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TACP

Wye Valley National Landscape
Unclassified County Roads Audit
Tintern and Whitebrook Pilot Areas

Report Reference: ESP.9264.4328 Rev2

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Wye Valley National Landscape
Unclassified County Roads Audit
Tintern and Whitebrook Pilot Areas

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Wye Valley
National Landscape

Report Reference: **ESP.9246.4328 Rev2**

Revision	Status	Date	Written/Compiled by	Checked by	Approved by
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02	Final	October 2025	Provision of Final Report at Client request.		
02	Draft	October 2025	Provision of Revised Draft Report Following Further Client / Liaison Group Comment		
01	Draft	August 2025	Provision of Revised Draft Report Following Client / Liaison Group Comment		
00	Draft	May 2025	Provision of Draft Report For Client / Liaison Group Comment		

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General Notes

1 Introduction

The Earth Science Partnership Ltd (ESP), including subcontracted appointees Burroughs and TACP, were instructed by the Wye Valley National Landscape to undertake a preliminary assessment of the Unclassified County Roads in two pilot areas comprising Tintern and Whitebrook. This report presents the findings of the pilot study in these areas.

1.1 Background

The Client has advised that Unsealed Unclassified County Road (UCRs) are part of the public highway network and legally open to all users, under the remit of the Highways Authority at Monmouthshire County Council. Whilst they may run concurrently with footpaths, bridleways or restricted byways, they are not a sub-category of public rights of way.

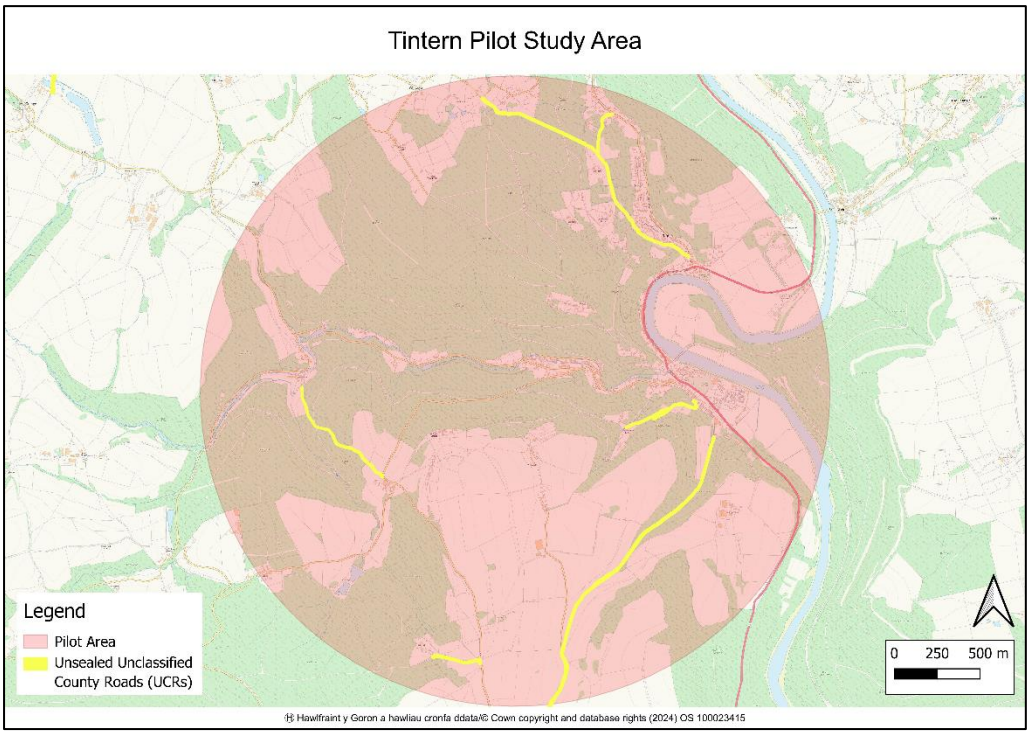
Due to topography, some route restrictions and surface conditions, they are often inaccessible to standard road vehicles and are primarily used by off road type vehicles, walkers, cyclists and horse riders.

For the purpose of this document, only the phrase “users” has been utilised to address the variety of those who may access the UCRs. Reference should be made to the Client provided Addendum (see Appendix E) which contains definitions for permitted users, the legal status of UCRs and client management responsibilities.

