SECTION B – TRAIL AUDIT FINDINGS

8 TRAIL AUDIT FINDINGS

8.1 Audit Methodology

8.1.1 Desk based research and consultation

Further desk-based research and consultation, building on the work of the 2019 Masterplan, was carried out in order to gather accurate information for this report.

Additional and robust consultation was completed, the majority of consultation being with key community and trail representatives. Private landowners were also spoken to where necessary and as advised by Community Representatives. It should be noted that the majority of discussion with landowners was carried out by key community and trail representatives.

It is important when considering the next steps in the development process, that the already established communication channels with private landowners is continued. It is important that engagement with landowners is transparent and is inclusive of their views and opinions at all stages of the development process. Satisfaction and buy-in within this key stakeholder group is paramount to ensure the development of the highest standard of trail in terms of route alignment and ongoing management and maintenance of the trail.

Continuing landowner identification, liaison and negotiation is required to ascertain which sections of the certain sections of the route might be able to be taken off-road e.g. the North West Cork Way and the first third of the Ballyhoura Way (west to east), where there has been limited progress with regards landowner identification and negotiation, since the completion of the 2019 Masterplan.

Consultation with key stakeholders at a local level, e.g. Council Officers and RRO's was also completed, in order to follow up with existing information accuracy and to ascertain if any developments had occurred since initial consultation had occurred in 2019.

8.1.2 Physical audit

The audit of the route itself was carried out by members of the Outdoor Recreation NI team, throughout the summer of 2021. The entire length of the trail, plus any identified linkages to key points of interest or local communities, was travelled by the team and the necessary data collected. Any sections of the route that were on quiet country roads, were audited using vehicles, and the rest of the route was audited on foot. Every meter of the route has been audited by ORNI. The dates that each section was audited can be seen in Table 3.

Section	Trail	Audit dates
12	Cavan Way	17th-21st May
8	Suck Valley Way	14th-18th June
6	Ormond Way	19th-23rd July
7	Hymany Way	19th-23rd July
10	Miners Way	2nd-6th August
11	Leitrim Way	2nd-6th August
4	Ballyhoura Way	16th-20th August
5	Multeen Way	16th-20th August
2	Sli Gaeltacht Mhuscrai	29th August -3rd September
3	North West Cork Way	29th August -3rd September
1	Beara Way	12th-17th September
9	Lung Lough Gara Way	4th-8th October

Table 3 Audit completion dates

The data collected during the audit is split into two categories, existing and recommended. Data for four different types of features was collected – trail line data, trail infrastructure, signage and interpretation and points of interest. A full break down of the types of data collected is listed in Table 4.

Trail Type Lines	Category	Trail type	Status	New build status
		Gravel	No work required	N/ A
		Tarmac	Upgrade	N/A
		Concrete	New build	Gravel
		Bedrock/ stone pitching		Gravel plus terram
	Built/ maintained trail (non-vehicular)	Boardwalk		Boardwalk
	(non venicular)	Woodchip		Stone pitching
		Mown grass		Bog Bridge
		Ecogrid		
Trail type		Bog Bridge		
ттап суре	Desire line	Grass (not maintained)		
		Bare earth (soil/ mud)		
		Sand/ shingle		
	Vehicle access - sealed surface	Tarmac		
		Concrete		
	Vehicle access - not sealed surface	Gravel		
		Soil/ mud		
		Grass down the middle		
	No existing trail	No existing trail		

Trail Infrastructure and Feature Points	Category	Status	Condition
	A-frame stile	Existing	Fit for purpose
Trail infrastructure/	Step over stile	Required	Replacement required
feature	Pedestrian gate		No longer required
	Kissing gate		

Farm gate
Foot bridge
Bog bridge
Bench/ rest area
Culvert
Water bar
Steps
Cattle grid
Car park

Signage and Interpretation points	Category	Post and disk content	Status	
	Post and disk	BBW (walk)	Existing	
		National Waymarked Trail	Required	
		BBW		
	Finger post	National Waymarked Trail		
	Interpretation panel	BBW (village overview)		
Signage and		BBW (history panel)		
Interpretation		BBW (generic)		
		Other - Interpretation panel		
		Warning sign - traffic and walkers		
	Information panel	Warning sign - livestock		
		Warning sign - No Dogs allowed		
		Warning sign - Other		

Points of interest	Category
Doints of interest	Existing point of interest
Points of interest	New point of interest

Category	Trail type	Status	New build status
	Gravel	No work required	N/ A
	Tarmac	Upgrade	N/A
	Concrete	New build	Gravel
Built/ maintained trail (non-vehicular)	Bedrock/ stone pitching		Gravel plus terram
	Boardwalk		Boardwalk
	Woodchip		Stone pitching
	Mown grass		Bog Bridge
	Ecogrid		
	Bog Bridge		
Desire line	Grass (not maintained)		
	Bare earth (soil/ mud)		
	Sand/ shingle		
Vehicle access - sealed surface	Tarmac		
	Concrete		
	Built/ maintained trail (non-vehicular) Desire line Vehicle access - sealed	Built/ maintained trail (non-vehicular) Bedrock/ stone pitching Boardwalk Woodchip Mown grass Ecogrid Bog Bridge Grass (not maintained) Desire line Bare earth (soil/ mud) Sand/ shingle Vehicle access - sealed	Built/ maintained trail (non-vehicular) Bedrock/ stone pitching Boardwalk Woodchip Mown grass Ecogrid Bog Bridge Grass (not maintained) Bare earth (soil/ mud) Sand/ shingle Vehicle access - sealed Tarmac Upgrade New build New build New build Venithe access - sealed

Vehicle access - not sealed surface	Gravel Soil/ mud Grass down the middle
No existing trail	No existing trail

Trail Infrastructure and Feature Points	Category	Status	Condition
	A-frame stile	Existing	Fit for purpose
	Step over stile	Required	Replacement required
	Pedestrian gate		No longer required
	Kissing gate		
	Farm gate		
Trail	Foot bridge		
infrastructure/	Bog bridge		
feature	Bench/ rest area		
	Culvert		
	Water bar		
	Steps		
	Cattle grid		
	Car park		

Signage and Interpretation points	Category	Post and disk content	Status
	Post and disk	Beara Breifne Way (walk)	Existing
	POST and disk	National Waymarked Trail	Required
	Finger nest	Beara Breifne Way	
	Finger post	National Waymarked Trail	
	Interpretation panel	Beara Breifne Way (village overview)	
Signage and		Beara Breifne Way (history panel)	
Interpretation		Beara Breifne Way (generic)	
		Other - Interpretation panel	
		Warning sign - traffic and walkers	
	Information panel	Warning sign - livestock	
		Warning sign - No Dogs allowed	
		Warning sign - Other	
Points of interest	Category		

Points of interest	Category
Points of interest	Existing point of interest
	New point of interest

Table 4 Audit data collected

8.1.3 Upland areas

As discussed in Section 2.9.2.2, upland or remote rural areas require additional specialist audit and design work. During the technical trail audit, details were recorded regarding the type of trail present

in terms of its current state, construction type, and recommendations as to its future development were made. It was not possible during the trail audit to ascertain if sections of trail within the upland/ remote rural areas (sections of the Beara Way, Sli Gaeltacht Mhuscrai and Ballyhoura Way), were located on sections classified as 'deep peat' or on gradients of 'greater than 30% slope'. Both of these trail conditions would result in different and significant trail build costs. The process below describes how sections of trail on deep peat and on sections with greater than 30% gradient, were identified.

Peat bog distribution across Ireland was informed by the most recently updated Corine Land Cover dataset (2018). This dataset provides detailed information on land cover across Europe, based on the classification of satellite imagery coordinated by the European Environment Agency (EEA) and cooperating countries (EEA39). A minimum mapping unit of 25 hectares is specified for status layers. The Corine dataset was coupled with a global slope dataset – 'terrain: slope in degrees' – provided by the Environmental Systems Research Institute (ESRI), where the highest spatial resolution elevation datasets are collated across separate countries or regions. The Airbus WorldDEM4Ortho dataset represents the highest resolution elevation dataset available across Ireland, with a spatial resolution of approximately 24 m.

Global slope data³ were clipped to the extent of each respective upland trail section using ArcGIS Pro 2.8.6. Trail types that were digitised and isolated are as follows;

- Recommended new build trail/trail upgrade on areas of peat and where slope gradients exceed
 30%
- Recommended new build trail/ trail upgrade on areas of peat and where slope gradients did not exceed 30%
- Recommended new build trail/trail upgrade in upland or remote rural locations that were not
 on areas of peat and did not have a slope of greater than 30%.

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³ Data Sources - Corine Land Cover Dataset (2018) - <u>Download Data (epa.ie)</u>, Esri Living Atlas, 'terrain: slope in degrees:' (https://arcg.is/9fmiv)

8.2 Key findings

See the Technical Supplement for detailed audit findings and recommendations resulting from the audit. For the purposes of reporting, the route is divided into 12 sections, as determined by the existing long-distance walking routes, illustrated in Figure 57.

8.2.1 Upland areas

An upland trail specialist was engaged to provide best practice advice as to the design, construction and management of upland paths. Chris York (Walking the Talk), recently completed a study and provided recommendations for the management and repair of upland paths on Croagh Patrick, amongst many other upland path projects. Chris reviewed the information collected by ORNI during the trail audit and the following information and recommendations were provided.

8.2.1.1 Introduction

For this report, sections of the BBW that are remote from settlements or public roads are defined as "remote rural" as well as upland. Upland areas are typically classified as land over 350m altitude, but there are low lying areas on the trail, e.g. the Beara Way that have challenging terrain (e.g. Gortagenerick), where additional consideration is needed in terms of trail design and build. A path could be constructed as 'upland style' in these areas based on a strategic approach to development.

The three upland areas on the BBW, namely on the Beara Way, the Sli Gaeltacht Mhuscrai and the Ballyhoura Way, required additional consideration in terms of trail design due to the sensitivities of the landscapes present. Characteristics of these areas include any combination of: steep gradients, rough terrain, exposed bedrock, deep peat, more than a kilometre to vehicle access, sensitive habitats etc.

8.2.1.2 Existing trail development

Development to date has lacked the finesse required for a World Class Experience and has led to some insensitive construction and poor choice of route. These issues will have consequences for trail maintenance in the medium- to long-term. The construction of tracks more than 2m wide is understandable if the priority is ease of access for machinery for construction and maintenance, but this makes it difficult to advocate more sensitive construction methods in the remaining areas. Unfortunately, the cost of remediation of poor standard trail is likely to be significantly higher than the cost of building the trail in the first place.

Another difficulty that needs to be flagged is construction on steep slopes using aggregate – there are a number of places where this 'track-building' technique has been used and results in loose aggregate (Figure 45).



Figure 45 Path built from loose aggregate and cut through deep peat

Construction across wet areas or deep peat has not been fully considered, which has left gaps in the built trail, and the use of individual stepping stones, rather than designed built trail, has not resulted in a functional path.



Figure 46 Use of stepping stones to traverse wet areas

8.2.1.3 Path design and construction standards

See Section 6.11 for discussion of path design and construction standards for upland and remote rural areas.

8.2.1.4 Overview of current trail

Figure 47 gives an overview of the three sections of upland or remote rural trail, highlighting some key issues. The ID number correlates with the reference system used in the trail audit. Please see detailed trail design for locations.

Trail section ID number Notes

Beara Way	1260-1287	Remote location – sections have been built and other difficult areas left. Potentially extremely challenging to manage due availability of materials, if they need to be imported it will be a huge logistical operation. There is potential for significant environmental impact.
	1218-1227	The cross slope and exposed bedrock make route construction likely to be expensive and technically challenging. Livestock poaching of the ground on 1227.
	1229-1230	Access for materials could be difficult here. Terrain doesn't look ideal for machine building (rocky outcrops).
	1239-1242	Materials look to be in short supply.
	1205-1214	Remote location – source of materials? Open slopes make narrow path lines difficult to manage if they are not dry.
	1192 – 1199	Open slope and lack of materials.
Sli Gaeltacht Mhuscrai	974-1022	Significant amount of remedial work needed to improve the quality of work – may be useful to do this before extending other sections.
	All	Deep peat in places
Ballyhoura Way	832-850	Looks like extensive area of deep peat but with forest roads constructed – hard to advocate an expensive hand-built path and the terrain is not conducive to keeping people on a narrow line.

Figure 47 Overview of key issues on existing upland trail sections

8.2.1.5 Remediation of previously built sections

The quality of construction appears to vary along different parts of the upland sections of the trail (and between differently managed sections) but none of it would be regarded as to a professional standard for remote rural path repair. Construction techniques have not taken account of sensitive environments and the scale of development resembles road-building in a number of places. Whilst this may have been an inexpensive method of construction, the terrain and substrates in the remote rural and upland sections are not well suited to this approach, which is reflected in the gaps that have been left where the conditions are 'too difficult'. One issue that needs to be considered in any detailed design is whether the choice of route is appropriate for the missing sections – excessive gradients or deep peat may prove too challenging to solve and alternative alignments could be more effective.

There are places, notably on the Beara Way and Sli Gaeltacht Mhuscrai, where the path is robust but poorly positioned or finished. It is questionable whether additional work would bring cost-effective benefit. Providing that these sections remain functional and maintained there is probably limited value in revisiting these areas except to soften their landscape impact and effort would be better concentrated on enhancing sections that are not fit for purpose and filling the gaps between.

A number of specific places appear to have construction issues that would need to be addressed if the ambition of managing a world-class long-distance route are to be realized. Comment has not been made on sections within plantation woodland or (probably) pre-existing vehicle tracks, although there are places where further work would be beneficial. Figure 48 provides an overview of key issues identified on existing built sections of trail on the upland or remote rural areas.

Trail section	ID number	Notes		
Beara Way 1287-1310		Construction looks like an agricultural track than a recreational path, with little regard for surfacing and there are gaps between sections that will be challenging to infill. Boggy areas appear not to have been tackled, leaving wet areas for people to traverse. Each of the wet areas will need to be reconstructed and gaps in-filled — unit costs will be high due to their fragmented nature. It is probably impractical to 'downgrade' the existing construction to a narrower path but landscaping of some of the 'raw' edges is recommended.		
Sli Gaeltacht 1008-1022 Mhuscrai		The route has been constructed with little regard to the landscape – cutting through topographic features and with unfinished path edges. The surface appears to be mobile on gradients and there is no sign of anchor bars or drainage features to reduce the potential for erosion. The path width means that these features would require large amounts of block stone. There are short sections where the path has not been constructed, which will make completion more difficult and relatively expensive.		
	974-998 Many of these sections resemble an agricultural track which do not with the landscape at present, but may 'settle' over time. The sections causeway are presumed to be across wet areas – some look well-coothers need to be buried level with the surface in order to remain state are gaps in construction – possibly due to lack of materials on site, terrain. It is very likely that these would require import of materials contrast between different types of construction could be visually jarra			
Ballyhoura Way	911-913	Built as a vehicle track – surface drainage is poor in places and aerial imagery indicates significant widening (possibly by quad bike use). Aggregate surface on steeper gradients will degrade and erode, particularly where surface drainage is poor. Remedial drainage features will be required.		
	828-831	Drainage has not been built effectively and needs upgrading to culverts or cross drains. Surface aggregate appears to be eroding so would need to be replaced.		

Figure 48 Overview of key issues on existing built trail in upland areas

8.2.1.6 Potential costs of construction of remote rural paths

Cost per metre is very hard to generalise on a large scale across different landscapes and habitats. There are likely to be high levels of variability, but some broad estimates may be helpful.

The costs of winning local materials tend to be similar to buying quarry product and transporting to site, so these have not been differentiated. Where access options for vehicles are limited, helicopter becomes the most usual choice for transport, adding to the environmental impact of construction. It also increases the logistical complexity of the project.

The notional costs of construction (Table 5) have been derived from expected outputs for a skilled workforce using generic techniques for the terrain. They include a consideration for labour, materials, machinery, oversight / supervision and a contingency of 10%. The costs do not include VAT. This does not include any costs of training / upskilling, and there could be a number of advantages to developing high quality apprenticeships or long-term training and development schemes.

Technique	Gradien	ts < 30%	Gradients > 30%		
	Mineral soil	Deep peat	Mineral soil	Deep peat	
Manual (with power barrow / winch)	€ 230,000	€ 330,000	€ 500,000	€ 830,000	
Machine assist (manual finishing)	€ 240,000	€ 320,000	€ 630,000	€ 1,320,000	
Machine built	€ 210,000	€ 260,000	not viable	not viable	

Table 5 Estimated cost per kilometre of constructed remote rural path

Filling the gaps where previous construction has taken place is likely to be at least the cost of new build – it may prove more expensive where short sections need be tackled due to inefficiencies of mobilisation and remoteness. Some of these sections may also need highly technical solutions, which will result in high unit costs. Additional budget is needed for remedial work in places where construction has failed or needs to be improved in order to be fit for purpose - it could be equivalent to approximately 50% of the construction cost for remediated areas.

Sole use of cost for choice of construction method is not a valid basis for decision making with this type and scale of investment – there may be over-riding reasons to select manual labour or machine, which would need to be assessed at the design stage. It is often pragmatic to use a mix-and-match approach to delivery, assuming that skilled and competent workforce is available – this is a significant limiting factor and may strongly influence the costs.

It is to be expected that costs could vary following the design phase, as it is not possible to accurately estimate different cost requirements from the available information. In addition, standardised costs may not reflect local availability of labour and machinery, especially as there is not an established 'industry' in Ireland from which to benchmark costs.

