



**GLENDALOUGH AND WICKLOW MOUNTAINS
NATIONAL PARK**

Draft Visitor Experience & Management Masterplan

Appendix B1

Recreational Trail Masterplan

Author: Outdoor Recreation NI

Glendalough & Wicklow Mountains National Park Visitor Experience and Management Masterplan

Recreational Trails Masterplan Part 1

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Prepared by Outdoor Recreation NI
on behalf of Fáilte Ireland



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1 Introduction

In August 2020, Fáilte Ireland commissioned a multi-disciplinary team to develop a Visitor Experience and Management Masterplan for Glendalough and Wicklow Mountains National Park. As part of the team, Outdoor Recreation NI's role was to develop a Recreational Trails Masterplan for Glendalough and the wider National Park with the aim of -

- Enhancing the visitor experience
- Dispersing visitors more widely across the National Park and the county
- Improving the sustainability of key recreation sites

Part 1 of this report sets out recommendations for achieving dispersal and for the enhancement of trails and trail networks for walking and off-road cycling¹ with detailed consideration of Glendalough Valley. Part 2 makes recommendations to increase the sustainability of key recreation sites within Wicklow Mountains National Park.

2 Background

The Glendalough Valley and the Wicklow Mountains National Park uniquely combine one of Ireland's top outdoor tourist attractions with the number one hillwalking destination in the country. The numerous issues resulting from this have been well documented and include –

- Degradation of the environment and disturbance of protected species
- Poor visitor experience resulting from overcrowding
- Negative impact on host communities

While these issues are most evident within the Glendalough valley, several other sites across the National Park are under significant strain as unprecedented numbers of locals and visitors take to the outdoors. Additionally, the persistent problem of car crime in upland car parks has altered the behaviour of hillwalkers and climbers, driving them to seek the security of sites in the valley floor and further focusing their activities on the uplands accessible from here.

Alongside these issues, several strategies² have identified the need to address the quality of basic visitor infrastructure and noted significant potential for improvement in this area to enhance the recreation experience for locals and visitors alike.

¹ Walking and off road cycling are the primary activities supported by the trail network

² Outdoor Recreation Strategy 2020-2025, Tourism Interpretive Masterplan for Ireland's National Parks and Coole-Garryland Nature Reserve

3 Current situation

Wicklow's mountains, valleys, rivers, lakes, woodlands and coastline provide an abundance of opportunities for a variety of outdoor recreation activities in a high-quality landscape. Added to this, the vast areas of land in public ownership mean that access to opportunities is plentiful. Most access is for walking with only a tiny percentage of overall provision specifically designated for off-road cycling. This includes –

- Wicklow Mountains National Park - 20,000 hectares supporting a range of recreation activities, predominantly hillwalking but also several easily accessed signature sites and lower-level woodland and valley walks
- Coillte Properties - 18 designated Coillte Outdoor Recreation sites and over 30,000 Ha³ of forest providing pedestrian access in line with Coillte's 'Open Forest Policy'
- Waymarked trails - upwards of 500km of trails equating to more than 150 walks spread across the county
- Off-road cycling at Ballinastoe and Avondale (Coillte) and Blessington Greenway

Opportunities at public sites are further complemented by provision of walking and/or cycling trails at private estates such as Powerscourt Waterfall, Russborough House and Belmont Estate among others.

As is evident in Fig. 1 the spread of outdoor recreation opportunities is not even, with an obvious concentration of sites in the north and east of the county, fewer towards the south, and a minimal number in the far west. This largely reflects the distribution of public land, in particular Coillte properties, across Wicklow.

Fig. 1 shows the distribution of walking and off road cycling trails across Wicklow.

³ Wicklow has the largest coverage of Coillte Forest Estate of any county in Ireland

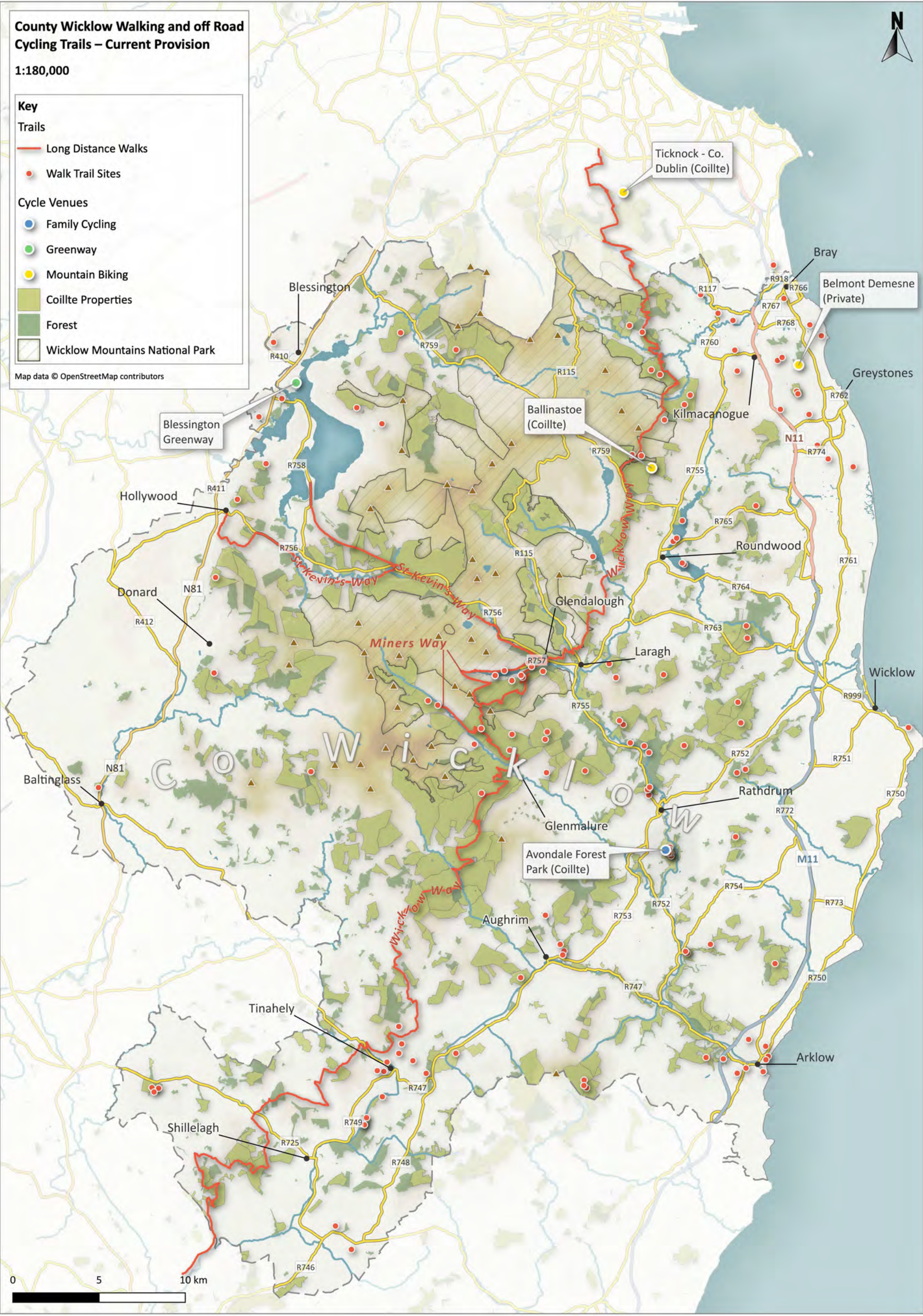


Fig. 1: County Wicklow Walking and Off-Road Cycling Trails – Current Provision

4 Dispersal Strategy

4.1 The Need for Dispersal

Overcrowding in Glendalough and at sites in the north-eastern area of the Park can be attributed to several factors including –

- Nationally significant heritage site
- Proximity to Dublin
- Stunning natural landscape with high quality recreational potential
- Concentration of recreational sites including access, visitor facilities and trails
- Low levels of awareness of other places to visit

The need for visitor dispersal from Glendalough and other key recreation sites and access points in the north-eastern area of the National Park is widely accepted. This is supported in part by counter data (pedestrian and vehicle), although this has significant limitations⁴, but to a greater degree by the consistent testimony of local residents, outdoor participants and staff on the ground as recorded in successive consultations over recent years. Key issues include insufficient car parking capacity to satisfy demand, road congestion, path erosion and damage to the environment. These have been further exacerbated by the growing popularity of walking, cycling and other forms of outdoor recreation in recent years, and most critically by the post COVID surge in visitors to the outdoors. There is clear need for an effective strategy to disperse visitor traffic to new, enhanced or lesser well-known sites across the county, to spread the recreational load, but also the benefits. In doing so, **dispersion to sustainable sites is key, otherwise the problem is simply shifted elsewhere.**

It is recognised that visitor numbers in the context of the tourism market will continue to grow, and that first time visitors to Wicklow will want to visit Glendalough, therefore an approach including better visitor management through a fundamental redesign of the visitor flow *and* dispersal in the valley will be required. This is discussed in more detail in Section 6. In relation to Glendalough, greater dispersal of repeat visitors to other attractions is key.

4.2 Dispersal Strands

While the monastic heritage of Glendalough and the dramatic glacial valleys of the north Wicklow mountains are unique, the county as a whole is rich in heritage and boasts beautiful scenery and

⁴ Discussed in 'Visitor Analysis'

varied landscapes and, with the exception of west Wicklow, there is an abundance of opportunities for outdoor recreation.

The following recommendations are made, working together to effectively disperse visitors to sites across the county -

1. Enhanced online presence - particularly via social media channels
2. Enhanced quality on the ground - improvements to basic visitor infrastructure
3. Product enhancement and product development
4. Strengthened outdoor recreation hubs
5. Increased connectivity

Each are discussed in more detail below.

4.3 Enhanced online presence

More than ever before, a strong digital presence is essential to reach visitors and to influence their behaviour⁵. This trend toward digital consumption has been further exaggerated by Covid as access to traditional channels of communication has been limited.

An enhanced online presence can be used to raise awareness and promote opportunities to take part in outdoor recreation at alternative sites. However, to *really* drive dispersal requires reaching key segments through targeted content on social media channels, the preferred source of information for an increasing number of users⁶. When making decisions about where to go, these cohorts are heavily influenced by engaging and popular content on social media that is both quick and easy to access. They are not inclined to spend time trawling through websites searching for inspiration or compiling information for a day out.

Maximising the impact of websites *and* social media platforms is therefore essential to take control of the message around the National Park and recreation sites in Wicklow, this can be achieved through –

⁵ www.smartinsights.com, 81% of people search online for a product or service

⁶ GWI Social Media Marketing Trends Report 2018, [40% of people used social media channels](#) for aspects of product research, 50% of 16-24 year olds research products online via social networks, 46% of 25-34 year olds research products online via social networks.

Website

- Developing one website and social media platform recognised as the 'go to' source of information. This requires consensus amongst stakeholders and budget for development and promotion and long-term maintenance/updates.
- Current, regularly updated content
- Website should be mobile device enabled and visitor focussed in content, design and function
- Considers the visitor journey - though the website and to the recreation site – many new visitors need their hand held throughout the journey

Social Media

- Maintaining an active social media profile
- Targeted content to key visitor segments
- Inspirational, engaging content with emphasis on images, videos and graphics
- Curated spoon-fed experiences - where to have coffee beforehand, where to eat after, etc.
- Use of social influencers, blogs etc. to amplify the message
- Social media campaigns to highlight dispersal sites

From a visitor management perspective, a coordinated approach to communication will ensure appropriate sites and experiences are promoted, i.e. not those already strained and at capacity. Analysis of visitor counter data (Section 7) can also support this. Crucially, with the surge of new inexperienced visitors to the outdoors, social media provides an effective opportunity to reinforce key messages around responsible access to the natural environment.

4.4 Enhanced Quality on the Ground

Improvements to basic visitor infrastructure

Wicklow has an extensive network of trails (predominantly walking), in scenic, high-quality settings across the county. In parallel with raising awareness of opportunities to enjoy these, it is essential to ensure that visitors can easily locate sites on the ground and that they feel welcome, safe and informed on arrival and throughout the experience. In essence this is about establishing a good standard of basic visitor infrastructure and visitor welcome at sites.

During fieldwork it was noted that while there are numerous examples of recreation sites with good visitor infrastructure, at many others this is lacking or below standard, in particular –

Car Parks -

The quality and finish of car parks is frequently poor. Many have a neglected feeling which may also give rise to anti-social behaviour, car crime and illegal dumping. This sets the tone for the experience that follows.

Visitor Signage -

The provision of visitor signage is highly inconsistent. This is in relation to the presence, quality and content of signage across recreational sites and applies to trailhead and visitor orientation information on arrival and, to a lesser degree, waymarking of routes. The provision of directional road signage to key recreation sites was also lacking in several cases.

Inconsistency in signage provision is understandable given the large number of landowners, delivery agents and management bodies involved in hosting, developing and managing recreations sites, however the result is confusing and poses a significant challenge for first time visitors, particularly the cohort of new visitors to the outdoors who will most likely use Google Maps to locate sites but require the regular reassurance of signage to guide their experience after arrival.

Overall, poor signage detracts from the visitor experience and may prevent visitors from exploring a site fully or experiencing the best it has to offer. Crucially, in the context of trails, it prevents users from choosing experiences most suited to their preferences, levels of fitness and experience. The results can be frustrating, or at worst pose a threat to safety. Visitors may be discouraged from recommending the experience to others, by word of mouth or via social media.

In relation to visitor information, growth in use of mobile apps such as Strava, Rungo, All Trails, Hiiker and others, particularly for navigation to and around sites (the uplands especially) is recognised, however the quality and accuracy of information can be inconsistent, and many visitors continue to prefer and to rely on physical signage on the ground.

4.4.1 Recommendations

4.4.1.1 Car Parks

Key stakeholders should agree basic minimum standards for car parks at outdoor recreation sites and a commitment towards improving the quality of spec and finish (appropriate to the setting), prioritising existing key recreation sites and those identified as significant for dispersal.

4.4.1.2 Signage

A county wide signage strategy should be agreed by key stakeholders and rolled out across all outdoor recreation sites across the county with the aim of enhancing the visitor experience by ensuring a consistent approach to signage infrastructure and content.

The new Wicklow Way signs currently being rolled out along the route are a good example of this approach.



Fig. 2: New Signage on the Wicklow Way

4.5 Product Enhancement and Product Development

Appropriate product development can effectively drive dispersal to lesser visited locations. Recommendations are focused on walking and off-road recreational cycling as the key outdoor activity markets and users of the trail network.

4.5.1 Walking

4.5.1.1 Current situation

With over 500km of waymarked walking trails in Wicklow, opportunities for all types of walking are plentiful across most of the county. Additionally, the strong emphasis on development and upgrade

of the trail network through individual and partnership working, and the relative availability of funding to achieve this ensures that the walking product is continually being enhanced. Roll out of the planned greenways over the next 3-5 years will further increase opportunities for flat, off-road walking.

Fig. 1 provides an overview of the walking product across Wicklow.

4.5.1.2 *General enhancement of the walking product*

General improvement across the overall trail network should focus on enhancing the visitor experience through –

- Improvements to basic visitor infrastructure (discussed in Section 4.4)
- For long distance routes, increasing the percentage off-road
- Developing flatter, looped walks accommodating a wider variety of users including those with limited mobility and families
- Developing multi-use trails to accommodate the growing leisure cycling market (discussed in Section 4.5.2.1)
- Habitat and environmental enhancement as the backdrop to the trail experience
- Consider preference for designated/purpose built walking trails over forest road
- Prioritising trail connectivity - connecting trails to settlements and to each other to increase doorstep walking opportunities, support development of active travel networks and to facilitate dispersal by offering a wider breadth of experiences

In doing so, all trail development should adhere to principles of sustainability, be appropriate to the setting and should avoid sanitising the landscape or users experience of it.

4.5.1.3 *Discovery Walks*

Above all others, the Spinc Trail in Glendalough stands out as *the* iconic tick box experience for recreational visitors to Wicklow and is believed to be by far the single most popular route of its kind in the entire county. While the trail itself is now largely sustainable thanks to an ongoing programme of upgrade works, Spinc Trail walkers contribute to congestion on the trails and in the car parks of the valley floor. Effectively dispersing these visitors elsewhere will help alleviate the pressure in Glendalough while spreading the economic benefits to other areas of the county.

The Spinc Trail's iconic status and appeal is attributed both to its setting and the fact that the route is waymarked throughout, increasing its accessibility to inexperienced users. That said, it is widely agreed that many visitors choose the Spinc though lack of awareness of other sites offering similarly

impressive experiences. To disperse this visitor segment, a series of 'Discovery Walks'⁷ have been identified at sites across Wicklow in consultation with key stakeholders, and with the following criteria

-

- Appealing route in an attractive landscape setting, 'wow' factor
- Walk time circa 2 - 4 hrs
- Straightforward route, ideally waymarked⁸
- Sustainable trail
- Availability of car parking at start of route
- Inclusion of some 'beginner' mountain walks

Several of the routes identified are established walks and are already included on websites such as visitwicklow.ie, however by elevating the profile of these sites through effective branding and promotion (especially via social media channels), visitors can be encouraged and given confidence to explore more widely across the county.

Through consultation, 19 sites were identified for consideration and each was then reviewed on the ground. Of these, 7 sites are recommended for immediate inclusion as Discovery Walks and a further 2 proposed subject to landowner agreement as follows –

1. Maulin
2. Clara Vale Jubilee Route
3. Table Track, Glenmalur
4. Little Sugar Loaf
5. Lackan Mass Path, Lughnagun
6. Ballinaclesh Cushbawn Mountain
7. Ballinafunshogue Loop

Subject to landowner agreement –

8. Trooperstown Hill
9. Croaghanmoira

Table 1 details the location and key features of each Discovery Walk.

⁷ Working title

While it was the intention to include a geographic spread of sites to compliment and strengthen the offering of the Outdoor Recreation Hubs⁹, many sites did not meet the criteria and were subsequently ruled out.

One of the sites proposed, Croaghanmoira (subject to landowner agreement), is a mountain walk. As per NPWS and Mountaineering Ireland guidelines, the sections of this route on open hillside should not be waymarked. While the route is straightforward, it will require a higher level of skill and experience to enjoy safely. This should be communicated to visitors with an emphasis on them building up experience on some of the lower-level routes first.

Several of the walks include short sections on private land. Permission to include these as Discovery Walks specifically has not been sought at this stage, however most are already established as formal walks with agreed public access.

Once launched, Discovery Walk sites will require ongoing monitoring of visitor induced path erosion and related visitor management issues and should be prioritised for path erosion works as required. Several of the proposed routes have been surveyed as part of the 2021 Upland Path Survey and some already prioritised for funding. In time, further sites can be added to the Discovery Walk portfolio as current issues around path erosion and car parking are resolved.

Further dispersal of this cohort will be achieved through the introduction of the shuttle bus service with promoted sustainable return walking routes (Section 4.8.1)

Appendix 1 provides a full list of the 19 sites assessed.

Appendix 2 contains maps showing proposed walking routes for each site.

