



Wheal Maid Off-road Cycling Hub

Rev 6: Presentation for consultation)



Funded by
UK Government



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Project Background and Aims

Commission

Meiloci were commissioned in July 2025 by Gwennap Parish Council to prepare a feasibility report to look at the improvement and integration of mountain biking facilities at Wheal Maid, in combination with other enhancements to the site.

Background and Context

- Known as '**Poldice Valley**' amongst the mountain biking community
- Mountain biking started becoming popular onsite around **20 years** ago
- The **mountain bike community** have themselves created and improved the trails which are maintained and loosely managed by an informal group of key community members
- Poldice Valley has a **unique and authentic character**, and is distinctive as a location that caters for higher ability users
- Mountain biking community now feel that the site has a **strong history** that deserves protection

Project Aims

The **core aims** of this project are to:

- Assess the feasibility of a formalised **mountain bike hub** at Wheal Maid
- Consider wider **enhancements for other user groups** (walkers, cyclists, horse riders), avoiding potential conflicts
- Explore opportunities for sustainable trail design and supporting infrastructure
- Develop a vision that integrates **heritage and ecological conservation** with recreational use
- **Engage local stakeholders** in shaping a responsible and community-supported future for the site
- Investigate **potential revenue-earning** opportunities which could contribute towards site management and improvement



Off-road Cycling Hub - Objectives and Potential

Baseline Objective – Protect What Exists

- Formalised permissions will provide security and enable greater investment in enhancements.
- Certain safety concerns and potential user-group conflicts to be considered.

Broaden Ability Levels and Riding Disciplines

- Attract greater visitor numbers.
- Lower the entry threshold for beginners while providing opportunities for progression.
- Attract user groups with higher disposable incomes, benefiting the local economy.
- Increase community involvement to help lead and maintain improvements.
- Discourage anti-social behaviour by increasing overall site usage.

Improve and Expand Mountain Bike Trails

- Establish a well-designed, well-maintained trail network, waymarked and graded by difficulty.
- Develop new trails and tracks in underused areas of the site (including more sheltered areas).

Develop Supporting Facilities to Enhance User and Visitor Experience

- Cafe facilities catering to both mountain bikers and other site users.
- Bike maintenance and rental services.
- Gathering spots and focal points that highlight the site's special qualities.
- Facilities for non-mountain bikers (e.g., seating areas,

viewpoints, interpretive trails).

- Measures to mitigate conflicts between different user groups.

Improve Access to and from the Site

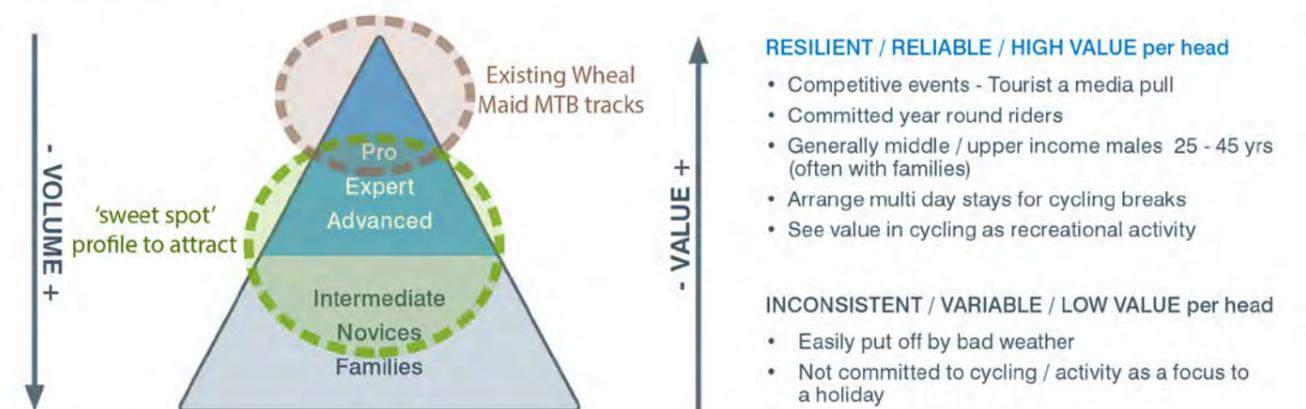
- Expand car parking capacity to address current pressures on busy days.
- Strengthen active transport links, including walking and cycling connections through the site.
- Collaborate with public transport providers to improve accessibility.

Create Revenue-Generating Opportunities

- Generate rental revenue from cafes, businesses, and parking facilities.
- Deliver knock-on benefits to the wider local economy (e.g., hospitality, accommodation, tourism).



MARKET PROFILE



source: Bikepark Cornwall Feasibility Study (Firecrest Mountain Biking)

Site Overview

Our site area has been chosen to cover the areas currently used by MTB riders and also capture green transport and landscape links within the surrounding areas.

Whilst it should be noted that the mountain biking community know the spot as ‘Poldice Valley’, for this piece of work we have categorised the site into four areas (based on ownership and as defined by the landscape character and topography):

- **Wheal Maid Valley** (Gwennap Parish Council) - Core area, including the tailings dam and the ‘Cornish Mars’ landscape, the main trail head and the higher performance trails. The Redruth and Chacewater Railway Trail crosses through.
- **Poldice Mine Valley** (Cornwall Council) - Adjacent valley to the north of Wheal Maid. Not as well used by mountain bikers, but closely linked in terms of landscape, history and active transport routes.
- **Wheal Fortune** (Cornwall Council) - East of the Parish Council owned area. Well used by mountain bikers, providing more user friendly routes than within Wheal Maid Valley
- **United Downs Woods** (Cornwall Council) - Adjoining woodland area to the south. Not currently well used by mountain bikers but offers shelter and gentle gradients, with potential to broaden the site’s appeal.



Wheal Maid Valley



Poldice Mine Valley



Wheal Fortune



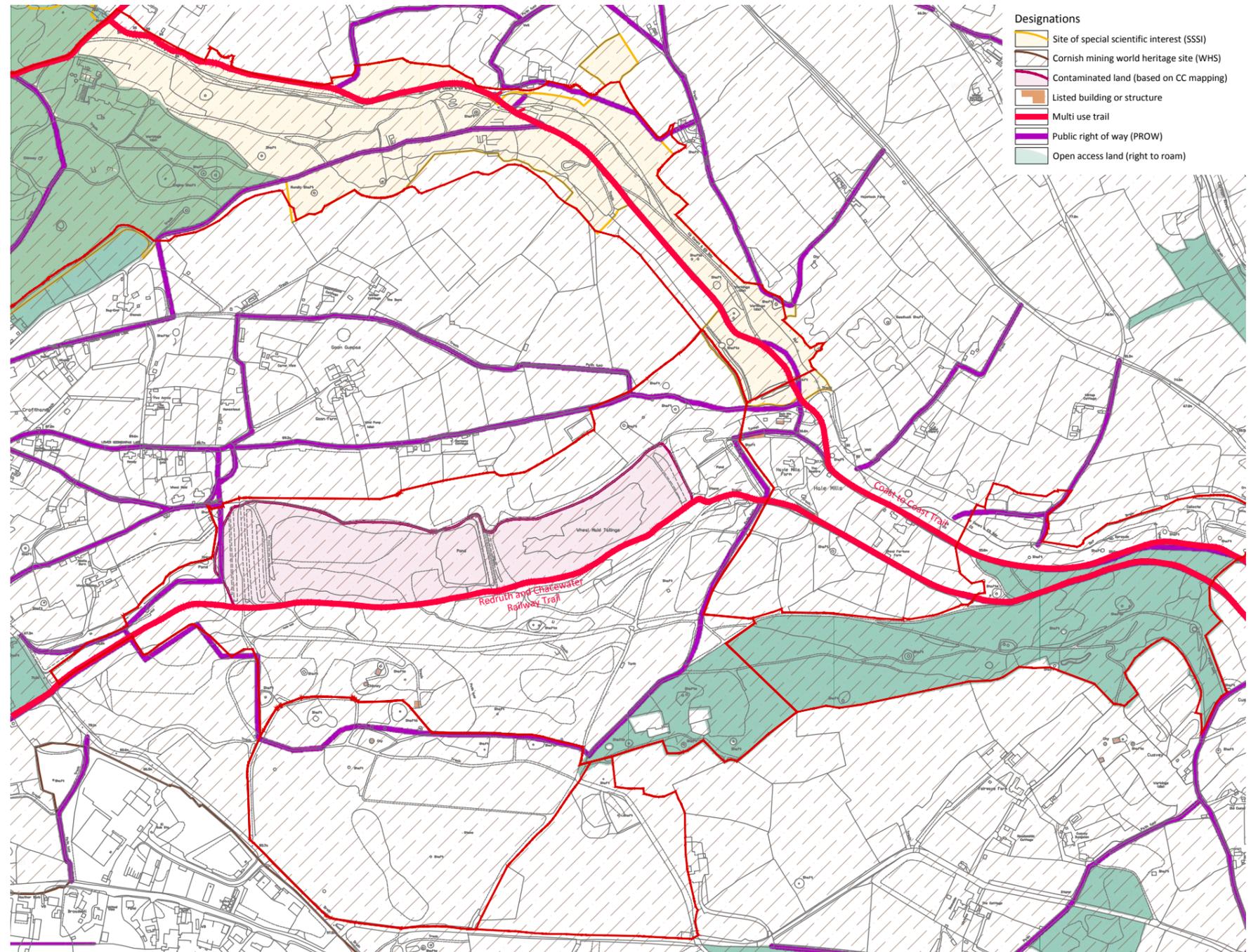
United Downs Woods

Site Analysis - Designations

Cover features of special value and influence planning decision making and landscape management. Can also open the door to **funding opportunities**.