8.2.1.7 Capacity and skills

Ireland does not have a ready supply of skilled path workers or operators of machinery in the context of upland style paths. There are very few contractors with experience of complex, high quality path construction and few people with the skills and experience to design or oversee the implementation of

a large-scale project of this nature. It would be unrealistic to expect contractors from other sectors (e.g. landscape gardening or civil engineering / building trades) to be able or willing to take on geographically diverse and remote projects in a short delivery period. There would be a need for significant upskilling of a workforce in terms of understanding the need for quality outputs, sympathetic construction techniques and resilience in hostile working conditions. There are a small number of individuals operating in Ireland with the necessary combination of skills and aptitude and they are likely to be in high demand from other parts of Ireland where upland path repairs are urgently needed.

This means that rapid delivery of the infrastructure is not a reasonable expectation. Specific capacity building for locally based individuals or businesses would be highly recommended, along with some thought for potential delivery mechanisms for construction and management of the remote rural sections of the route.

The proposed approach to upland trail works provides us with an opportunity to train people in the highly-skilled methods of upland path development and repair. A current example of success in this area is taking place in Co. Mayo. Work to repair the erosion along the pilgrim path at Croagh Patrick has provided ongoing opportunity for training, whereby a team of four trainees are working full-time on the mountain, led by experienced upland path builder Matt McConway. Even on completion, skilled workforce capacity in this specialist field will still be extremely limited.

A similar opportunity exists for upland path repair and development on the BBW. These sections could become a hub for sharing skills and knowledge regarding the management of upland path erosion. It is recommended that future discussion between Fáilte Ireland, trail committee representatives and other key stakeholders - including Local Authorities, RROs, Local Development Companies - explores the potential creation of a skills training programme specific to this field. Opportunities may exist to re-train workers from other areas with this niche skill, in doing so building the capacity for future upland trail works across Ireland.

8.2.1.8 Maintenance

In keeping with any capital investment in infrastructure, project planning needs to include provision for maintenance. This is essential to protect the investment in the infrastructure itself as well as ensuring that visitors have a world class experience beyond the initial period of development and promotion. It is highly unlikely that any projected economic benefits can be sustained without this maintenance.

Responsibility for delivery and quality assurance of maintenance is problematic on linear routes and the scale of BBW makes this even more acute. Whilst local delivery is a preferred approach, it can be difficult to resource and oversee efficiently. Routine maintenance can be allocated to local

organisations or outsourced, but repairs can be more challenging especially on areas of deep peat, where availability of materials is restricted. A minimum of 10 person days per kilometre each year needs to be resourced and this will be higher where routine vegetation management is required.

It is recommended that consultation between trail committees, RROs and LDCs is undertaken to discuss the most efficient structure for ongoing maintenance, and to agree clearly outlined roles and responsibilities. This should be incorporated into wider discussions regarding Trail Governance and Management, as discussed in section 2.6.

Recommendations

- Proactive development is recommended, to involve the strategic planning and programming of
 path development across all the remote rural sections of the route to agreed minimum
 standards, in order to provide a consistent visitor experience.
- All work in remote rural areas should take account of the Upland Path Advisory Group standards for Upland Pathwork the approach to construction and techniques within this manual should inform any future development.
- Additional detailed trail design by an upland path expert is required for sections of the BBW
 that have been identified as remote rural. Including previously built sections of trail within
 remote rural areas that require different levels of remediation a trail expert is required to
 advise on this.
- Consideration of training development to build capacity of skilled workforce for trail works.

8.2.2 Walkers and livestock

The BBW travels through a wide variety of landscapes, and agricultural landscapes are one of these that help to ensure that a substantial portion of the route is off-road. Included within agricultural landscapes are fields used for arable farming and fields and open hillside used for pastoral farming. Pastoral farming types encountered during the audit include cattle, sheep and horses.

8.2.2.1 Livestock

It is known that the behaviour of cattle can sometimes be unpredictable and as such, in England and Wales, legislation is in place stating that bulls of dairy breeds cannot be kept in fields with public access and beef bulls must be with cows, as well as recommendations regarding public access to fields with different herd make ups e.g. cows with calves etc. There is no legislation regarding cattle and public

access in Ireland. The majority of incidents involving cattle are in fields and enclosed areas and the two most common factors in these incidents are cows with calves and walkers with dogs⁴. Serious incidents and fatalities are rare, but the enjoyability of the walking route and the walker's experience comes in to play here also.

All large animals are potentially dangerous. Farmers are advised to try to ensure that cattle in fields with public access are of a normally quiet temperament. However, when under stress (e.g. because of the weather, illness, unusual disturbance, or when maternal instincts are aroused), even normally placid cattle can become aggressive.

Members of the public, including walkers and children, may not understand that cattle with calves can present a risk due to protective maternal instincts, especially when a dog is present. Cattle can also be inquisitive or playful with regards to walkers in a field, and this can be easily misinterpreted as aggression. It is unrealistic and unfair to expect members of the public to be aware of the behavioural characteristics of cattle or to make an assessment of risk before entering a field, even when the behaviour of the cattle is not aggressive. It is good practice to erect signage to advise walkers, but this may not be reliable given that the makeup of livestock in the field will change throughout the year, and it also relies on walkers abiding by the advice within the signage.

The trail audit found that at present, the trail crosses fields via two routes; either along the field boundary or directly through the field. It is easier to waymark a route along the boundary of a field as this will not get in the way of agricultural activities and directing footfall along the boundary, insofar as possible, ensures any crops or livestock remain undisturbed.

A solution to members of the public being in fields with cattle and designing a trail to follow the boundary of a field, is to create a trail corridor along the boundary of a field. A designed and built gravel trail can be developed and suitable stockproof fencing can be erected along the edge. The corridor can be narrow enough to incorporate a single width trail, plus space on either side for erecting a fence or minimal vegetation encroachment. See

Figure 49 for an example of a fenced trail corridor. This option can be beneficial to farmers in that:

- It keeps walkers separate from their crops or livestock.
- Trail maintenance will be minimal compared to mowing a grass path or wet or muddy areas requiring drainage solutions.

⁴ https://www.hse.gov.uk/pubns/ais17ew.pdf Health and Safety Executive, 2012

• The level of risk of having members of public on their land is reduced due to there being a defined and fenced trail.

It can also be beneficial to walkers in that:

- The level of risk on entering a field with livestock within is reduced.
- Navigation of the route is easier due to the defined trail.
- Enjoyability can be increased due to the provision of a robust walking surface.
- A robust walking surface allows use of the trail in all seasons.

Fenced corridors are not recommended for open hillside landscapes.

Change of use from grass to a gravel track, may have an impact on farm subsidies paid to the farmer. Discussions are ongoing with the aim of ensuring that no farmer would be disadvantaged financially by permitting public access to his or her land via the development of a gravel trail.



Figure 49 An example fenced trail corridor and continuous farm access within a fenced corridor

Fenced trail corridors can be designed so as to not impede agricultural requirements, such as access through a field boundary where a corridor is aligned, or the location of feeding or water troughs. Figure 50 shows how the trail corridor can be accommodated with no additional effort on the farmers part i.e. not needing to open and close additional gates. The walker is expected to traverse the crossing point via two step-over stiles and cattle and the farmer can pass freely. Any water or feeding troughs should be realigned to the new fence line or an alternative suitable location.

Where the trail corridor is required to dissect a field, for example where land either side of the corridor is too wet to accommodate a built trail, a fence line either side of the trail can be installed and the same system as described above can be used.





Figure 50 Proposed trail dissecting field, continuous farm access with double fenced corridor

In total, the amount of stockproof fencing recommended for the BBW, is 43.8km, which is 6% of the recommended linear trail. The majority of this is made up of fenced trail corridors passing through fields with livestock.

Should a landowner not wish to have built trail and fenced corridor on their land, the grass trail should be maintained through a scheduled mowing regime to ensure the trail is navigable by walkers. Consideration should be given to temporary fencing/electric fencing and appropriate signage to ensure that walkers are able to navigate the section of trail in question, if cattle are present.

Recommendations

- Sections of trail that pass through agricultural land where cattle are present, should consist of a built trail within a fenced corridor.
- Trail corridors should follow the boundary of a field where possible.
- Access points should be provided in fenced corridors where required.
- Feeding/ water troughs should be realigned to a suitable location where they are impacted by a proposed fenced trail corridor.
- Fenced corridors are not required on open hillside.

8.2.2.2 Electric fencing

The trail audit found that the use of electric fencing is extensive along the length of the trail. There were multiple occasions where the electric wire was too close to where the walker was expected to walk, or where warning signage and/ or protective tubing was missing. Electric fencing or barbed wire should

not be located where people may accidentally touch it, particularly alongside narrow paths or adjacent to access points such as stiles or steps, where users would instinctively hold on to something to cross.

Where an electric fence is on or adjacent to the route in a location where it might be touched by a walker, a warning sign should be used. For longer sections repeat usage of the sign as appropriate. If it is necessary to cross or open such a fence at any point, a means of passing safely should be provided e.g. protective tubing attached to the fence to prevent users coming in contact with it or a system which allows walkers to open the fence to pass through and then put it back in place.



Figure 51 Exposed electric fencing adjacent to stile, location were walker navigates 5 electric fences

Recommendations

- Electric fencing or barbed wire should not be used where walkers may be reaching to steady themselves. Where this can't be avoided, protective tubing should be used.
- Warning signage should be used.
- Electric fencing should not be used to demarcate a trail corridor.
- Any situations where a walker is expected to handle, or may accidentally handle electric fencing, protective tubing should be used.

8.2.2.3 Dogs

The presence of a dog, even one that's on a lead, can cause stress to livestock, particularly sheep during lambing season. When dogs are off their leads, the risks are even greater with sheep potentially being chased, injured or killed. It is the responsibility of the dogs owner to ensure that dogs are kept under control at all times and that local advisory signage is adhered to. There are multiple locations along the length of the trail where there is signage denoting that dogs are not permitted. It can generally be said that these are in locations where there is likely to be livestock present.



Figure 52 Images of dog warning signs along the route

Sport Ireland guidance states 'Do not bring dogs onto trails where livestock is present. The trail information will indicate if dogs are allowed on a trail. If they are not allowed this usually indicates that there is livestock on the trail'.

Localised rules about permitting dogs on a trail are at the request of a landowner. Many sections of the trail are via permissive access, achieved through the kind permission of the landowner and their requirements to permit public access should be respected.

Recommendations

• Local warning signs regarding permitting access to dogs should be adhered to at all times.

8.2.3 Route confusion

The 2019 Masterplan found that there was not a clear and definitive route for the BBW, or one clear source of information for users of the trail. Little progress has been made with regards to this since between 2019 and 2021. Confusion is due to:

• Lack of definitive starting point.

- Inclusion of a range of circular routes, alternative routes and spurs.
- Route extension to Ballycastle Co Antrim, following the Ulster Way 'the Ireland Way' being marketed and supported with robust information in the form of a dedicated website with navigable mapping plus a published a guide book

As a result, the available route information offers conflicting information depending on the source and is not presented in an accessible and navigable format. This has led to much confusion for stakeholders, walkers and visitors.

Source	Description
Beara Breifne Website	Maps are not navigable as they are small scale maps and do not give enough detail for the user to follow the route.
Irishtrails.ie	Maps for National Waymarked Trails are available to download from IrishTrails.ie, but one section of the trail is not classified as a NWT and hence are not mapped on Irishtrails.ie (North West Cork Way).
On trail	Beara-Breifne Way maps on noticeboards in most towns but not of a scale that would allow for reliable navigation.
Ireland Way	 Ireland Way guidebook and website was identified as the main source of route information by the majority of walkers Information differs from that promoted on the BBW website in that the Ireland Way starts in Castletownbere rather than Dursey Sound and continues on from Blacklion to follow to Ulster Way north, before ending in Ballycastle.

Table 6 Sources of information

8.2.3.1 Start and Finish Point

- Start point Dursey Sound
- Finish Point Blacklion

Consultation and desk research undertaken by Paul Hogarth Company and Tandem Design in development of the Visitor Experience and Brand Strategy elements of the project, clearly demonstrate an area of 'gathering' and an area of 'dispersal' critical to the story of the March. A Visitor Experience Strategy has been developed by the Paul Hogarth Company and provides concept designs for hardware at start and end points and key locations along the route. Selection of sites is subject to landowner consultation and consent. This will be supplemented by the Brand and Interpretation Toolkit in ongoing development by Tandem Design.

8.2.3.2 Exclusion of circular routes, alternative routes and spurs

A fully defined linear route is required in order to provide a singular and definitive recommended route for walkers, so circular routes, alternative routes and spurs should be excluded from the definitive route. For example, the western section of the Suck Valley Way would be used as the main linear route, rather than offering an option of either the western or eastern sections. This provides a definitive route for the walker and remains most historically accurate to the march of O'Sullivan Beara. Another example of this is the Beara Way, where there are northern and southern options to walk the Beara Way. The southern section is recommended to be the defined linear route that represents the historic march, but it is recognised that there was a gathering of people from all over the Beara Peninsula who joined the march at different locations.

Spurs to key attractions and settlements have been included as optional 'linkages' rather than part of the main route. Walkers can choose to do as many or as few of the linkages as they choose. Spurs not on the recommended BBW route or are part of a recommended linkage, should still continue to exist and be marketed and maintained as a National Waymarked Trail or a looped walk.

8.2.3.3 Better information

Clear, navigable maps for the definitive route of the BBW should be easily accessible online, for use on mobile devices and in a published hard copy format.

8.2.3.4 Ulster Way

The Ulster Way is an established long distance, waymarked walking route. It passes through the village of Belcoo in Northern Ireland, which is adjacent to the end point of the BBW at Blacklion. The extension of the BBW into Northern Ireland could be embraced as an all-Ireland product and encourage partnership working through key tourism bodies both north and south of the border. The 'coast to coast' element of a proposed extended BBW is a popular concept for challenge/ endurance events and may encourage the use of the route by a different target market. Extending the BBW to include Northern Ireland and the Ulster Way, though not recommended at this stage of route development, should be a long-term aspiration by trail managers.

Recommendations

• It is recommended that the BBW should be a definitive linear route, with a clear start and finish point, meeting the walkers' and visitors' needs and following the route taken by Dónal Cam O'Sullivan Beare as close as possible.

8.2.4 Trail Standard

The BBW is made up of eleven National Waymarked Trails (NWT) and one long-distance route that is not currently classified as a NWT.

Route name	National Waymarked Trail
Beara Way	Yes
Sli Gaeltacht Mhuscrai	Yes
North West Cork Way	No
Ballyhoura Way	Yes
Multeen Way	Yes
Ormond Way	Yes
Hymany Way	Yes
Suck Valley Way	Yes
Lung Lough Gara Way	Yes
Miners Way and Historical Trail	Yes
Leitrim Way	Yes
Cavan Way	Yes

Table 7 Status of long-distance walking routes on the BBW

The current trail standard against which all National Waymarked Trails are assessed against is the 'Management Standards for Recreational Trails' (Sport Trails Ireland - formerly National Trails office - 2008). It is recommended that the North West Cork Way long-distance route that is not currently classified as a NWT, is elevated to this standard. Section A of this report sets out the key information with regards how a sustainable trail should be built. All recommended upgrade and new build going forwards should be built to the standard set out in this report, in order to ensure the status of the trail as a world class trail.

8.2.5 Trail Condition

The trail audit has found that overall the quality of the trail was inconsistent. A walker would not be assured of the same standard of trail throughout the length of the BBW, with the quality of the condition of the trail varying greatly within and between sections. Although not all sections of the trail could be expected or would be recommended to be fully formalised with a constructed trail, the trail provided should still be fit for purpose and sustainable. Currently walker's encounter:

- Boggy areas (within which the water level fluctuates throughout the year).
- Sections that are poorly maintained in terms of vegetation control.

- Sections that are poorly maintained in terms of trail surface condition (e.g. poaching by cattle, trail surface damaged by vehicles).
- Sections adjacent to water courses that are liable to flooding at different times of the year.

Figure 53 shows several sections of trail that are impassable due to poor drainage, poaching by livestock and damaged by vehicles.



Figure 53 Poor condition trail - standing water, badly poached, damaged by vehicles

Recommendations

- A strategic, phased and agreed approach to trail development and maintenance along the length of the BBW is required.
- A Trail Audit has been completed for the entire BBW to identify all sections of trail that are in poor condition, and that would require works in the form of new build or upgrade. The detailed recommendations for each section of trail see Section 8.5

8.2.6 Trail Build

Through fieldwork and consultation with key stakeholders it was noted that there was generally a lack of purpose-built pedestrian trail throughout the length of the BBW. Where there was constructed trail, this was generally on localised, community level walks such as within local woodlands or alongside lakes, rivers or canals. Other isolated examples of built trail include trails within Coillte woodland, such as at the Ballyhoura Mountains.

Where examples of built trail were found, some sections were deemed unsustainable, that is, poor construction techniques had been used, resulting in maintenance issues for the land managers. In

addition, multiple sections were found to have issues with drainage caused by inappropriate trail or drainage construction techniques.

Table 8 shows an overview of the existing types of trail found on the audit (including linkages). Of the total length of the trail, only 17% is purpose built (or maintained as a) pedestrian trail. 18% of the total trail had no type of trail present, i.e. was either a desire line or no trail line at all. 47% of the total trail was classified as being off-road but accessible to vehicles, examples of this being quiet rural roads, access laneways or agricultural tracks.