Fig. 3 shows the location of the proposed Discovery Walks across Wicklow

⁹ Wicklow Outdoor Recreation Strategy 2020-25: Five Outdoor Recreation Hubs are identified as follows - Laragh, Rathdrum, Blessington-Baltinglass, East Coast Maritime and Tinahely-Shillelagh

Site	Key Features	Start/Finish Point	Landownership	Nearest Settlement
1. Maulin	Hillwalk, includes Wicklow Way	Crone Woods Car Park (Coillte)	Coillte/NPWS	Kilmacanogue
2. Clara Vale Jubilee Route	Woodland/ riverside walk	Clara Vale Car Park (Coillte)	Coillte	Rathdrum
3. Table Track Glenmalure	Woodland/riverside/ heritage walk	Baravore Car Park (Council)	Coillte	Glenmalure
4. Little Sugar Loaf	Hillwalk, includes Belmont Way	Belmore Estate Car Park (Private)	Private - Belmont /Kilruddery Estate	Greystones, Kilmacanogue, Bray
5. Lackan Mass Path Lugnagun	Hillwalk/heritage walk	Lackan Village	Private/Coillte/ NPWS	Lackan
6. Ballinaclesh Cushbawn Mountain	Woodland hillwalk	Macreddin Village	Private/ Coillte	Macreddin/ Aughrim
7. Ballinafunshoge Loop	Woodland hillwalk	Ballinafunshoge Car Park (Coillte)	Coillte	Glenmalure

Table 1: Proposed Discovery Walks

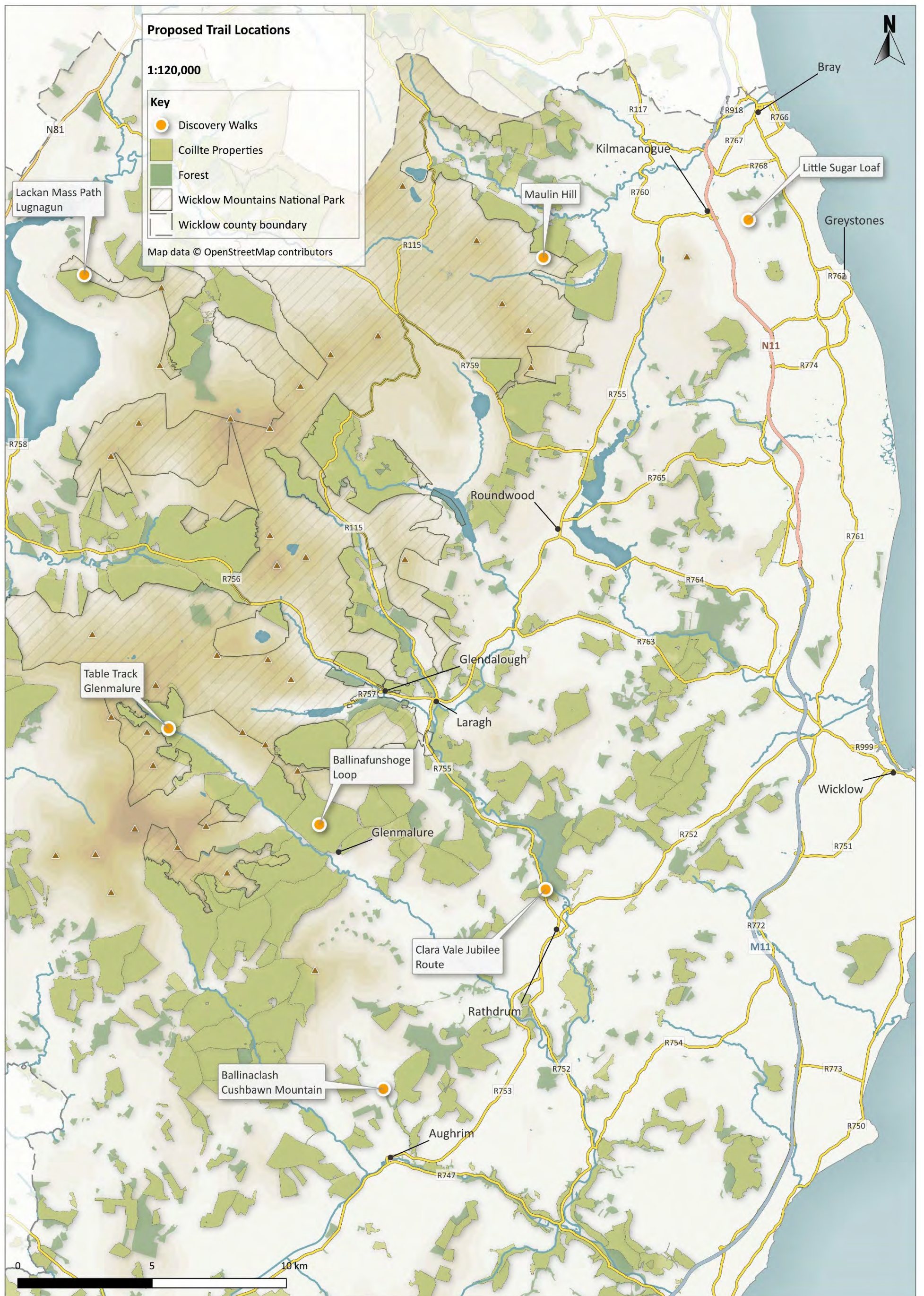


Fig. 3: Proposed Discovery Walk Locations

4.5.2 Off-road cycling

4.5.2.1 Trends

There has been an unprecedented growth in cycling over the past 10 years and a further surge in participation since Covid. This is evident across the various disciplines of cycling including off-road leisure cycling and mountain biking. During consultation, key stakeholders described an ‘explosion in cycling’ across forests in Wicklow since Covid.

The growth in leisure cycling is discussed in Section 4.4 of the Visitor Analysis which details the findings of recent research conducted by Outdoor NI on behalf of Fáilte Ireland¹⁰. This revealed a vast range of ability, preferences and requirements of participants, however key priorities and preferences for this group include –

- Safety – whether on or off-road
- Preference for off-road cycling opportunities, particularly for beginners, returners or families with young children. This group also demonstrated a preference for relatively short, flatter, circular routes, or linear sections of greenways with provision of a return shuttle service
- Attractive scenery – as a backdrop and motivating factor for visits/participation

Ebiking

Ebiking in all its forms – on road, off-road and mountain biking – has experienced a very significant increase in participation over the last couple of years with ebike sales spiking during covid. While this may not be very evident on the trails around Wicklow yet, trends in comparable national parks in the UK suggest there will be a notable increase in ebiking activity over the next 3-5 year including growth in associated services such as ebike hire and ebike charging stations for users to top up on the go (at cafes, visitor centres etc). This will be most evident in the west initially with the launch of the Blessington Lakes E-Greenway.

4.5.2.2 Current and Future Provision

Formal opportunities for off-road cycling in Wicklow are currently limited however several significant greenway developments underway will substantially increase the offering over the next 5 years.

Off-road cycling provision is focused in the north of the county with smaller sites elsewhere. Fig. 4 shows the distribution of existing and proposed off-road cycling provision in Wicklow.

¹⁰ Outdoor NI for Fáilte Ireland ‘Cycling Audit April 2021’

Current provision and future development is summarised below.

Coillte Forests

Under Coillte byelaws, cycling is only permitted at designated cycling sites in Wicklow as follows -

- Ballinastoe - National Mountain Bike Trail Centre offering 18km of red and blue grade trails with plans to extend the trail system by 2023
- Avondale – 1.5km leisure cycle on forest road with plans to upgrade this as part of the current Avondale development
- Carrick and Djouce/Deerpark – License agreement with local clubs for informal trails, no open public access
- Ticknock (Dublin Mountains) – National Mountain Bike Trail Centre with 13km of red and black trails with plans to extend the trail system by 2023. This site is in Dublin County but very accessible from north Wicklow

Greenways

- Blessington Lakes - 6km section of greenway with plans to extend the E-Greenway around the lake creating a 40km circuit by 2024.
- Arklow to Shillelagh - under development, estimated delivery by 2024
- Wicklow to Greystones – under development, full greenway status is uncertain with fall back option to develop a recreational trail
- Southern cross to Kilmacanogue – under development, 3km section of greenway to ease road congestion and support active travel, estimated delivery 2025
- Various other greenways at concept level

Private Sites

- Belmont Estate – recently opened site offering 8km green, blue and red mountain bike trails and pump track with focus on family market

Community led

- Vartry Reservoir – these are **not** designated cycling or multi use trails but are used extensively for leisure cycling due to the flat terrain and circular routes available

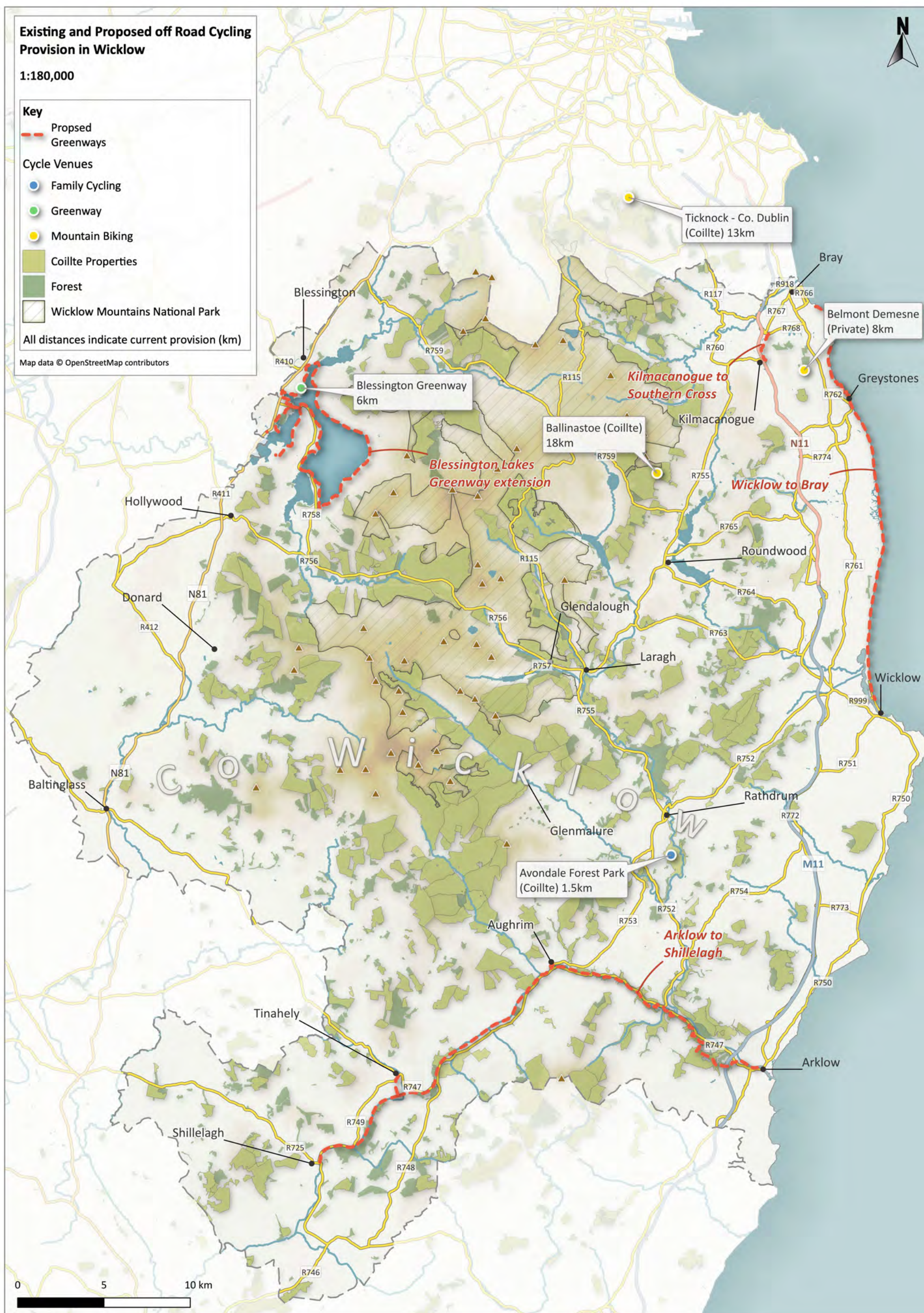


Fig. 4: Existing and Proposed Off Road Cycling Provision in Wicklow

4.5.2.3 Recommendations

Greenways

Current gaps in provision of off-road leisure cycling will largely be met by delivery of several regionally significant greenway projects across the county over the next 5 years. To maximise appeal, these must cater for the leisure market preferences identified in 4.5.2.1. Avoiding on-road sections for safety conscious riders and the option to enjoy shorter looped routes will extend appeal.

Family Cycling Venue

There is significant demand for off-road family cycling in flatter woodland sites or mature estates as evidenced by the success of similar sites in the UK and Northern Ireland providing purpose-built green and blue grade (easy/moderate level) mountain bike trails (min >10km). This offer can be further complemented by family friendly activities such as natural or bespoke play. Such sites are a significant draw for the family market, generating high visitor numbers¹¹. There are currently no such sites across Wicklow and no potential sites were identified during consultation /fieldwork. The offering at Belmont Demesne is similar however the product is currently limited. Opportunities to extend the offering here or to develop a similar product offering at a suitable site elsewhere should be supported.

Multi Use Trails and Trail Connectivity

Where appropriate, consideration should be given to developing multi use trails (over pedestrian only routes) to accommodate the growing leisure cycling market. Connecting multi use trail networks to each other will also support the long-term development of active travel routes and facilitate the growing Ebike market with its preference and ability to travel longer distances.

4.6 New Site Opportunities

During consultation, a number of privately owned estates were identified as undergoing change or redevelopment with potential to complement the wider tourism and recreation offering. Of these, only Kippure Estate has active plans to develop a potentially complementary offer.

Situated on the north-western edge of the National Park, Kippure Estate is currently under redevelopment having been recently purchased by private investors. There are plans for expansion of

¹¹ Gosford Forest Park, County Armagh – between 2017 and 2020, annual visitor numbers increased from 50,000 to over 350,000 following the development of a family cycling trail network and bespoke natural play.

the site through a lease/purchase of neighbouring Coillte forest, and significant investment committed to upgrading the visitor facilities and to offer a variety of opportunities for outdoor recreation including –

- Car parking for hillwalkers (approx. 500 spaces)
- E Mountain Bike (EMTB) hire for use in forest and surrounding hills
- Upgrade of estate roads providing low level walking and cycling opportunities
- Shuttle bus service for hillwalkers
- Guided hill walks

There are also plans to recommence residential field studies courses for educational groups.

Redevelopment is still in its early stages however the site offers clear potential to support the outdoor recreation offering in north / north-west Wicklow. Continued engagement by key stakeholders with the Estate owners/management is recommended to encourage development that complements the wider tourism offering in the area and aligns with the broader objectives of the National Park. Note, development is subject to appropriate/ statutory planning process and assessments.

4.7 Outdoor Recreation Hubs – spreading the load and the benefits

Five Outdoor Recreation Hubs and clusters have been identified in the Wicklow Outdoor Recreation Strategy 2020-25 as follows – Laragh, Rathdrum, Tinahely-Shillelagh, East Coast Maritime, Blessington-Baltinglass.

With the exception of Baltinglass, the Outdoor Recreation Hubs are well or very well catered for in relation to walking provision. The lack of off-road cycling opportunities across Wicklow has been discussed in 4.5.2.2, however this gap will be filled to a large extent by delivery of the proposed Greenways over the next 3 -5 years. In the case of most hubs therefore, the focus should be on raising awareness of opportunities and improving the quality and appeal of the experience on offer through upgrade to visitor infrastructure and protection and enhancement of the environment setting.

Maps showing walking and cycling provision within a 15km radius (approx. 15-20 min drive) for each of the outdoor recreation hubs can be viewed in **APPENDIX 3**.

Provision at each hub is summarised below -

4.7.1 Laragh

Long established as an outdoor recreation hub and the most popular gateway to the uplands, Laragh is a key settlement on the Wicklow Way, St Kevins Way and Miners Way – all of which pass through nearby Glendalough. The hub will be further strengthened by developments currently underway to enhance the Avonmore Way linking to Rathdrum and proposals to relocate Glendalough parking and visitor hub facilities to Laragh, linked via an off road, multi use trail (discussed in 6).

4.7.2 Rathdrum

Only 15 minutes by road from Laragh, Rathdrum is well catered for in terms of walking provision. Current development underway on the Avonmore Way will improve connectivity between Rathdrum town and Laragh. The major redevelopment of Avondale Forest, currently underway, will further consolidate the town's status as an outdoor recreation hub particularly suited for the family market.

4.7.3 Tinahely-Shillelagh

This hub boasts an impressive network of overlapping looped walking trails in the hills around Tinahely, suitable mainly for experienced walkers, and several short low-level woodland walks at Tomnafinnogue Woods all connected by the Tinahely Railway Walk. This route will form part of the planned Arklow to Shillelagh Greenway to be developed by 2024. Tinahely is also a key stop off point on the Wicklow Way (Stage 5/6). While there are currently limited opportunities for walking and cycling directly accessible from Shillelagh, this will be addressed by development of the greenway.

The Tinahealy Looped Trails hold appeal for experienced walkers and ramblers seeking longer walks in gentle, scenic landscapes however the trails are unlikely to support multi day walking itineraries due to their overlapping nature. At present, the outdoor recreation offering should be considered a component of a wider visitor itinerary in the area, however development of the Arklow to Shillelagh Greenway will be highly significant for tourism and recreation, elevating and consolidating the hub's status and pivotal in establishing outdoor recreation as the main draw to the area.

4.7.4 East Coast Maritime

Stretching from Bray to Arklow, maritime recreation is the main focus for development in this hub. This is well supported by current walking and cycling provision and future plans to develop a greenway/recreational trail from Wicklow to Bray.

4.7.5 Blessington-Baltinglass

Blessington is the primary settlement within this hub which stretches southwest along the N81 to Baltinglass. While provision is undoubtedly more limited along this western corridor and particularly at its southern end, development of the Blessington E Greenway will be a significant boost to recreation and tourism in west Wicklow. Various proposals to increase the outdoor recreation offering around Baltinglass are made below.

4.7.5.1 Baltinglass

For Baltinglass to operate effectively as hub there is need for increased outdoor recreation provision in the area.

As shown in Fig. 5 there are very few opportunities for walking and off-road cycling around Baltinglass, however the area will soon benefit from the launch of a cycle trail network with 3 routes of 18km, 22km and 47km respectively exploring the scenic quiet roads between Baltinglass, Rathdangan and Donard. This product will appeal to key segments within the leisure cycling market.

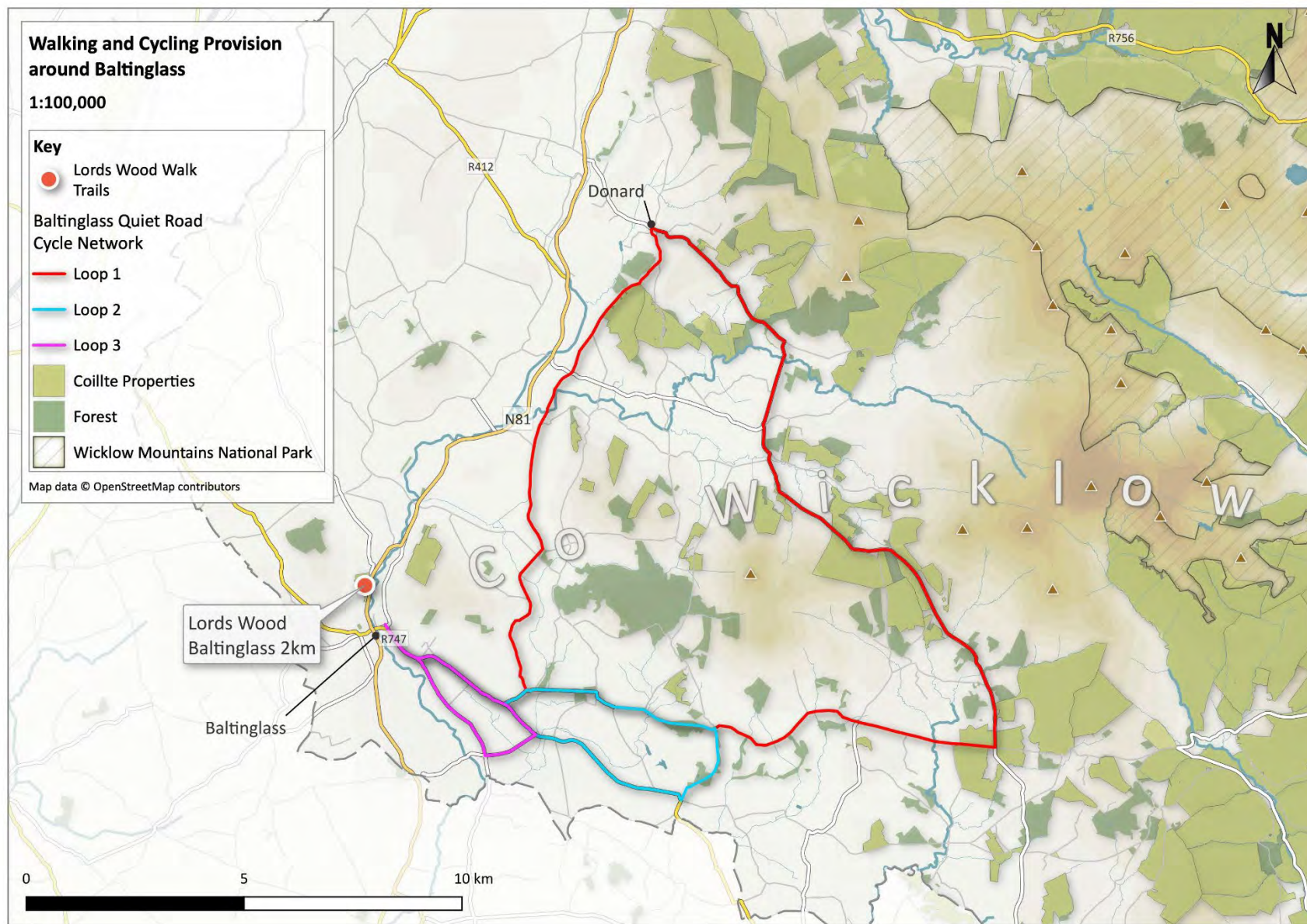


Fig. 5: Walking Provision and Quiet Road Cycling Network around Baltinglass

One of the most significant factors in the lack of outdoor recreation opportunities around Baltinglass is the near absence of Coillte land. Developing new access and trails on private land is significantly more challenging, however as has been demonstrated by the local community in Tinahely, these challenges can be overcome with impressive results¹².

The town of Baltinglass and the surrounding landscape has a wealth of archaeological heritage and is considered by heritage experts as the 'Hillfort Capital of Ireland' due to the huge concentration of prehistoric hillforts in the area. Many of these are located on private land but can be viewed from nearby roads and form part of the West Wicklow Heritage Trail; two driving/cycling routes originating in Baltinglass. While there *are* some sites with public access, these are understood to be little visited. Wicklow County Council has commissioned a Statement of Archaeological Significance for the Baltinglass Hills to define the significance of the area - this is currently underway with completion due late 2021.

Fig. 6 shows the location of key heritage sites in the hills surrounding Baltinglass.

Recommendations -

Looped Heritage Walks

Tying in with the existing driving and cycle routes, there is potential to develop a series of looped walks on private land and the quiet road network providing access to the area's key heritage sites linked by carefully placed viewing points and appropriate interpretation. This would further raise the profile of Baltinglass's Heritage as part of Ireland's Ancient East. To progress this, it will be necessary to carry out a feasibility study drawing on the knowledge of local heritage experts, access and recreation specialists and the local community. In recent years various significant heritage sites across Ireland have been adversely affected by improving access through provision of walking trails, therefore consultation with heritage specialists is key to ensuring any development is both appropriate and sustainable.