Site designations relate to heritage, public access and nature conservation:

- **Cornwall and West Devon Mining Landscapes World Heritage Site (WHS)** - internationally protected landscape on account of its mining heritage
- **Listed buildings/ structures** (all grade II) - structures associated with the Wheal Virgin Engine House (including Consols Clock Tower) and the Redruth and Chacewater Railway (close to Hale Mills Cottage)
- **Site of Special Scientific Interest (SSSI)** within Poldice Mine Valley - protected at a national level on account of habitat value (rare bryophytes) resulting from the exposed mining waste. Main mountain biking areas do not extend within the SSSI.
- A number of **Public Rights of Way (PROWs)** designated as Byways or Bridleways (allowing cyclists and horse riders to also use the routes) along with areas of **open access land (OAL)** (right to roam)
- Two well used **multi-use trails**; the Coast to Coast Trail and the Redruth and Chacewater Railway Trail. Provide boost to site footfall as well as access to the site

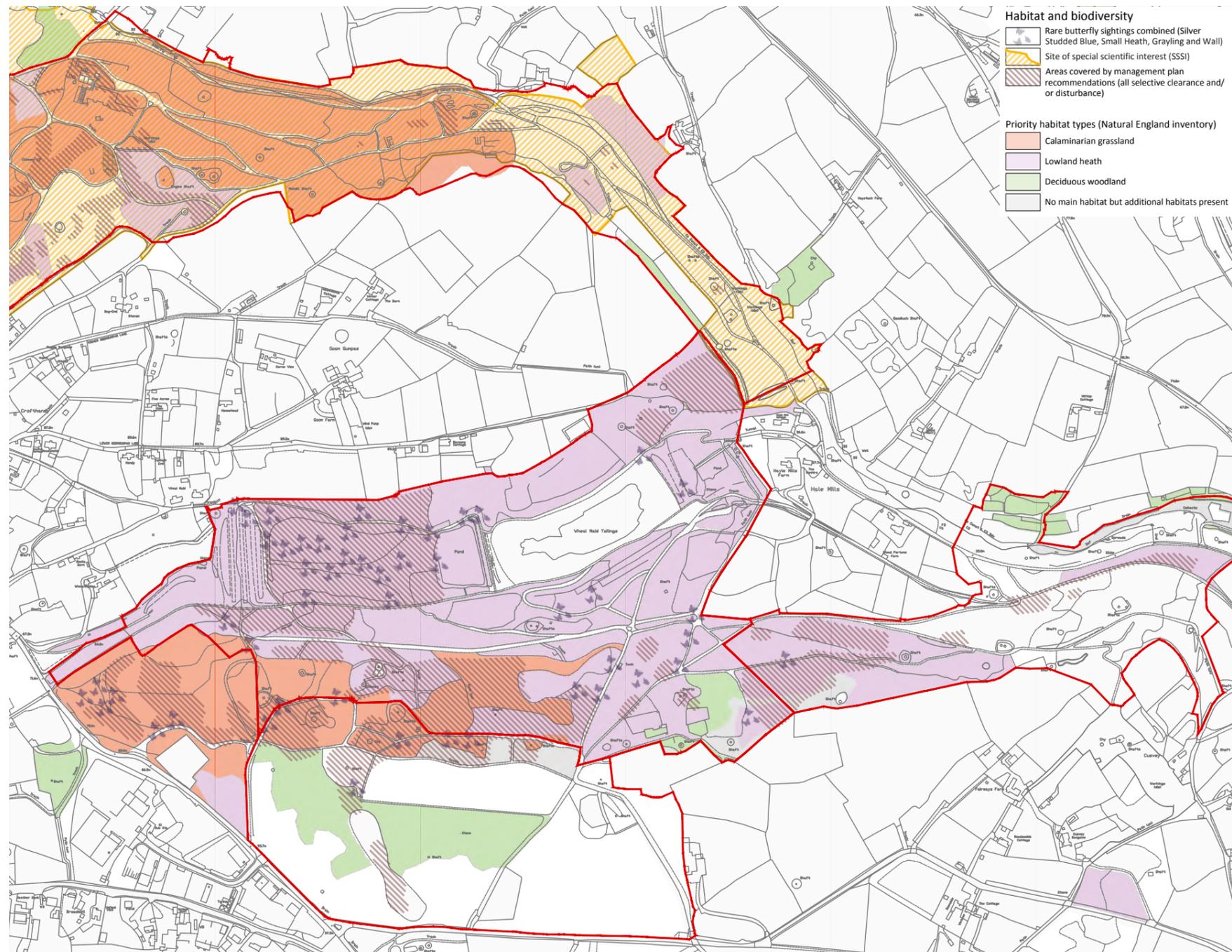


Could be seen as constraints, but also help protect what makes the site unique and special.

Proposals will need to be well considered and sympathetic to protect special qualities.



Site Analysis - Habitat



Site left largely to nature since the 1930's, developing into a rich **mosaic of habitats**. The historical mining activities have helped to create special habitat types.

Most of the site is designated as **'priority habitat'** (as mapped on the NE Priority Habitat Inventory):

- **Lowland heath**
- **Calaminarian Grassland;** (rare plant community associated with former mining sites)
- **Deciduous woodland** -mainly found along the ridgeline south of the Wheal Maid Valley

Though Poldice valley receives a higher level of statutory protection as a **Site of Special Scientific Interest (SSSI)**, Wheal Maid Valley provides an equally rich habitat. The Wheal Maid site has been assessed to meet the **criteria required for designation as a county wildlife site**.

The site supports populations of bats, birds, reptiles and amphibians, dragonflies and damselflies, and (in particular) butterflies. Butterfly sightings are often concentrated in areas of more open habitat and bare ground.

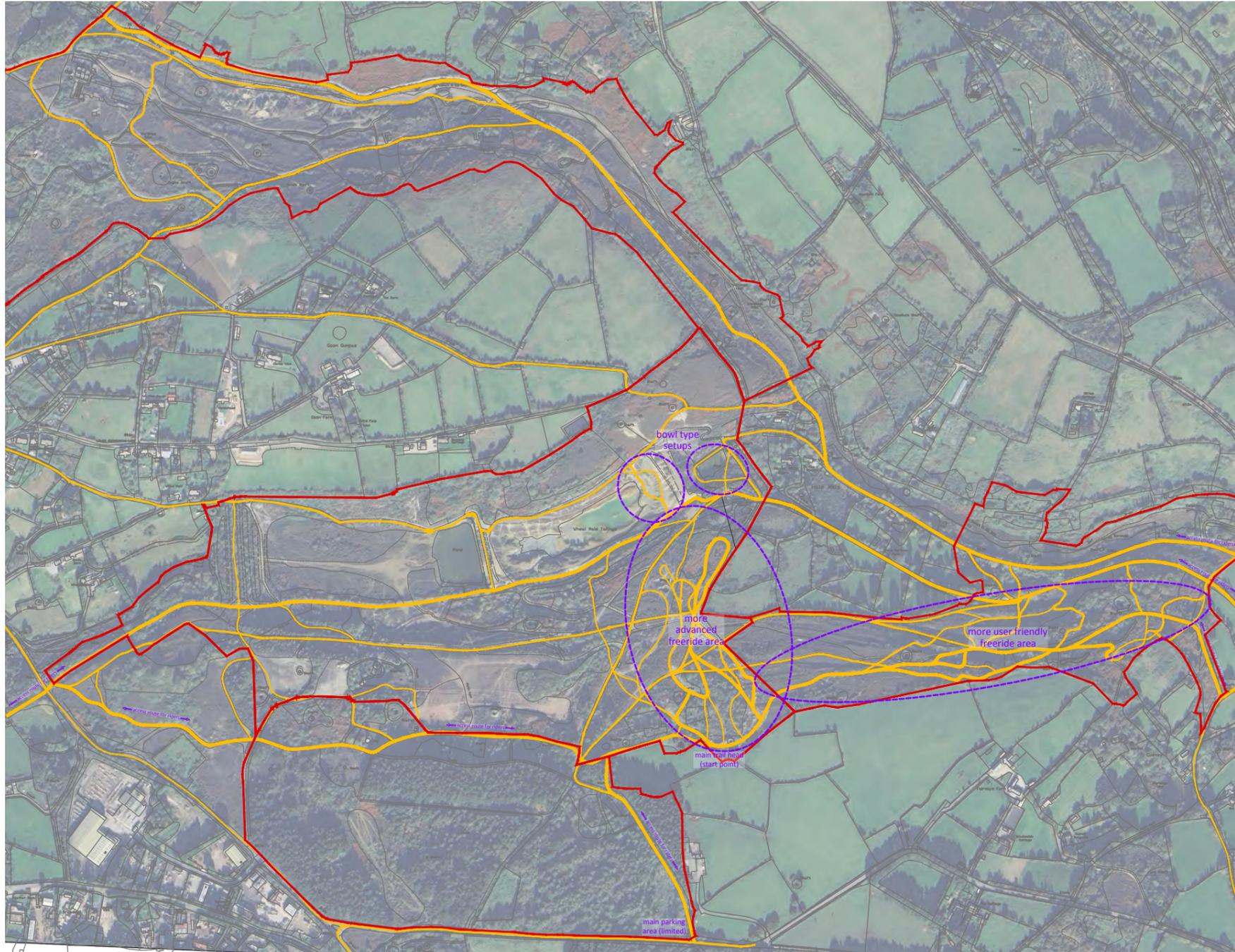
Almost all **management recommendations** (Cornwall Wildlife Trust/ Butterfly Conservation Trust) relate to **clearance, disturbance** and control of invasive species, which do not intrinsically conflict with mountain bike use.

Opportunities for **added value** in terms of enhancing the mountain bike facilities alongside habitat management, broadening the eligibility of **funding opportunities**.