Trail type	Sub-type	Length (m)	Length (km)	Percentage of <u>total</u> trail (%)	Percentage of of off-road trail (%)
On-road	Vehicle access - sealed surface	129957	130.0	18	N/A
Off-road	Vehicle access - not sealed surface	349944	349.9	47	58
	Purpose built/ maintained pedestrian trail	125783	125.8	17	21
	Desire line	67311	67.3	9	11
	No existing trail	64460	64.5	9	11
	Total	737455	737.5	100	100

Table 8 Lengths of purpose-built pedestrian trail

Where built trail has been recommended as part of the BBW, either new build or trail upgrade, it is imperative that appropriate and best practice design and construction techniques are used to ensure a high-quality trail surface. This combined with low levels of ongoing management and maintenance is critical to the success of trail development. Best practice guidance for trail build and trail upgrade see Section 1 of this report.

Upland areas or remote rural areas, require additional specialist attention with regards to the design and construction of the trail. These sections of trail are discussed in depth in Section 8.2.1.

Table 9 highlights unsustainable trail build techniques that were observed along the BBW during the audit.

Stepping stones

Stepping-stones have been used to bypass areas that have significant drainage issues. This technique does not address the core drainage issue and is also not appropriate visually or environmentally.

Stepping-stones also prove to be a health and safety issue as they are not anchored in the ground to provide a stable walking surface.



Geotextile

Geotextile can be used to create sustainable trails, in situations where there is significant clay content in the soil (i.e. the soil is soft and 'sticky' when wet) and where the soil is very weak (i.e. it contains a lot of organic material such as peat).

If the soil formation is hard or well drained and the sub-soil is granular with little or no clay content, a geotextile will not be required.

The use of geotextile is only successful when combined with appropriate use of mixed gravel and dust subbase and finishing layer, along with compaction and settling techniques. Terram appearing through the gravel indicates that appropriate trail finishing techniques have not been completed.







Geotextile appearing through gravel, a gravel trail sinking where geotextile hasn't been used, gravel trail spongy and cracking where geotextile hasn't been used.

Excessive removal of substrata

Sustainable trail build requires ground vegetation and topsoil to be removed to expose firm sub-soil and to form a formation tray for the trail to sit on.

The depth of formation tray will depend on the strength of the sub-soil.

Deep/ active peat should not be excavated to accommodate path construction due to its important properties in carbon sequestration.

A sustainable trail will not cut through the landscape, but rather flow through the landscape.





Removal of peat and excessive removal of substrata to accommodate existing trail build on the BBW.

Inappropriate trail width

Wider trails are required where vehicular access is necessary either for agricultural purposes or for emergency access. Where the purpose is walking only, unnecessarily wide trails detract visually from the landscape. See Section 4.3 for recommendations on trail width.





Table 9 Unsustainable trail build examples

To date along the BBW, there has been a historic lack of funding for trail design and construction. This should be addressed going forward, so that the BBW can be sustainably developed.

The trail audit and the resultant recommendations reflect the principles of sustainable trail design discussed in Section A. When a contractor is appointed to complete any trail build or upgrade on the ground, they will also undertake trail design to identify the necessary widths and categories of trail.

Recommendations

- Ensure that funding is made available for the design and construction of sustainable trail identified through the trail audit.
- All new build trail and trail upgrade along the BBW should reflect the standards described in Section A.

8.2.7 On-road and off-road walking

The 2019 Masterplan identified the percentage of off-road trail as being a critical success factor for the development of a successful long-distance walking trail. It is therefore paramount that the amount of off-road walking is maximised in order to offer the best walking experience to visitors.

Table 10 shows the off-road and on-road classifications used for the purposes of this audit.

Туре	Description
On road.	Accessible to cars.
On-road:	Fully and consistently surfaced.
	All national and regional roads, some third-class roads (OSI classification), depending
	upon surface type and usage level.
	Publicly maintained.

	Can accommodate varying levels of traffic - must have good lines of sight and have safe
	crossing points.
Off-road:	Can be accessible to cars.
OII-I Oau.	 Unsurfaced or not consistently surfaced (i.e. grass growing through the middle).
	Some 'other' and 'third class' roads (OSI classification), depending upon surface type –
	no national or regional roads.
	May be publicly maintained.
	Can accommodate low levels of traffic e.g. farm traffic or access to isolated private
	residences ⁵ .
	Walking on a footpath adjacent to a road.
	 All other sections of the trail which are not accessible to cars.

Table 10 Definition of on-road/off-road



Figure 54 Off-road sections of trail (Top), on-road sections of trail (Bottom)

 $^{\rm 5}$ This option is sometime preferable to unnecessary new build trail in low trafficked areas

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		2019			2021		
Trail Name	Length (km)	Length off-road (km)	Percentage off-road (%)	Length (km)	Length off-road (km)	Percentage off-road (%)	Percentage increase
Ballyhoura Way	87.0	53.9	62	86.5	65.7	76	14
Beara Way	85.6	61.4	72	88.4	82.0	93	21
Cavan Way	22.0	16.2	74	21.8	18.0	83	9
Hymany Way	92.0	67.8	74	93.1	69.3	74	1
Leitrim Way	22.9	19.1	83	25.2	25.2	100	17
Lung Lough Gara Way	55.5	31.0	56	58.8	54.8	93	37
Miner's Way	53.3	37.4	70	53.8	45.9	85	15
Multeen Way	35.8	25.7	72	37.9	32.4	86	14
North West Cork Way	42.1	11.5	27	43.5	22.2	51	24
Ormond Way	83.6	45.6	54	82.9	60.5	73	18
Sli Gaeltacht Mhuscrai	70.7	61.0	86	57.8	55.0	95	9
Suck Valley Way	58.3	48.7	84	57.8	49.5	86	2
Total	708.8	479.3	68	707.5	580.6	83	

Table 11 Percentage of off-road trail 2019 vs 2021 (not including linkages)

In 2019, an average of 68% of the BBW was off-road, although this varied considerably across the 12 component trails. Sport Ireland trail standards specify that the off-road percentage should be a minimum of 70%. However, as a signature tourism product (and on a par with other international best practice examples), walkers and visitors expect more off-road trail (approximately 90%). In the 2021 audit, it was found that an average of 83% of the trail was classified as being off-road, but again this varied considerably over the 12 component trails. This means that an additional 101.3km of trail has been taken off road since the 2019 study. This represents excellent progress in a two-year period and the work that has gone in at a community level to achieve this should be recognised and applauded.

An additional 56.1km of trail would need to be taken off road to achieve the 90% off-road target.

Further effort needs to be directed at the North West Cork Way, and the first section of the Ballyhoura Way between St Johns Bridge and Liscarroll. The majority of these sections have been recorded as onroad walking. The lack of off-road walking in these sections is primarily due to representatives at a community, local authority and LDC level, not making progress in seeking to increase the off-road percentage.

Trail Name	Length off- road (km)	Percentage off-road (%)	Length on- road (km)	Percentage on-road (%)	Total length (km)
Beara Way	14.8	96	0.7	4	15.5
Hymany Way	3.2	63	1.9	37	5.1
Leitrim Way	2.4	100	0.0	0	2.4
Lung Lough Gara Way	4.1	100	0.0	0	4.1

Miner's Way	8.3	94	0.5	6	8.8
Total	32.8		3.0		35.8

Figure 55 Length of linkages on the BBW

Figure 55 shows the lengths of the linkages along the BBW. Linkages, although requiring sections of upgrade and new build trail, have been separated out from the linear trail data, but are included in the recommendations in this report.

Recommendations

- Efforts should continue to be made to increase the percentage of off-road walking, from 83% to 90%.
- Areas that require additional focus to increase the off-road percentage are the North West
 Cork Way and the Ballyhoura Way from St Johns Bridge to Liscarroll.
- The Ormond Way and Hymany Way also require additional focus to increase the off-road percentages (73% and 74% respectively).

8.2.8 Waymarking

An important requirement from walkers and visitors is that the BBW should be navigable, without the need to carry a map. It is recognised however that sections across open hillside will require the use of a map for safety purposes should visibility be poor. All junctions on the route, plus reassurance markers should be waymarked using clear and recognisable waymarking, that follows the recommendations in the Waymarking Strategy within the Interpretation Toolkit.

During the audit, it was found that in many locations the BBW waymarking was non-existent, inconsistent or confusing.

The presence of other waymarked routes also adds extra confusion with regards to navigating the BBW. There are many junctions and intersections along the trail with other long-distance walks, looped walks and cycle trails. For example, the BBW Cycle route is well waymarked on the ground with very similar signage to that of the BBW walking route causing confusion.

The main issues identified with waymarking along the route are:

- There has been a piecemeal approach to waymarking to date.
- Not all sections of the route meet Sport Ireland's trail standards or have been assessed against these standards.

- The BBW is not fully waymarked.
- Confusion with other walk routes and the BBW Cycle route.



Figure 56 A selection of signage examples from the BBW

Recommendations

- The route should be clearly waymarked as the Beara Breifne Way, with dedicated signage that is different from all other waymarked routes.
- An Interpretation Framework should be developed setting out all specifications for waymarking and interpreting the Beara Breifne Way, which should be adopted and applied to the entire Beara Breifne Way.

8.2.9 Access and Land ownership

Robust consultation was completed within key organisations and individuals with regards the concept of the proposed development in 2019. This was further built upon during the 2021 trail audit, in that additional private landowners were consulted in order to identify and make recommendations for potential re-routes. Any future development of the BBW should continue to include thorough private

landowner consultation to proceed. No works recommended within this report will be undertaken without landowner consultation and consent.

Most walk trails on the BBW have been established through Permissive Access Agreements (PAAs) with individual private landowners. This has primarily been enabled by three key factors:

Communication with Private Landowners

Crucially important is the development and maintenance of personal relationships with landowners to retain goodwill and permission. Significant work has been completed over the years, both in a formal and informal capacity, to secure access along the BBW. Community and walk trail representatives have worked tirelessly to identify links between the long-distance routes, as well as identifying more suitable options for sections of the routes and working with private landowners to improve and link up the routes. There is still work to be done, and continuing relations and liaisons are required to continue to develop.

Rural Recreation Officers

RRO's are committed and dedicated to securing access for recreation and have excellent local knowledge and communication skills. As this role is vital, it is important that Officers receive appropriate salaries, support and resources to enable them to deliver outputs and encourage retention of experienced staff.

The 2nd phase of the expansion of the Walk scheme should be informed by a comprehensive review of the delivery of the scheme and include a review of the role played by the RROs, the funding model applied and other relevant factors. ORNI were appointed to undertake the review and submitted their report to the Department in July 2021. The report outlined a range of findings with associated recommendations including increased pay for RROs, additional funding for Local Development Companies that deliver the scheme and additional RRO posts. The Department of Rural and Community Development stated that they were committed to further increasing the number of RROs nationwide based on the outcome of the new National Outdoor Recreation Strategy (currently under development).

In 2019, there were four Rural Recreation Officers based along the route in the counties of Cork, Roscommon, Sligo and Tipperary (South). In 2021, this has been expanded to five officers, including Leitrim.

Both RROs and Community representatives should continue to work towards strategic priorities to further the development of the BBW.

Walk Scheme

The Walk Scheme offers payment to participating landholders for the development, maintenance and enhancement of walking routes that pass through their land. This financial compensation has been instrumental in establishing access to private landowner land for the BBW. The expansion of the Walk Scheme in 2021, means that the North West Cork Way is the only section of the BBW that is not included in the Walk Scheme.

Recommendations

- As a priority, include all long-distance walking trails within the BBW in the Walks Scheme.
- Continue to support and develop communication channels between key community or walk trail representatives and private landowners over whose land the BBW currently and potentially could travel.
- Ensure that all sections of the BBW are covered by a Rural Recreation Officer.

8.2.10 Natural and Built Heritage

The route corridor of the BBW has significant natural and built heritage, and as such designations have been put in place to protect and preserve this landscape. Whilst the development of sustainable recreational trails offers an excellent way of connecting people with natural and built environment, it is important that any impact trail development has on natural and built heritage is kept to a minimum. This section considers the heritage implications of developing the BBW through trail works.

To minimise the impact of trail development, all heritage resources within the area being considered for development must be considered. Heritage includes national monuments, archaeological sites, flora, fauna, habitats, landscapes, marine habitats, geology, inland waterways, rivers and lakes.

Sites of environmental and archaeological significance are protected by law and works in these areas must receive permission from the appropriate bodies before work starts. If a proposed trail route passes through or close to a heritage site this will have implications for the trail development and permission should be sought from the appropriate body at the trail planning stage. Irrespective of whether a site is a designated heritage area, it is good practice to keep disruption to the natural landscape and features to a minimum during the development and construction phases.

In addition to complying with legal requirements, heritage on a trail route should be considered from the point of view of enhancing the attractiveness of a trail and enriching the visitor's experience. While not all trail users are interested in the heritage along the trail this can be a positive aspect of the trail for many users and provides an opportunity for proactive engagement and learning.

A Built Heritage Impact Report for the BBW, produced by Consarc Conservation (August 2022), accompanies this report.

8.2.10.1 Natural Environment

Ireland's natural heritage provides resources of social, cultural, educational, recreational and aesthetic value. The National Parks and Wildlife Service (NPWS) is responsible for the conservation of a range of ecosystems and populations of flora and fauna in Ireland. A particular responsibility of NPWS is the designation and protection of Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Natural Heritage Areas (NHAs) and proposed Natural heritage Areas (pNHAs).

If a proposed trail development passes through or adjacent to any of the above designated areas the NPWS must be consulted and permission to proceed with the development sought. Depending on the nature of the proposed trail and the designation of the area concerned, the NPWS may:

- Authorise the development of a trail with no conditions.
- Authorise the development of a trail with specific conditions.
- Prohibit the development of the trail.

8.2.10.2 Built Environment

Recorded archaeological sites

There are many archaeological sites around the country. The National Monument Service as part of the Department for Culture, Heritage and the Gaeltacht, is responsible for the protection of archaeological heritage including the licensing of archaeological excavations, in accordance with the National Monuments Acts 1930 to 2004.

Work proposed at or close to a recorded Monument requires giving notice in writing to the National Monuments Service at least two months before commencing. This allows time to plan how the work may proceed in accordance with the protection of the monument. Some of the route may run alongside protected archaeological sites while other trails will pass close to or through listed sites. There may also be archaeological sites (including ancient sections of early roads) not listed on the database and others that may only come to light during the project.

All work on trails therefore needs to be approached very carefully and a detailed Archaeological Impact Assessment may need to be commissioned on certain projects.

Protected Structures

Under the Planning and Development Act 2000, a protected structure is one which a planning authority considers to be of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social, or technical point of view.

Any type of structure can be listed, for example, buildings, statues, follies, lime kilns, bridges, milestones etc. Under planning legislation, any works that would materially affect the character of a protected structure would require planning permission. Certain works carried out in the vicinity of a protected structure (i.e. not only those carried out to the structure itself) may also be deemed to materially affect its character and would therefore also require planning permission.

Each protected structure and set of proposed works will be different and will be determined on a caseby-case basis. It is strongly advised that the local planning authority is contacted in relation to all proposed works to protected structures, to determine if planning permission would be required.

Recommendations

- Plan thoroughly and consult widely with land management agencies and statutory authorities. Consultation with appropriate statutory bodies should be entered into from the early stages of the trail planning and development process.
- Liaise closely with the local planning authority in relation to all proposed works adjacent to protected structures, to determine whether planning permission would be required.
- Be prepared that certain assessments may need to be completed that will impact timeframes and budgets of development projects e.g. Strategic Environmental Assessment, Habitats Regulations Assessment and Appropriate Assessment, Environmental impact Assessment, Archaeological Impact Assessment.

8.2.11 Summary of key findings

The key issues identified regarding the physical trail are summarised in Table 12.

Issue	Description
Upland and remote rural areas	Upland areas of the BBW are within sensitive landscapes and the trail development process in these areas requires a different approach - a detailed trail design by an upland specialist plus trail build by a team specially trained in upland path works.

Walkers and livestock	Some sections of the trail pass through areas of pastoral farmland. Issues can arise when walkers and especially those with dogs, pass through areas with cattle present.
Route confusion	No definitive line of the route mapped and accessible, confusion over start point of the route, lack of or confusion over definitive description/ mapping/ source of information.
Trail standard	Holistic visitor experience trail standards appropriate for a strategically important tourism product are not currently in place.
Trail condition	No strategic approach to assessing trail condition, to date, Sport Trails Ireland provides the only level of accountability – current assessments are infrequent.
Trail build	BBW is not a sustainable trail - lack of funding for sustainable trail design and construction.
On-road vs off-road walking	Amount of off-road walking is currently adequate in the medium term at 83%. Further effort is required to bring certain sections of the trail to a higher percentage off-road, the main sections requiring attention being the North West Cork Way and the first third of the Ballyhoura Way.
Waymarking	A piecemeal approach to waymarking has occurred to date, the BBW not fully waymarked or navigable
Access and landownership	Additional buy-in is required from private landowners in order to increase the off-road percentage in the long-term. Resources have been confirmed from the Department in order to increase the number of RROs in order to increase access and oversee maintenance, but not all RROs are yet in post.
Natural and built heritage	Trail recommendations have the potential to impact sites of natural and built heritage importance. Consultation with the appropriate authorities and completion of certain assessments is required.

Table 12 Summary of key issues

8.3 Recommended Route

A re-route of sections of the BBW has been identified and recommendations put forward, primarily due to the trail confusion, the percentage of trail on-road and the condition of the current trail underfoot.