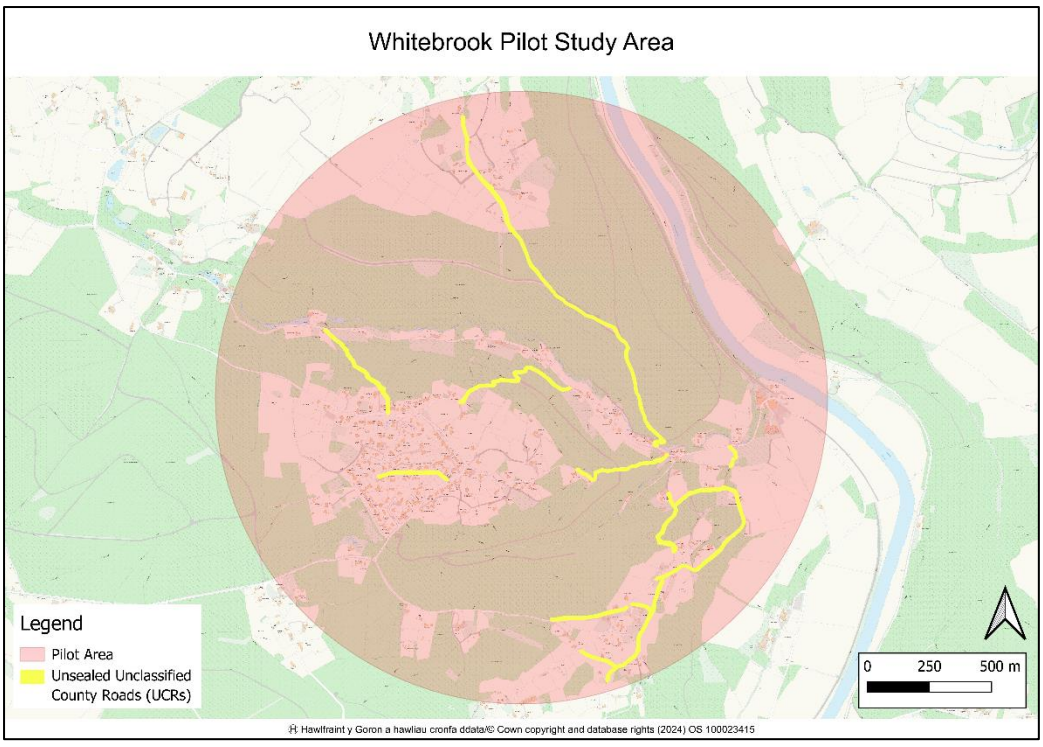
The audit that the assessment team was instructed to undertake, is aimed at addressing escalating concerns about the state of these UCRs, including issues such as:

- Degradation of the surface and structure of the UCRs, exacerbated by steep slopes and high-impact use.
- Potential safety risks to “users” of the UCRs.
- Areas of potential restricted access caused by poor surface conditions/route narrowing/interaction between varying users etc.
- Loss of the natural and cultural fabric of the countryside, including dry stone walls lining sections of the UCRs.

The assessment was instructed to focus on two pilot areas within the county, identified as the Tintern and Whitebrook areas. The routes assessed under this pilot study are shown as yellow routes on Inserts 1 and 2 below.



Insert 1: Tintern Pilot Study Area



Insert 2: Whitebrook Pilot Study Area

1.2 Scope of Works

The audit was to focus on the condition and management of unsealed UCRs in the Whitebrook and Tintern areas, which are popular with various user groups but also face significant challenges, including environmental damage, user conflicts, and safety concerns. Key aspects to be assessed as part of the audit included:

- **Surface condition:** Identification of erosion, compaction, and exposed bedrock.
- **Access:** Assessment of usability for walkers, cyclists, horse riders, motorbikes, and 4x4 vehicles.
- **Signage:** Evaluation of existing waymarking and advisory notices, with suggestions for options to better inform users.
- **Drainage features:** Assessment of functionality and identification of areas contributing to surface runoff and sedimentation in local watercourses, with suggestions for options to better manage waterflows.
- **Dry stone walls:** Assessment of the condition of dry stone walls along the UCRs, with suggestions for prioritising restoration.
- **Natural features:** Phase 1 habitat and species assessment along routes, including identification of Invasive Non-Native Species (INNS) with suggestions for avoiding impacts and opportunities to deliver net benefit for biodiversity within the scope of the project through the Environment (Wales) Act and to address climate & nature emergencies.
- **Evidence of misuse:** Identification of illegal vehicular access from surrounding area and any other inappropriate activities.

1.3 Required Inputs and Outcomes

As specified by the Client, the required survey/assessment inputs and outcomes comprised the following aspects.

Survey and Assessment

- Conduct a comprehensive condition survey of the approximately 11 km of unsealed UCRs.
- Include an evaluation of key features such as signage, drainage, and natural and cultural/historical features.
- Identify areas of concern for environmental impact, user safety, and accessibility.

Stakeholder Engagement

- Liaise with key stakeholders, including Monmouthshire County Council Highways team, Monmouthshire County Council Countryside team, and the Wye Valley National Landscape team. Whilst ongoing liaison with the Client team has been undertaken, discussion with wider stakeholders and/or steering group members is yet to be held.

Options scenarios

- Propose suggestions for practical, prioritized interventions to address identified issues, including surface repairs, improved drainage, and restoration of natural and cultural/historical features.
- Develop options for improved signage, including advisory and regulatory signs to inform users about appropriate use, route conditions, and conflict mitigation.

The instructed audit was to result in:

- A understanding of the current condition of UCRs and their impact on users and the environment.
- Evidence-based range of options for management interventions to improve the usability, safety, and sustainability of these UCRs.
- Identify measures to protect and restore the historical and environmental value of the UCRs

1.4 Report Format

This report includes a description of the works undertaken, the findings for each of the elements outlined in Section 1.3 and suggestions on improvements or items to be considered. At this stage the report is presented as digital only.

1.5 Limitations of Report

This report represents the findings of the brief relating to the proposed end use and is not a comprehensive characterisation and should not be construed as such.

Where preventative, ameliorative or remediation works are required, professional judgement will be used to make recommendations that satisfy the site-specific requirements in accordance with good practice guidance. Consultation with regulatory authorities will be required with respect to proposed works as there may be overriding regional or policy requirements which demand additional work to be undertaken.