Provides **educational, wellbeing and health benefits** to site visitors - opportunities for reaching a wider audience by attracting more people into site (though mountain biking).



Site Analysis - Mountain Bike Routes



The routes shown plotted from **Strava Heatmap data**.

These routes evolve over time as riders adapt and create new tracks. The map also does not show the potential new routes across the site.

The main trailhead located toward the eastern edge of the Wheal Maid site. Higher-performance freeride routes descend the north-facing slopes from this point.

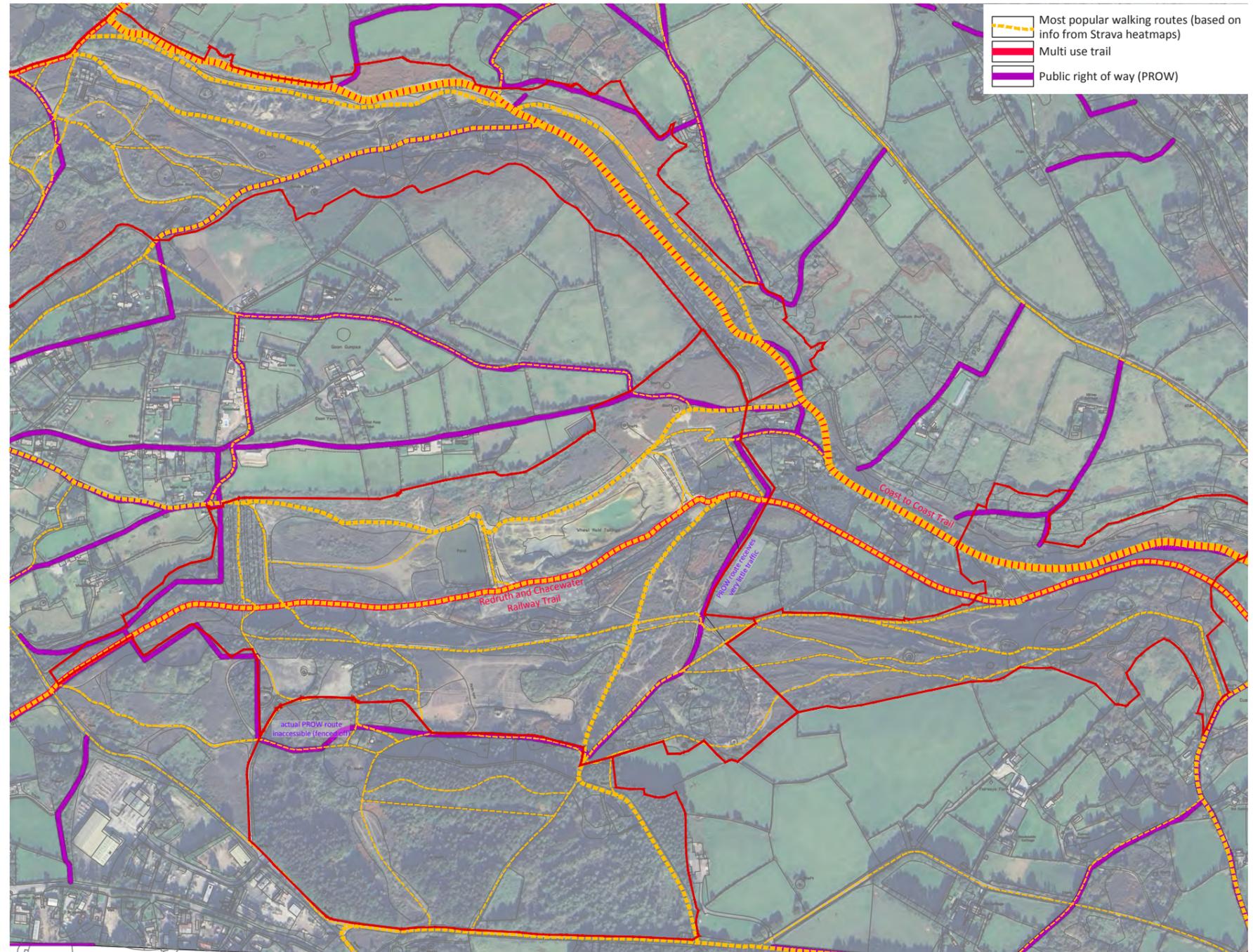
Alternative routes extend east, following gentler gradients across the Wheal Fortune site. These routes tend to be less technical and more user-friendly.

The bare ground and gravel at the tailings dam base also receive some use by mountain bikers, through the most contaminated areas of the site.

The main access routes for mountain bikers is via the multi-use trails or along the forest track to the parking area.



Site Analysis - Walking Routes



The routes shown plotted from **Strava Heatmap data**.

The most popular routes follow the two **multi-use trails**.

Other popular routes tend to follow **undesignated mining tracks**.

The **PROW's** appear to be often poorly used - in **places they are inaccessible** and blocked by fencing.

Whilst the busiest freeride areas appear to have low use by walkers there are **certain locations where the MTB trails cross over paths** that are relatively well used by walkers.

Site Analysis - Overview

The site has a distinctive mix of historical, ecological, topographical and recreational qualities that define its **special character**. It is significant to the **mountain-biking** community, which has developed a sense of stewardship.

With a sensitive approach, improving mountain-bike facilities can **align with habitat management**.

Key **heritage assets** fall within three clusters:

- Buildings associated with Wheal Maid Mine
- Structures associated with the Redruth and Chacewater Railway
- Ruins of buildings associated with Poldice Mine

These offer opportunities for interpretation and as an educational resource.

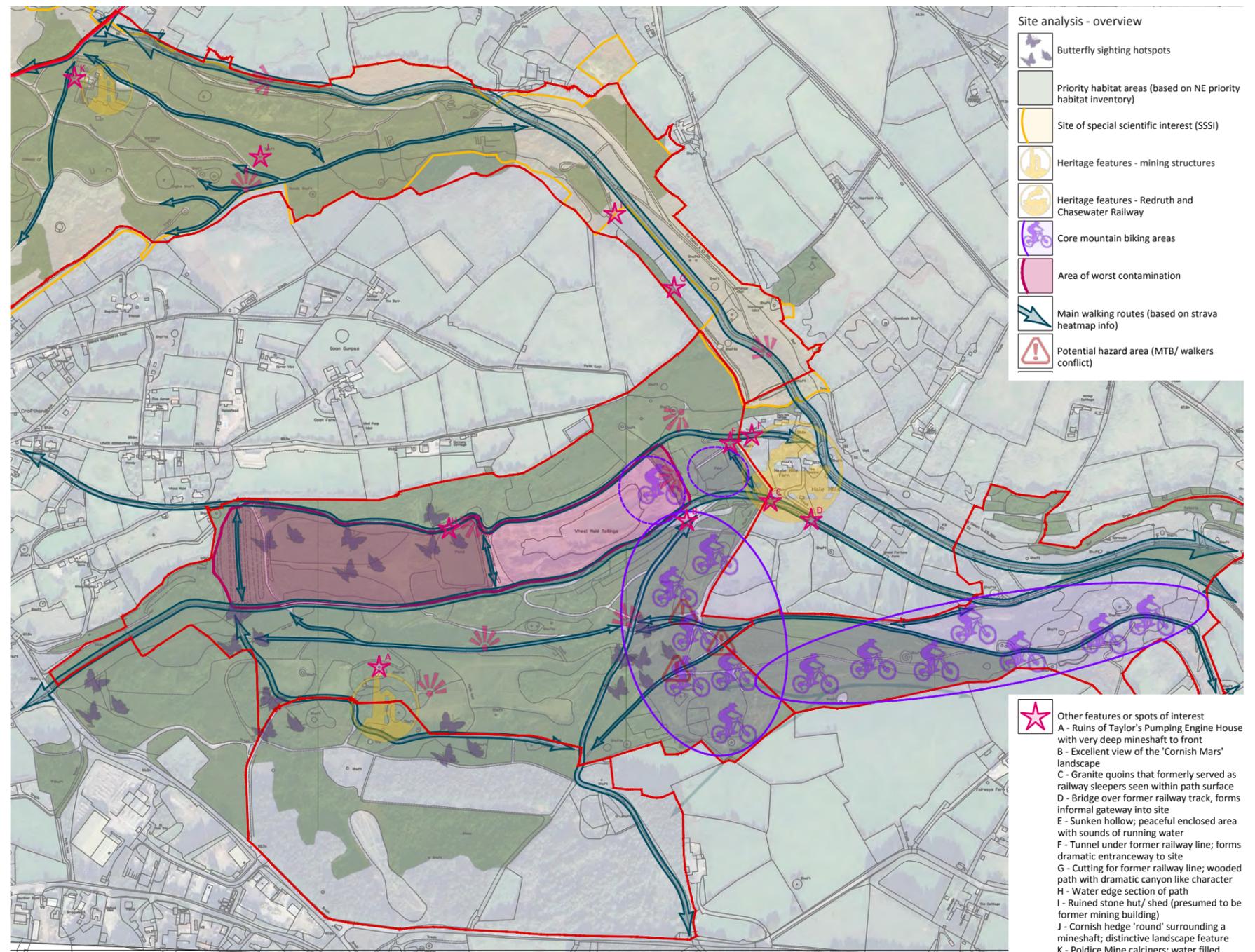
The **mountain bike trails** fall within three main zones:

- The steeper downhill/ freeride trails down the north facing slopes of the Wheal Maid Valley
- The more gentle trails across Wheal Fortune.
- The bowl like landforms within the tailings dam base (though this is the most contaminated area of the site)

There is potential to enhance existing provision and create additional trails where compatible with other constraints.