¹² Development of the extensive network of walking trails around Tinahely/Shillelagh has been led primarily by local community groups

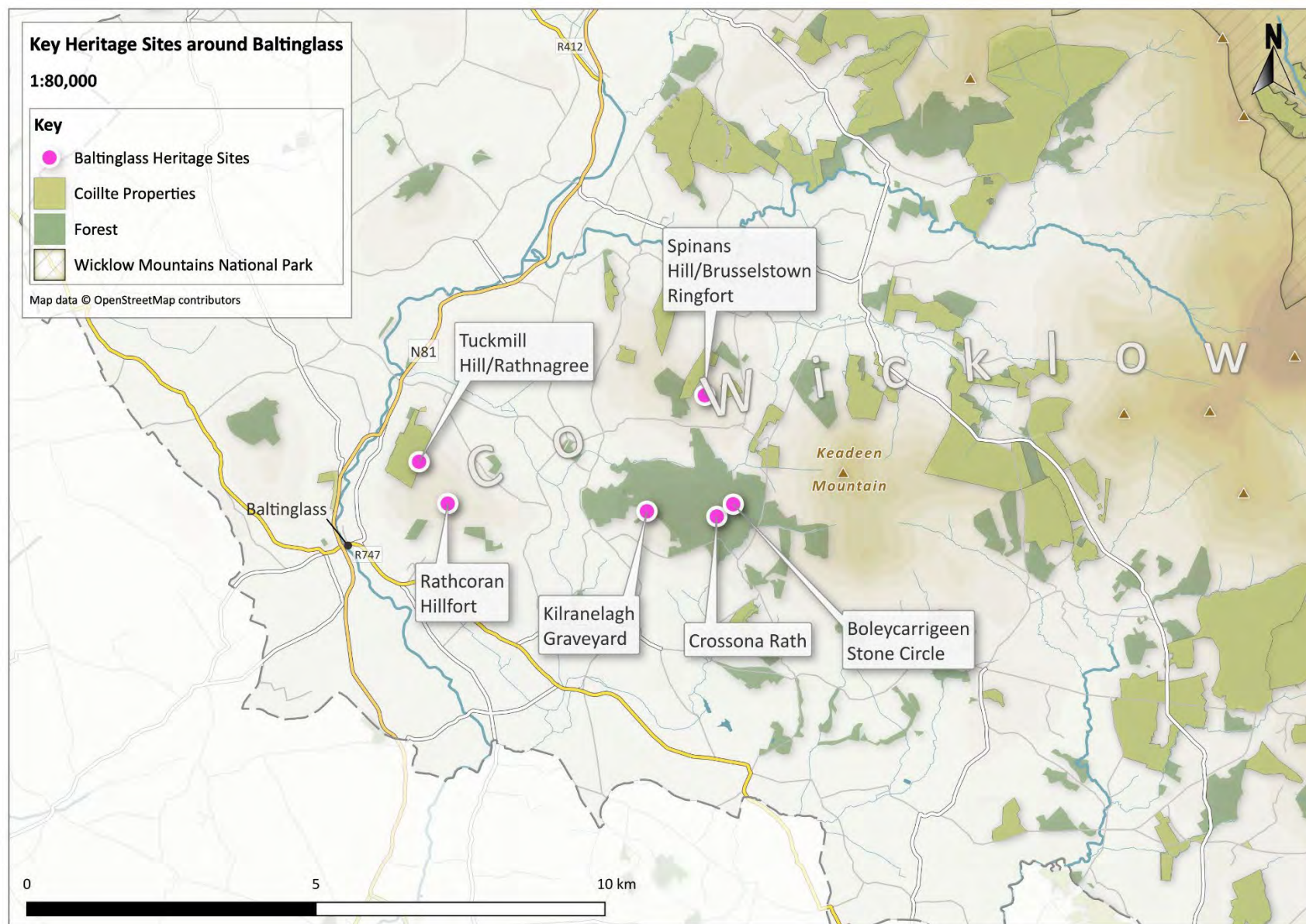


Fig. 6: Location of Key Heritage Sites around Baltinglass

Community Trail Plan

Should this not prove feasible, to increase walking and off-road cycling provision around Baltinglass, a Community Trail Plan should be developed in consultation with local communities. This process will allow a strategic approach to development of new trails on the ground, ensuring those delivered have wide appeal for locals and visitor alike. River corridors, hillside, private woodlands or historic tracks/pads may provide such opportunities.



Fig. 7: Hillforts in West Wicklow

4.8 Increasing connectivity

Increasing connectivity is a clear priority at a strategic level as evidenced by the various sustainable transport-active travel and greenway projects underway across the county.

This is also evident in relation to the trail network, where connectivity has been enhanced through product development. Examples of recent projects include the Belmont Way, Sugar Loaf Way and the work currently being undertaken on the Avonmore Way.

Further strategic development of trails linking networks to each other and to settlements will provide a wide variety of benefits for locals and visitors. As discussed in 4.5.2.3, where appropriate, development of multi-use trails accommodating leisure cyclists should be considered to expand the off-road cycling network and increase overall provision, taking consideration of their preference for flatter, fully off-road routes.

4.8.1 Shuttle Bus Service

Provision of a shuttle bus service operating around the National Park has long been proposed as part of the solution to the problem of congestion at Glendalough and the issue of car crime in upland car parks. The service would also improve access for those travelling by public transport, which has been

noted in previous studies as ‘very poor’¹³. Various models have been discussed serving visitors, hillwalkers, or both.

There are few examples of successful shuttle services operating in other upland areas across Ireland than can be drawn from. In most cases these are heavily subsidised. At Glenveagh National Park, a Park operated shuttle bus provides a morning drop off service to two locations on the Park boundary on weekends and bank holidays from where visitors can walk the return journey to the car park/trailhead. At the Burren National Park, a free shuttle bus takes users to and from the trailhead, operating multiple times a day, daily throughout the visitor season.

It is recommended that this same approach of shuttle bus drop offs is piloted across the Park. For each route identified, visitors walk the return journey to Laragh. The proposed routes in Table 2 and Fig. 8 have been identified through consultation with key stakeholders. The walking routes accessible from the drop off points ensure that most routes cater for both recreational visitors and hillwalkers. In each case there is a sustainable, waymarked return trail. In this way the shuttle bus service is an important dispersal mechanism, transporting visitors to other sustainable sites around the Park.

To be effective, the service should provide a reliable, regular, timetabled service supported by the use of mobile technology.

It is recommended to pilot the service on a selected number of routes initially to monitor the impact on sites and the associated implications for visitor management.

¹³ Wicklow Outdoor Recreation Strategy 2020-25

Route	Bus stops	Return Walking Routes	Key User Group
A. Wicklow Gap	<ol style="list-style-type: none"> 1. Miners Way Car Park 2. Wicklow Gap Car Park 	St. Kevin's Way, Miners Way and various hill walks	Visitors and Hillwalkers
B. Glenmalure	<ol style="list-style-type: none"> 1. Shay Elliot Car Park (later phase following path works) 2. Glenmalure Lodge 3. Ballinafunshoge Car Park 	Wicklow Way via Mullacor Route or Miners Path and various hill walks	Visitors and Hillwalkers
C. Rathdrum	<ol style="list-style-type: none"> 1. Ballygannon Car Park 2. Rathdrum 3. Stump of the Castle 4. Avondale 	Avonmore Way /Jubilee Loop	Visitors
D. Glenmacnass (later phase following path works)	<ol style="list-style-type: none"> 1. Waterfall Car Park 	TBC and various hill walks	Visitors and Hillwalkers

Table 2: Proposed Shuttle Bus Routes and Drop Off Points

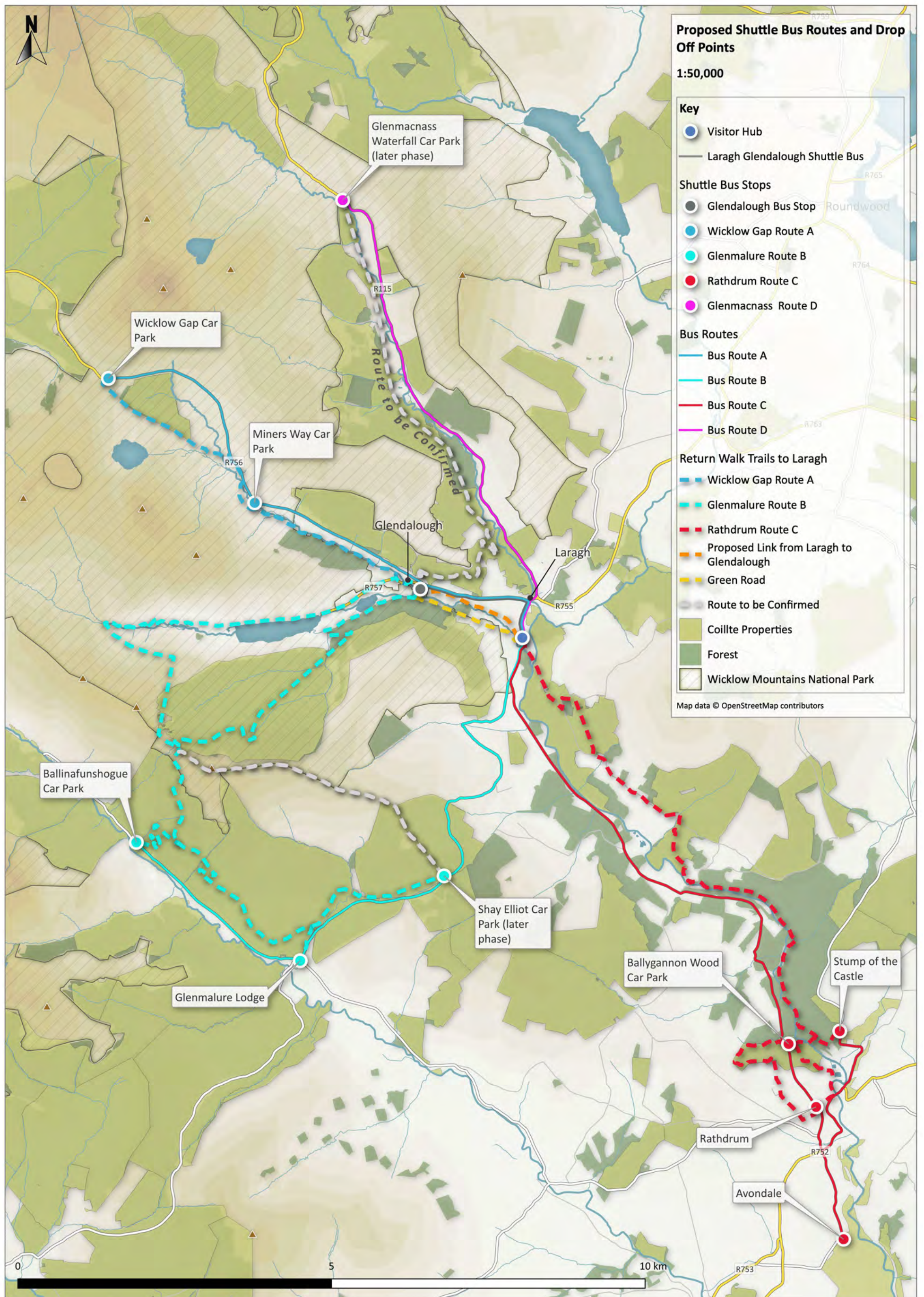


Fig. 8: Proposed Shuttle Bus Routes and Drop Off Points

5 Recreational Trail Masterplan

The Recreational Trail Masterplan in Fig. 9 shows the location of identified dispersal sites which can be promoted to achieve dispersal across the Park and wider Wicklow area including –

- Discovery Walks
- Sustainable walking routes serviced by the proposed shuttle bus service

The location of key visitor sites requiring intervention works is also shown (discussed in part 2).

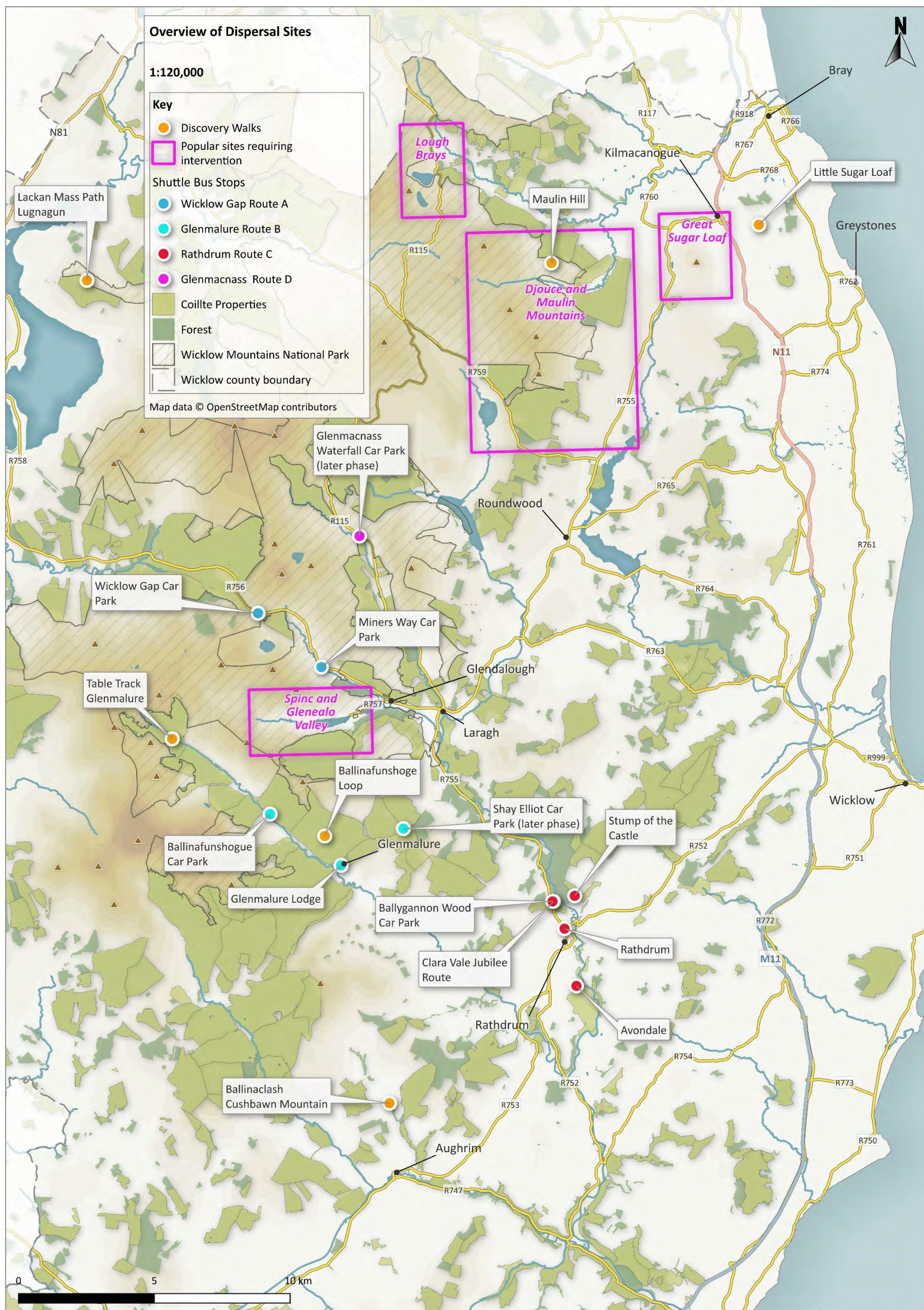


Fig. 9: Recreational Trail Masterplan for Wicklow

6 Glendalough Valley - Dispersal on the Valley Floor

Pedestrian and vehicle congestion on the Glendalough Valley floor and the issues arising from this are long standing and well documented. This is in part due to the valley's topography but is also a reflection of visitor behaviour and preferences, including how visitors move around the site via the current trail network. From analysis of available counter data, it is evident that the majority of visitors do not venture beyond the valley floor with most activity focused on the trails between the Monastic Site and the Upper Lake. This demonstrates visitors' strong preference for short, flat, accessible walks as a means of exploring the landscape.

There is limited scope to extend or reconfigure the trail network on the valley floor to successfully achieve dispersal within the current footprint of the site. The most effective way of achieving this, to accommodate current and growing visitor numbers, is by relocating the visitor hub (including car parking) to Laragh and extending the trail network along the valley floor to connect with the existing OPW site. A regular shuttle bus service will be required to connect the sites, however visitors should be encouraged to make their own way from Laragh by foot or bike. To achieve this requires careful design of the connecting trail to create a widely accessible, compelling visitor experience in its own right. While there are significant challenges to achieving this, there are multiple advantages including opportunities to enhance both the visitor experience and the environment including –

- Decompresses the upper valley by dispersing visitors along an extended valley floor network
- Enables visitors to explore more widely, including to lesser visited heritage sites
- Encourages longer dwell time in the valley

The Green Road

The historic Green Road running on the south side of the river from behind the Woollen Mills in Laragh all the way to the Upper Lake provides a highly scenic link from Laragh. This route has come into more popular use by walkers and off-road cyclists since development of the temporary overflow car park at Derrybawn, however **the Green Road is not considered suitable for use as the arterial trail connecting the new visitor hub to the valley** for the following reasons –

- Sections of the trail include unsuitable gradients and trail surface or are of insufficient width to accommodate an increased volume and wide variety of users on foot and bicycle
- Any significant trail works would ruin the character and experience of this historic route

Instead, it is proposed to develop a new multi-use trail running along the valley floor, taking in St Saviours Church and connecting with Trinity Church along the route. The trail should be wide enough to comfortably accommodate two-way walking and cycling traffic. Positioning the trail within a wide trail corridor will allow opportunities for screening and for habitat restoration and enhancement works along the route.

The *Glendalough to Laragh Masterplan* shows the concept design for the proposed trail connecting Laragh to the Monastic site and beyond to the Upper Lake and the Miner's Road. The new connecting trail between Laragh and the OPW site is 2km long, equating to a 30-40 minute walk or a 15 minute cycle.

Detailed trail design and development should focus on achieving the following–

- Safe, fully off road, traffic-free route for walkers and cyclists
- Connects to the current trail network, heritage sites and visitor services on the valley floor
- A flat, wide trail (min. 3m) with suitable surface adhering to Sport Ireland Trail Grades of Class 2/ 'Easy' walking and 'Family' off road cycling trails¹⁴
- Compelling visitor experience with varied trail surface and corridor, viewpoints and interpretation
- Capitalises on opportunities for habitat restoration and enhancement within the wider trail corridor
- Avoids proliferation of trails and loss of protected habitat on the valley floor
- Provides meaningful all-ability visitor experience
- Sits sensitively within the landscape
- Does not negatively impact upon natural or built heritage features

Laragh – visitor hub for the valley and the wider area

A key advantage of relocating the Glendalough visitor hub to Laragh is the opportunity it provides to establish the village as the main hub and trailhead for the wider walking and cycling network that radiates from here including the Wicklow Way, St Kevin's Way, Avonmore Way, Miner's Way and Trooperstown Hill. Bike hire for use in the valley and on the Avonmore Way will be an essential element of the visitor service provision.

¹⁴ Sport Ireland 'Classification and Grading for Recreational Trails', 2008

7 Visitor Monitoring

As noted in the Visitor Analysis, there is need for a more comprehensive approach to visitor monitoring and analysis to better inform visitor management, including effectiveness of the dispersal strategy, to identify visitor behaviour and trends and to assist with planning and resource allocation. A shared system providing an overview of counter data at key recreation sites in the wider Park and at county level would provide greatest insight for stakeholders. A system offering automatic, remotely retrieved counter data shared via a web-based portal would be most effective. Of note, WMNP has started to roll out this system using Nomad counters at various locations around Glendalough valley. These are also used at various Wicklow County Council sites.