It should be noted that both regulations and their interpretation by statutory authorities are continually changing.

This report represents the findings and opinions of experienced geo-environmental and geotechnical specialists. Earth Science Partnership does not provide legal advice, and the advice of lawyers may also be required.

2 Areas of Assessment

As outlined in Section 1.0, the pilot study comprises locations in the Whitebrook and Tintern areas. The Client has provided route names for each of the locations (see Table 1) and the start/end Grid Co-ordinates for each of these have been included.

Tintern Pilot Study Area		Grid Reference (Start)	Grid Reference Finish
1	Church Wood Road	353078E 200030N	352695E 199899N
2	Chapel Hill Road	353208E 199854N	352321E 198582N
3	Tout Road	351839E 198522N	351566E 198536N
4	Horse Way/Glynwood Road	351270E 199591N	350824E 200175N
5	Tintern Road	353050E 200875N	351860E 201800N
5a	Gurlus Grove Road (northern spur from Tintern Road)	352527E 201485N	352560E 201734N
Whitebrook Pilot Study Area			
1	School Lane	352262E 206475N	352495E 206448N
2	Multiple roads to include Maypole Road, Pen Y Fan Road, Chapel Road, Glyn Road & Moor Lane	352590E 205474N	353579E 206418N
3	Ginny's Lane/Manor Road	353387E 206545N	353025E 206488N
4	Grove road	353365E 206888N	359562E 207916N
5	Robin's Way/Narth Road	352916E 206888N	352540E 206762N
6	'Woodland Road'	352256E 206717N	352012E 207054N

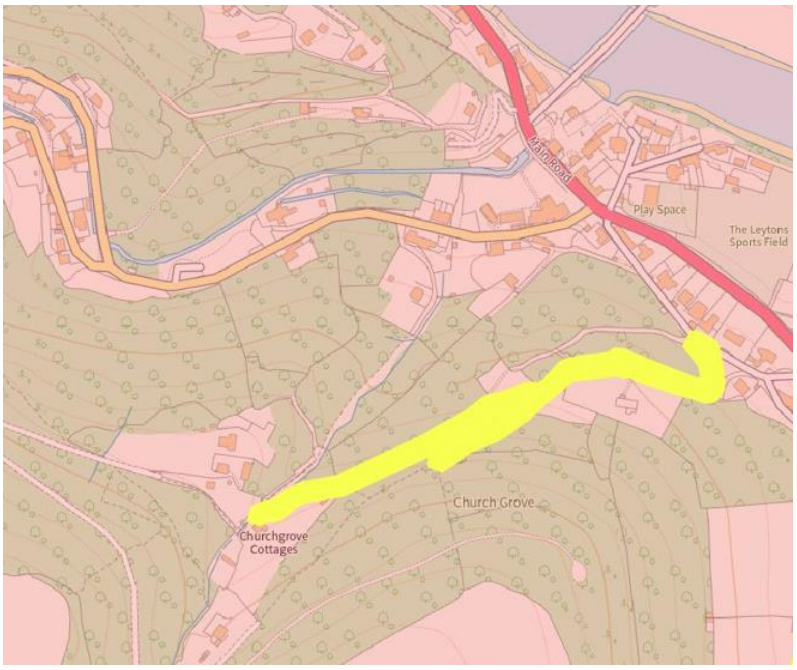
Each of the areas/routes are discussed individually in the following sections of this document.

3 Tintern Pilot Area

3.1 Church Wood Road

3.1.1 General Location Details

The Church Wood Road starts at Grid Reference 353078E, 200030N and was followed to the termination of the route at Grid Reference 352695E, 199899N. The approximate route as presented by the Client is indicated on Insert 3 below.



Insert 3: Church Wood Road

Church Road is accessed from an unnamed road off the A466 within Tintern; its initial steep section up towards St Mary's Church was found to be well-constructed, comprised of embedded stone surfacing that provided a stable and durable walking surface. No visible defects or signs of material failure were observed in this section.

As the route progressed further, the embedded stone was no longer prevalent, and the route eventually reached a peak before transitioning downhill, where a marked deterioration in surface condition was noted. The constructed stone surface transitioned into an uneven and poorly defined terrain, heavily covered with leaf litter and organic debris. This obscured the underlying material and made the route increasingly difficult to navigate, particularly in wet or low-visibility conditions. Dense surrounding vegetation, including encroaching tree roots and overhanging branches, presents a potential obstruction to safe passage and indicates limited routine maintenance.

See Insert 4 for a general view of the route and the photographic volumes in the appendices for the full photographic volume.

Insert 4: General View of Route (Singular Marker Post in Left Foreground)

Some possible evidence for vehicle use is noted at the start of the route, off the A466, with flattened vegetation and tyre tracks noted , however, whilst deterioration is noted in the upper portions, no obvious evidence for significant vehicle use/damage is identified beyond the footpath marker.

3.1.2 Drainage

A stream ran parallel to the route but at a much lower level, on the right-hand side, serving as a natural drainage feature within the landscape. The streambed contained scattered rock deposits of varying sizes, some of which appeared to have shifted or been displaced by flowing water with occasional small drops/waterfalls. These deposits may influence the direction and speed of water movement during periods of heavy rainfall, potentially altering drainage patterns in the immediate area.