Many factors were taken into consideration when defining the recommended route including:

- route of the historic O'Sullivan Beara march
- availability of state-owned land
- presence of private land and its usage and owners' attitude to access provision
- existing formal and informal walking trails
- terrain type
- location of natural and built heritage and features of interest
- the location of positive control points
- proximity to urban areas for services and amenities

Careful consideration of these influencing factors has resulted in the recommended route of the BBW outlined in Figure 57.



Figure 57 The recommended route of the BBW

8.4 Recommended Trail Works

It is imperative going forward that any trail works on the BBW, whether new build or upgrade, are completed in line with the recommended sustainable trail standards outlined in Section A.

Many of the key trail issues raised can be addressed through sustainable trail works. The detailed trail works required are outlined in this report as follows:

- Section 8.5 gives an overview of each of the sections of the BBW, composed of the 12 NWT's.
- The Technical Supplement covers the trail works required in detail for each of the 12 component long-distance walking routes on the BBW.
- Section **Error! Reference source not found.** summarises the estimated cost of the recommended trail works.

8.5 Trail Section Overview

8.5.1 Beara Way

Route overview

Length ⁶	Start and Finish Point
Existing – 85.6km	Start – Dursey Sound Car Park (V 50781 41892)
Recommended - 88.4km	Finish – Kealkil (W 04856 56623)

On-road/ Off-road and Terrain

Description	On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern
Open hillside, rocky outcrop, pastoral/ arable field, bog, gravel trail, farm track, disused	outcrop, pastoral/ arable field, bog, gravel trail, farm track, disused vehicle track, tarmac footpath and local road (not consistently	Existing route	61.4	72%	Upland areas and remote rural areas with no built path present - landscape sensitive to increase in footfall and susceptible to damage by erosion
rehicle track, tarmac footpath and local road (not consistently surfaced or low usage).		Recommended route	82.0	93%	Pro-active approach required to upland and remote rural areas starting with a trail design by an upland path expert and

⁶ Linear route only, linkages not included

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					continuing with path build being undertaken by a contractor specially trained in upland path build techniques
		Existing route	24.2	28%	Existing route does not meet the medium term target of less than 20% on-road
On-road sections on regional and local roads	On- road	Recommended route	6.4	7%	Sections on-road through settlements are essential to allow the continuation of the route and provide opportunity to experience local towns and villages. Other onroad sections are on rural roads and do not provide cause for concern due to low traffic usage.

Linkages

Linkage Name	Length off- road (km)	Percentage off-road (%)	Length on- road (km)	Percentage on-road (%)	Total length (km)
Dunboy Castle Link and Kealkill Link	14.8	96	0.7	4	15.5

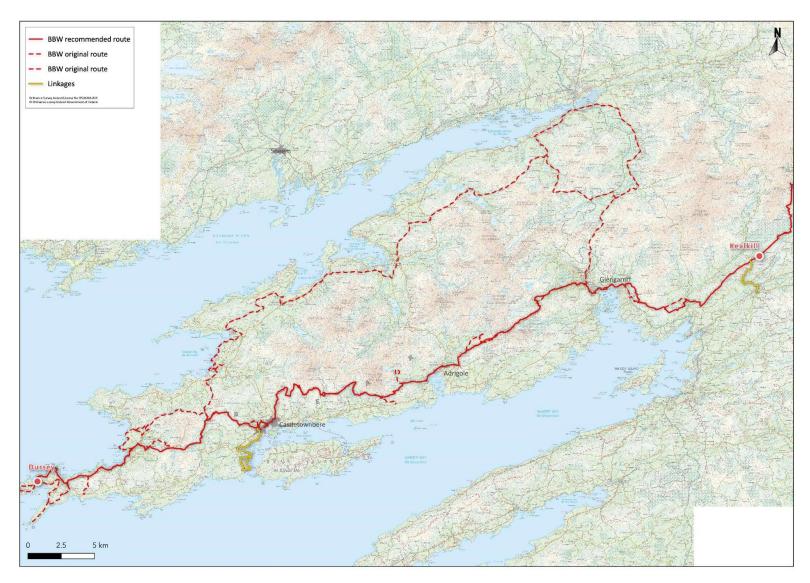


Figure 58 Overview of the Beara Way section of the BBW

The trail surface along the BBW on the Beara Way is interesting, varied and provides a strenuous walk for those sections within the West Cork hills. As noted in the previous table, the recommended trail is now 93% off-road which exceeds the long-term target of having over 90% of the route off-road. A significant improvement here being on the approach to Glengarriff from the east, the route now travels across disused tracks on the hillside before dropping down into the settlement, rather than using the regional road.

Off-road sections of the trail consist of used and disused vehicle tracks, open hillside with and without desire lines (some of which can be boggy or very wet under foot), and sections of pastoral farmland that are intended to be maintained for walkers (see Figure 59).



Figure 59 Off-road trail on the Beara Way

Trail Condition

Sections of the BBW on the Beara Way are identified as requiring work, either new build or trail upgrade, due to the condition of the trail. Sections that are wet or boggy underfoot require new build trail to provide a robust trail surface for walkers. A built trail will address drainage and erosion issues as well as ensure that the trail is sympathetic to the surrounding landscape in terms of visual and physical impact. The process by which trail build in the uplands should be carried out has been discussed in Sections 6.11.1 and 8.2.1.

Sections that are currently located on pastoral farmland are often overgrown or impacted by livestock e.g. poached by footprints, presence of droppings etc. The recommendation is that a built trail within a fenced corridor should be developed in order to separate walkers from livestock. This will benefit the trail surface as well as the safety and comfort of the walker. Should a landowner not wish to have a fenced corridor on their land, a programme of maintenance is required for sections of grassed path that is carried out timely and diligently.

The Beara Way has been part of the Walk Scheme since 2008 and has benefitted from landowners receiving payments to maintain the route on their land.

Infrastructure

Resources have been invested in replacing and upgrading infrastructure across the Beara Way in recent years. Wooden infrastructure has been replaced with durable metal infrastructure such as bridges and A-frame stiles. Infrastructure specifications can be seen in Section 6.2.

Waymarking and Interpretation Panels

Waymarking for the BBW on the Beara Way is adequate, but with room for improvement. There is no cohesive approach to waymarking on this section, i.e. not all locations that require waymarking are marked with BBW signage - the letters 'BBW' or the image of Donal O'Sullivan Bere. In some locations rely on existing National Waymarked Trail signage, in this case, the Beara Way. There are some locations waymarking is missing entirely. Some signage requires removal as it adds to trail confusion regarding the navigation of the linear BBW.

Interpretation panels on this section are located in the settlement where the route passes through.

They are place specific, helpful and fit for purpose. No other interpretation panels are required.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the Beara Way are as follows:

- Trail confusion:
 - o Uncertainty over starting point of the route.
 - o Uncertainty over the direction of the route the linear route is recommended to travel from Dursey to Castletownbere, then on to Adrigole and Glengarriff.
 - o Multiple waymarked routes meeting at certain points e.g. looped walks, cycle trails etc.
 - o Lack of consistent waymarking type, location and branding.
 - o Route not fully waymarked in both directions.
- Key sites of historic note not being located on the trail e.g. Dunboy Castle.
- Key sites of historic note requiring upgrade works e.g. Dunboy Castle.

Presence of national and European natural heritage designations – partnership working and
environmental surveys are required where trail upgrade or new build is recommended. The
presence of a designation or protected habitats or species does not preclude trail development,
but adaptions and appropriate mitigations may need to be made.

Item	Description			
New build trail	 Existing sections of the Beara Way require new build trail. This is required to increase the off-road percentage on the trail, as well as to provide a robust walking surface on sections of the trail that are already off-road, but no built trail is present. Specialist approach to trail design and build required for sections in upland areas. New build trail along sections of rocky outcrops north of Carrig. Specialist upland trail design required here. 			
Trail upgrade	Existing sections of the Beara Way require trail upgrade. This is required to provide a robust walking surface on sections of the trail where some form of built trail has been present in the past. Trail upgrade works include resurfacing, fixing issues such as subsidence etc. Upgrade trail along Adrigole waterfront by resurfacing and re-pointing			
Other works	Other works required such as installation of drainage e.g. water bars.			
Trail re-route	 Re-route at Castletownbere to increase off-road walking Re-route at Gortagenerick due to challenging topography Re-route at Coomarkane due to trail erosion Re-route at Glengarriff to travel along the waterfront and past the harbour and Blue Pool Re-route east of Glengarriff to avoid walking on the N71 unnecessarily Re-route at Coorycommane to increase off-road walking Linear trail to continue east at Kealkil, rather than travelling into Kealkil. Optional linkage to Kealkil to be retained. 			
Trail linkages	Develop optional linkages to key points e.g. Dunboy Castle and Kealkil. Proposed linkage to Coomgira Waterfall to be explored in the future but not as part of this project.			
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles may be required to cross field and property boundaries.			
Waymarking and Interpretation	ration New and replacement signage required to reflect the recommendations of the signage and interpretation strategy. Recommendations to be applied to the entire BBW.			

8.5.2 Sli Gaeltacht Mhuscrai

Route overview

1	Charle and Ethilab Datus
Length	Start and Finish Point

Existing – 70.7km	Start – Kealkil (W 04856 56623)
Recommended - 57.8km	Finish – Millstreet (W 27163 90286)

On-road/ Off-road and Terrain

Description	On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern
Open hillside, pastoral/ arable field, bog, gravel trail, farm track, disused vehicle track, tarmac footpath and local	Off- road	Existing route	61.0	86%	 Upland areas and remote rural areas with no built path present - landscape sensitive to increase in footfall and susceptible to damage by erosion Upland areas and remote rural areas with built path present, but built unsustainably
road (not consistently surfaced or low usage).		Recommended route	55.0	95%	Pro-active approach required to upland and remote rural areas starting with a trail design by an upland path expert and continuing with path build being undertaken by a contractor specially trained in upland path build techniques
		Existing route	9.7	14%	Existing route does not meet the long-term target of less than 10% on-road
On-road sections on regional and local roads	On- road	Recommended route	2.8	5%	Sections on-road through settlements are essential to allow the continuation of the route and provide opportunity to experience local towns and villages. Other on-road sections are on rural roads and do not provide cause for concern due to low traffic usage.

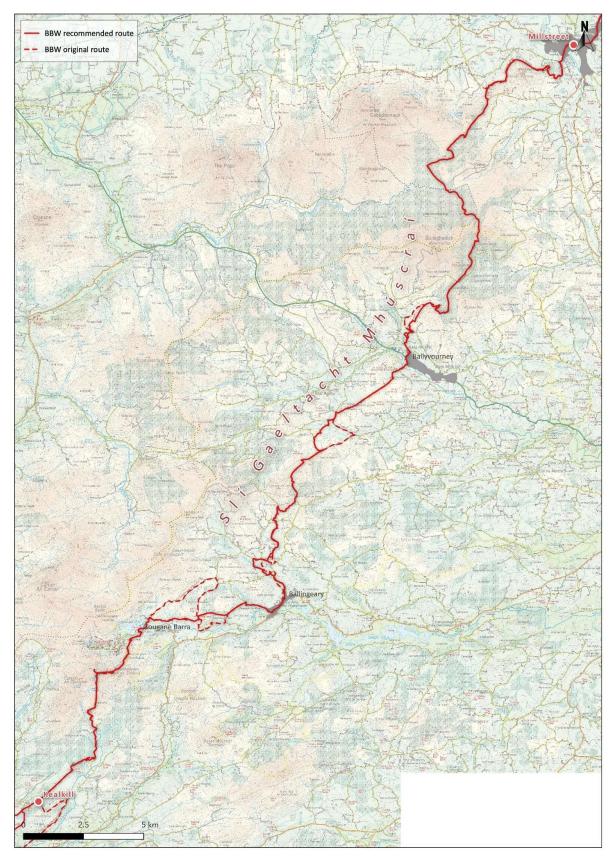


Figure 60 Overview of the Sli Gaeltacht Mhuscrai on the BBW

The trail surface along the BBW on the Sli Gaeltacht Mhuscrai is interesting and varied. As noted in the previous table, the recommended trail is over 95% off-road and exceeds the long-term target of having 90% of the BBW off-road. The sections that are on-road are spread out and have low levels of traffic. Additional work to increase the level of off-road walking is not required on the Sli Gaeltacht Mhuscrai.

Off-road sections of the trail consist of used and disused vehicle tracks (farm and forestry), open hillside with and without desire lines (some of which can be boggy or wet under foot), built gravel trail (Figure 61), bog bridge, stone stepping and sections of pastoral farmland intended to be maintained for walkers.



Figure 61 Off-road trail on the Sli Gaeltacht Mhuscrai

Trail Condition

A built trail will address drainage and erosion issues as well as ensure the trail is sympathetic to the surrounding landscape in terms of visual and physical impact. The process by which trail build in the uplands should be carried out has been discussed in Sections 6.11.1 and 8.2.1.

Sections that are currently located on pastoral farmland are often overgrown or impacted by livestock e.g. poached by footprints, presence of droppings etc. The recommendation is that a built trail within a fenced corridor should be developed in order to separate walkers from livestock. This will benefit the trail surface as well as the safety and comfort of the walker. Should a landowner not wish to have a fenced corridor on their land, a programme of maintenance is required for sections of grassed path that is carried out timely and diligently.

Up until 2021, the Sli Gaeltacht Mhuscrai was not part of the Walk Scheme and did not benefit from landowners receiving payments to maintain the route on their land. The trail has been maintained in an ad hoc manner by local route committee groups, who have sourced funding independently. The route was successful in the recent round of Walks Scheme funding with landowners now being able to receive payment for maintaining the route on their land. It also means that new sections are likely to be developed as new landowners come on board.

Infrastructure

Resources have been invested in replacing and upgrading infrastructure across the Sli Gaeltacht Mhuscrai in recent years, again under the management of local walk route committees. Wooden infrastructure has been replaced with durable metal infrastructure such as bridges and A-frame stiles.

Waymarking and Interpretation Panels

Waymarking for the BBW on the Sli Gaeltacht Mhuscrai is adequate, but with room for improvement. There is no cohesive approach to waymarking on this section, i.e. not all locations that require waymarking are marked with BBW signage - the letters 'BBW' or the image of Donal O'Sullivan Bere. Some waymarking locations rely on existing National Waymarked Trail signage, in this case, the Sli Gaeltacht Mhuscrai.

Interpretation panels on this section of the route are located in the settlement where the route passes through. They are place specific, helpful and fit for purpose. No other BBW interpretation panels are required.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the Sli Gaeltacht Mhuscrai are as follows:

- Trail confusion:
 - o Multiple waymarked routes meeting at certain points e.g. looped walks, cycle trails.
 - o Lack of consistent waymarking type, location and branding.
- Lack of joined up approach to trail management trail is managed at a sub section level by local walk route committees, resulting in a piecemeal approach to route management.

- Historic lack of funding the Sli Gaeltacht Mhuscrai has not benefitted from Walks Scheme funding previously.
- Presence of national and European natural heritage designations partnership working and
 environmental surveys are required where trail upgrade or new build is recommended. The
 presence of a designation or protected habitats or species does not preclude trail development,
 but adaptions and appropriate mitigations may need to be made.
- Presence of features of built heritage interest where new build trail or trail upgrade is recommended. The presence of a designation or feature does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

Item	Description
New build trail	 Existing sections of the Sli Gaeltacht Mhuscrai require new build trail. This is required to increase the off-road percentage on the trail, as well as to provide a robust walking surface on sections of the trail that are already off-road, but no built trail is present. Specialist approach to trail design and build required for sections in upland areas. New build trail along sections between Lough Fadda and Lough Glas, as well as north of Foilastookeen. Specialist upland trail design required here.
Trail upgrade	Existing sections of the trail require upgrade. This is required to provide a robust walking surface on sections of the trail where some form of built trail has been present in the past. Trail upgrade works include resurfacing, fixing issues such as subsidence etc. Certain sections of existing upland paths require trail upgrade also, which will require specialist trail design.
Other minor works	Other works required such as installation of drainage e.g. water bars.
Trail re-route	 Trail to continue east at Kealkil, rather than travelling into Kealkil. Optional linkage to Kealkil to be retained. Trail re-route south of Gortafludig, the Walk Scheme has opened up access here with farmers now coming on board, resulting in the amount of on-road trail being reduced. Reroute at Gorteennakilla resulting in a better trail line and greater historical accuracy. Reroute north of Ballyvourney to accommodate roadworks on the N22 – route to be reinstated Re-route south of Derreen – resulting in a better trail line and greater historical accuracy.

Trail linkages	 Retain optional linkage to Kealkill. 			
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles may be required to cross field and property boundaries.			
Waymarking and Interpretation	New and replacement signage required to reflect the recommendations of the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022). Recommendations to be applied to the entire BBW.			

8.5.3 North West Cork Way

Route overview

Length	Start and Finish Point
Existing - 42.1km	Start – Millstreet (W 27163 90286)
Recommended – 43.5km	Finish – St Johns Bridge (R 39396 09817)

On-road/ Off-road and Terrain

Description	On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern
	es, tarmac and local road istently Off- road	Existing route	11.5	27%	No concern over existing off-road sections, more required.
Farm tracks, forest trails, desire lines, tarmac footpath and local road (not consistently surfaced).		Recommended route	22.5	51%	Not enough of the route off-road to meet the medium term goal of the BBW project of 80% off-road. Pro-active approach required to engage with local landowners to increase the off-road percentage.
		Existing route	30.6	73%	Existing route does not meet the medium term target of 20% on-road
On-road sections on regional and local roads	On-road	Recommended route	21.3	49%	Sections on-road through settlements are essential to allow the continuation of the route and provide opportunity to experience local towns and villages. Other on-road sections, although are on rural roads are lengthy and provide a poor walking experience.