8 Conclusion

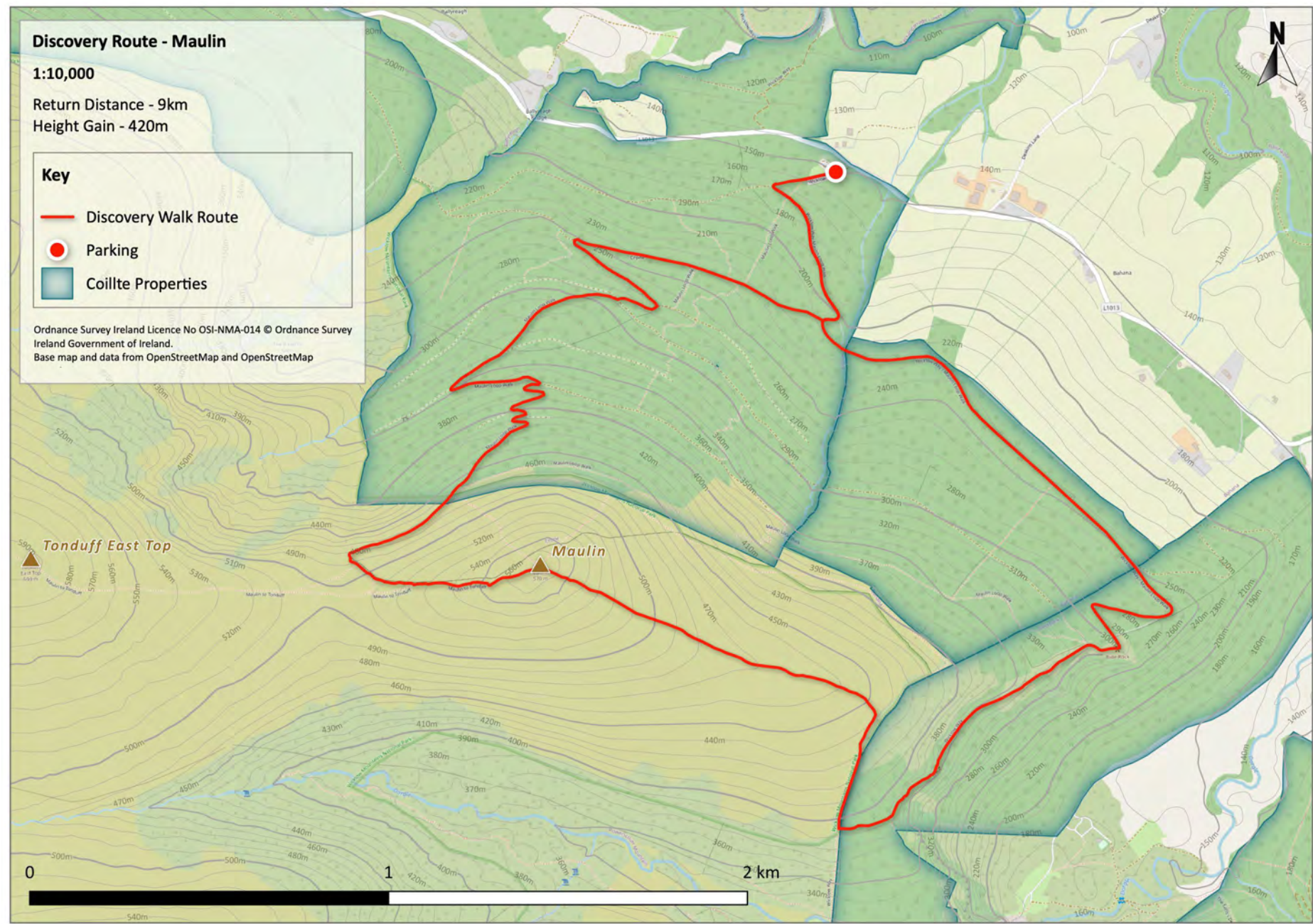
- Improving the quality and sustainability of outdoor recreation sites is integral to achieving effective dispersal within the Park and on a county wide level.
- A planned and coordinated approach to the promotion of lesser well-known sites and experiences with an emphasis on reaching key visitor cohorts through an enhanced online presence, particularly via social media channels, is essential to this.
- Dispersion to *sustainable* sites is key to avoid replicating issues elsewhere
- Continued monitoring of visitor behaviour via a comprehensive system of visitor counting and feedback from staff on the ground will be necessary to assess the impact of the dispersal strategy and to respond to visitor management issues arising from increased footfall at sites.
- Off road cycling - planned greenway developments will significantly increase off road cycling provision, however a gap remains for a family focused site providing a purpose built off road cycle trail network and other complimentary family friendly offering
- Glendalough Valley – first time visitors to Wicklow will want to visit Glendalough therefore the site will continue to experience high visitor numbers. Extending the footprint of the visitor area along the valley floor to Laragh can effectively decompress the area between Glendalough and lower/upper lake while offering opportunities to enhance the visitor experience and extend dwell time.

Appendix 1 – Discovery Walks - List of Sites Assessed

Site	Start/Finish Point	Included	Notes
1. Maulin	Crone Woods Car Park (Coillte)	✓	Path erosion works proposed
2. Clara Vale Jubilee Route	Clara Vale Car Park (Coillte)	✓	
3. Table Track Glenmalure	Baravore Car Park (Council)	✓	Path works proposed (drainage)
4. Little Sugar Loaf	Belmore Estate Car Park (Private)	✓	
5. Lackan Mass Path Lugnagun	Lackan Village	✓	Path erosion works proposed. Sorrel Hill to be kept under review
6. Ballinaclash Cushbawn Mountain	Macreddin Village	✓	
7. Ballinafunshogue Loop Glenmalure	Glenmalure	✓	
8. Trooperstown Hill	Trooperstown Car Park (Coillte)	-	Proposed subject to landowner agreement. Path erosion works proposed
9. Croaghanmoira	Drumgoff Layby Parking	-	Proposed subject to landowner agreement
10. Cariglineen	Shay Elliot	x	Path unsustainable
11. Keadeen Mountain	East side, nr Rathdangan	x	Navigational challenge
12. Sugar Loaf West	Nr Donard	x	Severe path erosion, not sustainable
13. Kirikee	Shay Elliot	x	Limited appeal
14. Braigue/ Cullentragh	Shay Elliot	x	Limited appeal. Cullentragh Summit on private land

15. Fauna	Ballyvraghan, nr Donard	x	Limited appeal. Community trail only
16. Dwyer's Chair	Drumgoff	x	Short route, eroded path, safety issues & sensitive wildlife
17. Church Mountain	Near Hollywood	-	Path erosion works and heritage assessment required before inclusion. Could form part of wider Baltinglass Heritage Sites Project
18. Table Track Loop – Glen of Imaal	Seskin Defence Forces Information Centre	x	Requirement to consult firing range timetable before walking
19. Raheenleagh/ Croghan Kinsella	Barrackcroghan/ SE side	x	Limited appeal

Appendix 2 – Discovery Walk Proposed Routes



Discovery Route - Jubilee Walk with Clara Bridge Link

1:10,000

Return Distance - 10km

Height Gain - 120m

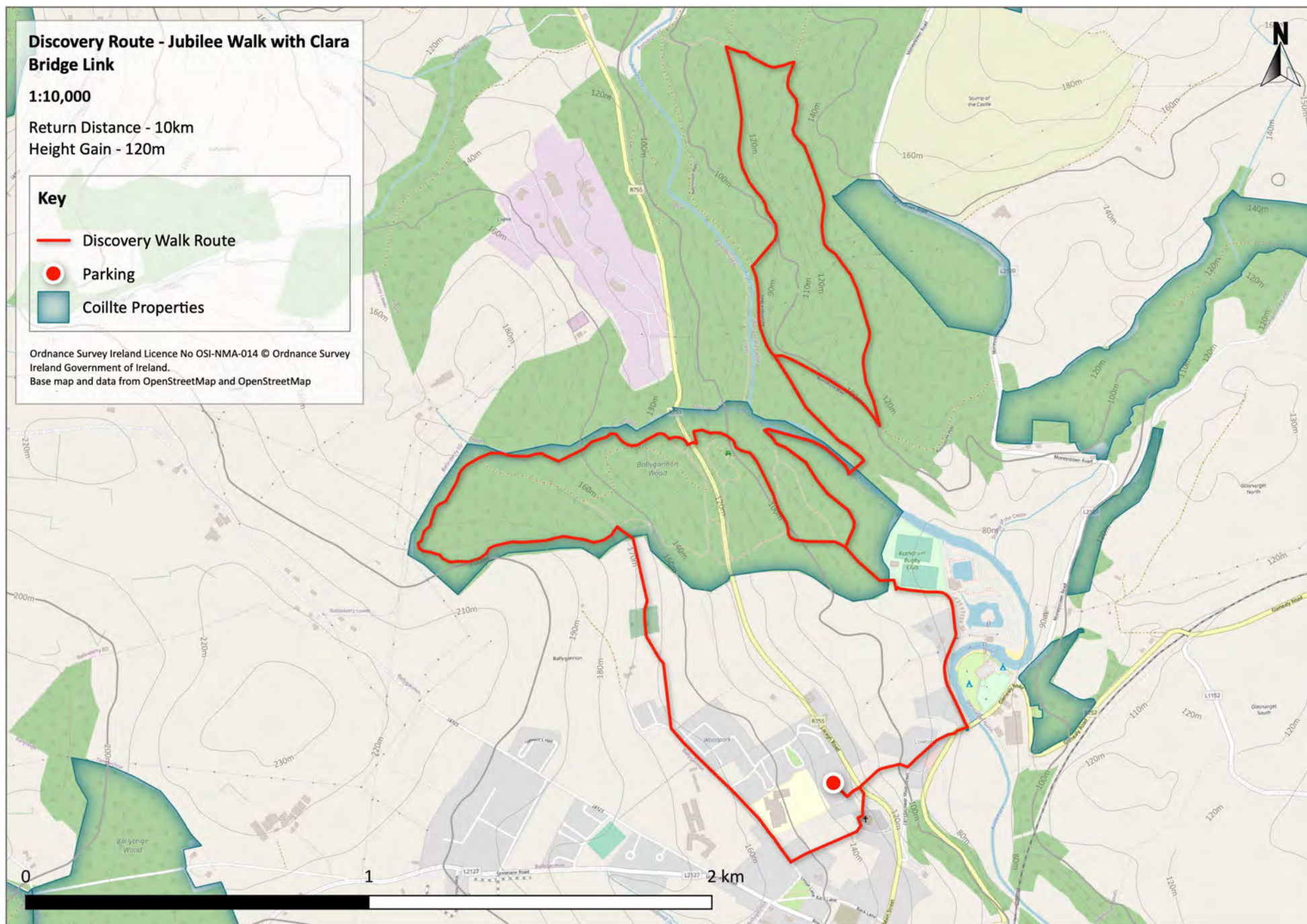
Key

— Discovery Walk Route

● Parking

■ Coillte Properties

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Base map and data from OpenStreetMap and OpenStreetMap



Discovery Route - Glenmalure Table Track

1:10,000

Return Distance - 6km

Height Gain - 240m

Key

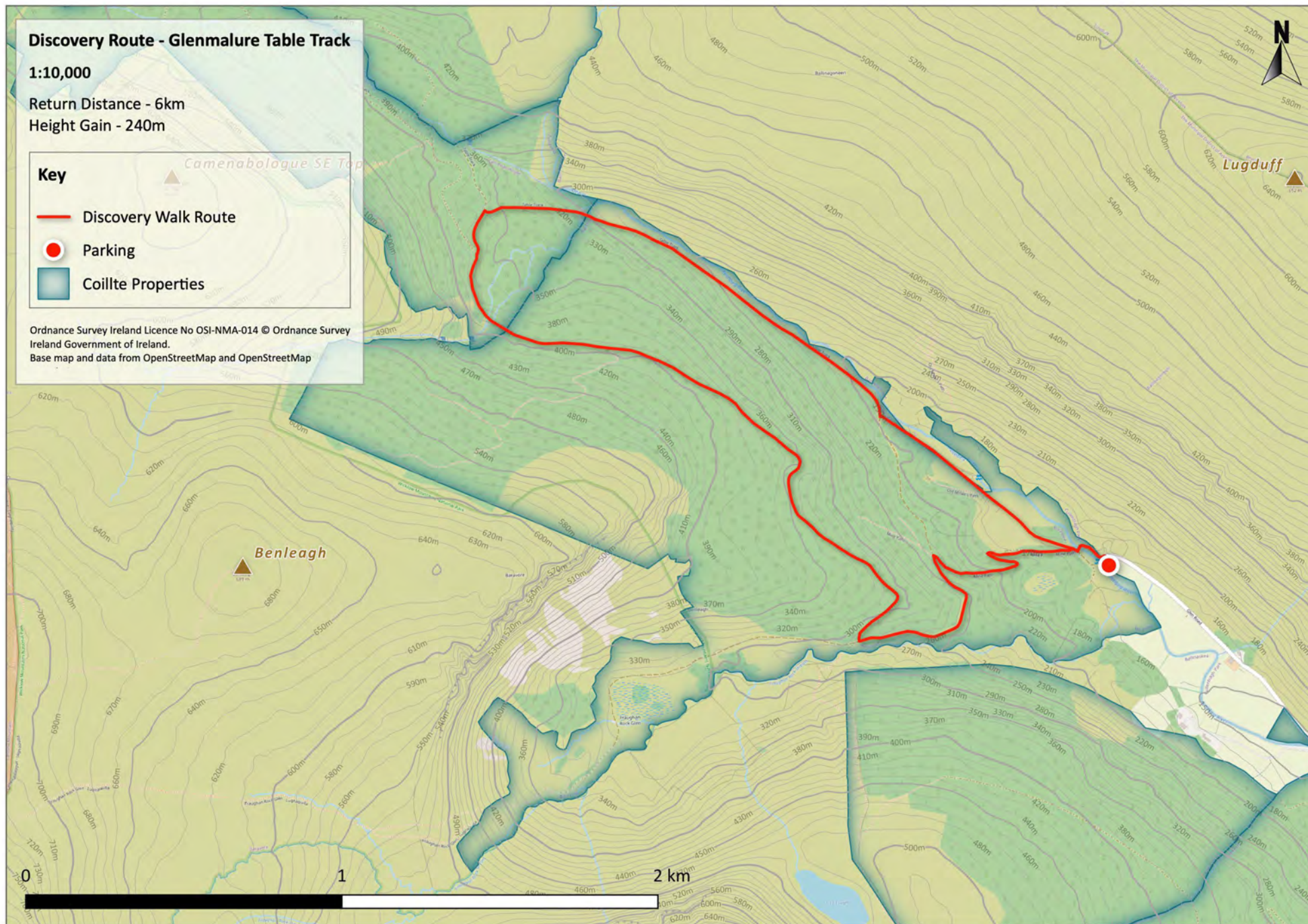
— Discovery Walk Route

● Parking

■ Coillte Properties

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Base map and data from OpenStreetMap and OpenStreetMap



Discovery Route - Little Sugarloaf

1:7,000

Return Distance - 4km

Height Gain - 225m

Key

— Discovery Walk Route

● Parking

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Base map and data from OpenStreetMap and OpenStreetMap



Discovery Route - Ballinaclash Cushbawn

1:20,000

Return Distance - 13km

Height Gain - 180m

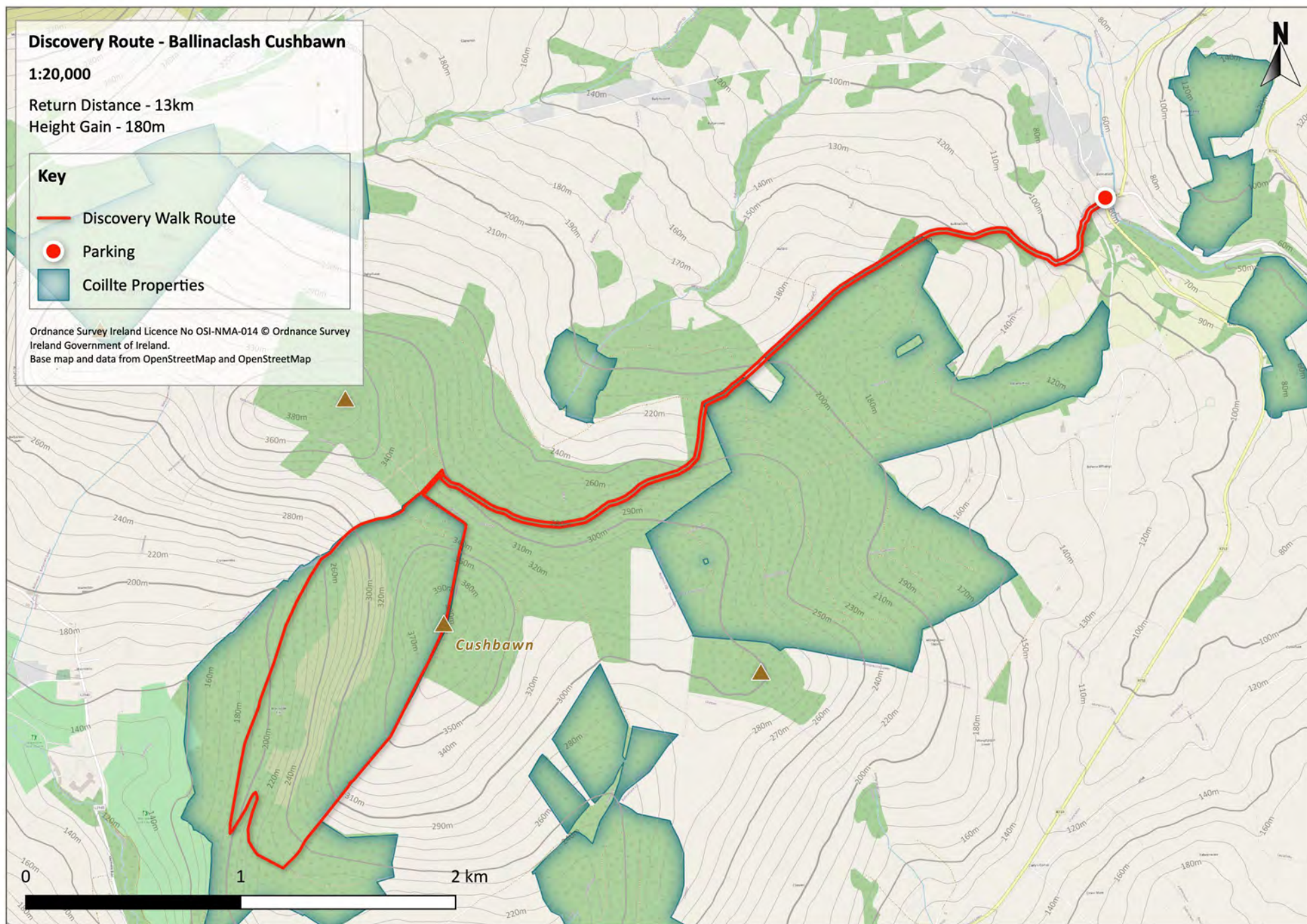
Key

— Discovery Walk Route

● Parking

■ Coillte Properties

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Discovery Route - Ballinafunshogue Loop