Walking is **focused along multi-use trails** and former mining tracks, with designated PROWs often used less than undesignated routes. Some paths cross MTB trails, requiring careful conflict and safety management

The site's **dramatic scenery** and **special viewpoints** should be protected and enhanced.



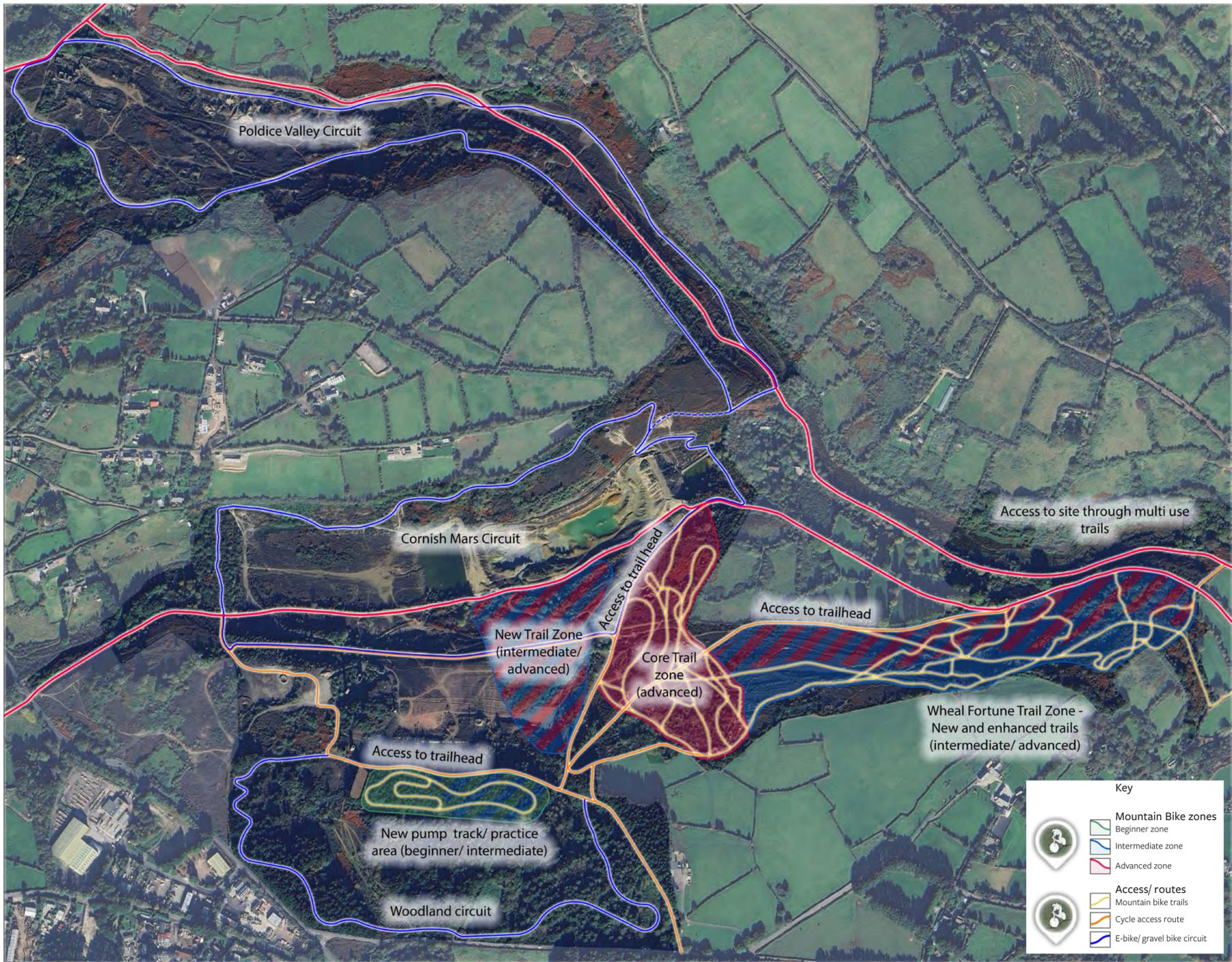
Benefits to the Local Economy

The proposed off-road cycle hub could **boost the local economy** by attracting visitors who spend on accommodation, food, drink, and cycling services. Its **year-round appeal** would help extend Cornwall's tourist season and support sustainable, active tourism.

The hub could create jobs, encourage new enterprises, and strengthen existing businesses, including local hospitality and accommodation providers, as well as cycle-focused services such as St Pirans Cycle Hire and Chacewood Bike Park.

This economic uplift would be especially valuable given **recent pressures on local hospitality**, highlighted by the closure of two pubs: The Fox and Hounds and Carharrack Stars.





Key proposals

Freeride MTB zones

- **Core Trail Zone** (targeted at advanced riders)
 - Protect and enhance core trails as origins and heritage of mountain biking within the site
 - Mitigate safety concerns and conflicts with other user groups
 - Enhanced facilities and provision at key nodes, (e.g. gathering/spectating spot at trailhead)
 - Potential diversion of Public Right of Way crossing through zone
- **Wheal Fortune Trail Zone** (targeted at intermediate to advanced riders)
 - Enhance/improve existing trails
 - Create new trails and connections between them
- **New Trail Zone** (targeted at intermediate to advanced riders)
 - Develop a variety of new trails through part of the site which currently receives little use
 - Opportunity for woodland routes
 - No conflicts with Public Rights of Way or proposed waymarked walking routes

Practice area/ pump track (targeted at beginner to intermediate riders)

- New woodland practice track with a range of features/ route options
- Shelter provided by the woodland
- Adjacent to car park and arrival hub (with site wayfinding and picnic facilities)

Offroad circuit routes (targeted at e-bikes and gravel bikes)

- **Cornish Mars Circuit**
 - Mostly using existing tracks (undesigned)
 - New section of track created across upper valley to the north side
- **Poldice Valley Circuit**
 - Follows existing tracks (undesigned or byway) - works limited to waymarking and localised clearance/surfacing improvements
- **Woodland Circuit**
 - New trail created around the woodland

Connections and access

- Active travel benefits of multi-use trails - mitigate conflict with other trail users
- Waymarked cycle links up to trailheads along suitable (e.g. wide enough, off waymarked walking routes)



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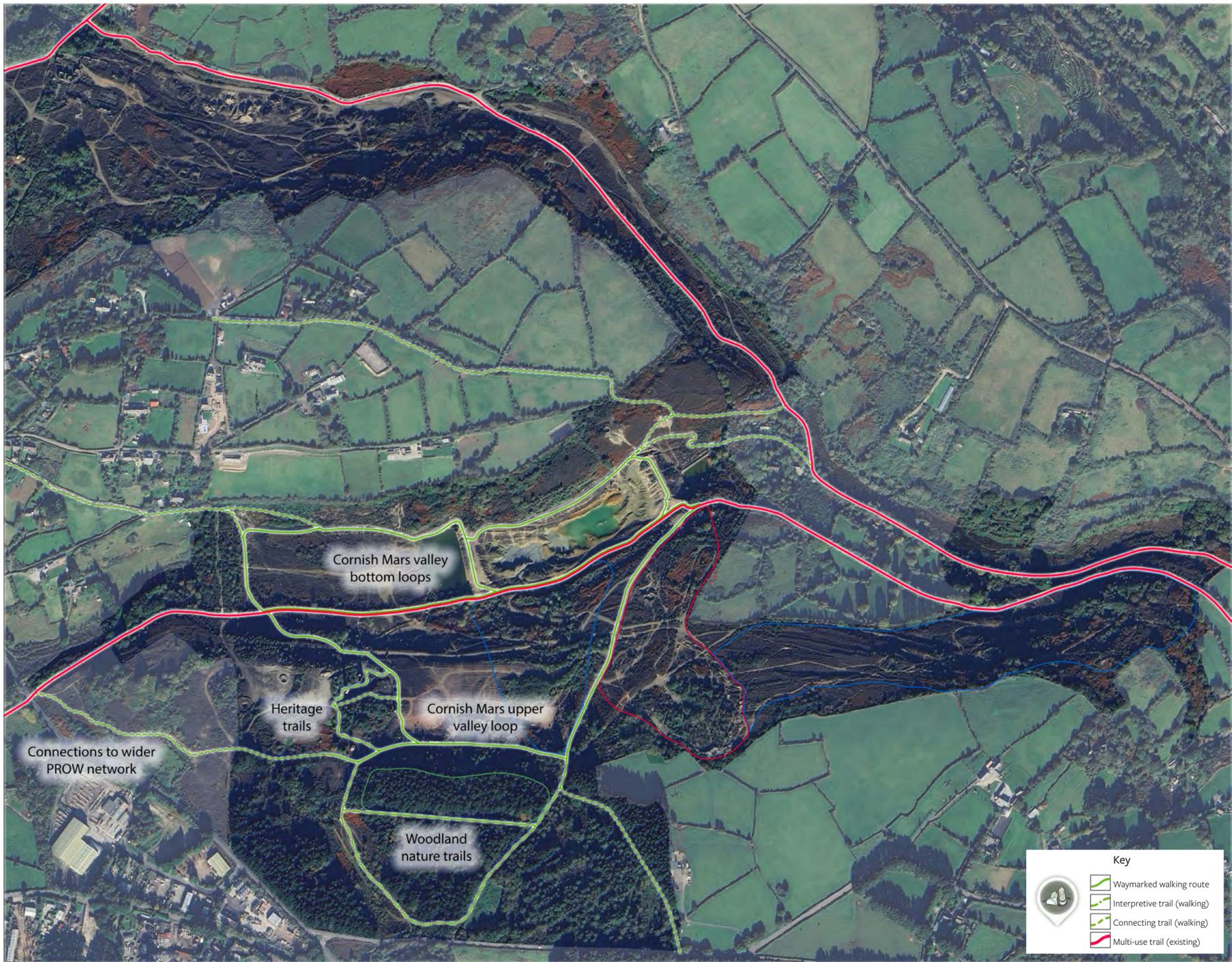


