468
WB	4	Agg.	2,468	Other	0	Other	0

Description

Hand uild track, with drainage largely blocked now, requiring repairs and drain excavated along full length. New build from end of path to top.

Appendix 1: Path Condition Surveys – Measures and Indices

Measures		
No. paths/no. braids	#/#	Number of path lines in use which are to be managed, followed by total/maximum number of other path lines apparent which are to be blocked off
Bare width range	m/m	Minimum width of bare vegetated ground in section, followed by maximum width of bare ground in section
Trample width range	m/m	Minimum width of ground showing evidence of trampling, followed by maximum width of showing trampling and change of vegetation
Gully depth range	m/m	Minimum depth of gulying below normal ground height to deepest point in path width, followed by maximum depth of gulying anywhere on section
Long gradient/cross-fall	%	Average gradient along path section measured from start looking up path line using clinometer, followed by average cross-fall measured up drain or fall line using clinometers
Indices		
Roughness	1–5	Where 1 = very rough and uncomfortable surface requiring concentration, while 5 = ability to look at view while walking on path
Drainage	1–5	Where 1 = permanently saturated with water, or very high flows of water, and 5 = very well drained ground, or very low flows of water
Erosion	1–5	Where 1 = evidence of large amounts of movement of material on path line and 5 = no movement of material from path line. A retrospective assessment of damage
Dynamism	1–5	How rapidly the path can be expected to deteriorate, where 1 = path very likely to deteriorate rapidly, and 5 = a very stable path. The future rate at which material is likely to move
Condition	1–5	Where 1 = very severe damage and 5 = little evidence of damage. An overall estimate
Work priority	1–5	A combination of path condition and dynamism. Include high priority for pre-emptive work to prevent severe path damage. Where 1 = very high priority and work is recommended within the next year, and 5 = very low priority
Cost per meter Extra costs	£ per meter extra per meter	Average cost per meter based on priorities 1–5 from Red surveys. Information to be added – only indicate if path has obvious extra cost (e.g. helicopter costs)
Comment	(a) site:	Comment: (a) on path condition, site, available materials and features; (b) on types of work, style of construction and any adaptation of usual construction