3.1.3 Structural

The route followed a steep incline and was supported on the left-hand side by a retaining wall, situated just before the approach to the adjacent church. At the time of the survey, the wall appeared to be in fair structural condition, with no immediate signs of collapse or significant displacement. However, it was heavily obscured by dense vegetation, including overgrown shrubs, climbing plants, and low-hanging branches, which made a full and thorough visual inspection difficult. The extent of the overgrowth raises concerns, as prolonged vegetation cover can trap moisture against the stonework, accelerate weathering, and promote root ingress into the wall's structure. The nature of the wall would present challenges with any repair – it would be envisaged that local repairs could be undertaken where stones have become loose, which may be constructed in a dry wall.

3.1.4 Erosion

As the route descends downhill, the impact of erosion becomes more evident. The combination of water runoff and the natural slope have led to significant soil displacement in certain areas, causing uneven terrain.

In some sections, the erosion has exposed underlying substrates, further compromising the stability of the route. These areas are particularly hazardous in wet conditions, where water runoff exacerbates the erosion process, deepening ruts and making the surface even more difficult to traverse. The gradual loss of material in these sections has contributed to the overall deterioration of the route, reducing both its safety and long-term durability.

3.1.5 Signage

Some general signage was present at the start of the route, near the church, however, this was infrequent and clear way markers comprised wooden “yellow arrow” footpath signage.

As a UCR is not a footpath, existing signage could be considered to be inaccurate/misleading, and any signage (including improvements) should be carefully worded so as not to create confusion between UCRs and adjoining rights of way.

3.1.6 Suggestions For Improvement

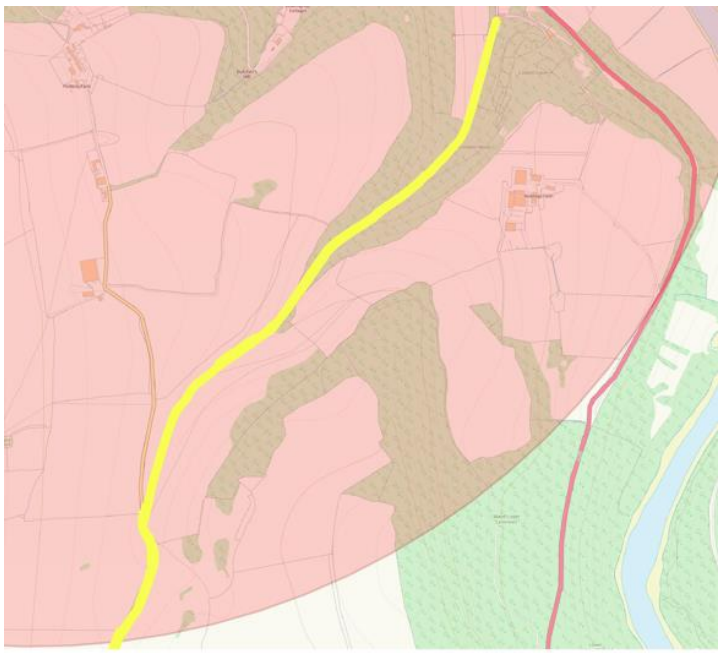
Much of the path is difficult to access, therefore implementing improvements will be difficult from an access perspective. However, there are low cost and simpler methods that could be implemented:

- The stream running parallel to the route should be stabilised through repositioning of displaced rocks, installation of small check dams, and reinforcement of banks using soft engineering methods such as coir rolls and native planting.
- To address structural concerns, dense vegetation around the retaining wall should be carefully removed to facilitate a thorough inspection. Any required minor repairs, such as stone resetting or repointing, should be carried out using appropriate materials, and a long-term vegetation control and inspection regime should be established.
- Eroded sections should be regraded and stabilised using suitable aggregates, with drainage features like water bars or cross-drains installed to control runoff. The addition of edging and slope vegetation would further reduce soil displacement, helping to restore the route’s integrity and improve safety for users.
- Improve signage along the route, including public advice on allowable use at different sections of the route. There does not appear the space to separate pedestrian users from vehicular/other users and this will need addressing through the improved signage, which could include advice on narrowing of the route/lack of passing places/likely interaction with other route users.

3.2 Chapel Hill Road

3.2.1 General Location Details

Chapel Hill Road starts at Grid Reference 353208E, 199854N and was followed to the termination of the route at Grid Reference 352321E, 198592N. The approximate route as presented by the Client is indicated on Insert 5 below.



Insert 5: Chapel Hill Road

Chapel Hill Road was found to be in poor condition, characterised by a rocky, uneven, and unstable surface that presented challenges for both pedestrian access and long-term durability. The loose and irregular stone composition made the path difficult to navigate safely, with frequent shifts underfoot and little structural cohesion to support sustained use. Several sections along the route exhibited clear signs of surface water ingress, including pooled water, damp patches, and softened ground.

One section of the route has seen a recent collapse of the embankment which supported the field above which had caused a narrowing of the route and can only be easily accessed by walkers and making access more difficult for other users. Further south of this area, the route became less rocky and was more a traditional farm access route. Noting there was a significant narrowing due to vegetation from each side of the hedgerow, the route eventually joined Penterry Farm Access Road.

Whilst the route is blocked by the collapse around the mid-point, vehicle use is evidence both before and beyond the collapse and identified as tyre tracks (both four and two wheeled vehicles) and crude repair work (potholes filled with stone blocks etc.) It is not clear if this is from current use or from use prior to the collapse.