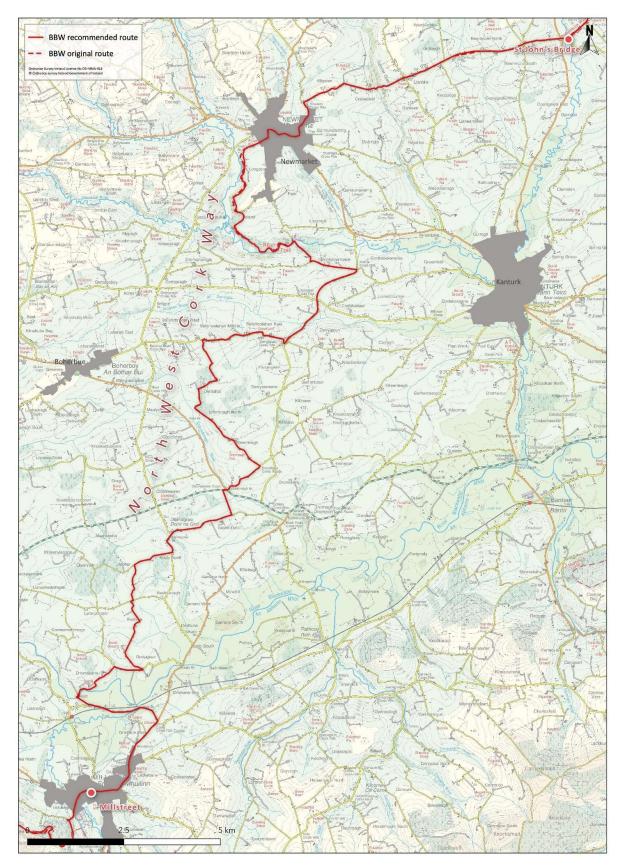


Figure 62 Overview of the North West Cork Way section of the BBW

The trail surface along the BBW on the North West Cork Way, in the majority consists of bitmac rural and regional roads. As noted in the previous table, the recommended trail is only 51% off-road and falls short of the National Trails Office standard for off-road to on-road ratio of 70% off-road, and the aim of the BBW project of having 80% of the route off-road. The sections that are on bitmac trail surface are repetitive and lack interest, coupled with high hedgerows often preventing views of the surrounding landscape. It is essential that these sections are taken off-road, using private land and that a sustainable non-bitmac surface is provided.

Off-road sections of the trail consist of farm track, built forest trails and desire lines across wooded areas. Farm tracks and forest trails are constructed using compacted gravel, are robust and provide a welcome alternative to walking on bitmac. Figure 63 shows trail surfaces on the NWCW.



Figure 63 On-road and off-road trail on the North West Cork Way

Trail Condition

The majority of the trail is on bitmac roads and as such does not need any trail build or upgrade works. Work is required to identify suitable off-road alternatives to the existing on-road sections.

The North West Cork Way has not been part of the Walks Scheme and has not benefitted from landowners receiving payments to maintain the route on their land, or the scheme providing an incentive for private landowners to permit access for walking on their land. The route has been developed by local and passionate individuals, in partnership with those spearheading the Bear Breifne Way. The trail was not submitted to the most recent round of Walks Scheme funding as no progress has been made with regards re-routes on this section.

Infrastructure

Minimal infrastructure is present on this section of the route due to the high percentage of the route on-road. Resources have been invested in replacing and upgrading infrastructure on the North West Cork in recent years, again under the management of local individuals. An example is the new bridge north of Millstreet.

Waymarking and Interpretation Panels

Waymarking for the BBW on the North West Cork Way is not adequate. There is no cohesive approach to waymarking on this section, i.e. not all locations that require waymarking are marked. Existing BBW finger post markers are fit for purpose and well placed.

Interpretation panels on this section of the route are located in the settlements where the route passes through. They are place specific, helpful and fit for purpose. No other BBW interpretation panels are required.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the North West Cork Way are as follows:

- Trail confusion:
 - o Reference made to the Duhallow section of the BBW rather than the North West Cork Way. The Duhallow Way is a separate national waymarked trail that crosses the BBW.
 - o Lack of consistent waymarking at some locations.
- High percentage of on-road walking.
- Lack of interest in terms of trail variety and landscape.
- Lack of route management trail is managed by a few individuals resulting in a piecemeal approach to route management.
- Not an official National Way Marked Trail.
- Historic lack of funding the North West Cork Way has not benefitted from Walks Scheme funding to date and further opportunities to enhance the route and get more of it off-road should be explored.

- Presence of national and European natural heritage designations partnership working and
 environmental surveys are required where trail upgrade or new build is recommended. The
 presence of a designation or protected habitats or species does not preclude trail development,
 but adaptions and appropriate mitigations may need to be made.
- Presence of features of built heritage interest where new build trail or trail upgrade is recommended. The presence of a designation or feature does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

Item	Description			
New build trail	Trail build will be required in order to increase the percentage of off-road walking on the North West Cork Way. Sections of new build trail to be identified through community and landowner liaison to gain permission to access private land.			
Trail upgrade	Very little purpose-built trail requires trail upgrade. Island Wood, south of Newmarket, is well kept as a Coillte trail network site.			
Other minor works	Other works required such as installation of drainage e.g. water bars.			
Trail re-route	No re-routes have been identified since the 2019 Masterplan was undertaken. Major trail re-routing through, working with local landowners and community representatives to identify suitable off-road alternative to on-road sections, required.			
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles may be required to cross field and property boundaries.			
Waymarking and Interpretation	New and replacement signage required to reflect the recommendations of the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022). Recommendations to be applied to the entire BBW.			

8.5.4 Ballyhoura Way

Route overview

Length	Start and Finish Point
Existing - 87km	Start – St Johns Bridge (R 39396 09817)
Recommended – 86.5km	Finish – Tipperary (R 89064 35660)

On-road/ Off-road and Terrain

Description	On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern
Open hillside, gravel trail, farm track, forest road, disused vehicle track, tarmac road footpath and local road (not consistently surfaced).	Off-	Existing route	53.9	62%	Does not meet the 80% target of off- road trail for the BBW, additional off- road walking required. Majority of off-road trail on this section, is purpose-built trail, e.g. recreational trails on Coillte owned land at Ballyhoura Mountains and Glen of Aherlow. Upland areas and remote rural areas with no built path present - landscape sensitive to increase in footfall and susceptible to damage by erosion
	Recommended route	65.7	76%	Does not meet the 80% target of off- road trail for the BBW, additional off- road walking required. Section in the Ballyhoura Mountains between Seefin and Carron Mountains. Pro- active approach required to upland and remote rural areas starting with a trail design by an upland path expert and continuing with path build being undertaken by a contractor specially trained in upland path build techniques	
		Existing route	33.1	38%	Existing route does not meet the medium-term target of a maximum of 20% on-road walking
On-road sections on On- regional and road local roads		Recommended route	20.8	24%	Recommended route does not meet the medium-term target of a maximum of 20% on-road walking. The section between St Johns Bridge heading east to Churchtown, requires effort to reduce the on-road walking. A 1km section on the N24 just south of Tipperary would need to be addressed also.

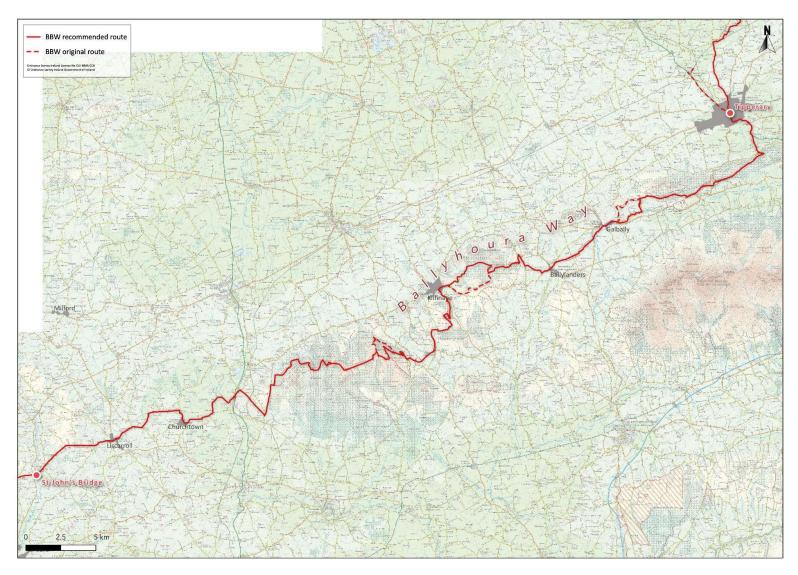


Figure 64 Overview of the Ballyhoura Way section of the BBW

The trail surface along the BBW on the Ballyhoura Way is at times, interesting and varied. As noted in the previous table, the recommended trail is 76% off-road and this falls slightly short of the 80% target required for this project.

The first 20km of the route from St Johns Bridge to Churchtown, is on a bitmac surface. The other sections that are on bitmac trail surface are on the approach to or leaving settlements, with short section of the route crossing the N20, a busy national road. It is preferable that these on-road sections are taken off-road, using private land and that a sustainable non bitmac surface is provided.

Off-road sections of the trail consist of open hillside which can be boggy underfoot, forest trails and roads, vehicle track and local roads that are not consistently surfaced. See Figure 65.



Figure 65 On-road trail and off-road trail on the Ballyhoura Way

Trail Condition

Sections of the BBW on the Ballyhoura Way are identified as requiring work, in the form of new build or trail upgrade. Some off-road sections are in poor condition within the forest at the Ballyhoura Trail Centre. Works are required to address boggy areas between Seefin Mountain and Carron Mountain, with careful consideration given to trail build here due to landscape sensitivities.

A section of off-road trail to the east of Galbally along the River Aherlow also requires trail works in the form of new build trail.

The Ballyhoura Way has not previously been part of the Walks Scheme and has not benefitted from landowners receiving payments to maintain the route on their land. The trail has been maintained in an ad hoc manner by local community representatives, who have sourced funding independently.

Sections of off-road trail on this route are on Coillte owned land and as such the trail falls under the maintenance remit of Coillte.

The Ballyhoura Way was submitted to the new round of Walks Scheme funding and was successful. Funding for trail maintenance and the appointment of a RRO will be available in due course.

Infrastructure

The infrastructure present on the Ballyhoura Way requires attention. There are multiple examples of pieces of wooden infrastructure that are at the end of their lifespan, or where infrastructure is missing. Long sections do not have any infrastructure present due to the section between St Johns Bridge and Churchtown. Also large sections of the route are within Coillte owned land, resulting in less property boundaries to cross.

Waymarking and Interpretation Panels

Waymarking for the BBW on the Ballyhoura Way section of the BBW is poor. There is no cohesive approach to waymarking on this section, i.e. very few locations that require waymarking are marked with BBW signage - the letters 'BBW' or the image of Donal O'Sullivan Bere. The majority of waymarking locations rely on existing National Waymarked Trail signage, in this case, the Ballyhoura Way.

Interpretation panels on this section of the route, bar one, are located in the settlements where the route passes through. Three are place specific, helpful and fit for purpose. One interpretation panel is not location specific and should be upgraded to provide location specific information. One interpretation panel is not location specific and is located in Ardpatrick, a small settlement that the route does not pass through. This should be removed. Location and content of interpretation panels should be consistent along the entire BBW.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the Ballyhoura Way are as follows:

• Trail confusion:

- Multiple waymarked routes meeting at certain points e.g. looped walks, cycle trails, mountain bike trails.
- Lack of consistent waymarking type, location and branding.

- Lack of route management trail is managed by a few individuals resulting in a piecemeal approach to route management.
- Historic lack of funding the Ballyhoura Way has not benefitted from Walks Scheme funding previously.
- Presence of national and European natural heritage designations partnership working and
 environmental surveys are required where trail upgrade or new build is recommended. The
 presence of a designation or protected habitats or species does not preclude trail development,
 but adaptions and appropriate mitigations may need to be made.
- Presence of features of built heritage interest where new build trail or trail upgrade is recommended. The presence of a designation or feature does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

Item	Description
New build trail	 Existing sections of the Ballyhoura Way require new build trail. This is required to increase the off-road percentage on the trail, as well as to provide a robust walking surface on sections of the trail that are already off-road, but no built trail is present. Specialist approach to trail design and build required for sections in upland areas. New build trail along sections between Seefin Mountain and Carron Mountain require specialist upland trail design required. New build required along the River Aherlow to the east of Galbally.
Trail upgrade	Existing sections of the trail require upgrade. This is required to provide a robust walking surface on sections of the trail where some form of built trail has been present in the past. Trail upgrade works include resurfacing, fixing issues such as subsidence etc. Certain sections of existing upland paths require trail upgrade also, which will require specialist trail design.
Other minor works	Other works required such as installation of drainage e.g. water bars.
Trail re-route	 Re-route between Green Wood and Castle Philip Re-route between Kilfinanne and Ballylanders Re-route to the east of Galbally
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles may be required to cross field and property boundaries.

Waymarking and Interpretation	New and replacement signage required to reflect the
	recommendations of the Brand and Interpretation Tookit
	(Tandem Design – in development as at November 2022).
	Recommendations to be applied to the entire BBW.

8.5.5 Multeen Way

Route overview

Length	Start and Finish Point
Existing - 35.81km	Start – Tipperary (R 89064 35660)
Recommended – 37.9km	Finish – Milestone (R 94279 58380)

On-road/ Off-road and Terrain

On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern
Off-	Existing route	25.7	72%	Majority of off-road trail on this section, is purpose-built off-road vehicle trail, e.g. access roads to wind farms, farm track. The existing route does not meet the goal of having 80% of the route off-road.
road	Recommended route	nded 32.4 86%		A section of new build off-road trail is recommended from Newtown to Donohill, to take the trail off-road at this point. Further work is needed to get the route off-road between Tipperary and Newtown.
	Existing route	10.2	28%	Existing route does not meet the medium term target of a maximum of 20% on-road walking. The first 8km from Tipperary to Donohill is on-road.
On-road	Recommended route	5.4	14%	There is a busy, 4.3km on-road section between Tipperary and Newtown. This does not provide a safe or pleasant walking experience. Other sections on-road through settlements are essential to allow the continuation of the route and provide opportunity to experience local towns and villages.

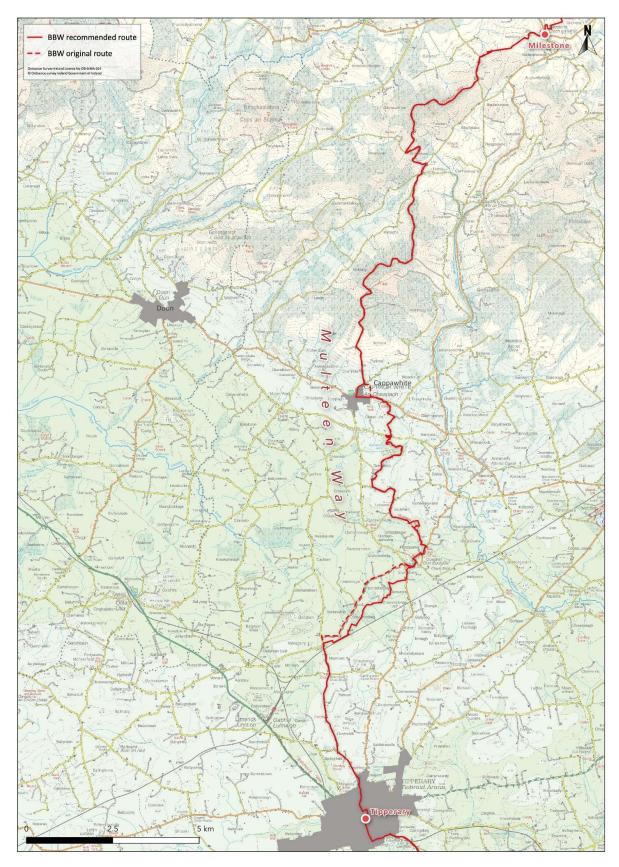


Figure 66 Overview of the Multeen Way section of the BBW

The trail surface along the BBW on the first half of the Multeen Way between Tipperary and Cappaghwhite, is interesting and varied. From Newtown to Cappaghwhite, the recommended trail surface will consist of new build gravel trail through pastoral farmland, gravel and bitmac vehicle access tracks and gravel trails through woodland. Cappaghwhite to Milestone is dominated by forest and wind farm access tracks, along with rural roads. The route follows windfarm access roads for 14km. As noted in the previous table, the recommended trail is 86% off-road and meets the BBW medium term target for having 80% off-road.

For the recommended route, the first 4.3km of the route is on a rural road with a bitmac surface. Other sections that are on bitmac trail surface, are on the approach to, or leaving settlements. It is preferable that these sections are taken off-road and that a sustainable non bitmac surface is provided.





Figure 67 Off-road trail on the Multeen Way

Trail Condition

Sections of the BBW on the Multeen Way are identified as requiring work, in the form of new build trail and trail upgrade. Several off-road sections do not have any kind of built trail and involve following field boundaries.

The Multeen Way has not been part of the Walks Scheme and has not benefitted from landowners receiving payments to maintain the route on their land. The trail has been maintained in an ad hoc manner by local community representatives, who have sourced funding independently.

The Multeen Way was submitted to the new round of Walks Scheme funding and was successful. Funding for trail maintenance and appointment of a RRO will be available in due course.