1:10,000

Return Distance - 10km

Height Gain - 280m

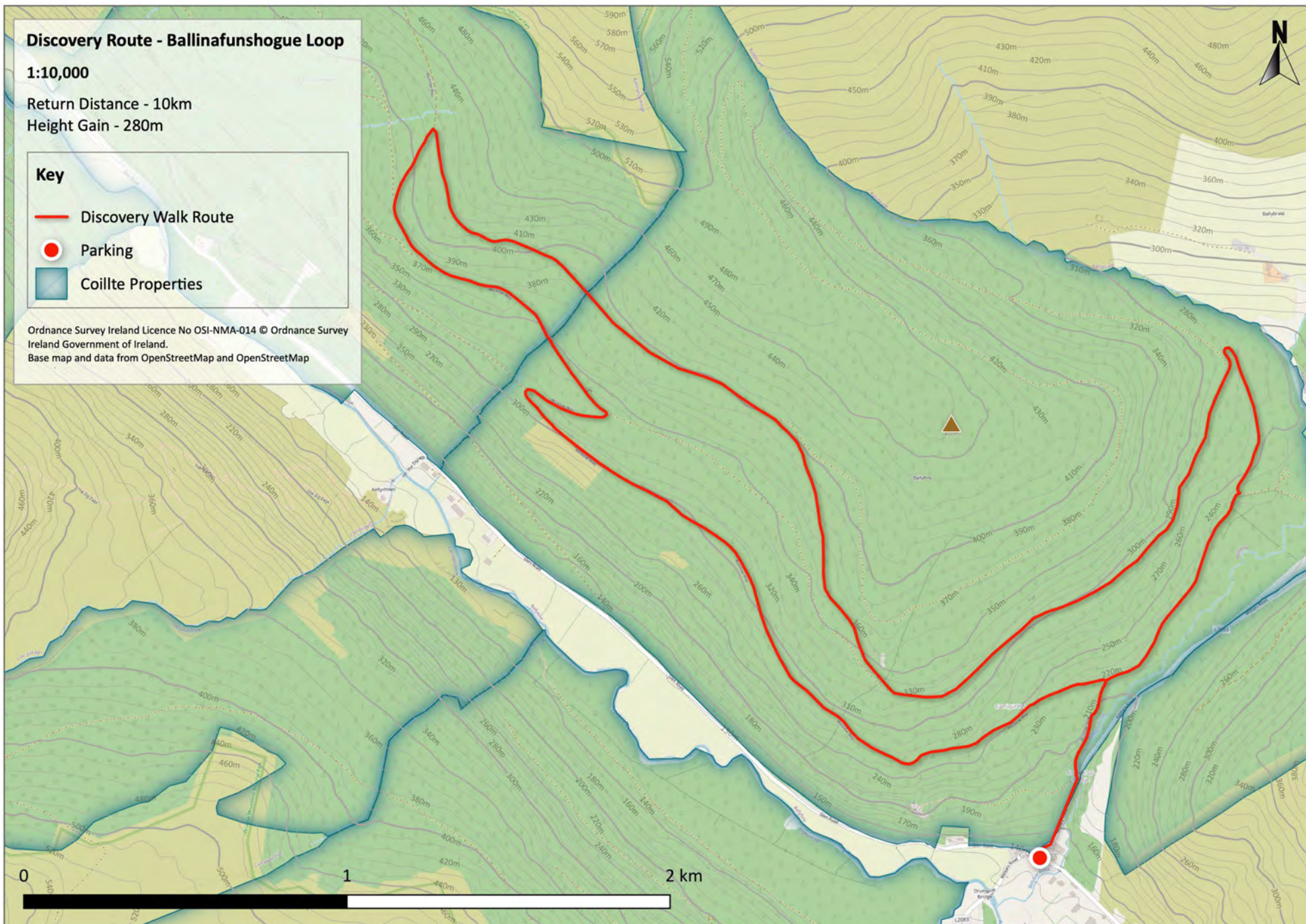
Key

 Discovery Walk Route

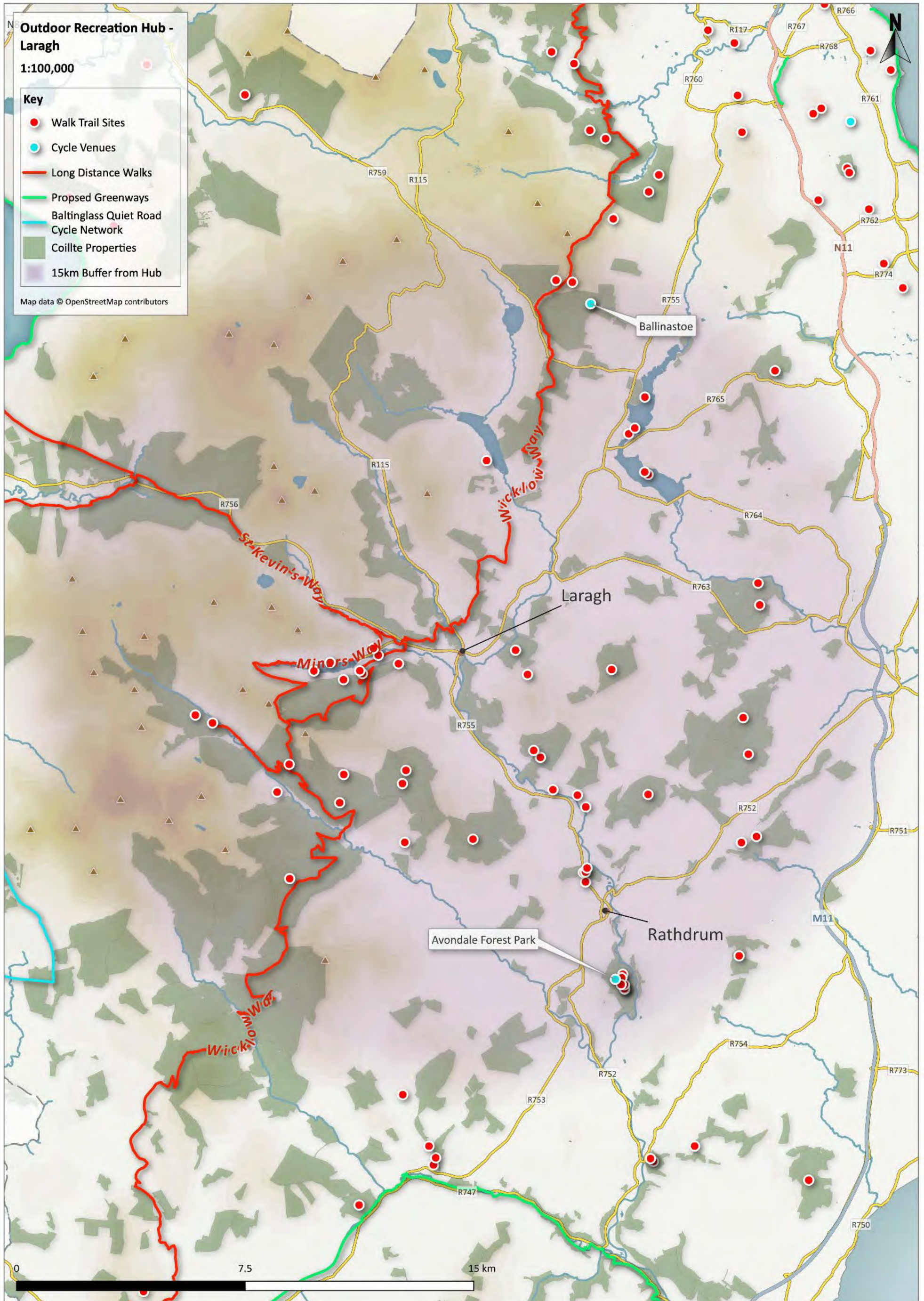
 Parking

 Coillte Properties

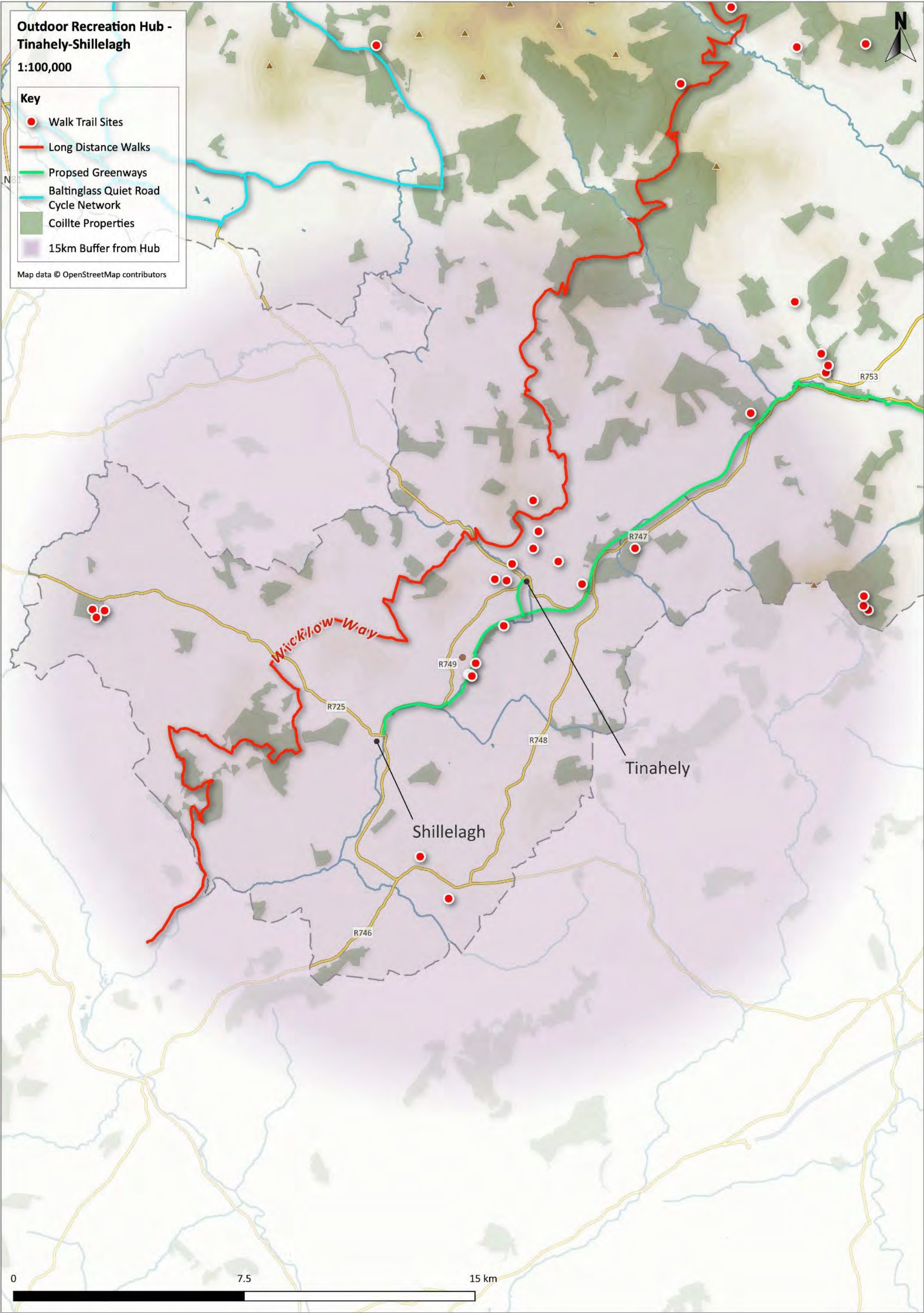
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Base map and data from OpenStreetMap and OpenStreetMap



Appendix 3 – Outdoor Recreation Hubs – Walking and Cycling Provision (15km Radius)







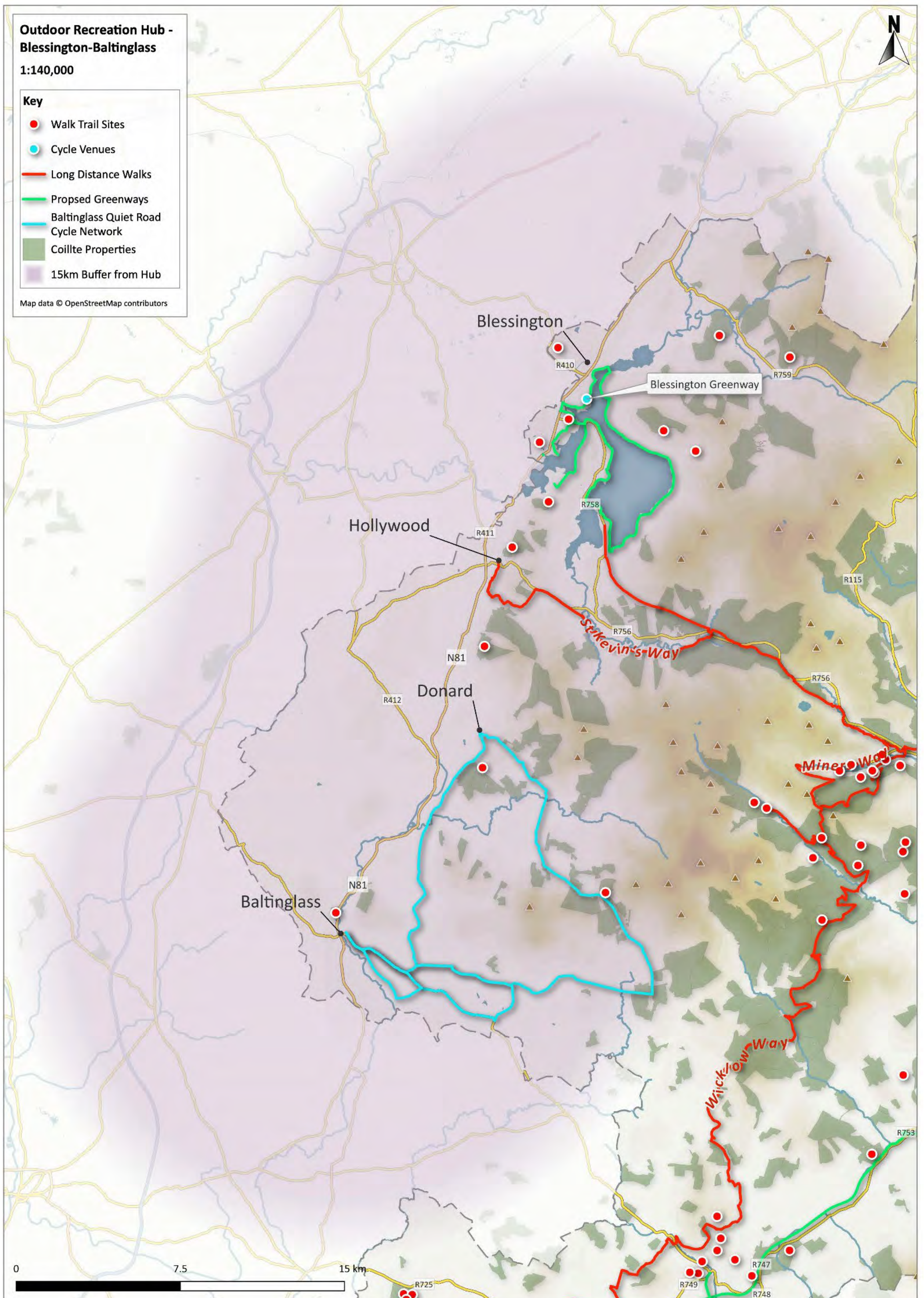
**Outdoor Recreation Hub -
Blessington-Baltinglass**

1:140,000

Key

- Walk Trail Sites
- Cycle Venues
- Long Distance Walks
- Propsed Greenways
- Baltinglass Quiet Road
Cycle Network
- Coillte Properties
- 15km Buffer from Hub

Map data © OpenStreetMap contributors



**Outdoor Recreation Hub -
East Coast Maritime**

1:180,000

Key

- Walk Trail Sites
- Cycle Venues
- Long Distance Walks
- Propsed Greenways
- Baltinglass Quiet Road
Cycle Network
- Coillte Properties

Map data © 2018 contributors
15 km Buffer from Hub



Glendalough & Wicklow Mountains National Park Visitor Experience and Management Masterplan

*Recreational Trails Masterplan Part 2:
Improving the sustainability of existing
key recreation sites*

November 2022

Prepared by Outdoor Recreation NI
on behalf of Fáilte Ireland



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1 Introduction

Although it is recognised that there are many sites across Wicklow that attract visitors, through consultation and discussion with the key stakeholders, four key recreation sites were identified that stand out as providing an iconic outdoor recreation visitor experience in the uplands (Fig.1). These are:

- Great Sugar Loaf Mountain
- Djouce Mountain
- Spinc and Glenealo Valley
- Lough Brays

Whilst other sites in the uplands are undoubtedly more popular for hill walking and receive more footfall, the four sites above are considered not only attractive to hill walkers, but significantly, to the casual day visitor.

These sites attract the casual day visitor for a variety of reasons including;

- they provide stunning scenic views of the surrounding landscape.
- they are known as the ‘signature’ outdoor recreation experience in the Wicklow area.
- they are easily accessible from the road /public car parks.
- they are defined on the ground sufficiently, to be walked by those without specialist mountain skills e.g. map reading
- they can all be experienced without specialist clothing and footwear, although not recommended.
- they receive considerable publicity, predominantly through social media channels.

It is anticipated that these high value/high volume sites will continue to attract visitors in the future and consequently, *appropriately managing these sites now is key to their future sustainability*. Priority management at each is based on the *principle of protecting the site, rather than making it easier or safer for people to use these sites*. *Consequently there is no intention to market these key recreation sites moving forward*. At each site issues which need addressing include problems of recreational induced erosion and issues regarding car parking capacity and other essential visitor services, such as toilet provision.

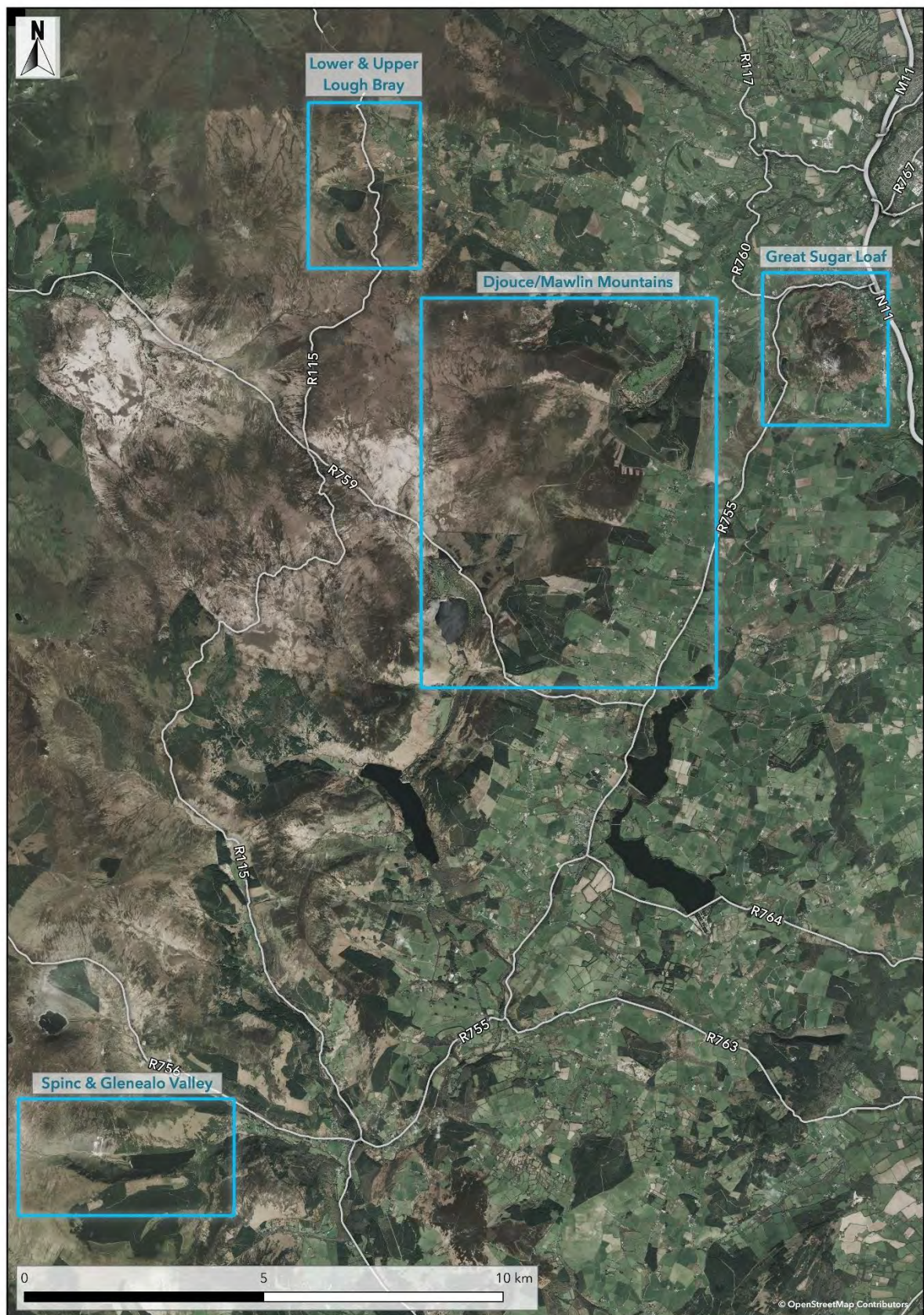


Fig.1 Key visitor honey pot sites in the Uplands

2 Recreation Induced Erosion

All four sites are presently experiencing problems of erosion resulting not only from natural causes but exacerbated by increased pressure through a variety of recreational activities, predominantly walking.

The fundamental concept in which each environment can sustain recreational activities up to an optimal level, after which deterioration can be expected in the environment and/or the activity taking place is known as the '*recreational carrying capacity*'. The recreational carrying capacity of all four sites has been exceeded.

When recreational forces exert heavy pressure on sensitive upland areas, this is often manifested on the ground as path degradation and deterioration.

Damage can be evident in the form of *ecological*, *physical* and *perceptual* damage. Ecological damage manifests itself as damage to vegetation, soils and landforms, physical damage affects the path's surface and its surrounding whilst, perceptual damage refers to the damage caused to the landscape and wild land quality by the visual impact and the presence of paths – which in turn can cause a reduction in a person's aesthetic experience and overall enjoyment of the environment.

Paths that exhibit evidence of footpath degradation and deterioration normally show a series of problem sites differing in both form and magnitude of damage as they cross several different physiographic units. In many cases the immediate effect of damage is localised in the areas of the path itself and in a zone of marginal trampling and does not extend over a larger area.

Recreation induced erosion damage caused by walkers in the Wicklow Mountains is not new. During the early 1990s, Paddy O'Leary completed a PhD thesis on path erosion in the Wicklow Mountains, whilst in 2003, Mountain Meitheal carried out a path condition survey within the Wicklow Mountains to assess the level of damage. Since then, the popularity of the mountains has continued to increase, and anecdotal evidence suggests that this has been accompanied by increased levels of footpath erosion across the entire path network. To measure the anticipated increase, the Wicklow Uplands Council and the NPWS appointed in December 2020 a path erosion and recreation specialist, 'Walking the Talk', to undertake a 'Wicklow Mountains Upland Path Condition Survey'. The audit included assessing 140kms+ of existing eroded paths and cost information from the audit has been used in this report.

Within the context of this study, the current path degradation at the four-signature recreation sites is briefly considered together with a short review of the current management techniques already employed, where relevant. General principles for future footpath erosion management are also

provided with all recommendations for upland path erosion based on the guiding principles of the British Upland Footpath Trust namely:

- Repairs are necessary to prevent or ameliorate visual intrusion and environmental damage.
- Works should be of a high standard of design and implementation using indigenous material, sympathetic in colour and texture to the immediate surrounding area. Uniformity of construction should be avoided e.g steps.
- Techniques used should protect existing vegetation and normally only locally occurring plant species should be used in restoration.
- The more remote the path, the more stringently the criteria for path repairs should be applied. This will be a matter of judgement i.e., in general, the more remote or wild the location the less acceptable an engineered path will be.
- Repaired paths should be suitable to the route's use and constructed on a scale appropriate for the intended use i.e., walking, biking.
- Before any repair is agreed the question should be asked, 'is there a better solution'?
- The use of waymarks, cairns or other intrusive features, other than those traditionally established on summits and path junctions, is discouraged.
- A sustained commitment of resources to path management is sought, so that small scale continuous maintenance can replace infrequent, major repairs as the normal method of path management.

The final guiding principle related to securing long-term, on-going funding for routine path maintenance of the sites has been highlighted throughout consultation as the single most important element required to be put in place, if all four sites in the future are to be managed sustainability and further deterioration and damage to the habitats, biodiversity and landscapes halted. Related to this is the concern that across Ireland, there are very few contractors who have the necessary skills to undertake path erosion works and that investment is needed to upskill local people in such techniques. An example of where this is working well at present is at Croagh Patrick, Westport. A specialist Scottish path erosion contractor is currently mentoring and training on the job a team of 6 local men to repair the badly eroded trail up Croagh Patrick mountain. A similar model should be adopted in Wicklow moving forward.

3 Key Recreation Sites

3.1 Great Sugar Loaf

At 501 metres, Great Sugarloaf is considered to many as Wicklow's iconic mountain to climb. Dominating the skyline driving from Dublin into Wicklow, its steep slopes and volcanic like appearance and the fact that it stands alone from the main nearby peaks of the Wicklow Mountains adds to the distinctiveness of its profile in the landscape and therefore its recognition as a place to walk.