See Insert 6 for a general view of the route and the photographic volumes in the appendices for the full photographic volume.

Insert 6: General View of Route

3.2.2 Drainage

A culvert was observed at the start of the route which pipes Coldwell Spring to the River Wye. It was protected with trash grills with CCTV monitoring indicating that the culvert is susceptible to flooding. It was also evident the route is subject to frequent or heavy water flow, likely because of surface runoff or periodic flooding. The presence of this drainage infrastructure indicates an effort to manage excess water and reduce the risk of washout or pooling along the route. However, its location at the entrance may also imply that flooding or water accumulation begins near the top of the route and flows downhill. Further along, logs had been installed, acting as water bars or log erosion barriers. These were laid at a skew, which would direct surface runoff into the adjacent watercourse. These makeshift interventions appear to function as informal channels or deflectors, guiding water away from the main walking line to prevent further erosion or water damage to the route's surface.

3.2.3 Structural

It was evident that the route was being used by motorised vehicles, including 4x4s, as tyre tracks were visible along the route. A section of the embankment appeared to have experienced a landslide, resulting in a significant portion of the slope collapsing. The retaining walls along the route were generally in fair condition, though most were heavily covered in vegetation.

3.2.4 Erosion

Erosion is a significant issue along the route, contributing to the poor condition. Several areas show clear signs of surface water ingress, which suggests that runoff from surrounding terrain is accelerating the erosion process. The route appears to be vulnerable to frequent flooding, as indicated by the presence of a culvert at the start of the route. This constant water flow likely washes away surface material, further destabilising the route and contributing to soil displacement. A section of the embankment has experienced a landslide, which is a direct result of soil erosion. The collapse of the slope highlights the ongoing degradation of the surrounding terrain, suggesting that the area is highly susceptible to further erosion and instability.

3.2.5 Signage

With the exception of a single “Tintern/Marian Way Pilgrimage” marker, no other evidence of signage, direction, pedestrian route or authorised vehicle signage was noted along this route. Whilst the route is linear and includes few junctions, signage is not made clear and the route blockage at the mid-point is not highlighted.

3.2.6 Suggestions For Improvement

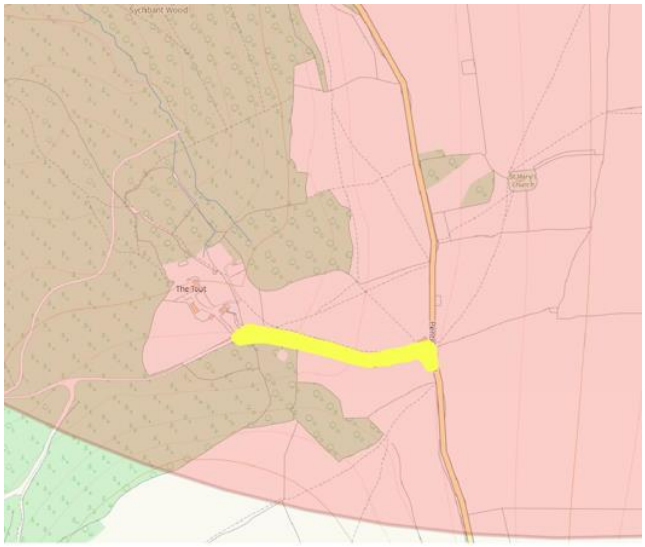
To address the issues identified along the second route in a way that is practical for a rural setting, a series of low-impact, cost-effective interventions are suggested:

- Surface improvements should focus on regrading uneven sections and adding locally sourced gravel or stone to stabilise the surface, improving accessibility while retaining a natural appearance.
- Basic drainage enhancements, such as clearing and maintaining the existing culvert, installing shallow side ditches, and replacing makeshift wooden deflectors with small stone or log water bars, will help manage runoff and reduce erosion.
- Where embankment failure has occurred, the slope could be regraded by hand or with small machinery and stabilised using natural solutions such as coir rolls, timber steps, or native vegetation planting to reduce further slippage.
- To preserve the structural integrity of retaining walls, overgrown vegetation should be cut back manually to allow visual inspection and light maintenance.
- Implementation of general signage on route user suitability and advice on restriction to route which prevents full traverse.

3.3 Tout Road

3.3.1 General Location Details

Tout Road starts at Grid Reference 351839E, 198522N and was followed to the termination of the route at Grid Reference 351566E, 198536N. The approximate route as presented by the Client is indicated on Insert 7 below.



Insert 7: Tout Road

This route featured a dual concrete strip design, and the surface showed limited signs of heavy wear or damage typically associated with vehicle use. Overall, the route was in fair condition, with only minor vegetation encroachment along the edges, indicating that maintenance or natural conditions had so far prevented overgrowth from becoming a significant issue. See Insert 8 for a general view of the route and the appendices for the full photographic volume.

Insert 8: General View of Tout Road

3.3.2 Drainage

A drainage system was integrated into the route and appeared to function as the primary means of managing surface runoff in the area. At the time of the survey, the drainage infrastructure appeared to be operational, with no immediate signs of blockages or overflow. However, the long-term effectiveness of the system will depend on routine maintenance, such as the removal of debris, sediment, and vegetation that could obstruct flow.