Infrastructure

Resources have been invested in replacing and upgrading infrastructure across the Multeen Way in recent years. Wooden infrastructure has been replaced with durable metal infrastructure such as bridges and A-frame stiles.

Waymarking and Interpretation Panels

Waymarking for the BBW on the Multeen Way section of the BBW is poor. There is no cohesive approach to waymarking on this section, i.e. very few locations that require waymarking are marked with BBW signage - the letters 'BBW' or the image of Donal O'Sullivan Bere. The majority of waymarking locations rely on existing National Waymarked Trail signage, in this case, the Multeen Way.

Interpretation panels on this section are located in the settlements where the route passes through. They are place specific, helpful and fit for purpose. Location and content of interpretation panels should be consistent along the entire BBW.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the Multeen Way are as follows:

- Trail confusion:
 - o Multiple waymarked routes meeting at certain points e.g. looped walks, cycle trails,
 - Lack of consistent waymarking type, location and branding
- Lack of route management trail is managed by a few individuals resulting in a piecemeal approach to route management.
- Historic lack of funding the Multeen Way has not benefitted from Walks Scheme funding previously.
- Presence of national and European natural heritage designations partnership working and environmental surveys are required where trail upgrade or new build is recommended. The presence of a designation or protected habitats or species does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

• Presence of features of built heritage interest where new build trail or trail upgrade is recommended. The presence of a designation or feature does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

Item	Description		
New build trail	Existing sections of the Multeen Way require new build trail to get the route off-road. This involves the use of privately-owned land which requires new build trail. Existing sections of off-road trail require new build trail in order to provide a sustainable trail surface.		
Trail upgrade	Existing sections of the trail require upgrade. This is required to provide a robust walking surface on sections of the trail where some form of built trail has been present in the past. Trail upgrade works include resurfacing, fixing issues such as subsidence etc.		
Other minor works	Other works required such as installation of drainage e.g. water bars.		
Trail Re-route	 Re-route from Newtown to Donohill Remove the alternative route that bypasses Cappaghwhite – unnecessary and passes through a large dairy herd. 		
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles may be required to cross field and property boundaries.		
Waymarking and Interpretation	New and replacement signage required to reflect the recommendations of the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022). Recommendations to be applied to the entire BBW.		

8.5.6 Ormond Way

Route overview

Length	Start and Finish Point
Existing - 83.6km	Start – Milestone (R 94279 58380)
Recommended – 82.9km	Finish – Portumna (M 86495 04812)

On-road/ Off-road and Terrain

Description	On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern
Forest trails, vehicle tracks, pastoral farmland, tarmac footpath and local road (not consistently surfaced).	Off road	Existing route	45.6	54%	Lack of off-road, designed, built trail – could lead to sustainability issues with increased footfall. Lack of trail maintenance on farmland sections of trail.
	Recommended route	60.5	73%	Doesn't meet the 80% off- road target set for the BBW project. Increase in amount of built trail recommended in order to ensure trail sustainability.	
On-road sections on regional and local roads	On-road	Existing route	38.1	46%	Sections on-road through settlements are essential to allow the continuation of the route and provide opportunity to experience local towns and villages. Other on-road sections are on local rural roads and do not provide much cause for concern due to low traffic usage.
		Recommended route	22.4	27%	On-road percentage needs to be reduced - e.g. opportunity to do this north of Cloughjordan

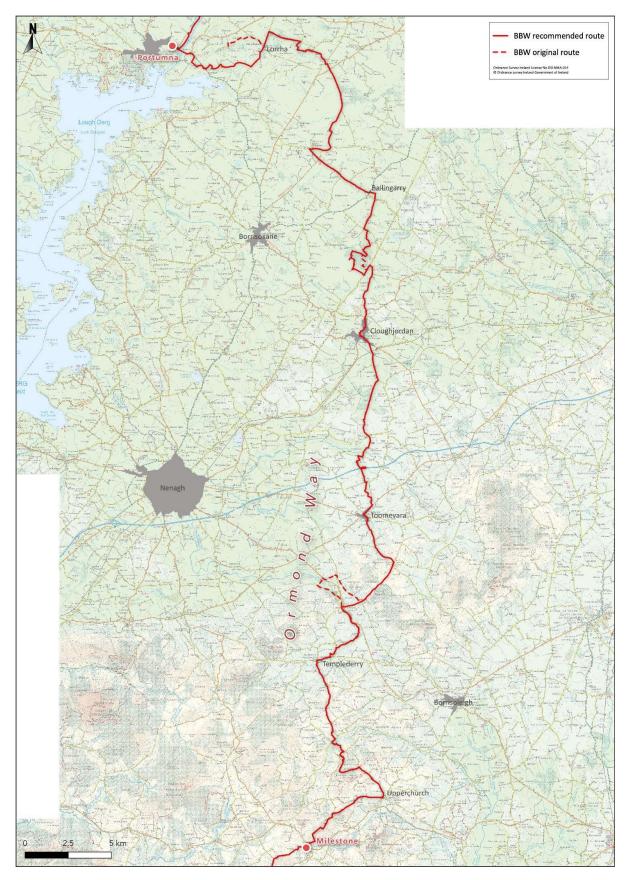


Figure 68 Overview of the Ormond Way section of the BBW

The trail surface along the BBW on the Ormond Way is interesting and varied, although, as noted in the previous table, the recommended trail is 73% off-road and does not meet the 80% target set for the BBW project in the medium term. The sections that have bitmac trail surfacing are spread across the route and have low levels of traffic. It is preferable that these sections are taken off-road, using private land and that a sustainable non bitmac surface is provided.

Off-road sections of the trail consist of forest track, pastoral farmland that is (intended to be) maintained for walkers (Figure 69), vehicle tracks and local roads with grass in the middle.



Figure 69 Off-road trail on the Ormond Way

Trail Condition

Sections of the BBW on the Ormond Way are identified as requiring work (trail upgrade) due to the condition of the trail. Sections that are wet or boggy underfoot may require new build trail to provide a sustainable trail surface for walkers at all points of the year. A designed, built trail will address drainage and erosion issues as well as ensure that the trail is sympathetic to the surrounding landscape in terms of visual and physical impact.

Sections that are currently located on pastoral farmland are often overgrown or impacted by livestock. It is recommended that a fenced corridor with built trail is developed here, in order to reduce the amount of maintenance required, as well as preventing livestock accessing the trail in order to benefit the condition of the trail and comfort of the walker.

The Ormond Way has not been part of the Walks Scheme and has not benefitted from landowners receiving payments to maintain the route on their land. The trail has been maintained in an ad hoc manner by local passionate individuals, who have sourced funding independently. The route was

submitted to the new round of Walks Scheme funding and was successful. Funding for trail maintenance and RRO will be available in due course.

Infrastructure

Resources have been invested in replacing and upgrading infrastructure across the Ormond Way in recent years, again under the management of local walk route representatives. Wooden infrastructure has been replaced with durable metal infrastructure such as bridges and A-frame stiles.

Waymarking and Interpretation Panels

Waymarking for the BBW on the Ormond Way is excellent. The Ormond Way section is the best waymarked section of the Bear Breifne Way.

Interpretation panels on this section are located in the settlements the route passes through. Four out of five are not place specific, these should be furnished with location specific information.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the Ormond Way are as follows:

- Off-road percentage needs to be increased further.
- Lack of joined up approach to trail management trail is managed at a local level by local walk route representatives. Different groups not working together regarding the BBW.
- Historic lack of funding the Ormond Way has not benefitted from Walks Scheme funding previously.
- Presence of national and European natural heritage designations partnership working and
 environmental surveys are required where trail upgrade or new build is recommended. The
 presence of a designation or protected habitats or species does not preclude trail development,
 but adaptions and appropriate mitigations may need to be made.
- Presence of features of built heritage interest where new build trail or trail upgrade is recommended. The presence of a designation or feature does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

Item	Description
New build trail	Existing sections of the Ormond Way require new build trail to get the route off-road. This involves the use of privately-owned land which requires new build trail. Sections of trail that are already off-road, but have been identified as being unsustainable, also require new build.
Trail upgrade	Existing sections of the trail require upgrade. This is required to provide a robust walking surface on sections of the trail where some form of built trail has been present in the past. Trail upgrade works include resurfacing, fixing issues such as subsidence etc.
Other minor works	Other works required such as installation of drainage e.g. water bars.
Trail re-route	 Re-route to continue east at Latteragh, rather than travelling north to Curragh. Re-route at Scohaboy Bog to include existing boardwalk trail Re-route from Lorrha to Portumna.
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles may be required to cross field and property boundaries.
Waymarking and Interpretation	New and replacement signage required to reflect the recommendations of the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022). Recommendations to be applied to the entire BBW.

8.5.7 Hymany Way

Route overview

Length	Start and Finish Point
Existing - 91.98km	Start – Portumna (M 86495 04812)
Recommended -	Finish – Ballygar (M 78604 51864)

On-road/ Off-road and Terrain

Description	On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern	
Open bog, vehicle tracks, pastoral farmland, tarmac footpath and local road (not consistently surfaced).	Off-road	Existing route	67.8	74%	Lack of off-road, designed, built trail – could lead to sustainability issues with increased footfall. Lack of trail maintenance on farmland sections of trail.	
		Recommended route	69.3	74%	Doesn't meet the 80% off- road target set for the BBW project. Increase in amount of built trail recommended in order to ensure trail sustainability. Clarity required regarding development of Athlone Greenway and potential for path sharing here.	
On-road sections on regional and local roads	On-road	Existing route	24.2	26%	Sections on-road through settlements are essential to allow the continuation of the route and provide opportunity to experience local towns and villages. Other on-road sections are on local rural roads and do not provide much cause for concern due to low traffic usage.	
		Recommended route	23.9	26%	On-road percentage needs to be reduced.	

Linkages

Trail Section	Length off- road (km)	Percentage off-road (%)	Length on- road (km)	Percentage on-road (%)	Total length (km)
Ballinasloe Link	3.2	63	1.9	37	5.1

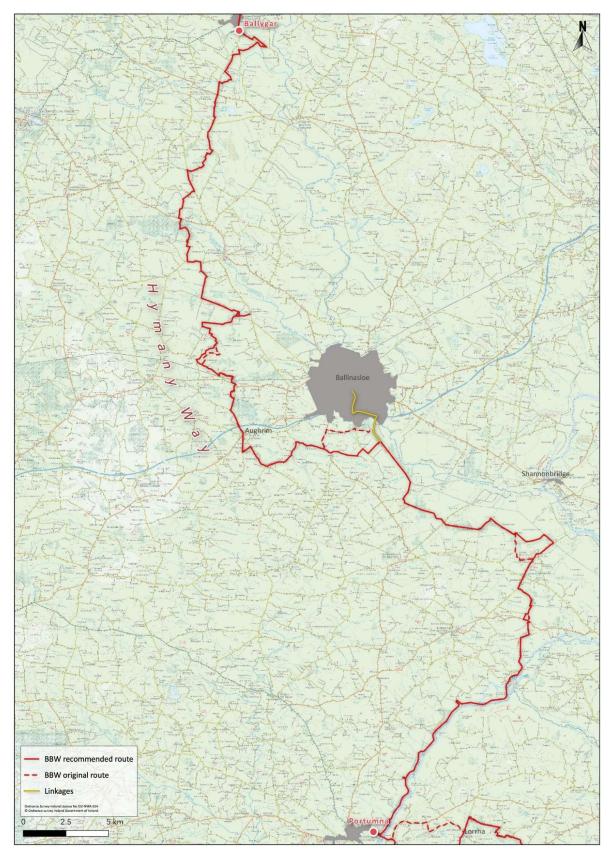


Figure 70 Overview of the Hymany Way section of the BBW

The trail surface along the BBW on the Hymany Way is interesting and varied. As noted in the previous table, the trail is 74% off-road but does not meet the 80% off-road target set for the BBW project. The sections on bitmac road are spread across the route and have low levels of traffic. It is preferable that these sections are taken off-road, using private land and that sustainable non-bitmac surfacing is provided.

Off-road sections of the trail consist of pastoral farmland that is (intended to be) maintained for walkers, vehicle tracks, open bog and local roads which are not consistently surfaced (Figure 71).



Figure 71 Off-road trail on the Hymany Way

Trail Condition

Sections of the BBW on the Hymany Way are identified as requiring work — new build trail and trail upgrade - due to the condition of the trail. Sections that are wet or boggy underfoot require new build trail to provide a sustainable trail surface for walkers at all points of the year e.g. boardwalk or floating trail (incorporating geotextile membrane). A designed, built trail will address drainage and erosion issues as well as ensure that the trail is sympathetic to the surrounding landscape in terms of visual and physical impact.

Sections that are currently located on pastoral farmland are often overgrown or impacted by livestock. It is recommended that a fenced corridor with built trail is developed, in order to reduce the amount of maintenance required, as well as preventing livestock accessing the trail in order to benefit the surface of the trail and comfort of the walker.

The Hymany Way north of Portumna follows the northern bank of the River Shannon for over 12km.

This section of the trail is in poor condition as little maintenance has been undertaken and livestock

freely roams, resulting in uneven trail underfoot. This section of trail requires a new build trail that is fenced off from livestock.

The Hymany Way has not been part of the Walks Scheme and has not benefitted from landowners receiving payments to maintain the route on their land. The trail has been maintained in an ad hoc manner by local passionate individuals, who have sourced funding independently. The route was submitted to the new round of Walks Scheme funding and was successful. Funding for trail maintenance and appointment of a RRO will be available in due course.

Infrastructure

Resources have been invested in replacing and upgrading infrastructure across the Hymany Way in recent years, again under the management of local walk route representatives. Wooden infrastructure has been replaced with durable metal infrastructure such as bridges and A-frame stiles.

Waymarking and Interpretation Panels

Waymarking for the BBW on the Hymany Way section of the BBW is poor. There is no cohesive approach to waymarking on this section, i.e. very few locations that require waymarking are marked with BBW signage - the letters 'BBW' or the image of Donal O'Sullivan Bere. The majority of waymarking locations rely on existing National Waymarked Trail signage, in this case, the Hymany Way.

Interpretation panels are located in the settlements where the route passes through. They are place specific, helpful and fit for purpose. Location and content of interpretation panels should be consistent along the entire BBW.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the Hymany Way are as follows:

- Lack of trail maintenance with overgrown sections of off-road trail.
- Lack of joined up approach to trail management trail is managed at a local level by local walk route representatives.
- Shannon embankment owned by ESB mowing permitted but earthworks not.
- Proposed Athlone Galway Greenway preferred option along the Shannon embankment. Exact route and development dates not yet known.

- Historic lack of funding the Hymany Way has not previously benefitted from Walks Scheme funding.
- Presence of national and European natural heritage designations partnership working and environmental surveys are required where trail upgrade or new build is required. The presence of a designation or protected habitats or species does not preclude trail development, but adaptions and appropriate mitigations may need to be made.
- Presence of features of built heritage interest where new build trail or trail upgrade is required.
 The presence of a designation or feature does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

Recommendations

Item	Description
New build trail	Existing sections of the Hymany Way require new build trail to get the route off-road. This involves the use of privately-owned land which may require new build trail. Sections of trail that are already off-road, but are identified as being unsustainable, will also require new build. Sections of new build trail will include floating trail where the ground is wet and sections of boardwalk where the ground is very wet.
Trail upgrade	The section of trail between Portumna and Meelick Weir requires trail upgrade and may require new build trail if there is no existing sub-base. Detailed trail audit required to identify areas of existing trail that do not meet sustainable trail standards. Trail upgrade works such as resurfacing, major drainage works, fixing issues such as subsidence etc.
Other minor works	Other minor works required such as installation of drainage e.g. water bars, to be identified through trail audit.
Trail re-route	 Re-route south of Ballinasloe to take section off busy 'R' road Re-route at Clonfert due to landowner issues Re-route at Kilgerrill
Linkage	Pedestrian linkage to Ballinasloe required.
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles are required to cross field and property boundaries.
Waymarking and Interpretation	New and replacement signage required to reflect the recommendations of the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022). Recommendations to be applied to the entire BBW.