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Key proposals

- **Waymarked circular walking routes**
 - Interconnected circular waymarked routes offering a range of character and challenge
 - Localised works to improve accessibility (e.g. re-surfacing, steps, handrails)
 - Routes selected to provide access across site whilst avoiding potential conflict areas
- Improved **walking links** to multi-use trails and wider PROW network
- **Interpretive/ educational trails** focusing on the site's **heritage** and **wildlife**
 - Heritage trail through the old mining structures
 - Nature focused trail through the woodland
 - Interpretation along routes (information boards, potential interpretive artwork)
 - Potential boardwalks through wetter areas or across uneven ground and around mining features

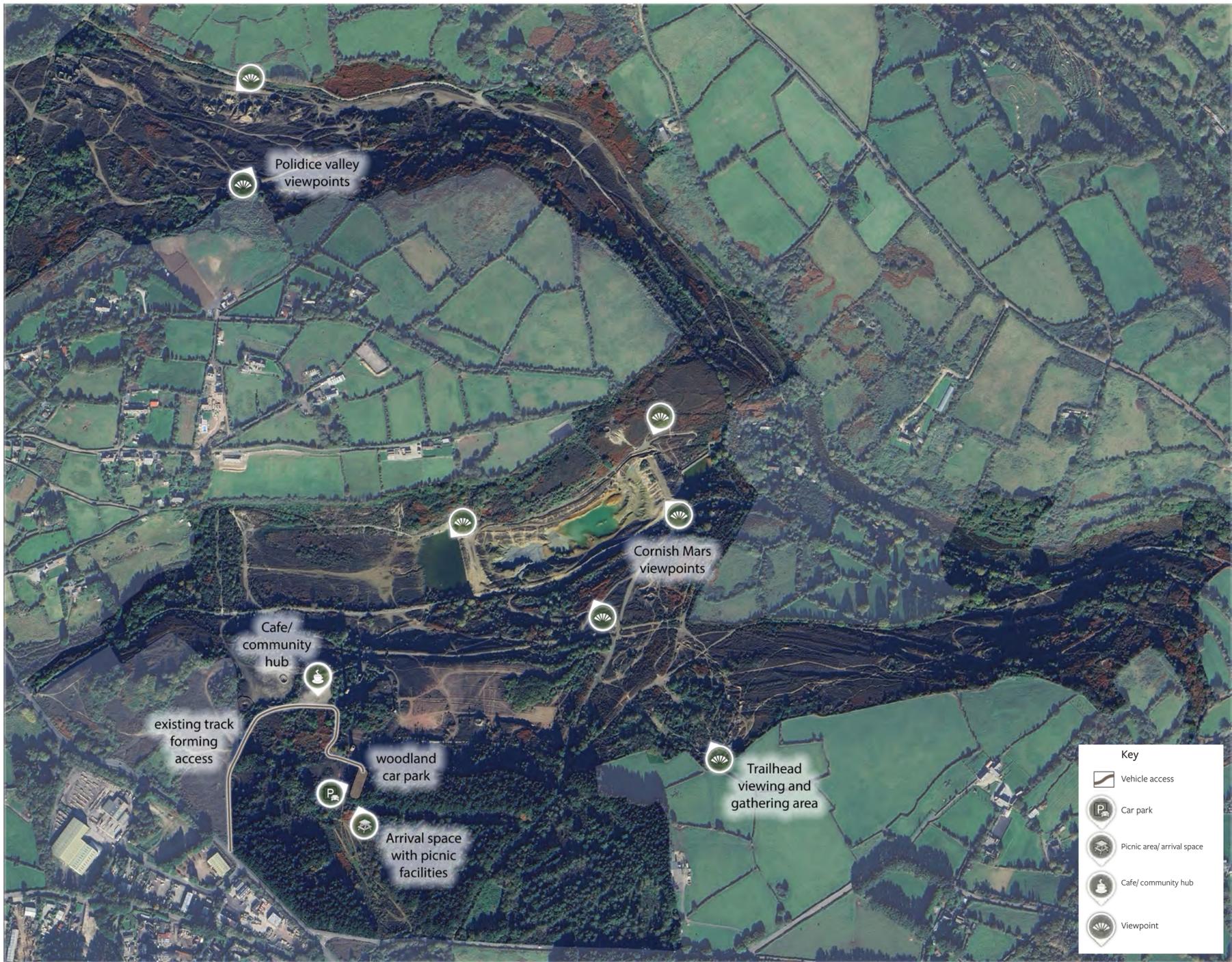


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Proposals - Parking and Facilities



Key proposals

- Cafe building/ community hub**
 - Sited close to mining buildings with good views across the valley
 - Initially proposed a temporary/ pop-up structure, developing into a permanent construction as the facility develops. End goal could include adaptive re-use of one of the mining buildings (subject to planning and other constraints)
 - Potential to include space for community events and site interpretation.
 - Access track allows for disabled parking and drop-off zone
- Car park**
 - Proposed within cleared area of plantation woodland - surfaced with self binding gravel to give a natural feel
 - Designed to accommodate approximately 30 vehicles
 - Existing vehicle track (to be improved/ resurfaced) providing access along most of route, with path widened to serve final approach
 - Located adjacent to the pump track/ practice area, with adjacent picnic area and arrival space
- Viewpoints/ focal points**
 - Positioned to take advantage of best views across the site and at key points of activity (e.g. the trailhead)
 - Potential to include seating, artwork and interpretation

Wheal Maid Off Road Cycling Hub

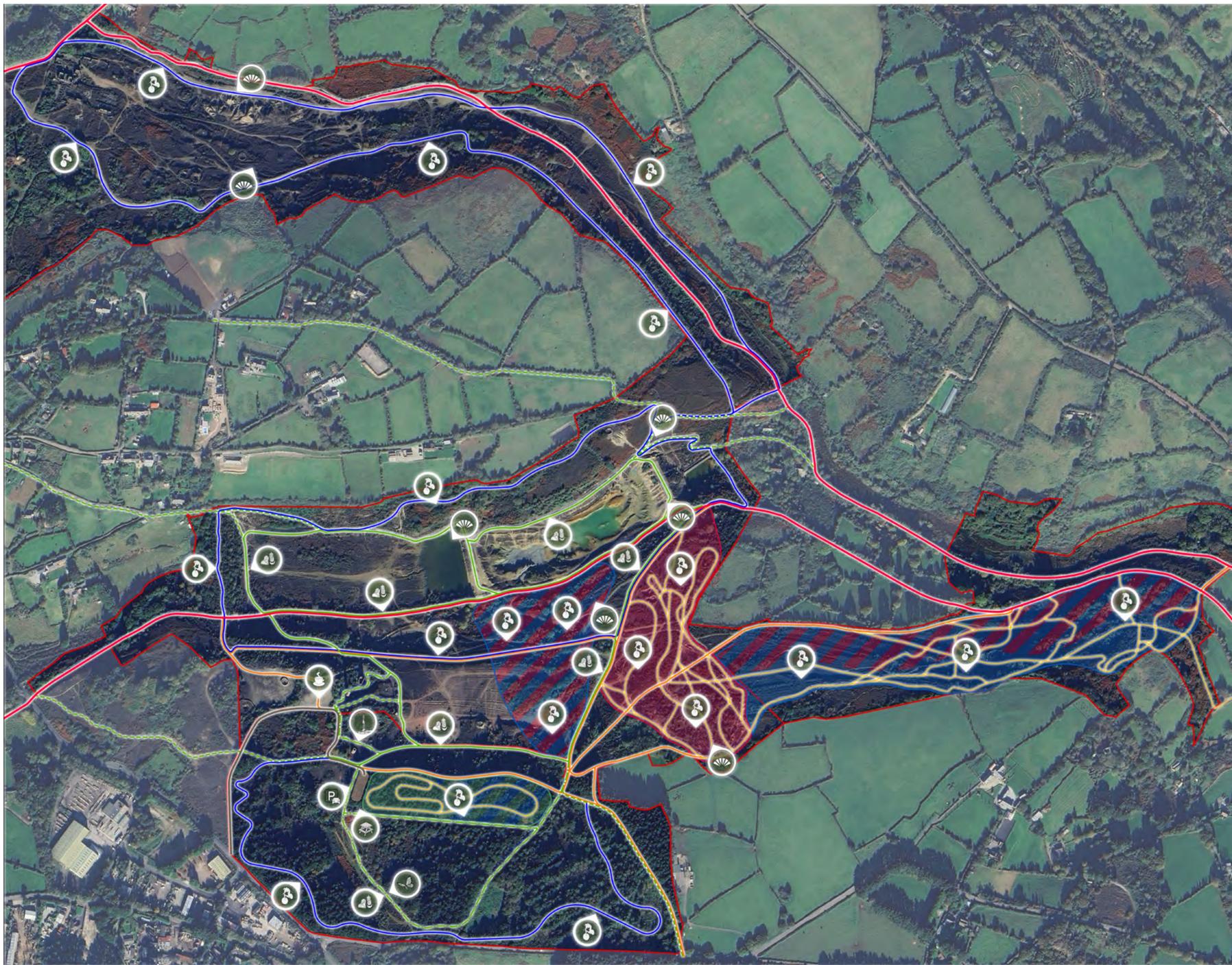


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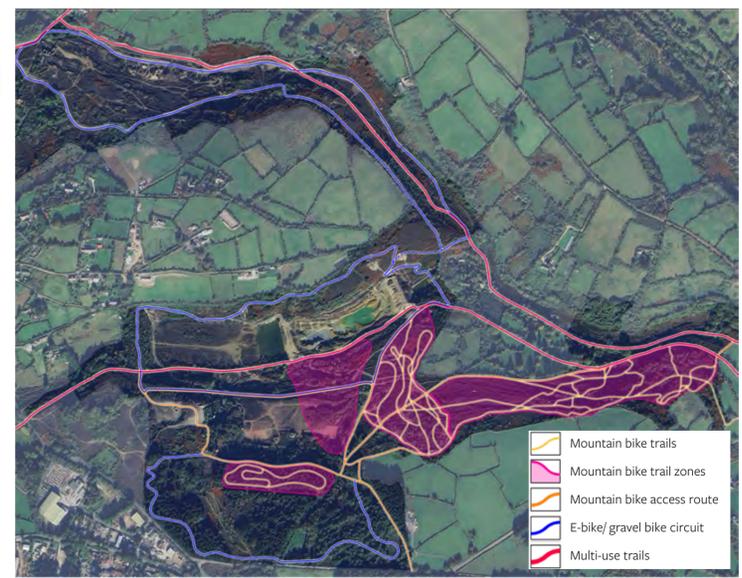