3.3.3 Structural

Despite the generally good condition, several cracks were noted in the concrete strips. These may suggest early signs of structural stress or age-related deterioration, potentially requiring monitoring or future maintenance to prevent further degradation.

3.3.4 Erosion

Erosion does not appear to be a major concern, largely due to its dual concrete strip design. The lack of vehicle usage off the concrete track use has limited the physical disturbance of the surface, reducing the typical erosion risks associated with ruts and soil compaction. As a result, the surface remains in fair condition with only minimal wear and tear.

3.3.5 Signage

No obvious signage is present along Tout Road, with the exception of “Private Access” signs near the end of the walked route. Immediately adjacent to Tout Road is a yellow public rights of way marker that directs pedestrian users over a stile and through an adjacent field (see Insert 9). User information for Tout Road is not made clear and signage could be improved to clarify rights and advise that the UCR terminates at “The Tout” and becomes a bridleway.

Insert 9: Pedestrian Marker Directing Away From Tout Road

3.3.6 Suggestions For Improvement

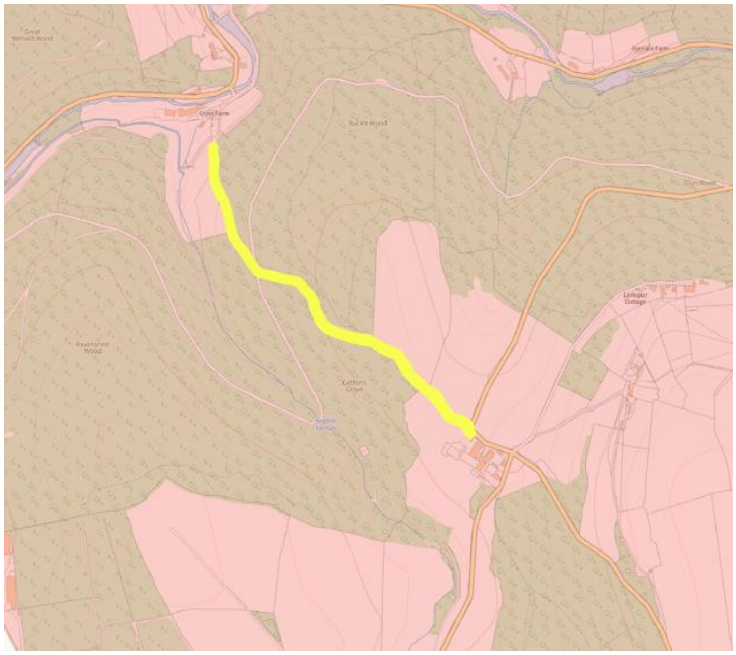
Although there was some minor wear and tear, the overall condition was good, and no suggestions were necessary aside from updated signage.

The route would benefit from improved signage to identify permitted users and restriction further along where it becomes a bridleway.

3.4 Horse Way/Glynwood Road

3.4.1 General Location Details

The Horse Way/Glynwood Road section starts at Grid Reference 351270E, 199591N and was followed to the termination of the route at Grid Reference 350824E, 200175N. The approximate route as presented by the Client is indicated on Insert 10 below.



Insert 10: Horse Way/Glynwood Road

This route showed clear and consistent evidence of motorised and equine activity, which may have contributed to the deterioration of the route's structural integrity in multiple sections. Tyre tracks, surface rutting, and areas of displacement were observed, particularly where the ground was softer or less supported. Several parts of the route were heavily covered in fallen leaves, which obscured the rocky substrate beneath making the route unpredictable for users. Despite these conditions, the route remained generally passable on foot during the visit.

3.4.2 Drainage

The route concluded at a small bridge spanning a narrow watercourse, marking a transition point between the route and the surrounding landscape. At this location, a sluice gate had been installed, playing a crucial role in the management of water flow through the channel. The presence of the gate suggests a deliberate intervention to control water levels, particularly during periods of heavy rainfall or increased runoff from the adjacent land which were used to create fishing ponds. By adjusting the gate to regulate the volume and speed of water passing through, it helps to prevent sudden surges downstream, which could otherwise lead to flooding, bank erosion, or damage to infrastructure.

3.4.3 Structural

Informal dry-stone walls were observed along various sections of the route, providing essential support to adjacent embankments and helping to stabilise the route, particularly where there were changes in elevation or steep, sloping ground.

These walls play a critical role in preventing soil slippage and erosion onto the route, especially in areas that may be vulnerable to heavy rainfall or prolonged saturation. The structures were largely covered in moss and other vegetation, which is indicative of consistent damp conditions in the surrounding environment—likely due to limited sunlight, poor airflow, or natural water retention in the soil.

3.4.4 Erosion

Erosion is a prominent issue, primarily driven by ongoing motorised vehicle activity. Clear evidence of erosion was found in the form of tyre tracks, surface rutting, and areas of soil displacement, especially in sections where the ground is softer or less supported. These disturbances not only degrade the surface but also accelerate the process of soil erosion, with water runoff potentially exacerbating the damage by further displacing material in the ruts.

3.4.5 Signage

There is little evidence of signage at the start of the route identifying what users the route is suitable for. Whilst infrequent, along the route there are markers and wooden bollards which may obstruct access for some route users (see Insert 11). There is a junction between the UCR and a Public Rights of Way, and signage is not clear on what users are permitted where the UCR adjoins the right of way.