8.5.8 Suck Valley Way

Route overview

Length	Start and Finish Point
Existing route - 58.26km	Start – Ballygar (M 78604 51864)
Recommended route -	Finish – Clonalis House (M 66083 81280)

On-road/ Off-road and Terrain

Description	On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern
Open bog, vehicle tracks, pastoral farmland, grass path, tarmac footpath and local road (not consistently surfaced).		Existing route	48.7	84%	Lack of designed, built trail – could lead to sustainability issues with increased footfall. Lack of trail maintenance on farmland sections of trail.
	Off-road	Recommended route	49.5	86%	Built trail required in flood plain at Lough Lung, plus bridge that allows passage of watercraft, east of Glinsk. Built trail required in sections of pastoral farmland where livestock is present.
On-road sections on regional and local roads	On-road	Existing route	9.5	16%	Sections on-road through settlements are essential to allow the continuation of the route and provide opportunity to experience local towns and villages. Other on-road sections are on local rural roads and do not provide much cause for concern due to low traffic usage.
		Recommended route	8.3	14%	None

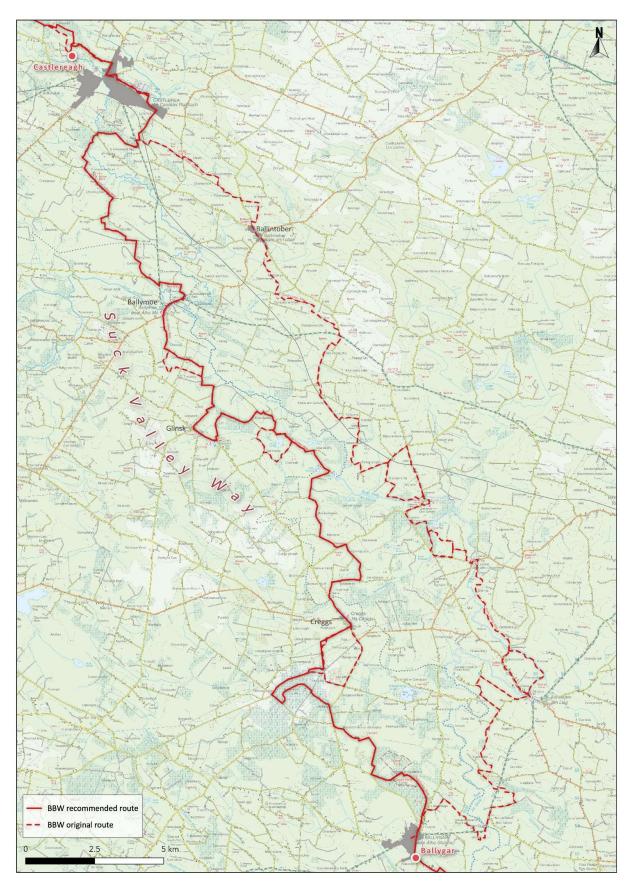


Figure 72 Overview of the Suck Valley Way section of the BBW

The trail surface along the BBW on the Suck Valley Way is interesting and varied. As noted in the previous table, the trail is 86% off-road and meets the 80% off-road target set for the BBW project. The sections on bitmac road are spread across the route and have low levels of traffic. It is preferable that these sections are taken off-road in the long-term, using private land and that sustainable non-bitmac surfacing is provided.

Off-road sections of the trail consist of pastoral farmland that is (intended to be) maintained for walkers, vehicle tracks, forest trail, open bog and local roads which are not consistently surfaced (Figure 73).





Figure 73 Off-road trail on the Suck Valley Way

Trail Condition

Sections of the BBW on the Suck Valley Way require works to the exiting trail. Sections that are wet or boggy underfoot require new build trail to provide a sustainable trail surface for walkers e.g. boardwalk or floating trail (incorporating geotextile membrane). A designed, built trail will address drainage and erosion issues as well as ensure that the trail is sympathetic to the surrounding landscape in terms of visual and physical impact.

Sections that are currently located on pastoral farmland are often overgrown or impacted by livestock. It is recommended that a fenced corridor with built trail is developed, in order to reduce the amount of maintenance required, as well as preventing livestock accessing the trail in order to benefit the surface of the trail and comfort of the walker.

Evidence of poorly built sections of trail were noted on the Suck Valley Way. Figure 74 shows purpose-built trail in woodland north of Castlerea where the trail edges have not been blended to cover the geotextile membrane, and where inappropriate materials and techniques have been used e.g. no sub-base and surfacing, no compaction. This has resulted in an unstable structure to the trail profile and

erosion of the trail. Other sections of the woodland on the approach to Clonalis house have sporadic sections of poorly built trail interspersed with waterlogged and at times, unpassable sections of trail.

The Suck Valley Way has been part of the Walk Scheme since 2008 and has benefitted from landowners receiving payments to maintain the route on their land.



Figure 74 Trail in poor condition on the Suck Valley Way

Infrastructure

Inadequate infrastructure was noted at locations on the Suck Valley Way. Figure 75 shows examples of wooden infrastructure that are not fit for purpose due to inappropriate design and placement, rotting timbers and lack of grip.

Wooden infrastructure should be replaced with durable metal or recycled plastic infrastructure such as bridges and A-frame stiles.



Figure 75 Infrastructure not fit for purpose on the Suck Valley Way

Waymarking and Interpretation Panels

Waymarking for the BBW on the Suck Valley Way section of the BBW is satisfactory in the main. The majority of waymarking locations rely on existing National Waymarked Trail signage, in this case, the Suck Valley Way.

Only one BBW interpretation panel is present, located in Castlerea. It is not place specific unfortunately. Location and content of interpretation panels should be consistent along the entire BBW, in that local information is presented in each of the settlements the route passes through.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the Suck Valley Way are as follows:

• Trail confusion

- o The Suck Valley Way is a circular route, no existing recommendations are made for which side of the route walkers should follow.
- o Not clear where the trail ends Irishtrails.ie states that the Suck Valley Way starts and ends at Ballygar, with a spur into Castlerea, yet there are Suck Valley Way waymarkers on the northern side of Castlerea on the approach to Clonalis House.
- Alternative routes are promoted for when the river is in flood and the route is impassable.
- Issues with flooding and trail inundation.
- Lack of trail and infrastructure maintenance with overgrown sections of off-road trail and poorly maintained stiles and bridges.
- Poorly constructed purpose-built trail not sustainable.
- Lack of joined up approach to trail management trail is managed at a local level by local walk route representatives.
- Presence of national and European natural heritage designations partnership working and environmental surveys are required where trail upgrade or new build is required. The presence

- of a designation or protected habitats or species does not preclude trail development, but adaptions and appropriate mitigations may need to be made.
- Presence of features of built heritage interest where new build trail or trail upgrade is required.
 The presence of a designation or feature does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

Recommendations

Item	Description
New build trail	Existing sections of the Suck Valley Way require new build trail to get the route off-road. This involves the use of privately-owned land which may require new build trail. Sections of trail that are already off-road, but are identified as being unsustainable, also require new build.
Trail upgrade	There are sections of the existing trail that do not meet sustainable trail standards. One example being the woodland north of Castlerea. Trail upgrade works such as resurfacing are required.
Other minor works	Other minor works required such as installation of drainage e.g. water bars.
Trail re-route	 Route of the BBW to be waymarked along the western side of the Suck Valley, as this is more historically accurate to the march of O'Sullivan Bere. Re-route at Cornamucklagh, to avoid riverside section with issues.
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles are required to cross field and property boundaries.
Waymarking and Interpretation	New and replacement signage required to reflect the recommendations of the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022). Recommendations to be applied to the entire BBW.

8.5.9 Lung Lough Gara Way

Route overview

Length	Start and Finish Point
Existing - 55.49km	Start – Clonalis House (M 66083 81280)
Recommended – 58.8km	Finish – Miners Way Curlew Mt's (G 76529 06595)

On-road/ Off-road and Terrain

Description	On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern
Open bog, vehicle tracks, pastoral farmland, tarmac	Off-road	Existing route	31.0	56%	Lack of off-road, designed, built trail – could lead to sustainability issues with increased footfall. Lack of trail maintenance on farmland sections of trail. Livestock present on farmland sections.
footpath and local road (not consistently surfaced).		Recommended route	54.8	93%	Existing sections of trail that require works, due to poor trail build or lack of existing trail build. Private landowners at Moygara Castle refusing public access.
On-road sections on regional and local roads		Existing route	24.5	44%	On-road sections are on local rural roads and do not provide much cause for concern due to low traffic usage. Sections on-road through settlements are essential to allow the continuation of the route and provide opportunity to experience local towns and villages. The percentage of on-road walking is still too high and impacts route enjoyability.
		Recommended route	4.0	7%	None

Linkage

Trail Section	Length off- road (km)	Percentage off-road (%)	Length on- road (km)	Percentage on-road (%)	Total length (km)
Gurteen Link	4.1	100	0.0	0	4.1

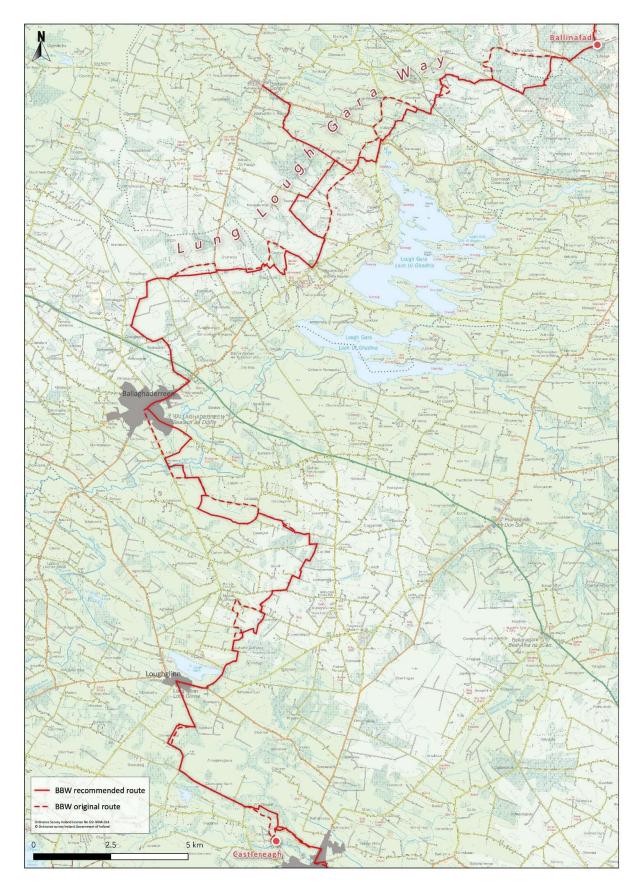


Figure 76 Overview of the Lung Lough Gara section of the BBW

The trail surface along the BBW on the Lung Lough Gara Way is interesting and varied. As noted in the previous table, the recommended trail is now 93% off-road and exceeds the long-term aspiration of having 90% of the route off-road. The sections on bitmac road are spread across the route and have low levels of traffic. No additional work is required to get more of the route off-road.

Off-road sections of the trail consist of pastoral farmland that is (intended to be) maintained for walkers, vehicle tracks, open bog and local roads that are not consistently surfaced (Figure 77).



Figure 77 Off-road trail on the Lung Lough Gara Way

Trail Condition

Sections of the BBW on the Lung Lough Gara Way require works to the existing trail. Sections that are wet or boggy underfoot require new build trail to provide a sustainable trail surface for walkers e.g. boardwalk or floating trail (incorporating geotextile membrane). A designed, built trail will address drainage and erosion issues as well as ensure that the trail is sympathetic to the surrounding landscape in terms of visual and physical impact.

Sections that are currently located on pastoral farmland are often overgrown or impacted by livestock. It is recommended that a fenced corridor with built trail is developed, in order to reduce the amount of maintenance required, as well as preventing livestock accessing the trail in order to benefit the condition of the trail and comfort of the walker.

There are several re-routes recommended for the Lung Lough Gara Way and the condition of the trail surface here is poor, with trail build and upgrade being required.

Evidence of poorly built sections of trail were noted on the Lung Lough Gara Way. Figure 78 shows purpose-built trail where the trail is poorly surfaced and geotextile is appearing through, plus a section of the trail being used by machinery, rendering it almost impassable.

The Lung Lough Gara Way has not been part of the Walks Scheme and has not benefitted from landowners receiving payments to maintain the route on their land. The trail has been maintained in an ad hoc manner by local individuals, who have sourced funding independently. The route was submitted to the new round of Walks Scheme funding and was successful. Funding for trail maintenance and appointment of a RRO will be available in due course.



Figure 78 Existing trail in poor condition on the Lung Lough Gara Way

Infrastructure

Resources have been invested in replacing and upgrading infrastructure across the Lung Lough Gara Way in recent years, again under the management of local walk route representatives. Wooden infrastructure has been replaced with durable metal infrastructure such as bridges and A-frame stiles.

Waymarking and Interpretation Panels

Waymarking for the BBW on the Lung Lough Gara Way section of the BBW is poor. The route is well waymarked using existing National Waymarked Trail signage, in this case, the Lung Lough Gara Way. But BBW signage is sporadic and the types of BBW signage varies between plate and finger post. At the time of audit, several Lung Lough Gara Way waymarker post arrows were taped over at several locations resulting in route confusion. The start of the route at Clonalis House also had taped over signage, again contributing to trail confusion (Figure 79).



Figure 79 Excessive and taped up signage on the Lung Lough Gara Way

Only two BBW interpretation panels are present, located in Loughglynn and Monasteraden. They are both not place specific. Location and content of interpretation panels should be consistent along the entire BBW, in that local information is presented in each of the settlements the route passes through.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the Lung Lough Gara Way are as follows:

Trail confusion

- At several locations along the trail, the yellow directional arrow on the Lung Lough Gara
 Way waymarker plates, has been taped over with black tape, resulting in trail confusion.
- o No official end point for the route, rather just where it joins the Miners Way.
- Lack of trail and infrastructure maintenance with overgrown sections of off-road trail and poorly maintained stiles and bridges.
- Private landownership permission to access private land may be required where new build trail is required.
- Presence of features of built heritage interest where new build trail or trail upgrade is required.
 The presence of a designation or feature does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

Recommendations

Item	Description			
New build trail	Existing sections of the Lung Lough Gara Way require new build trail to get the route off-road. This involves the use of privately-owned land which requires new build trail.			
Trail upgrade	There are sections of the existing trail that do not meet sustainable trail standards. Trail upgrade works such as resurfacing are required.			
Other minor works	Other minor works required such as installation of drainage e.g. water bars.			
Re-routes	 Re-route at Clonalis House Re-route at Druminagh Re-route at Lissergool Re-route adjacent to the Lung River on the approach to Ballaghderreen Re-route at Drumacoo Re-route at Clogher Re-route south of Moygara Castle Re-route north of Moygara Castle via Cloontycarn and Mullaghroe Re-route at Derrygolagh 			
Linkages	Develop linkage to Gurteen			
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles are required to cross field and property boundaries.			
Waymarking and Interpretation	New and replacement signage required to reflect the recommendations of the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022). Recommendations to be applied to the entire BBW.			

8.5.9.1 Addendum – Lung Lough Gara Way

Field work and consultation regarding improvements to the BBW trail were completed in October 2021. Mapping, analysis and detailed costings for the recommendations were completed in March 2022. In June 2022, prior to the final submission of the report, it came to light that a section of the Lung Lough Gara Way, between Castlerea and Loughglinn, had been changed.

The start/ finish point of the Lung Lough Gara Way and the Suck Valley Way has traditionally been located within the ground of Clonalis house, and the recommendations put forward in this report reflect this in terms of design and costs. The owners of Clonalis House have requested that the Lung Lough Gara Way and the Suck Valley Way, no longer pass through their property.

In order to address this request, local Community trail representatives have identified a new route to link the Suck Valley Way from Castlerea, to the Lung Lough Gara Way to the west of Lough Glinn. See Figure 80. It has been reported that waymarking for the original route has been removed, and new waymarking installed along the identified re-route. The new route uses a combination of footpaths, 'L' class roads and bog roads, along with two short sections on the R361. It is believed that the new route is a short-medium term solution while Community representatives work on a long-term solution, which is to secure permission to access private land linking a series of bogs between Castlerea and Loughglinn.

The new route of the trail also involves the suggested re-location of the start/ finish of the Lung Lough Gara way and the Suck Valley Way, from the grounds of Clonalis house, to Somers Park in Castlerea. Somers Park is a public park with walking trails, fitness equipment, a play park and public toilets, funding has also been secured for the development of an outdoor events and cultural space.

Due to the late submission of the Castlerea re-route, it has not been possible to audit this section of the route or make recommendations as to suitable works required along the new re-route or any long-term alternative routes. It has also not been possible to amend the report in terms of the recommended route (via Clonalis House). It should be noted that detailed recommendations and costings in terms of trail statistics, new build or upgrade of trail, plus recommendations for signage, waymarking and infrastructure for the section of the BBW between Castlerea and Loughglinn, are no longer applicable.



Figure 80 Lung Lough Gara re-route 2022

8.5.10 Miners Way

Route overview

Length	Start and Finish Point
Existing - 53.3km	Start – Miners Way Curlew Mt's (G 76529 06595)
Recommended -	Finish – Drumleague Lock (G 95347 07452)

On-road/ Off-road and Terrain

On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern
Off-road	Existing route	37.4	70%	Existing purpose-built trail is not built to standard, which may result in sustainability issues over time.
	Recommended route	45.9	85%	Existing sections of trail that require upgrade, due to poor trail build or lack of existing trail build
	Existing route	15.9	30%	Does not meet the 80% off-road target set for the BBW project
On-road	Recommended route	commended ute T.9 Sections on-road through settlements are essential the continuation of the round provide opportunity to experience local towns are villages. Other on-road seare on rural roads and do		experience local towns and villages. Other on-road sections are on rural roads and do not provide much cause for concern

Linkages

Trail Section	Length off- road (km)	Percentage off-road (%)	Length on- road (km)	Percentage on-road (%)	Total length (km)
Carrowkeel Link					
and	8.3	94	0.5	6	8.8
Arigna Mines Link					

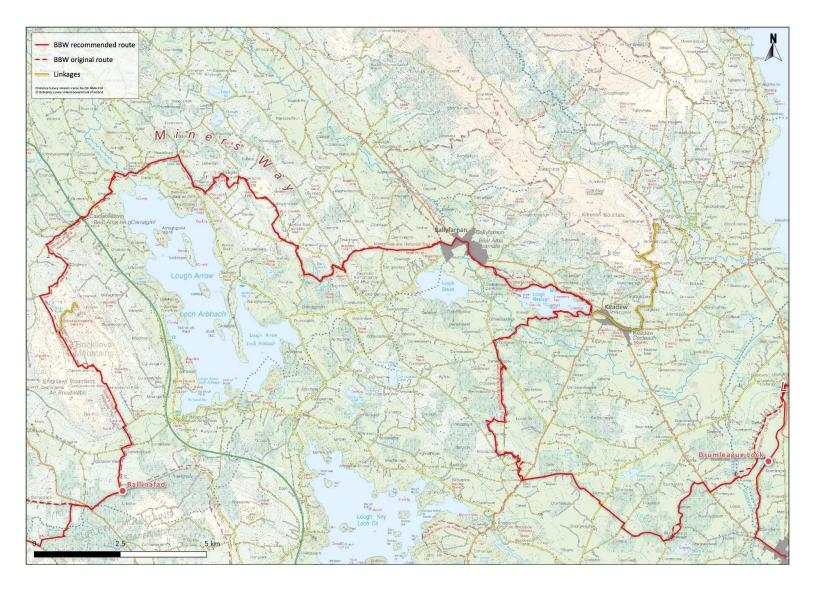


Figure 81 Overview of the Miners Way section of the BBW

The trail surface along the BBW on the Miners Way is interesting and varied. As noted in the previous table, the recommended trail is 85% off-road and hence meets off-road target in the medium term of 80% set for the BBW project. The sections on bitmac trail are spread out and have low levels of traffic. It is preferable that these sections are taken off-road in the long-term, using private land and that a sustainable non bitmac surface is provided.