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Concept Masterplan

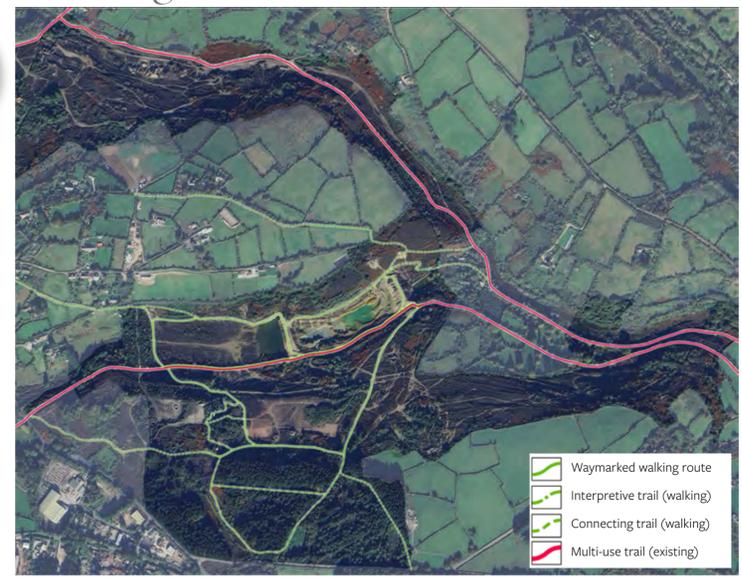


Access - mountain bikes



- Mountain bike trails
- Mountain bike trail zones
- Mountain bike access route
- E-bike/ gravel bike circuit
- Multi-use trails

Access - walking



- Waymarked walking route
- Interpretive trail (walking)
- Connecting trail (walking)
- Multi-use trail (existing)



- Vehicle access
- Car park

Key

- | | | | |
|--|------------------------------|--|--------------------------------|
| | Mountain Bike zones | | Car parking |
| | Beginner zone | | Picnic facilities |
| | Intermediate zone | | Cafe/ Community Hub |
| | Advanced zone | | Viewpoint/ focal area |
| | Access/ routes | | Wildlife interpretation/ trail |
| | Mountain bike trails | | Heritage interpretation/ trail |
| | Cycle access route | | |
| | E-bike/ gravel bike circuit | | |
| | Waymarked walking route | | |
| | Interpretive trail (walking) | | |
| | Connecting trail (walking) | | |
| | Multi-use trail (existing) | | |
| | Vehicle access | | |



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Wheal Maid Off Road Cycling Hub

Accessible Cycle Provision

ACCESSIBLE OFF-ROAD CYCLING:

- **Adaptive cycles** (e.g., recumbent trikes, side-by-side cycles, off-road wheelchairs, mountain trikes) support riders unable to use standard bikes.
- **Tricycles, e-bikes** and **e-trikes** improve access for those with balance issues or difficulty with climbs.
- Catering for a **wide range of abilities** supports progression and enables mixed-ability families and groups to ride together.
- Inclusive **programmes**—guided sessions, training and support for disabled riders—can be delivered in partnership with organisations such as British Cycling’s Limitless programme and The Cornwall Bicycle Project CIC.

DESIGN REQUIREMENTS FOR ADAPTIVE MTB TRAILS:

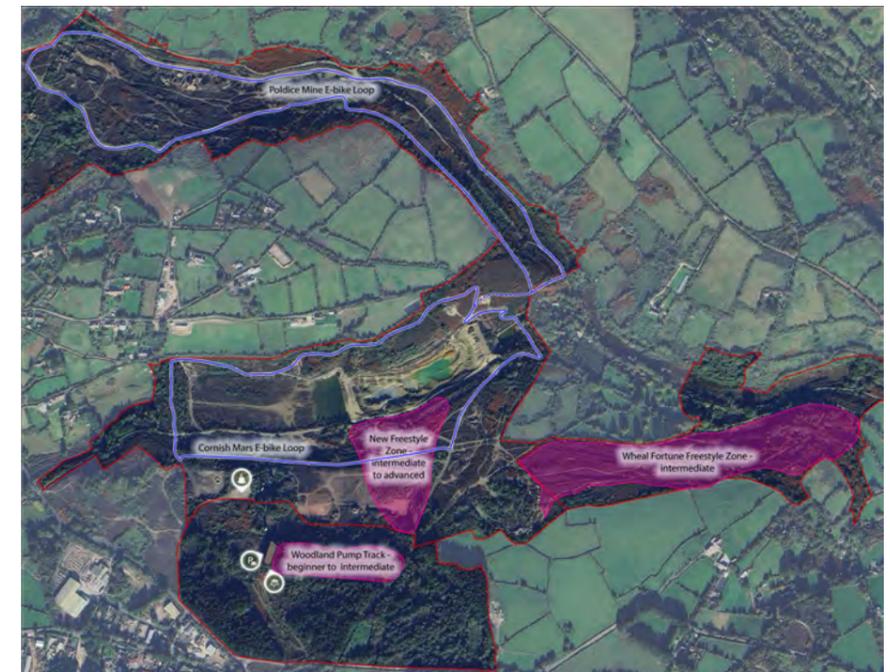
- Minimum **trail width** of approx. 1.2 m, with pinch points no narrower than 1 m; turn radius 4.5–6 m; **surfaces** should avoid loose, rough or rutted conditions.

- Provide accessible **rest points**.
- Ensure **good access to trail** start/finish points from car parks and wider cycle links
- Clear **information**, signage and waymarking for adaptive-friendly routes.

SITE SUITABILITY AND OPPORTUNITIES:

- **Woodland pump track:** Easily accessed; suitable for beginner–intermediate adaptive use.
- **New freeride trail area:** Good access; can meet design needs; suitable for intermediate–advanced riders.
- **Wheal Fortune area:** Gentler gradients; suited to intermediate adaptive provision.

A range of adaptive-friendly trails should be provided to accommodate different abilities and challenge levels. A **minimum of 3 inclusive trails** should be created to cater for a range of abilities.



Plan showing zones to include adaptive/ inclusive trails



Off-road MTB Wheelchair



Off-road Hand Trike



Side by side tandem trike



Recumbent off-road Trike



Pump track designed for adaptive cycling

Accessibility and Inclusion

WAYMARKED WALKING TRAILS

With surfacing and gradient improvements, these waymarked routes could be made accessible:

- **Cornish Mars Valley Bottom Loops:** encircles the tailings dam; accessible from the Redruth to Chacewater Multi-use Trail.
- **Woodland Nature Trails:** through United Downs Woods; accessible from the proposed car park and existing lay-by.

These paths should follow the guidelines set out in *Inclusive Mobility: A Guide to Best Practice* (DoT, 2021)

Steep valley slopes make fully accessible routes up and down the valley impractical, but surfacing improvements and stepped access will enhance accessibility over current conditions.

ACCESSIBLE FACILITIES AND FURNITURE

Level access is provided between the car park and cafe/community hub, including disabled parking and a drop-off zone.

Proposed **seating** at viewpoints and focal points will offer rest zones for walkers and cyclists along routes back to the trailheads..

Accessible landscape furniture should be included within the mix, with some benches featuring backs and armrests, and picnic tables allowing wheelchair access.

INTERPRETATION AND WAYFINDING

Accessible routes should be **clearly identified** and signposted via site information, boards, and waymarking.

Site information and interpretation materials should consider accessibility, including font size, style, contrast, and reading height. Creative approaches, such as art, sculpture, and images, can broaden accessibility.

Boardwalks or gratings near features of interest (wildlife or heritage) can enhance educational value, visitor engagement, and well-being.



Plan showing accessible walking routes (in green) with the multi-use trails (also accessible) shown in red



Accessible walking routes where gradients allow



Waymarking to signpost accessible routes



Accessible site information and interpretation



Seating to provide rest points, including accessible seating



Potential boardwalks/ gratings providing access to features of interest

Protecting and Enhancing Wildlife

CONSIDERATION AND DISCUSSIONS TO DATE

A **management plan** prepared by the Butterfly Conservation Trust has been a key reference document for proposal development (A conservation plan for Cornish mine sites in the Carnon Valley and Camborne-Redruth Mining District, Marcus Rhodes, 2024).