Insert 11: General View of Route Separation/Bollard Use and Way Market to Right

At the end of the route, a single sign is present indicating that vehicular use of the forestry track is prohibited, however general vehicular use of the UCR is not prohibited. Discussions with adjacent residents, suggests that whilst now less frequent, there are periods of 4x4 use along the route, which is not prevented by the bollards.

3.4.6 Suggestions For Improvement

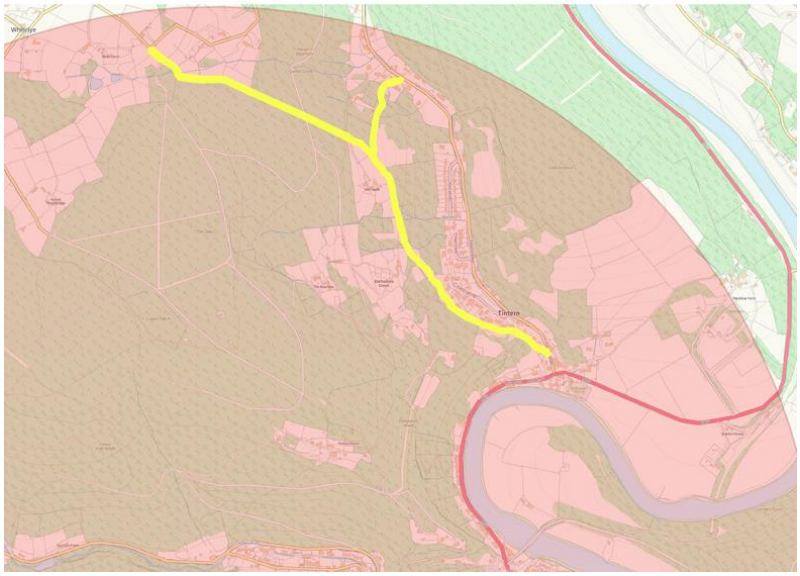
To address the deterioration and improve its long-term resilience, a series of practical interventions are suggested:

- In areas of surface rutting and displacement, targeted regrading should be carried out, followed by the addition of compacted gravel or crushed stone to restore a level, durable surface.
- Where fallen leaves conceal unstable ground, seasonal clearance is advised to maintain visibility and safe footing.
- The existing sluice gate at the bridge crossing should be routinely inspected and kept clear of debris to ensure continued effective water regulation; if manually operated, a schedule of checks before and after heavy rain should be established.
- The moss-covered retaining walls should be gently cleared of vegetation to allow for structural inspections, while maintaining some cover for ecological reasons where appropriate.
- Any loose or displaced stones should be reset to preserve wall stability and prevent soil slippage.
- In erosion-prone areas, installing shallow side ditches or log water bars will help to divert runoff away from the route and reduce further degradation. These low-cost, low-maintenance measures can be implemented using hand tools or small machinery and are well suited to the access limitations and landscape sensitivities typical of rural environments.
- Improve signage along the route for all users at junctions, including public advice on allowable/prohibited use. Consideration will need to be given to how to improve/replace the use of wooden bollards whilst maintaining bridle way access.

3.5 Tintern Road

3.5.1 General Location Details

Tintern Road starts at Grid Reference 353050E, 200875N and was followed to the termination of the route at Grid Reference 351850E, 201800N. The approximate route as presented by the Client is indicated on Insert 12 below.



Insert 12: Tintern Road

Tintern Road began with a steep incline and was in fair condition, composed primarily of gravel. Evidence of excavation along the embankment suggested the route had been widened to accommodate larger vehicles. Exposed tree roots and large rocks were visible within these embankments. Further along the route, rocks had accumulated in the centre of the route, though it remained navigable on foot.

3.5.2 Drainage

Sandbags had been strategically placed along the slope leading down to the stream, arranged in a stepped formation that appeared to function both as makeshift steps and as an informal flood prevention measure. Their positioning suggests a practical, low-cost intervention intended to manage surface water runoff and stabilise the ground in an area likely prone to erosion or high foot traffic. By creating a series of stepped levels, the sandbags help slow the flow of water down the slope during heavy rainfall, reducing the potential for soil displacement and minimising the risk of scouring at the stream edge.

3.5.3 Structural

The retaining walls were generally in fair condition, though heavily moss-covered. In several areas, early signs of structural failure were evident. These included minor displacements, gaps between stones, and bulging in parts of the wall where the pressure from the adjacent embankment appeared uneven. A few sections showed more advanced deterioration, with stones having already dislodged or collapsed, posing a potential hazard to route users and increasing the risk of further failure if not addressed.

3.5.4 Erosion

Erosion appears to be a concern along the route, particularly in areas where the embankments have been excavated to accommodate larger vehicles (see Insert 13). The excavation has likely disturbed the natural slope, contributing to soil instability and increasing the risk of further erosion along the route's edges.

Further along the route, beyond Hill Farm, a section demonstrates significant erosion. The accumulation of rocks in the centre of the route suggests that erosion is causing material to wash or fall from the embankments, which could lead to further displacement of gravel and other surface materials. While the route remains passable on foot, the shifting of rocks and gravel indicates that erosion may gradually worsen, particularly in areas where water runoff from the incline can wash loose material down the route. Clear evidence of vehicular use (motorbike) use in this upper portion is noted.