Off-road sections of the trail consist of used and pastoral farmland, built gravel trail, vehicle tracks, canal towpath and local roads that are not consistently surfaced (Figure 82).



Figure 82 Off-road trail on the Miners Way

Trail Condition

Sections of the BBW on the Miners Way are identified as requiring work, either new build or trail upgrade, due to the condition of the trail. Sections that are wet or boggy underfoot require new build trail to provide a sustainable trail surface for walkers. A designed, built trail will address drainage and erosion issues as well as ensure that the trail is sympathetic to the surrounding landscape in terms of visual and physical impact.

Sections that are currently located on pastoral farmland are often overgrown or impacted by livestock. It is recommended that a fenced corridor with built trail is developed, in order to reduce the amount of maintenance required, as well as preventing livestock accessing the trail in order to benefit the condition of the trail and comfort of the walker.

Overall there is a lack of purpose built pedestrian trail, with lots of walking on access tracks for farm vehicles.

The Miners Way and Historical Trail has been part of the Walk Scheme since 2008 and has benefitted from landowners receiving payments to maintain the route on their land.

Infrastructure

Inadequate infrastructure was noted at locations on the Miners Way. Figure 83 shows examples of wooden infrastructure that are not fit for purpose due to inappropriate design and placement, rotting timbers and lack of grip.

Wooden infrastructure should be replaced with durable metal or recycled plastic infrastructure such as bridges and A-frame stiles.



Figure 83 Poor infrastructure on the Miners Way

Waymarking and Interpretation Panels

Waymarking for the BBW on the Miners Way and Historical Trail is poor. There is no cohesive approach to waymarking on this section, i.e. very few locations that require waymarking are marked with BBW signage - the letters 'BBW' or the image of Donal O'Sullivan Bere. The majority of waymarking locations rely on existing National Waymarked Trail signage, in this case, the Miners Way and Historical Trail, or simply the yellow man symbol plus arrow.

Waymarking is confusing on the Miners Way and Historical Trail, as both the 'Miners Way' and 'Historical Trail' are separately waymarked at different locations. Interpretation also refers to both trails as individual trails, and both trails as a cohesive trail.

Interpretation panels on this section of the route are located in the settlement where the route passes through. They are not place specific. Location and content of interpretation panels should be consistent along the entire BBW, in that local information is presented in each of the settlements the route passes through.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the Miners Way and Historical Trail are as follows:

• Trail confusion:

- o Two names being used for the National Waymarked Trail at some points ('Miners Way' and 'Historical Trail'), and a single name being used at others ('Miners Way and Historical Trail').
- o Multiple waymarked routes meeting at certain points e.g. looped walks, cycle trails.
- o The Miners Way and Historical Trail is circular rather than linear.
- Lack of consistent waymarking type, location and branding.
- Private landownership permission to access private land may be required where new build trail is recommended.
- Presence of national and European natural heritage designations partnership working and
 environmental surveys are required where trail upgrade or new build is recommended. The
 presence of a designation or protected habitats or species does not preclude trail development,
 but adaptions and appropriate mitigations may need to be made.
- Presence of features of built heritage interest where new build trail or trail upgrade is recommended. The presence of a designation or feature does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

Recommendations

Item	Description	
New build trail	Existing sections of the Miners Way and Historical Trail require new build trail to improve sections of existing trail (new build boardwalk and sustainable gravel path) and to get sections of the route off-road. This involves the use of privately-owned land which requires new build trail.	
Trail upgrade	There are sections of the existing trail that do not meet sustainable trail standards. Trail upgrade works such as resurfacing are required.	
Other minor works	Other minor works required such as installation of drainage e.g. water bars.	
Trail linkages	 Retain optional linkage to Carrowkeel Megalithic Cemetery 	

	Retain optional linkage to Arigna Mining Museum
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles are required to cross field and property boundaries.
Waymarking and Interpretation	New and replacement signage required to reflect the recommendations of the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022). Recommendations to be applied to the entire BBW.

8.5.11 Leitrim Way

Route overview

Length	Start and Finish Point
Existing - 22.92km	Start – Drumleague Lock (G 95347 07452)
Recommended – 25.2km	Finish – Dowra (G 99161 26725)

On-road/ Off-road and Terrain

Description	On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern
Pastoral farmland, bitmac path, grass track, gravel path, boardwalk and local road (not consistently surfaced).	Off-road	Existing route	19.1	83%	Use of grass paths - could lead to sustainability issues with increased footfall.
		Recommended route	25.2	100%	None
On-road sections on regional and local roads	On-road	Existing route	3.9	17%	Sections on-road through settlements are essential to allow the continuation of the route and provide opportunity to experience local towns and villages. Other on-road sections are on rural roads and do not provide much cause for concern due to low traffic usage.
		Recommended route	0.0	0%	None

Linkages

Trail Section	Length off- road (km)	Percentage off-road (%)	Length on- road (km)	Percentage on-road (%)	Total length (km)
Leitrim Link	2.4	100	0.0	0	2.4

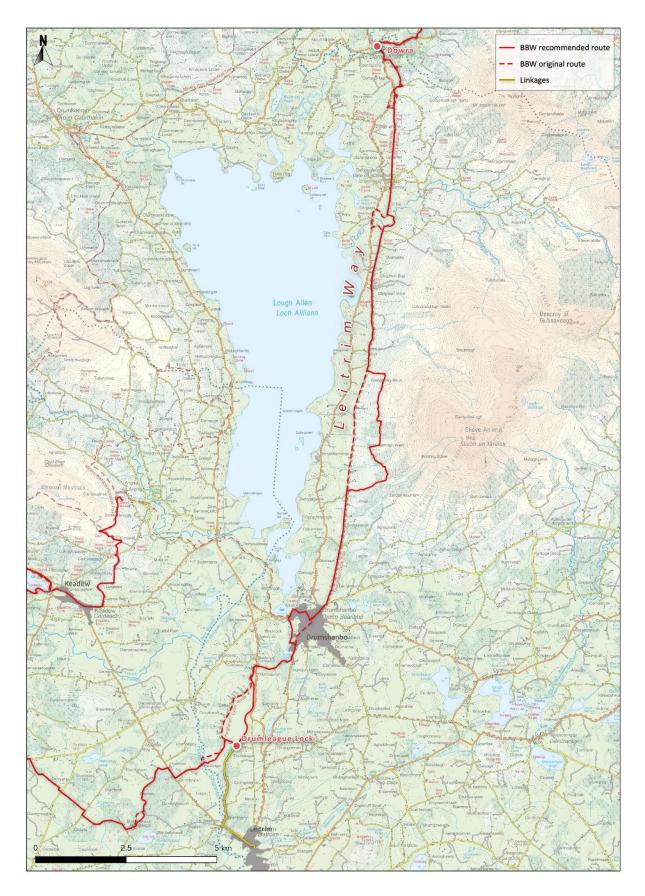


Figure 84 Overview of the Leitrim Way section of the BBW

The trail surface along the BBW on the Leitrim Way is interesting and varied. As noted in the previous table, the trail is 100% off-road is the only section of the trail to reach this target.

Off-road sections of the trail consist of pastoral farmland, bitmac path, grass track, gravel path, boardwalk and local roads with that are not consistently surfaced (Figure 85).





Figure 85 Off-road trail on the Leitrim Way

Trail Condition

Sections of the BBW on the Leitrim Way require new build trail or trail upgrade, due to the condition of the trail. Sections that are wet or boggy underfoot require new build trail to provide a sustainable trail surface for walkers. A designed, built trail will address drainage and erosion issues as well as ensure that the trail is sympathetic to the surrounding landscape in terms of visual and physical impact.

Sections that are currently located on pastoral farmland are often overgrown or impacted by livestock. It is recommended that a fenced corridor with built trail is developed, in order to reduce the amount of maintenance required, as well as preventing livestock accessing the trail in order to benefit the condition of the trail and comfort of the walker.

Until 2021, the Leitrim Way had not been part of the Walks Scheme and has not benefitted from landowners receiving payments to maintain the route on their land. The trail has however had resources dedicated to it in order to be submitted to the NTO for assessment as a National Waymarked Trail. An RRO for the County was appointed in 2021. The route was successful in its bid to be included in the Walk Scheme.

Infrastructure

Resources have been invested in replacing and upgrading infrastructure across the Leitrim Way of recent in order to be submitted for assessment as a National Waymarked Trail. Wooden infrastructure has been replaced with durable metal infrastructure such as bridges and A-frame stiles.

Waymarking and Interpretation Panels

Waymarking for the BBW on the Leitrim Way is poor. There is no cohesive approach to waymarking on this section, i.e. very few locations that require waymarking are marked with BBW signage - the letters 'BBW' or the image of Donal O'Sullivan Bere. Most waymarking locations rely on existing National Waymarked Trail signage, in this case, the Leitrim Way, the yellow walking man and yellow arrow.

Interpretation panels on this section of the route are located in the settlements where the route passes through. They are not place specific, and as such are not helpful and require replacement.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the Leitrim Way are as follows:

- Trail confusion:
 - o Lack of consistent waymarking and interpretation type, location and branding.
- Issues with the management of trail development.
- Historic lack of funding the Leitrim Way has not benefitted from Walks Scheme funding prior to 2021.
- Private landownership permission to access private land may be required where new build trail is recommended.
- Presence of national and European natural heritage designations partnership working and
 environmental surveys are required where trail upgrade or new build is recommended. The
 presence of a designation or protected habitats or species does not preclude trail development,
 but adaptions and appropriate mitigations may need to be made.

 Presence of features of built heritage interest where new build trail or trail upgrade is recommended. The presence of a designation or feature does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

Recommendations

Item	Description
New build trail	Newly recommended sections of the Leitrim Way require new build trail. This involves the use of privately-owned land which requires new build trail. Sections of trail that are identified as being unsustainable, also require new build.
Trail upgrade	There are sections of the existing trail that do not meet sustainable trail standards. Trail upgrade works such as resurfacing are required.
Other minor works	Other minor works required such as installation of drainage e.g. water bars.
Trail re-route	 Re-route the trail on the eastern side of Lough Allen from the minor road on to the lower slopes of Slieve Anierin.
Trail linkages	 Retain optional linkage to Leitrim village
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles are required to cross field and property boundaries.
Waymarking and Interpretation	New and replacement signage required to reflect the recommendations of the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022). Recommendations to be applied to the entire BBW.

8.5.12 Cavan Way

Route overview

Length	Start and Finish Point		
Existing - 22km	Start – Dowra (G 99161 26725)		
Recommended – 21.8km	Finish – Blacklion (H 08136 38071)		

On-road/ Off-road and Terrain

Description	On/ off- road	Existing or recommended	Length (km)	Percentage	Areas for concern
Pastoral farmland, farm track, gravel path, open bog, open hillside, forest trail, bog bridge and local road (not consistently surfaced).		Existing route	16.2	74%	Increased use of bog sections without built path - could lead to sustainability issues with increased footfall.
	Off-road	Recommended route	18.0	83%	None
		Existing route	5.7	26%	A 2km section on the R206 is not desirable and should be moved off-road.
On-road sections on regional and local roads	On-road	Recommended route	3.8	17%	On-road sections are on rural roads and do not provide much cause for concern due to low traffic usage. Sections on-road through settlements are essential to allow the continuation of the route and provide opportunity to experience local towns and villages.

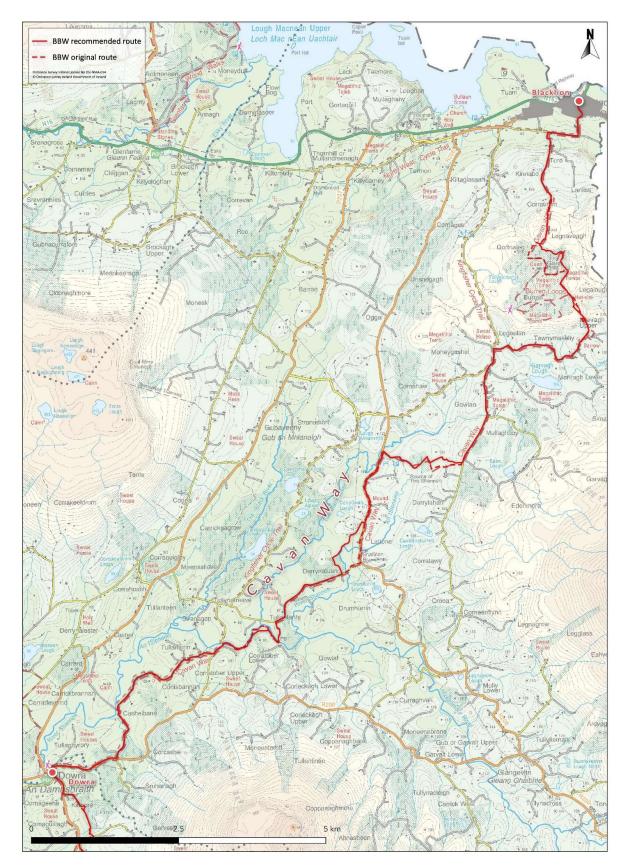


Figure 86 Overview of the Cavan Way section of the BBW

The trail surface along the BBW on the Cavan Way is mixed. Off-road sections of the trail consist of pastoral farmland, gravel path, farm track, open bog and hillside, bog bridge (Figure 87) and local roads which are not consistently surfaced.

As noted in the previous table, the trail is over 83% off-road and exceeds the target of 80% set for the medium term for the BBW project. In the longer term, increasing the off-road percentage to 90% is desirable and that a sustainable non-bitmac surface is provided.





Figure 87 Off-road trail on the Cavan Way

Trail Condition

Sections of the BBW on the Cavan Way require new build trail, due to the condition of the trail. This includes a section on the R206 leading to the Shannon Pot and sections that are wet or boggy underfoot. A designed, built trail will address drainage and erosion issues as well as ensure that the trail is sympathetic to the surrounding landscape in terms of visual and physical impact.

The Cavan Way has not previously been part of the Walks Scheme and has not benefitted from landowners receiving payments to maintain the route on their land. It was successful in its bid to be included in the Walk Scheme in 2021.

Infrastructure

Several sections of the BBW on the Cavan way have been identified as requiring A-frame stiles and bridges. Durable metal or recycled plastic infrastructure should be used for these requirements.

Waymarking and Interpretation Panels

Waymarking for the BBW on the Cavan Way is non-existent. No locations are marked with BBW signage - the letters 'BBW' or the image of Donal O'Sullivan Bere. Most waymarking locations rely on existing long-distance walk signage, the yellow walking man and yellow arrow, plus a few locations which refer to the National Waymarked Trail, the Cavan Way.

Interpretation panels are located in the settlements where the route passes through. They are not place specific, and as such are not helpful and require replacement.

All waymarking should adhere to the recommendations made in the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022).

Key issues

The main issues identified with the section of the BBW that follows the Cavan Way are as follows:

- Trail confusion:
 - o Lack of consistent waymarking and interpretation type, location and branding.
- Lack of community representation in terms of trail development.
- Historic lack of funding the Cavan Way has not benefitted from Walks prior to 2021 and further opportunities to enhance the route and get more of it off-road could be explored.
- Private landownership permission to access private land may be required where new build trail is recommended.
- Presence of national and European natural heritage designations partnership working and environmental surveys are required where trail upgrade or new build is recommended. The presence of a designation or protected habitats or species does not preclude trail development, but adaptions and appropriate mitigations may need to be made.
- Presence of features of built heritage interest where new build trail or trail upgrade is recommended. The presence of a designation or feature does not preclude trail development, but adaptions and appropriate mitigations may need to be made.

Recommendations

Item	Description		
New build trail	Existing sections of the Cavan Way require new build trail to get the route off-road. This involves the use of privately-owned land which requires new build trail. Sections of trail that are already off-road, but are identified as being unsustainable, also require new build.		
Trail upgrade	There are sections of the existing trail that do not meet sustainable trail standards. Trail upgrade works such as resurfacing are required.		
Other minor works	Other minor works required such as installation of drainage e.g. water bars.		
Re-routes	 Re-route at Corratober Re-route at Lattone Re-route to the east of the Shannon Pot Re-route within Cavan Burren Park 		
Linkages	Link trail to the Shannon Pot		
Infrastructure	New or replacement footbridges are needed to cross bodies of water. New or replacement stiles are required to cross field and property boundaries.		
Waymarking and Interpretation	New and replacement signage required to reflect the recommendations of the Brand and Interpretation Tookit (Tandem Design – in development as at November 2022). Recommendations to be applied to the entire BBW.		