Sugar Loaf is easily accessible off the N11 Motorway near the village of Kilmacanogue with the shortest route up the mountain accessed from a large car park situated off the L1031 road that runs along the southern boundary of the mountain. Given that the car park is already at an elevation of c.290 metres the total climbing elevation required is only 210 metres. This makes it particularly accessible to a wide audience. The 3.5-kilometre route from the car park to the summit and back takes between 1–1.5 hours. Although there are no counters on the mountain to record use, it is obvious from the erosion that it is heavily used. Usage is expected to increase following the recent waymarking of the Sugar Loaf Way which skirts along the bottom of the mountain.

Initially a wide grassy path, once dominated by vegetation, but now worn away, leads walkers up towards the bottom of the mountain (Fig. 2) but as the steepness of the slope increases, the grassy path becomes increasingly devoid of its vegetation covering, therefore making it more susceptible to natural erosion processes.



Fig. 2 Wide grassy path with central eroded line becoming increasingly devoid of vegetation cover.

As walkers continue up Sugar Loaf it is difficult to distinguish the line of the path to the summit. Fig. 3 shows multiple eroded paths across the hillside before two main routes emerge.



Fig. 3 No defined main path results in multiple eroded paths across the hillside.

Both routes are severely eroded. Recreation induced erosion has stripped the surface of one of the lines back to expose the bed rock leaving a rough, stony path to walk on, whilst on the other line a large gully has been carved out to the right of the path, caused most likely by walkers seeking out a more comfortable walking surface and the action of water on the steeper gradient. In places, the eroded gully is over a metre in depth. (Fig. 4)



Fig. 4 Vegetation stripped away to leave a rough stony path and large gully to the right of the path created and vulnerable to natural erosion processes.

As the path gets steeper, a wide rough scree path leads walkers to the summit of Great Sugar Loaf where walkers get rewarded for their efforts through spectacular views over the Dublin Bay and the East coast. The final ascent to the summit is through a steep gully which offers walkers an 'adventure' option of scrambling (Fig. 5).



Fig. 5 Scree path leads walkers to the summit. Final ascent is through a steep gully (photo credit on right Chris York)

From the summit of Great Sugar Loaf many walkers descend using an alternative route from that used to ascend the mountain. Three scree paths are evident coming off the summit all of which are rough underfoot (Fig. 6). According to the Glen of Imaal Mountain Rescue Team, 18 call outs took place on Great Sugar Loaf from 2016-2019. This compares to 75 and 35 call outs in Glendalough and Lugnaquilla respectively during the same period. Anecdotal evidence suggests that many of the call outs to Sugar Loaf related to those who were unprepared for the nature of the terrain.

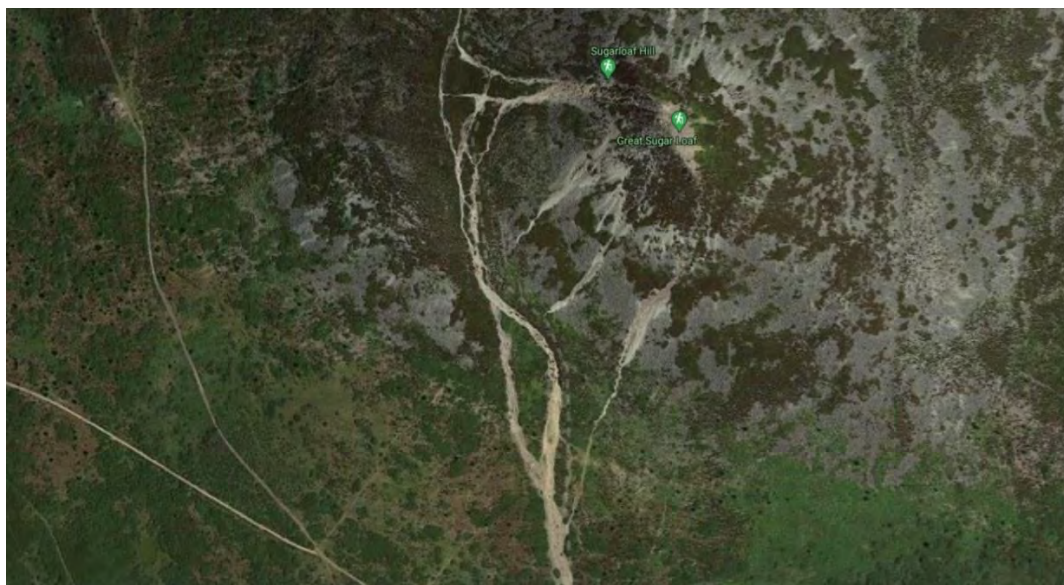


Fig. 6 Three scree paths are used by walkers mostly to descend from the summit.

In summary, an assessment of Sugar Loaf identified that in addition to erosion caused by natural processes, mainly water run-off on steep slopes, recreation induced erosion is exacerbated by users;

- being given the flexibility to spread out at the start of the walk on relatively flat terrain causing widespread vegetation damage and eventually leading to an eroded path.
- being unclear of the main route up the mountain leading to path braiding and lateral erosion across the hillside.
- being unclear of the descent route from the summit resulting in three distinct visual intrusive scree scars
- stepping off the boulder strewn path to seek a more comfortable route causing gullying and therefore increasing the vulnerability of the surrounding vegetation, soils and landscape to natural erosion processes.

To address the current level of erosion on Great Sugar Loaf, and to protect the mountain from further degradation, it is recommended that footpath erosion works are completed providing an out and back route up to the summit of Great Sugar Loaf. On the ascent, walkers will be naturally directed to scramble up the steep gully but instead of descending the steep gully, an alternative route will be provided on the northern side (Fig. 8).

It is anticipated that mitigation measures will include 'light touch' intervention, landscaping and the use of hard construction techniques, for example,

- containing walkers in the lower levels of the mountain to a more defined path through the creation of landscape features such as mounds.
- subtly defining those areas where path clarity is poor through light touch interventions e.g placing of boulders at strategic points.
- subtly blocking off braided paths with large boulders or vegetation mounds. This could also be used to block off the summit access points.
- surface run-off management, as required, throughout the length of the path.
- constructing sections of aggregate stone path where necessary from the lower flanks of the mountain up to where the scree slope starts.
- scree or boulder pitching the steepest sections of the path. See Fig. 7 for scree pitched path on Croagh Patrick, Westport.



Fig. 7 Scree Pitched path on Croagh Patrick (credit Matt Conway)

Given the accessibility of the mountain and the wide range of mitigation techniques to be used to combat footpath erosion on it, including both hand techniques and techniques using machinery, it is suggested that Great Sugarloaf is used as a ‘training ground’ for upskilling locals on erosion repair as suggested in section 2 above.

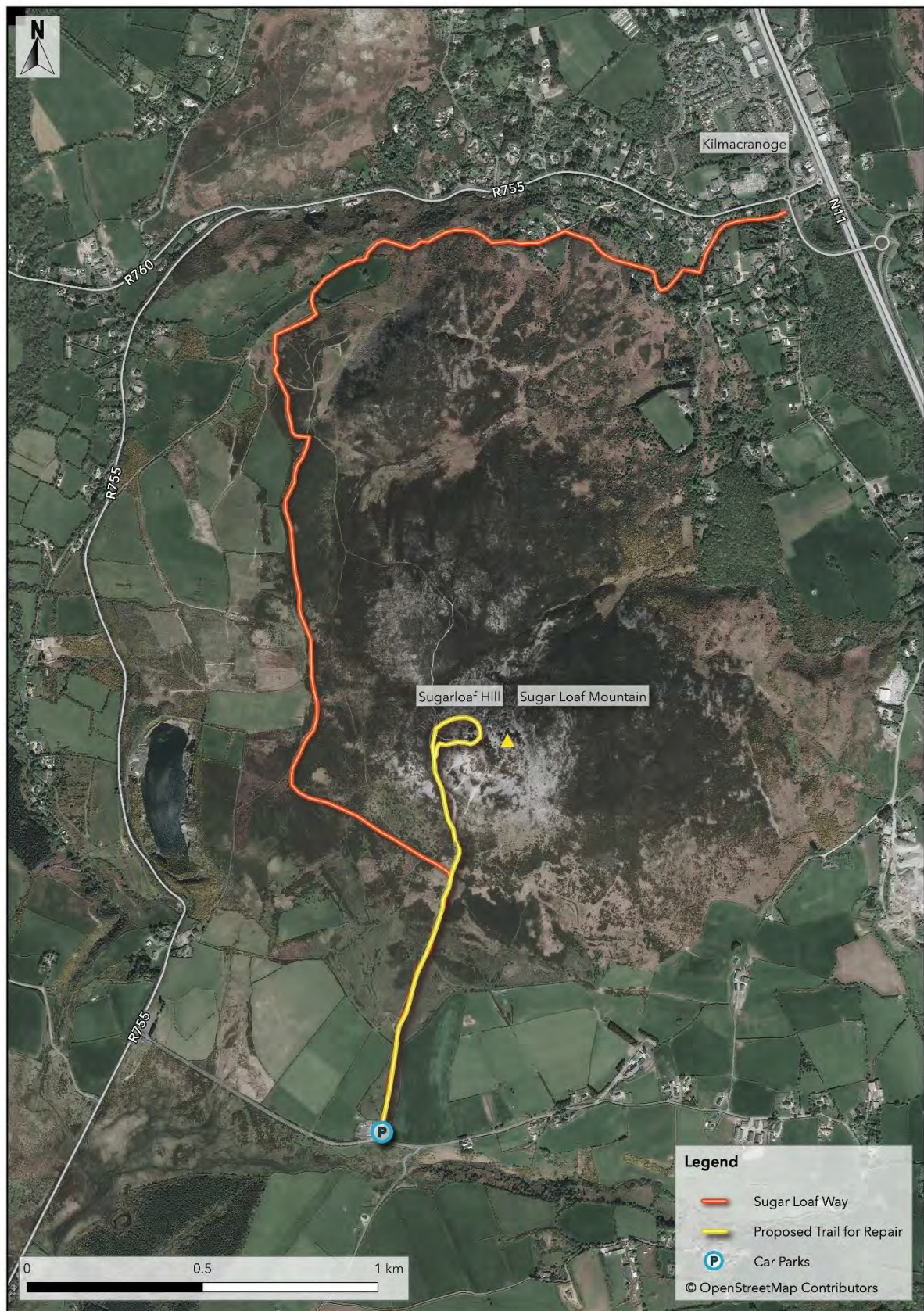


Fig. 8 Proposed path for repair on Great Sugar Loaf.

3.2 Djouce

Within the National Park area, the popularity of walking Djouce Mountain has been evident for years with the number of people walking in the area reflecting the quality and richness of the environment.

Located in the north-eastern section of the Wicklow Mountains and at 725 m in height, it dominates the views of the Wicklow Mountains from Roundwood to Newtownmountkennedy. For those who reach the summit, they are rewarded with spectacular views.

Djouce is easily accessible, bounded to the west by the R115, the R759 in the south and R755 in the east. Although the most accessible route up Djouce starts at the Ballinastoe Wood car-park, or the adjacent J.B. Malone car-park off the R759, many walkers approach it from Djouce Woods or Crone Woods, both of which are served by large car parks on Coillte owned land.

During the late 1990s, it became apparent that the numbers walking Djouce were having a detrimental effect on the landscape manifested as footpath deterioration and degradation. The carrying capacity of the trail was exceeded and consequently in response, a footpath erosion management scheme was undertaken by the National Parks and Wildlife Service. A boardwalk path, using former railway sleepers, was laid from before the J B Memorial stone up White Hill and on towards the summit slopes of Djouce stopping shortly after where the path takes a 90° turn east along the 131km Wicklow Way towards Powerscourt Waterfall, Enniskerry and Crone Wood (Fig. 9).



Fig. 9 Constructed path made from railway sleepers on approach to the JB Memorial Stone and shortly before the end of the constructed boardwalk where walkers start their final ascent up to the summit of Djouce from the western side.

The building of the boardwalk, although primarily built to prevent further damage to the surrounding vegetation, has undoubtedly contributed to the mountain's on-going popularity acting as a navigation aid to less experienced walkers and facilitating the need for limited specialist footwear. In addition, the first section of path from the western approach allows easy access to one of the Wicklow's most iconic views overlooking Lough Tay and Luggala Mountain and therefore attracts many casual day visitors. During the past 5 years figures show that during the period 2016 – August 2020, 22 call outs have taken place on Djouce by the Glen of Imaal Mountain Rescue Team.

Although the work carried out to date by NPWS has largely been successful, further suggestions to improve the route's sustainability include;

- a) The management of surface water run-off as required, throughout the length of the path.
- b) Providing passing places along the length of the boardwalk by increasing its width. At present walkers are stepping off the boardwalk and creating a parallel eroded path defeating the original purpose of protecting the sensitive habitat (Fig. 10). This is exacerbated by mountain bikers who are spilling out from the mountain bike trail centre of Ballinastoe that backs onto Djouce.



Fig. 10 Eroded parallel path to the boardwalk evident made worse by mountain bikers spilling out from Ballinastoe MTB Trail Centre

- c) Constructing a new section of path from the JB Memorial car park to where the current section of boardwalk starts. This could be an extension of the boardwalk, or a new aggregate path. Walkers will always take the most comfortable walking surface as evident in Fig. 11, gravitating away from the stony path on the right towards the softer walking surface on the left.



Fig. 11 Path braiding caused by walkers seeking out a more comfortable waking surface.

- d. Construction of a new path on both the eastern and western approaches to the summit. On the western approach to the summit path braiding and lateral erosion across the hillside are evident. On the eastern approach to the summit, the eroded path which is in sections 25m+ wide is not only having a detrimental effect on the sensitive habitats of the mountain but also to the landscape quality through the visual impact of the scar. For some this can cause a reduction in their aesthetic experience and overall enjoyment of the environment (Fig. 12). On the lower slopes light touch intervention techniques such as reseeding, replanting of heather, blocking off secondary paths will need to be accompanied on the steeper sections by the construction of a stone pitched/stepped path.



Fig. 12 Lateral erosion on both the western and eastern approach to the summit.

- e. Construction of a new path along the existing length of the Wicklow Way from where the boardwalk currently stops to where it meets the Maulin summit junction. This is the busiest section of the Wicklow Way outside the Glendalough Valley. As evident from Fig. 13 when walkers are channelled into a very narrow corridor, the recreational forces on a defined area are increased and the potential for erosion is exacerbated. Undercutting and collapse of the upslope is evident. A combination of techniques including light touch intervention and harder construction techniques including construction of stone aggregate path, stone paving and stone stepping should be considered on this section. See Fig. 14 for an example of a stone stepped path in the Mourne Mountains. Permission will be required from the private landowner for any works to take place along this section.



Fig. 13 Eroded sections of the Wicklow Way along the bottom of Djouce mountain.



Fig. 14 Sustainable stone stepped path in the Mourne Mountains.

Given that Djouce is easily accessible for the casual day visitor from car parks on both the eastern and western sides of the mountain, the path degradation on Maulin has also been considered. Severe erosion manifested as a scree slope is evident on the final section of path leading to the summit, from Crone Woods (Fig. 15). This section will require path erosion works such as stone pitching.

Although the section from the summit towards the Wicklow Way is less severely eroded, because of the gentler slope angle, nevertheless, light touch interventions including water management, track guidance, reseeding and revegetating the heather cover at the sides of the trail along this section would be beneficial.



Fig. 15 Severely eroded path coming up from Crone Woods to the summit of Maulin and path erosion along from the summit of Maulin towards the Wicklow Way

Given the existing level of ecological, physical and perceptual damage along this section of path, the anticipated continued high levels of future use of the path, and the promotion of a section (loop using Crone Woods, Maulin) within the new Discovery Walks (see Part 1 Section 4.5.1.3 of the Recreational Trails Masterplan), it is recommended that a detailed programme of capital path erosion works is drawn up as soon as possible and implemented for the entire path (Fig. 16). It is understood that NPWS have already funding in place to do the works. This initial injection of funding, however, must be supported by an on-going routine maintenance budget.



Fig. 16 Path erosion works required on Djouce and Maulin.

3.3 The Spinc and Glenealo Valley Trail

Undoubtedly one of the most iconic trails in Wicklow is the Spinc and Glenealo Valley Trail in the Glendalough Valley. Not only are walkers rewarded with spectacular views down the valley, but as they climb up into the valley, amazing views of the surrounding Wicklow Mountains open all around (Fig. 17).



Fig. 17 Looking down the towards the Lower Lake in the Glendalough Valley

Located only an hour's drive from Dublin, the trail is one of 9 promoted waymarked trails within the Glendalough Valley by the NPWS. Access to the trail is mostly through the Upper Lake car park or using the car park 2km further down the valley at the OPW Visitor Centre Car Park. The 9.5km walk is waymarked throughout its entire length giving confidence to those less experienced walkers. It is estimated to take about 3-3.5 hours taking walkers to a height of 500m above the valley floor. Although it is considered a high mountain route, exposed to the weather, and for which proper footwear and rainwear are essential, its accessibility and social media attention results in it attracting a cohort of very inexperienced walkers as well as many hillwalkers.

During the period 1997-2002, it became apparent that the numbers walking the Spinc were having a significant effect on the landscape manifested as footpath deterioration and degradation and that the sensitive mountain environment needed protecting. In response, the NPWS initiated a programme of footpath erosion work. Initially a boardwalk path, using old railway sleepers, was initially laid but part of this (600 wooden steps) has been recently replaced by a stone aggregate path (Fig. 18)

A new viewing platform has also been installed which gives unrivalled views down the Glendalough Valley.



Fig. 18 Boardwalk on the Spinc and new viewing platform

The boardwalk trail continues from the viewpoint up and over the Spinc before descending through blanket bog and heath to the Glenealo River. Some of the final sections down to the Glenealo River have had footpath erosion works carried out on them in the past (Fig. 19).



Fig. 19: Previously eroded trail that has been stone paved just after where the boardwalk stops

After crossing the bridge, a rocky trail zig zags down the valley following the Glenealo River towards the former Miners Village and the Glendalough Lead Mines (Fig. 20). A track then leads walkers back down the Glendalough Valley.



Fig. 20 Miner's Trail leading back to Glendalough

NPWS has continued to secure funding to manage eroded sections along the trail with the result that the entire circular trail is totally sustainable preventing further physical path degradation and deterioration and consequently ecological damage to the vegetation, soils and landforms.

The popularity of the trail is evidenced from counter data. In 2017, 100,405 walkers were recorded on the section of path leading to the viewpoint. In 2018 this had risen to 120,719 and in 2019 to 138,808.

Although the work carried out to date has largely been successful, further suggestions to improve the route's sustainability include;

- a) The management of surface water run-off as required, throughout the length of the path.
- b) Providing increased regular passing places along the length of the boardwalk through increasing its width. Walkers are currently stepping off the existing boardwalk and creating an eroded path parallel to it as it's not wide enough to allow walkers to pass each other. Where passing places have been provided already this seems to be effective (Fig. 21).



Fig. 21 Damaged surface running parallel to the boardwalk where it's not wide enough for walkers to pass. Where the boardwalk has been widened this is having a positive impact.

- c) Providing sustainable 'positive control point' (PCPs) sites off the side of the boardwalk. Along the trail, walkers are stepping off the path at numerous locations to take photos. Consequently, many areas at the side of the path are showing signs of deterioration (Fig. 22).



Fig. 22 Areas shown signs of erosion due to walkers stepping off the trail to take photos.

Although it is not considered feasible to carry out erosion control management on all these areas, it was evident that there were several major PCPs along the trail at which work could be carried out to prevent further deterioration of the surrounding soils and vegetation. One potential solution would be to lay stone paving at the PCP, providing a sustainable point from which visitors could take pictures. Any paving should be made of local stone so enable it to blend in with the surrounding landscape as evident in Fig. 23..



Fig. 23 Stone Paving 'sitting' unobtrusively within the surrounding landscape

- d) On-going maintenance of the section towards the Glenealo Valley bridge crossing. It is evident that footpath erosion works have been carried out in this section in the past, but that walkers are now choosing a more comfortable route along the margins of the original fixed trail.



Fig. 24 Lateral erosion causing damage to the soils and vegetation as walkers take a more comfortable detour around the original stepped path

- e) Landscaping the areas to the sides of the stone steps put in as part of the new trail up to the Spinc viewpoint and relaying some of the steps to make them safer for walking on. The new steps are already standing proud of the adjoining ground producing a causeway effect and are likely to be easily undermined leading to the potential of the path land sliding down the slope (Fig. 25)



Fig. 25 Stone steps on path not performing their expected role.

- f) Landscaping the sides of the newly constructed trail up to the viewpoint. Currently this trail is visually intrusive in the landscape, for some aesthetically displeasing and causing a reduction in their overall visitor experience. It is understood that the NPWS are hoping to fence and plant out this area with native trees imminently helping to make this trail sit more comfortably within the landscape (Fig. 26).
- g) Putting in place a more fitting and sensitively designed viewpoint that fits better within the surrounding landscape. This is to be considered in detail and recommendation made as part of the wider overall interpretation strategy for the Glendalough /Laragh Valley as part of this project. (Fig. 26).



Fig. 26 New stone path requiring improved landscaping and a more sympathetic viewpoint given its surroundings.

Above all else, what is required for the Spinc Trail is a sustained programme of continuous path maintenance if it is to be managed sustainability and further deterioration and damage to the habitats, biodiversity and landscapes halted.

Fig. 27 shows those sections that have already had path erosion carried out on them, but as referenced above, even these sections need constant upgrade and attention. A commitment to on-going funding for path maintenance is required.