We have liaised with the following experts with knowledge of the site:

- Marcus Rhodes (University of Exeter)
- Adrian Spalding (founder of Spalding Associates)

RESPONSE TO ECOLOGY IN THE DESIGN

- **North facing slopes** are generally **lower value** to butterflies - this is where most things are proposed
- **Existing tracks** are serving for access and routes
- Cafe/ community hub building is sited in an open, flat area lacking in ground flora
- **Conifer plantation** represents the **lowest value**

Habitat/ ecology - potential benefits



The site provides important habitat for **bryophytes** and **butterflies**. Maintaining suitable conditions for these requires a level of **disturbance** and vegetation **clearance**



Scrub clearance for access and facilities, including clearance of **non native invasives**



Disturbance through trail building, creating patches of bare ground (beneficial to butterflies). **Stone facing** on ramps provides **wildlife refuge**



Creation of **woodland rides** to accommodate new trails



Selective clearance of **plantation woodland** to allow space for trails, with clearance focused on non native conifers

habitat onsite; this is where the car park and pump track are proposed

- **New trail zones** are proposed through areas where some **clearance and disturbance would be beneficial**
- The **richest areas** for wildlife have been **kept clear of proposals** (around the valley bottom, areas known to be used by Nightjars)
- Proposals **within the SSSI** have been **kept to a minimum,**

- Selective **woodland thinning**, focused on non native species, for pump track and path through United Downs Wood (part of good woodland management)
- Clearance of **non native invasive species** where widening tracks or clearing for focal points
- **Information/ interpretation** providing public awareness regarding the wildlife onsite - hopefully leading to more considerate use by the public
- Developing **volunteer conservation** activities as public interest in the site grows

OPPORTUNITIES FOR ENHANCEMENTS FOR HABITAT AND WILDLIFE

- The **clearance and ground disturbance** from trail building could be **beneficial** to habitat (if clearance focuses on encroaching scrub and over-mature stands of heather)
- Creation of **woodland rides** for new trails through wooded areas

Materials and Furniture

Landscape materials



Weathering steel (corten) for signage



Natural materials such as **stone** and **timber** used for landscape furniture and features



Site won natural stone used where possible for trail and ramp building



Natural logs arising from woodland clearance made use of in landscape furniture



Locally sourced **self binding gravel** used where required for track/ path works and car park

Landscape furniture



Simple **benches** at key locations, such as viewpoints



Accessible picnic benches close to car park



Some more formal **benches with back and arms** (accessible) at key locations and along accessible routes



Flat topped **seating boulders** used to provide less formal seating and gathering spaces



Potential for **wayfinding or interpretation** within landscape furniture

Interpretation and wayfinding



Potential for **interpretive art** related to the site's history, geology or nature



Interpretation boards at focal points covering key features of interest



Hierarchy of **wayfinding information** provided through signage, fingerposts and marker posts



Design Toolkit - Bike Trails Crossing Paths



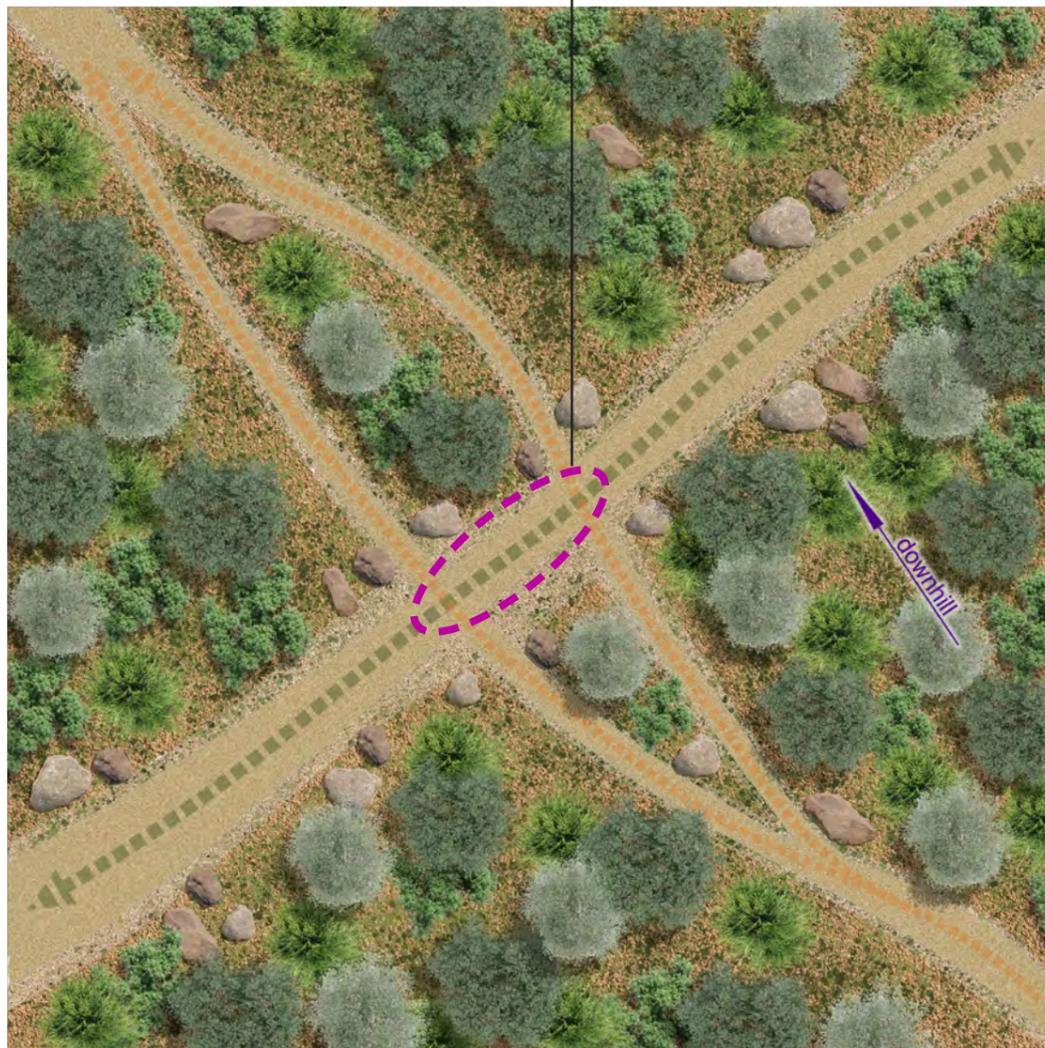
Applicable locations: Where bike trails cross over a pedestrian route/ footpath and slowing down the cyclist isn't practical (e.g. where the cyclists need to keep enough speed for the jumps downhill of the crossing). This mainly applies along one section path/ Bridleway

Other mitigation measures:

- Review trail routes to reduce number of crossing points if practical (e.g. by combining crossing points or closing off underused routes)
- General safety signage at entrance ways/ trail heads
- Waymarking pedestrian routes off the paths where crossings occur
- Long term objective to divert PROWs where the crossings occur

Existing scenario

Potential Hazard at crossing point

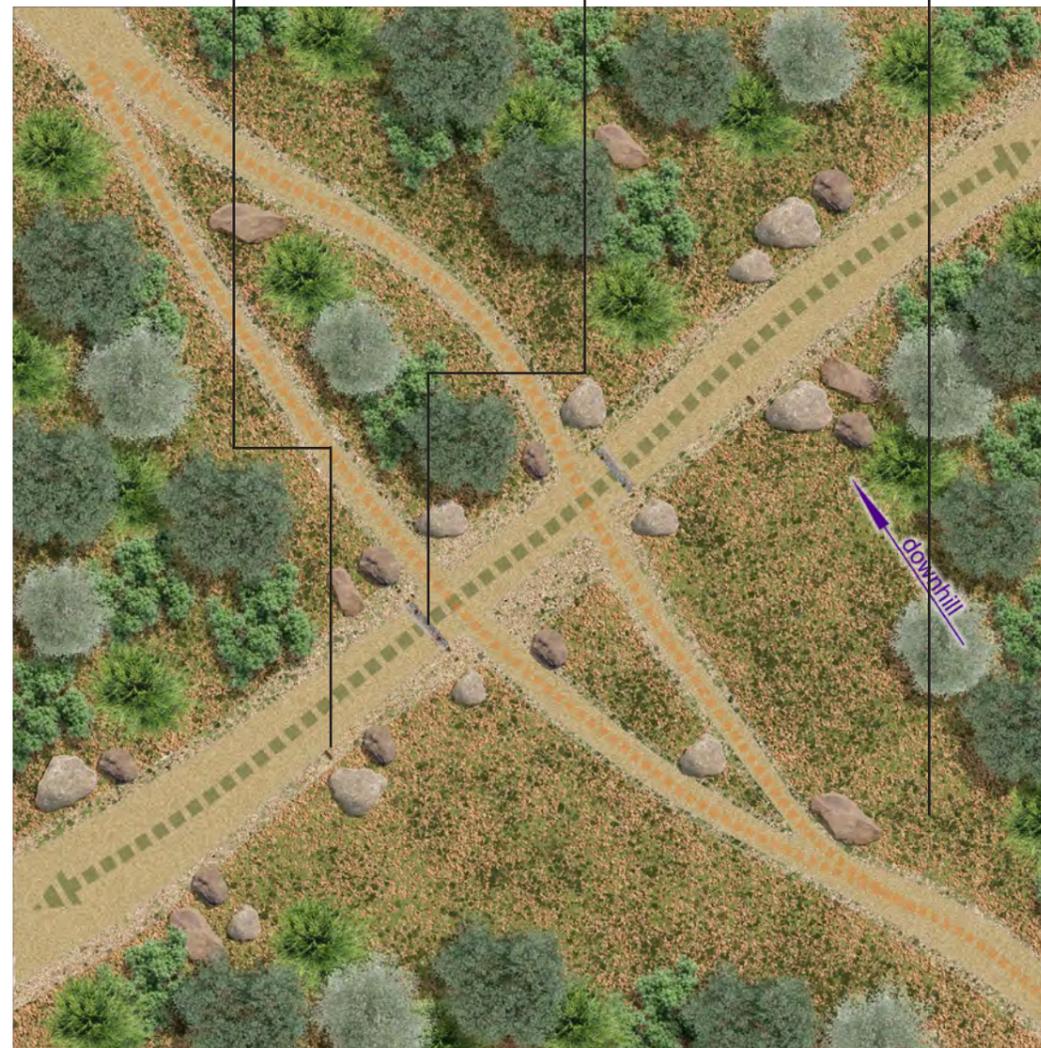


Proposed improvements

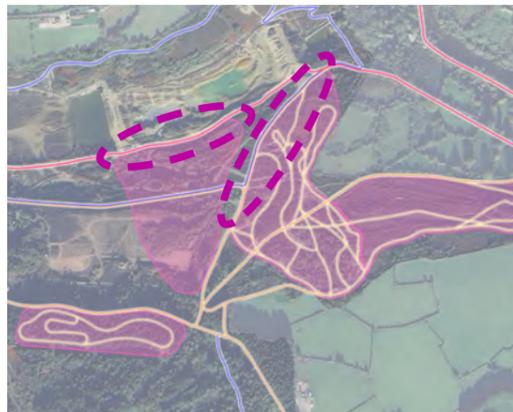
Signage to side of path on approach, in both directions