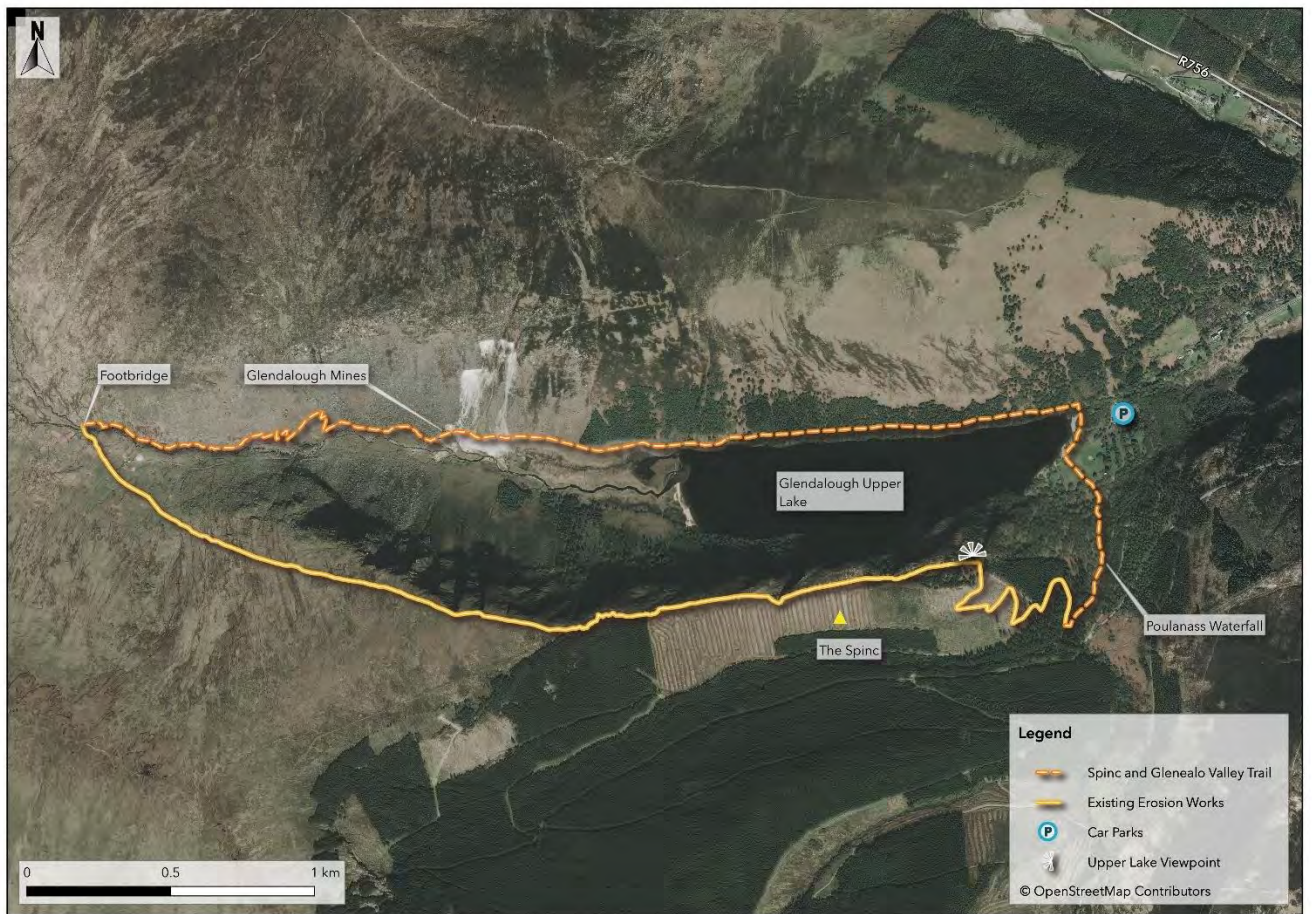


Fig. 27 Sections of the Spinc Trail where erosion works are already complete

3.4 Lough Brays

The Upper and Lower Lough Brays are glaciated corrie lakes nestled into the east flank of Kippure Mountain in north Wicklow. They are considered two of the most impressive corrie lakes in Wicklow, the Lakes being dammed by glacial moraine. Lower Lough Bray sits outside the boundary of the National Park. They are located less than 2km from the village of Glencree and c.15km from Tallaght, the largest satellite town of South Dublin.

Several walking options exist for visitors to the area. A short walk from the main quarry car park located off the R115 brings walkers quickly to the Upper Lake. From here walkers can walk along the top of the glacial moraine ridge to the Lower Lough and Eagle's Crag, following a defined path thus requiring limited navigation skills.

For those who start their walk at the Lower Lough there is no formal car parking, but rather walkers park their cars along the roadside near the Gate Lodge of Lough Bray Cottage. A short walk leads walkers to the Lower Lake or on up to the Upper Lake and Eagles Crag. A third option for walkers is to walk a complete circuit of the corries on an upper path. Starting at either end walkers can complete the c.7km walk in 3-3.5 hours. Stunning views are afforded to those who do this circuit (Fig. 28).



Fig. 28 View towards Great Sugar Loaf from the top of the Lough Bray corrie

In addition, the opportunity to participate in 'wild swimming' in the Lough Brays is an added attraction for visitors, with wild swimming increasingly promoted through magazines e.g., Outsider, newspapers and social media channels, particularly Instagram. Consequently, the combination of location, accessibility from the public road, stunning views and more recently the popularity of wild swimming in the Loughs, results in the Loughs receiving a large footfall.

It is evident that increased numbers using the site is having a detrimental effect on the soils and vegetation manifested as footpath erosion on the ground. This is made more acute because of the underlying peaty soils which are particularly vulnerable to repeated pressure from feet.

The eroded path that leads from the quarry car park across towards the Lower Lake is evident in Fig. 29.



Fig. 29 Eroded path visible along the top of the glacial moraine ridge.

Although along most of the moraine ridge walkers remain within a relatively constrained corridor the path has already lost its vegetation and therefore the critical period in which erosion is initiated is past and the ground is already adjusting to new conditions of greater trampling (Fig. 30). Peat is exposed throughout the length of the ridge and the path is particularly vulnerable on the steeper slopes leading up to the moraine ridge.



Fig. 30 Eroded path along the glacial moraine ridge on Upper Lough Bray exposing vulnerable peaty soils.

On these sections, continued repeated foot pressure and mechanical abrasion has resulting in loss of vegetation from the path and erosion processes such as stepping, gullyng starting to appear (Fig. 31)



Fig. 31 Erosion damage on the steeper slopes of the glacial moraine. Surface of path devoid of vegetation cover exposing peaty soils much of which is being washed away by natural erosion processes leaving a slippery, wet path for walkers to navigate and causing increased path erosion.

Erosion damage on the path leading up to the Lower Lough is more localised and is a result mainly of water-logged peaty soils making walkers spread out and lack of path clarity. Path clarity is known to be one of the causative factors contributing to an increase in the lateral spread of walkers across and away from a path and consequently increased erosion (Fig. 32).



Fig. 32 Localised waterlogging resulting in increased lateral spread and lack of path clarity resulting in increased lateral spread.

Path erosion along the higher corrie path in many areas is confined within a narrow corridor, albeit wet and slippery (Fig. 33). Areas of localised puddling, causing walkers to spread out to find drier areas to walk are noticeable (Fig. 34).



Fig. 33 Wet, muddy peaty path causes walkers to spread out causing increased erosion



Fig. 34 Localised puddling causing increase in path width as walkers look to find a drier walking surface.

In several sections along the path, walkers are very close to the edge of the cliff, posing a health and safety issues for inexperienced hill walkers.

In summary, an assessment of Lough Brays identified the key problem areas to be where –

- visitors are given the flexibility to spread out on relatively flat terrain across the lateral moraines causing widespread vegetation damage.

- visitors are unclear of the main route up to the Upper Lough from the Quarry car park leading to path braiding and lateral erosion across the hillside.
- visitors seeking alternative dry options around localised areas of peat puddling causing greater spread of erosion.

Without doubt the Lough Brays is a complex site to manage. Not only does the site have breeding Annex 1 protected species, but the lake itself is an Annex 1 habitat containing rare plants and plant communities. This presents challenges to NPWS in managing both walkers and swimmers to the site.

In the anticipation that the Lough Brays will continue to attract significant numbers of visitors in the future, several options were presented to NPWS regarding the future management of the site. Options ranged from closing the quarry car park to deter further use of the site, maintaining the status quo through to developing the site in terms of car parking, undertaking path erosion works and formalising the existing viewpoint. The advantage and disadvantages of each were put forward and the following was agreed with NPWS as the most appropriate option to take forward to help protect the site's habitats and landscape in the future. It includes three elements:

- enhance the Quarry car park in terms of aesthetics and parking efficiency.
- formalise the existing area used as a view/photo-point opposite the quarry car park. It is hoped that by formalising the viewpoint it will deter a small percentage from walking down to the Upper Lough and prevent future degradation to the soils and vegetation. The viewpoint should be 'low key' so that it does not attract additional visitors to the site through architectural merit. (Fig. 35).
- actively manage the eroded moraine by peatland restoration techniques/signage and fencing.

Following further consultation with NPWS it was agreed that consideration should be given to a second phase of works, if necessary, after careful monitoring of the phase 1 works. This would include:

- undertake footpath erosion works, in agreement with the private landowner, on the section of eroded path that joins the end of the moraine to the informal car parking area at the Gate Lodge – i.e. the section that skirts the southern side of Lower Lough Bray.
- formalise and increase the car parking arrangements along the roadside for those accessing Lower Lough Bray
- consider the need for other visitor servicing facilities in the area such as toilets. In terms of visitor servicing, priority should be given to making use of the facilities that already exist at the Glencree Peace and Reconciliation Centre and how best visitors could access the Lough Brays without needing to walk on the road.

Although there is extensive localised damage to the soils and vegetation on the path around the rim of the corries, no erosion works should take place at present on this path. It is essential however that there is an on-going process of monitoring the path erosion across the site, including the section of path out-with NPWS ownership around the Lower Lough.



Fig. 35 Proposed location for viewpoint at the Lough Brays.

4 Enhancing car parking and visitor service provision at key outdoor recreation sites.

4.1 Car crime, car parking and toilets provision.

Issues related to many of Wicklow's key upland recreation sites include car crime, car parking capacity and toilet provision.

Car crime is a significant issue in the Wicklow area and is on the increase. In 2018 there were 402 incidents whilst in 2019, this had increased to 521, an increase of 30%. 66% of victims were Irish, the rest international visitors.

According to the Garda Crime Prevention Officer, most of the incidents occur in scenic areas and are caused through visitors leaving valuables in their car, often where they are visible. This is a particular problem beside Lough Tay, where visitors park along the side of the road to get a quick photo and leave valuables in-view. Car crime is particularly prevalent in those areas where the criminals can make an easy get away via the N11 and M50 e.g., Sugar Loaf, Lough Tay, Lough Brays.

To address the issue of car crime, many hill walking clubs are using club members to act as car park attendants when parked up for a day's walk. Whilst this provides a good solution for walking clubs, the casual day visitor to the Wicklow area is still vulnerable. Without doubt the presence of people in a car park can act as a deterrent to car criminals, and therefore it is recommended that where appropriate, a coffee-cart type facility is placed in some of the larger well-used car parks.

Consideration should also be given to improved signage in all car parks warning visitors not to leave valuables in their car and the installation of CCTV where possible.

Another solution to the car crime issue is encouraging landowners to provide safe car parking on their land. July 2021 will see the opening of a large car park for hillwalkers on the Kippure Estate. For €5 a car, walkers can park in the Estate grounds and make use of the toilet facilities.

Anecdotal evidence suggests that many car parks in the Wicklow Uplands are not able to accommodate the numbers of cars arriving, particularly at the weekends and during the holiday periods. This causes not only local traffic congestion, but also can cause conflict between visitors and those who live and work in the area e.g landowners who gates become blocked and cannot get their farm machinery past parked cars along the side of the road. This was confirmed through spot checks carried out by Kevin McShane Associates during the bank holiday, 6-7 June 2021 of the main upland car parks. Most car parks were full, except for those where visitors parked up to take a quick photograph before moving off again.

4.1.1 *Great Sugar Loaf*

A large, formalised car park already exists to serve hill walkers and casual day visitors at Great Sugar Loaf, one of Wicklow's key honey pot sites. Future proposals for the site include creating a sustainable circular trail from the car park to the summit.

Recommendation: To enhance the visitor experience, the car park should be sympathetically landscaped to become more inviting and reconfigured to become more effective. In addition, facilities for a mobile type 'coffee cart' should be installed. This should be operational as a minimal at the weekends/bank holidays and main holiday periods. (See Fig. 36 Car Park Provision and sites recommended for Improvement for all recommendations regarding car park and visitor services' provision at each).

Given the number of young families using the site, it is also recommended that toilets are provided on-site. These could be waterless toilets negating the need for a water supply etc to the site. (see Appendix A)

4.1.2 *Djouce*

Parking opportunities to serve Djouce's hillwalkers and casual day visitors currently includes both formalised and informal parking.

Walkers already make use of four parking areas along the R759 towards Lough Tay namely, Ballinastoe north, Balinastoe south, JB Malone and beside Boleyhorrigan Forest. During the weekends and holiday periods these 4 sites are beyond their carrying capacity.

More recently because of COVID, the public have been able to use the large car park at Piers Gate, opposite Luggala Estate, following an agreement between the private landowner and Wicklow County Council. This car park is usually reserved for film crew parking.

In addition to these car parks Djouce is served by several car parks on its eastern side. This is also a very popular area for walking to access Djouce Wood, Powerscourt Waterfall, Maulin, Tonduff and the Wicklow Way. There are several car parks within this area all of which are on Coillte land. Four are located along the Old Long Hill Road with the largest being Ballintesk, at the northern end of Djouce Woods. The Djouce Woods car parks together hold c.135 cars, with Crone Woods car park having capacity for approx. 80. Coillte hope to apply in early 2022 for planning permission for a larger car park and visitor servicing facilities at Ballinastoe Woods. Although largely for mountain bikers using the trail centre, the car park will also be available for use by walkers.

Recommendation: All four parking areas along the R759 should be more efficiently laid out to accommodate additional cars and landscaped to enhance the visitor experience. In addition, the block of conifers actively used as a 'toilet', behind the JB Malone car park should be removed.

Although there is an agreement currently with the landowner and the Council for the public to use Piers Gate car park, a more permanent solution is required for this area to serve walkers going to Ballinastoe, Djouce and Luggala. The potential exists to create a car park in the vicinity on land owned by NPWS and Coillte. Any new car park should provide toilets given its footfall and to help deter car criminals, a mobile coffee-cart type facility offered. An opportunity also exists to develop a car park back towards Roundwood on Coillte owned land, at the site earmarked for the new HQ of the Mountain Rescue team. Visitors would however then be required to walk c.1km up towards Piers Gates using the Wicklow Way. If no new car park is developed within the vicinity of Piers Gate and no permanent arrangement can be put in place with the landowner to use the existing Piers Gate car park, it is recommended that the existing Balinastoe north car park is extended.

To facilitate the car parking carrying capacity issue at Crones Wood and the Djouce Woods car parks, all should be reconfigured to become more effective and inviting to the visitor. Toilet provision should also be provided in the car park at Crones Wood and to help negate car crime and increase the visitor experience, a mobile coffee-cart facility provided. This should be operational as a minimal at the weekends/bank holidays and main holiday periods. Consideration also needs to be given to improved signage/trailhead information at the Coillte owned car parks along the Long Hill Road.

4.1.3 Lough Brays/Glencree

Car parking currently takes place in the former quarry near the Upper Lake and informally along the side of the road where walkers access the Lower Lake beside the Gate Lodge leading to Lough Bray Lodge.

Recommendation: To enhance the visitor experience, particularly if the works proposed in Section 3.4 go ahead, the main quarry car park should be sympathetically landscaped and reconfigured to become more effective.

Given the significant car crime issue in the area, there is also an opportunity to work with the Peace and Reconciliation Centre in Glencree to secure parking for hillwalkers/visitor using this area. Any positive contribution that visitors could make to the economic sustainability of the Glencree community should be welcomed.

4.1.4 Lough Dan/Old Bridge

During the summer of 2020, anecdotal evidence suggests that the Lough Dan/Old Bridge area experienced similar traffic congestion problems as the Glendalough/Laragh area due to overcrowding and under-capacity for car parking. No formal parking exists in the area except for a small layby at the start of a looped walk despite a section of the Wicklow Way starting/finishing in the area to the east of Dry Hill.

The area is heavily used not only by hill walkers to climb Scarr/Kanturk, but also by day trippers wishing to access Lough Dan, despite there being no formal access to the Lough on this side.

Since the summer of 2020 there has been an increase in informal camping in the area and this has brought with it unwanted anti-social behaviour. This is despite the recent opening by a local farmer of a new 20 pitch campsite south of Old Bridge.

Finding a solution to the parking problem in the area is complex. Given that there is no formal access to Lough Dan from this side, any car park should serve hillwalkers/day walkers only and not casual day trippers/informal campers.

Recommendation: Support Scouting Ireland in formalising a pre-book car parking facility on its ground for hillwalking groups.

4.1.5 Glenmalure

This valley is very popular with hill walkers, particularly as a starting point for Lugnaquilla. Although many walkers start up the zig zags there is no formal car parking provision at this point. Cars parked along the side of the road cause congestion for other users and issues for farmers moving machinery/accessing fields. Although there has been on-going discussion with the landowners at the bottom of the zig zags for many years about developing a car park, no progress has been made on the ground.

Further down the valley is Coillte-owned, Ballinafunshoge car park which has a capacity for 8-10 cars.

A much larger car park, Barravore, (c. 50 spaces), is situated at the end of the valley where the road stops. This area has been identified as a new Discovery Walks location. The short-looped trail will accommodate those looking for a walk of a couple of hours without bringing them into sensitive mountain areas. This will complement work already started by Coillte in upgrading the trails around the crusher houses and promotion of the Miner's Trail. The Miner's Trail links the mining valleys of Glenmalure, Glendalough and Glendasan starts/ends here.

Recommendation: To enhance the visitor experience, the car park should be sympathetically landscaped to become more inviting and reconfigured to become more effective. This should include the delineation of a dedicated shuttle bus drop-off area.

This site should also provide toilets given its footfall and the increase in the number of campers using the area. Consideration will need to be given to making the toilet facilities vandal proof.

4.1.6 Shay Elliott

Named after Shat Elliott, the Irish international racing cyclist whose memorial stands nearby, the car park is located at the top of the hill between Glenmalure and Laragh. This popular car park is used predominantly for those climbing the surrounding hills namely, Mullacor, Derrybawn and Corriglinneen. Given its remoteness it is often a target for car break-ins. The car park has space for approx. 25 cars.

Recommendation: To enhance the visitor experience, the car park should be sympathetically landscaped to become more inviting and redesigned to become more effective. This should include the delineation of a dedicated shuttle bus drop-off area.

4.1.7 Seskin

Another popular starting point for walkers summiting Lugnaquilla is from Seskin, where the Defence Forces have a base. Car parking is already provided at Seskin informally in the areas around the pub, school and Army Information Point. With the availability of land for more formal car parking and given that the Information Point is manned 24/7, this provides an ideal opportunity to increase the car parking capacity of the site and provide toilets.

Recommendation: Work with the Defence Forces to increase and formalise the current car parking area at Seskin and provide toilets for users.

4.1.8 Glenmacnass Waterfall Car Park

This popular car park is used by many visitors stopping to take photographs of the waterfall and by walkers accessing Lough Ouler /Tonelagee Mountain and Kanturch

Recommendation: To enhance the visitor experience, the car park should be sympathetically landscaped to become more inviting and redesigned to become more effective. This should include the delineation of a dedicated shuttle bus drop-off area.

4.1.9 Glendason Valley Lead Mines near Laragh

Close to Laragh, this car park is popular with hill walkers using the St Kevin's Way and the Miner's Way and for day trippers accessing the lead mines. Given that this section of the St Kevin's /Miner's Way trail is sustainable down to Glendalough and is anticipated to become a drop-off point in the new proposed upland bus shuttle service from Laragh, this car park has an important role to play moving forward.

Recommendation: To enhance the visitor experience, the car park should be sympathetically landscaped to become more inviting and reconfigured to become more effective. This should include the delineation of a dedicated shuttle bus drop-off area.



Fig. 36 Car Park Provision and sites recommended for Improvement

5 Conclusion

With visitor numbers expected to grow, it is essential that a proactive approach is taken to ensure the future sustainability of the Wicklow uplands. With many sites already having reached their recreational carrying capacity, work is required now to address problems of recreational induced erosion and issues regarding car crime, car parking capacity and other essential visitor services, such as toilet provision.

Given the special landscape and environmental qualities of Wicklow, a key element of any work is ensuring that they don't devalue the landscape, places or habitats, the local community or impact on the conservation activities of the NPWS.

APPENDIX A

A challenge to the provision of services in some of the car parks in Wicklow is the lack of water and electrical services on the site. This can be solved however through the provision of a self-contained 'waterless' toilets and the use of solar powered lighting and extractor fans. 'Waterless' toilets have no impact on the surrounding environment and are therefore suitable for use in locations with environmental designations. They are user-friendly and are easy and cost effective to maintain.



The toilet units can be incorporated into a fully accessible bespoke building in keeping with the setting for example the basic toilet can be finished with a bespoke timber or stone external face.



The Natsol Zero Discharge Toilet is suitable for busy public sites or where a discharge of urine to ground is not permitted. They are used in Richmond Park in London which has visitors numbers far in excess of any proposed site in Wicklow.

Cost:

~£4600 + VAT + delivery per unit (toilet system only).

Installation by local contractor: ~ £2,000 + VAT.

Natsol liaise fully with clients' chosen contractors and provide site specific installation instructions.

Optional:

Natsol-provided timber building with wipe down cubicle lining for £4590 + VAT + delivery.

Natsol provided metal building for £4090 + VAT + delivery.

The price includes guttering, downpipes, vent pipe support and all fixings.

Price does not include grab rails or urinals which Natsol can provide at extra cost.

Tot: ~ £12,000 for one unit, not including delivery. Bespoke building will raise the costs.

Volume of usage

The tank size can take 7,000 - 8,000 uses of any sort before requiring emptying.

Based worst case using Richmond Park as an example (one in 3 visitors, 7000 uses per tank.)

50,000 visitors p/a – 2.4 tanks or 1 tank emptied 2.4 times per year

75,000 visitors p/a – 3.6 tanks or 1 tank emptied 3.6 times per year or 2 tanks emptied 1.8 times a year

100,000 visitors p/a – 4.8 tanks or 1 tank emptied 4.8 times a year or 2 tanks emptied 2.4 times a year

At Richmond Park, they were installed to service a predicted 100,000 toilet uses a year. (The site receives 350,000- 400,000 visitors a year, and has other toilets in the park)

The building has 5 pedestals (2 ladies, 1 gents, and 2 disabled – one with baby change, the other on a RADAR lock) with five independent 1000 gallon tanks, one directly under each pedestal. There are also two waterless urinals in the gents' toilet that discharge into the disabled toilet as well as taps in both disabled toilets that discharge into the disabled pedestal tanks. Male and female toilets have no taps, only alcohol gel.

The design fulfils the requirement for a low water use toilet block with excellent odour control, no site discharges, low management requirement and infrequent emptying for installation at an SSSI.

Collection

This toilet is not urine separating and does not produce compost. Solids and liquids enter a glass-reinforced concrete storage tank – dimensions 3.5m (w) x 1.1m (d) x 1.2m (h).

Ventilation

Ventilation is achieved through a passive duct and extraction cowl or by low power fan (can be solar powered) depending on the site. This results in a completely odour free cubicle under normal operating conditions.

Maintenance and cleaning

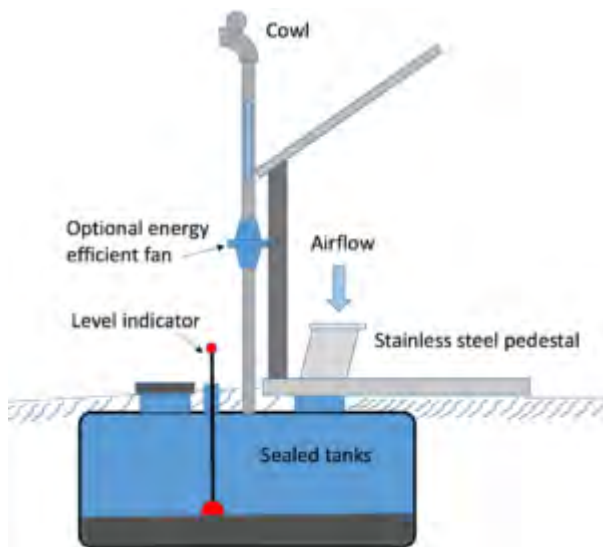
No 'soak' material is added to this toilet and maintenance requirements are very low.

Operating manual details requirements for daily and weekly cleaning duties, six monthly checks and emptying procedure. At Richmond Park, the cleaners wipe the fixed seat and then wash some water around the inside of the pedestal. The system has no flush so it is crucial that the cleaner adds some water to the system every time they clean. The cleaners are okay with the toilets and can get around them as quickly, if not quicker, than on ordinary toilet where the pedestals take longer to clean. Initially, the tanks that had no taps or urinals discharging into them were too dry and that waste was just piling up under the pedestal. Adding water to the tank during cleaning and also just after emptying allows for more even dispersal and easier emptying.

Emptying

Emptying is by slurry tanker from outside the building. Due to the lack of any flush water emptying is infrequent. It should be emptied a minimum of once a year. The tank size can take 7-8K uses of any sort before requiring emptying. At Richmond Park, emptying happens on average 3 times per year with a large 4000-gallon tanker which is far more economical than standard cess pit tanks and this results in a lower carbon footprint. The cost in 2015 was just over £2000 which included management fees to our facilities management contractor. This was expected to reduce as emptying process was expected to get quicker as a result of adding more water to the system to make it easier to pump. It is estimated that sludge removal costs are about 95% cheaper than a flush toilet and cesspool system.

Technical

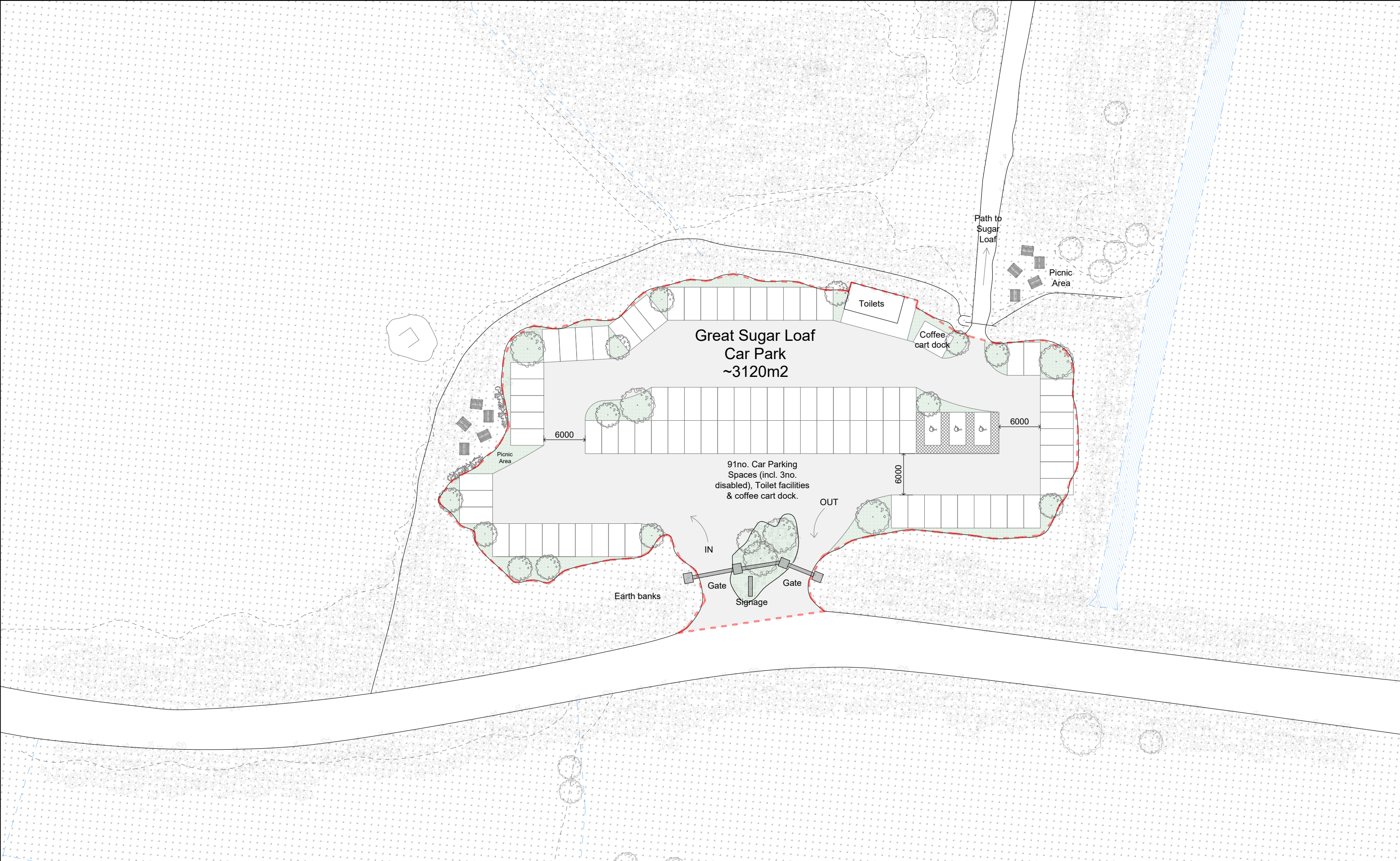


Supplied:

- Below floor 3m³ storage tank
- Stainless steel pedestal with Teflon coating to inner surface (and Corian top surface)
- Extraction cowl or fan unit and power supply as required
- External airtight emptying hatch
- Cubicle connection point for urinals and wastewater from basins

Optional extras:

- Gel dispensers
- Ceramic water-less urinal
- Grab rails
- Vent pipes
- Level indicator rod
- Natsol can supply a fully accessible building or can advise a design team on integrating the system into a building design by others.



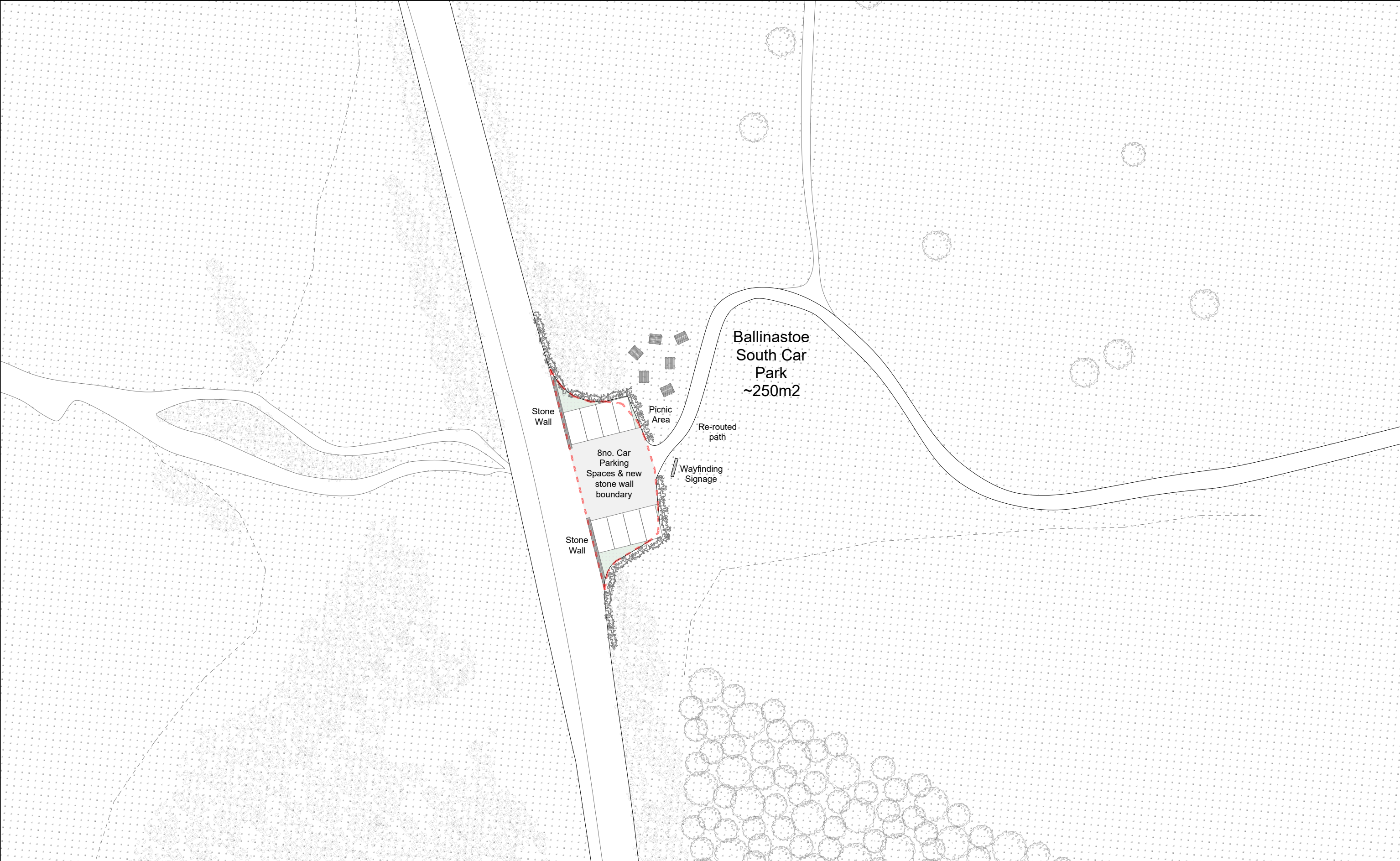
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Notes:

PROJECT Wicklow Mountains
JOB NO. 20-1991-C
TITLE Proposed Car Park 01 - Great Sugar Loaf
STATUS -
DWG No. CDG-201
DRAWN NF CHECKED DS APPROVED - SCALE 1:500 SIZE A3 DATE NOV 21
File loc: J:\2020\20-1991-C-Glendalough_Wicklow NP1, Consarc Drawings\1. Design\Proposed Car Parks\24th Nov 21

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consarc-design.co.uk TEL. +44 (0)28 9082 8400 mail@consarc-design.co.uk



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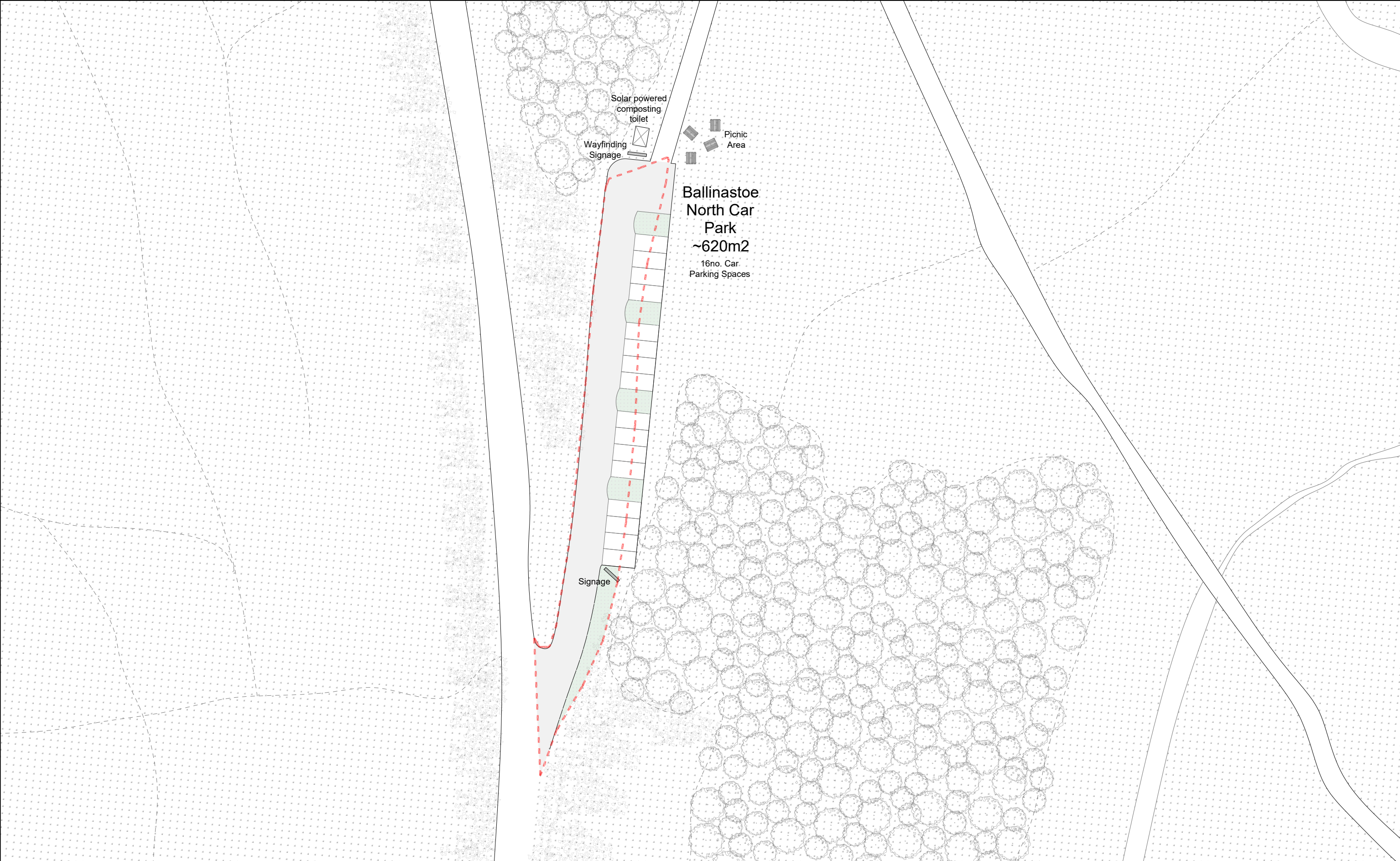
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TITLE Proposed Car Park 02 - Ballinastoe South
STATUS -
DWG No. CDG-202
DRAWN NF CHECKED DS APPROVED - SCALE 1:500 SIZE A3 DATE NOV 21
File loc: J:\2020\20-1991-C-Glendalough_Wicklow NP1, Consarc Drawings\1. Design\Proposed Carparks\24th Nov 21

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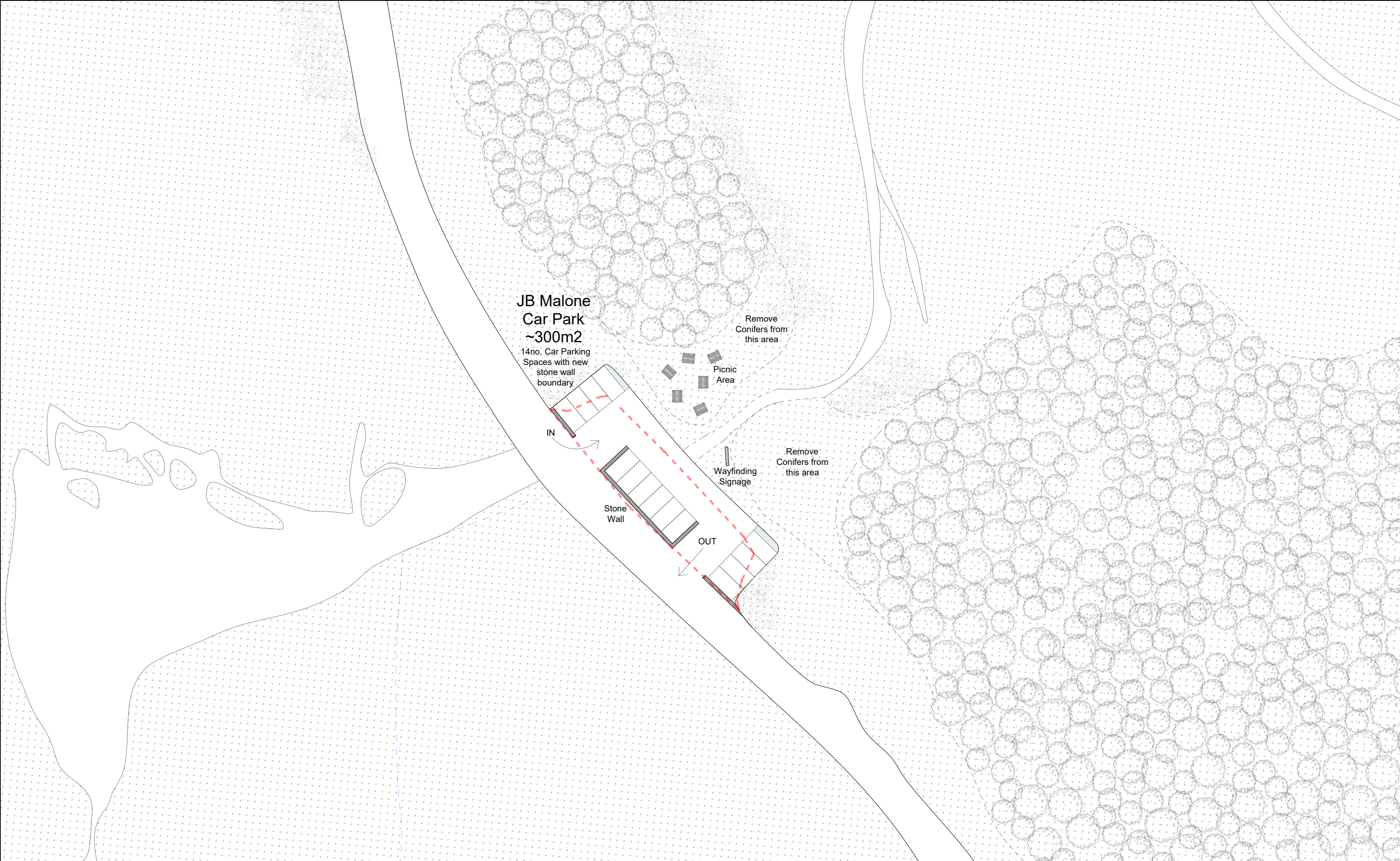
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PROJECT Wicklow Mountains
JOB NO. 20-1991-C
TITLE Proposed Car Park 03 - Ballinstoe North
STATUS -
DWG No. CDG-203
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File loc: J:\2020\20-1991-C-Glenabough_Wicklow NP1, Consarc Drawings\1. Design\Proposed Carparks 24th Nov 21

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PROJECT Wicklow Mountains
JOB NO. 20-1991-C
TITLE Proposed Car Park 04 - JB Malone
STATUS -
DWG No. CDG-204
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