Surface treatments, signage in surfacing and bollards across path to signpost crossing points (either side of crossing point)

Vegetation clearance within triangular zone uphill of crossing point



Design Toolkit - Stopping Bike Trails At Path



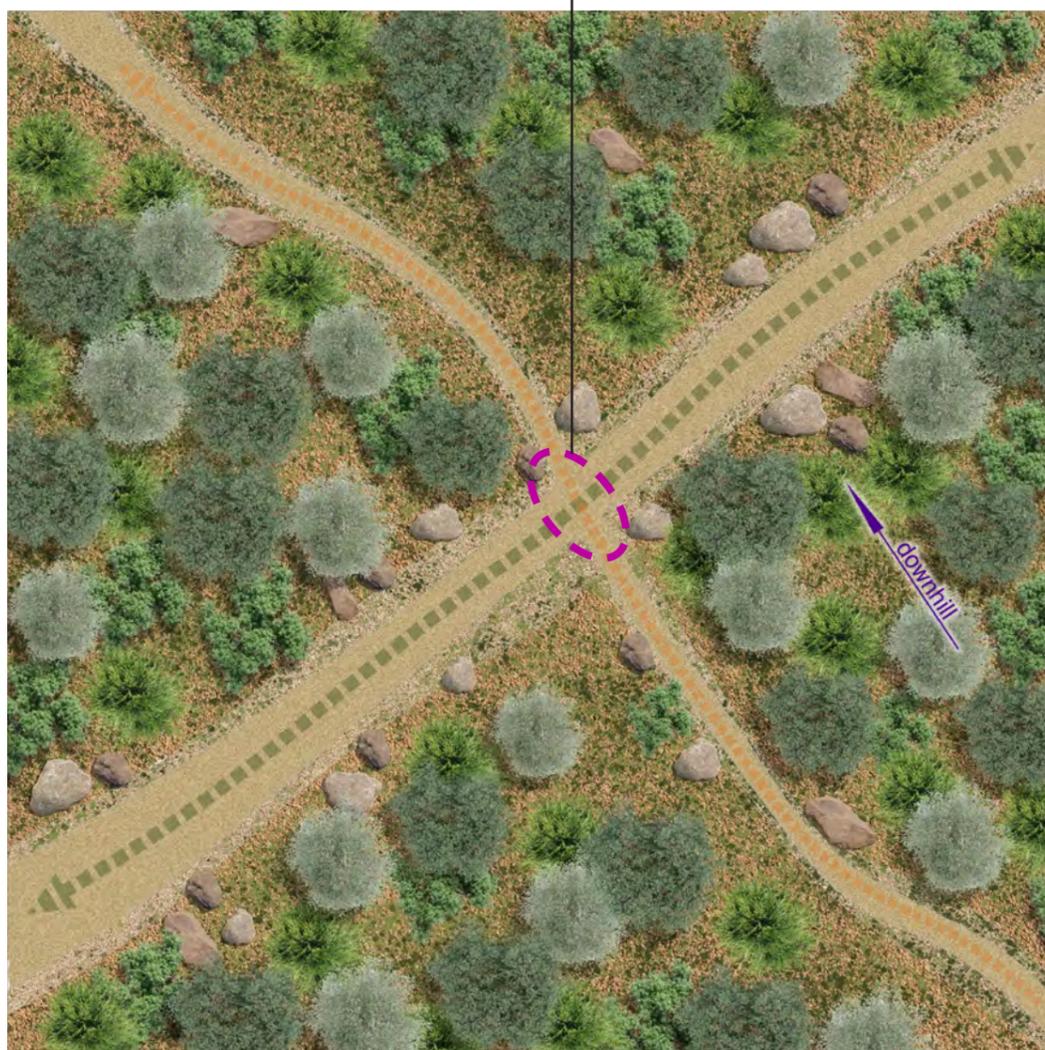
Applicable locations: Where trails end or cross over a waymarked walking route. This mainly applies along the shared use track leading up the valley and at parts of the Redruth and Chacewater Multi-use Trail

Other mitigation measures:

- Create a trail free buffer along downhill side of pedestrian route, to avoid bike trails developing across route
- General safety signage at entrance ways/ trail heads

Existing scenario

Potential Hazard at crossing point



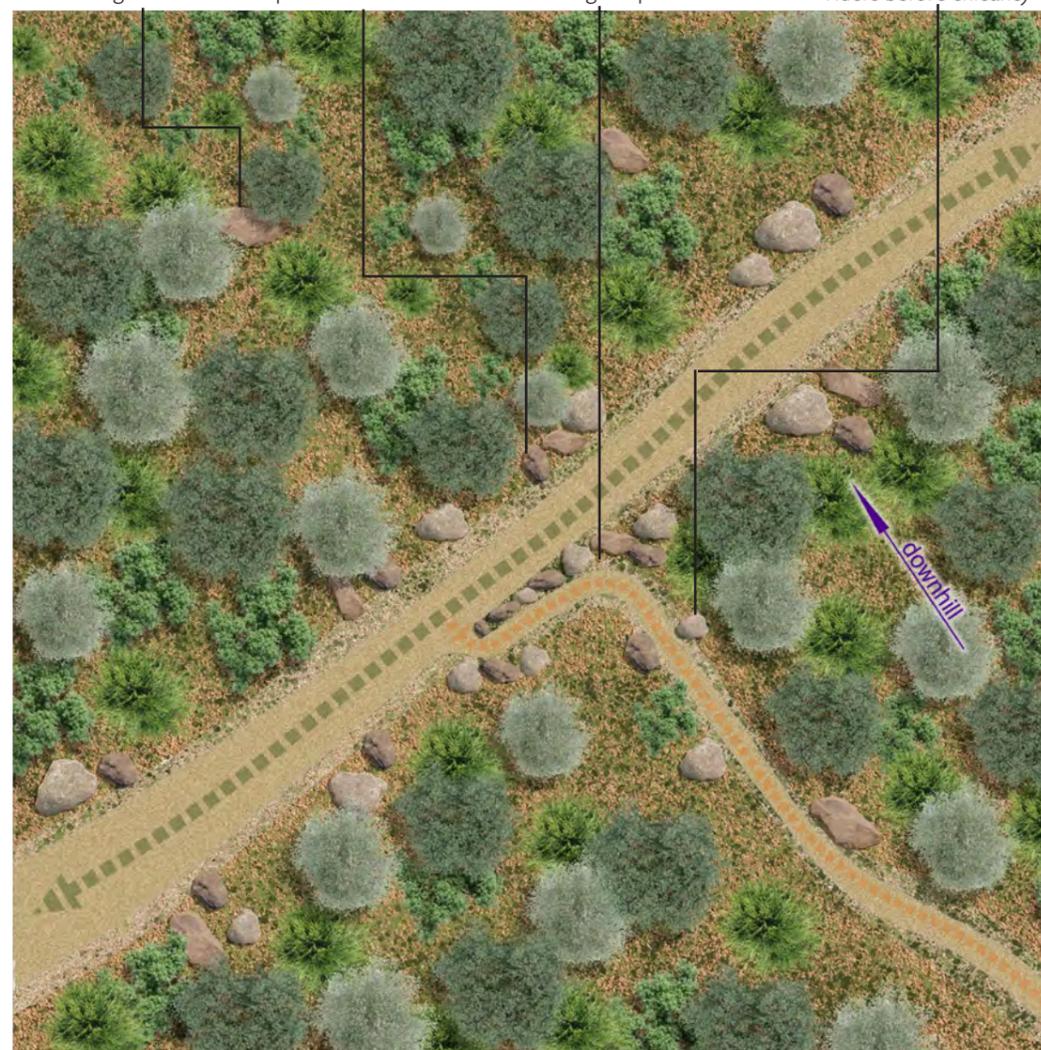
Proposed improvements

Allow the trail downhill of the crossing to re-vegetate

Arrange boulders to block trail across pedestrian route

Use boulders/ rocks to create chicane in trail route before entering the path

Create pinch point between boulder (to slow down riders before chicane)



Trailhead



Cafe/ Community Hub



Mountain Bike Trail Crossing Point



Raised Walkway (aspirational idea - not part of current proposals)



REVISIONS

No.	Status	Date	Issued by
Rev_01	Presented at meeting	19/08/2025	GS
Rev_02	Minor corrections	20/08/2025	GS
Rev_03	Presented at meeting	21/10/2025	GS
Rev_04	Interim issue for meeting	27/11/2025	GS
Rev_05	Draft consultation issue	17/12/2025	GS
Rev_06	Consultation issue	19/01/2026	GS