Insert 13: Widening of Lower Sections of Tintern Road (on left) and Significant Erosion in Upper Sections (on right)

3.5.5 Signage

With the exception of a single “No Vehicle Entry” sign at the start of the route, no obvious route/advice markers were present.

3.5.6 Suggestions For Improvement

To improve the condition and long-term stability of the route, a targeted combination of structural reinforcement, drainage management, and erosion control is suggested, using practical methods appropriate for rural access routes:

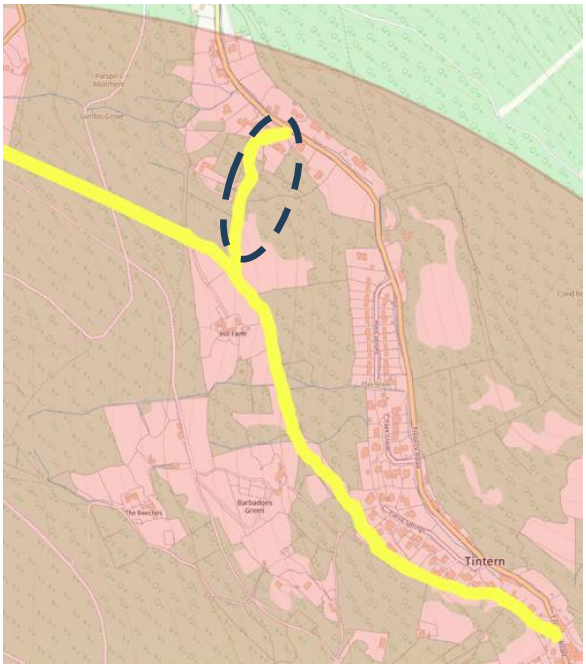
- The excavated embankments could be stabilised with natural solutions such as geotextile matting, timber crib walls, or live staking with deep-rooted native plants to bind the soil and reduce further slippage.
- The current use of sandbags as makeshift steps and drainage controls could be upgraded with more durable materials such as timber risers, rock steps, or gabion baskets filled with local stone to improve both function and longevity.

- Retaining walls showing signs of bulging, displacement, or collapse should be prioritised for repair — this may involve resetting or replacing dislodged stones and rebuilding sections using dry-stone or mortared techniques, depending on access and available materials.
- Vegetation on the walls should be carefully cleared to enable inspection, while avoiding unnecessary disturbance to mature root systems that may currently provide stabilising benefit.
- Additional drainage measures such as shallow swales, water bars, or stone-lined channels should be installed intermittently along the slope to intercept and redirect surface water, reducing the movement of loose gravel and embedded rocks.
- Implementation of clear signage advising on the use of the route. Identification of the exact point that the Gurlas Grove spur branches from the Tintern Road route (see Section 3.6) should be signed for advice.

3.6 Gurlus Grove Road (Spur to Tintern Road)

3.6.1 General Location Details

The Gurlus Grove Road is a spur to the previous Tintern Road section (see Section 3.5), it starts at Grid Reference 352527E, 201485N and was followed to the termination of the route at Grid Reference 352560E, 201734N. The approximate route as presented by the Client is indicated on Insert 14 below.



Insert 14: Gurlas Grove (spur to Tintern Road)

The route began with a steep decline which was largely covered in leaves with rocks underneath. As the route continued, the gradient levelled out slightly, but the surface remained irregular and difficult to traverse due to the continued presence of sizable rocks embedded in the trail. Additionally, tree roots and overhanging branches encroached on the trail in multiple areas, adding further obstacles and reducing the overall usability of the route.

3.6.2 Drainage

No formal drainage infrastructure, such as culverts, side ditches, or cross-drains, was observed along the surveyed route. The absence of visible drainage features could raise concerns regarding the potential for surface water accumulation and subsequent erosion or deterioration of the routeway.

3.6.3 Structural

The retaining wall alongside the route appeared to be in fair condition overall, serving its intended purpose of stabilising the adjacent slope and preventing soil erosion onto the route. However, the wall was heavily covered in moss and other vegetation, which could indicate that the area experiences prolonged damp conditions.

3.6.4 Erosion

The tree roots and overhanging branches encroaching on the route may be indicative of erosion, as the soil around the roots could be weakening and shifting. This encroachment could indicate that the soil surrounding the tree roots is gradually weakening, shifting, or being washed away potentially due to surface water runoff, foot traffic, or natural wear over time.

Insert 15: Typical view of Gurlas Grove (spur to Tintern Road)

3.6.5 Signage

With the exception of a gate at the end of the route, no obvious evidence for signage was noted along the route.

3.6.6 Suggestions For Improvement

To address the issues identified along the route, a series of low-impact, practical improvements tailored to the rural context should be implemented:

- The unstable, rocky incline at the beginning of the route should be regraded, with larger loose stones securely embedded into the surface to create a more stable surface. In areas where the incline is particularly steep, consideration could be given to steps constructed from timber sleepers or embedded stone, however, this would need confirmation of suitability on a UCR.
- The deep ditch crossing the route should be backfilled with compacted aggregate or bridged with a timber or stone crossing to restore accessibility and prevent further widening due to foot traffic or water flow.
- While no formal drainage system is present, targeted drainage improvements are suggested to reduce further erosion such as installing shallow side ditches, stone-lined cross drains, or log water bars to redirect runoff away from vulnerable areas.

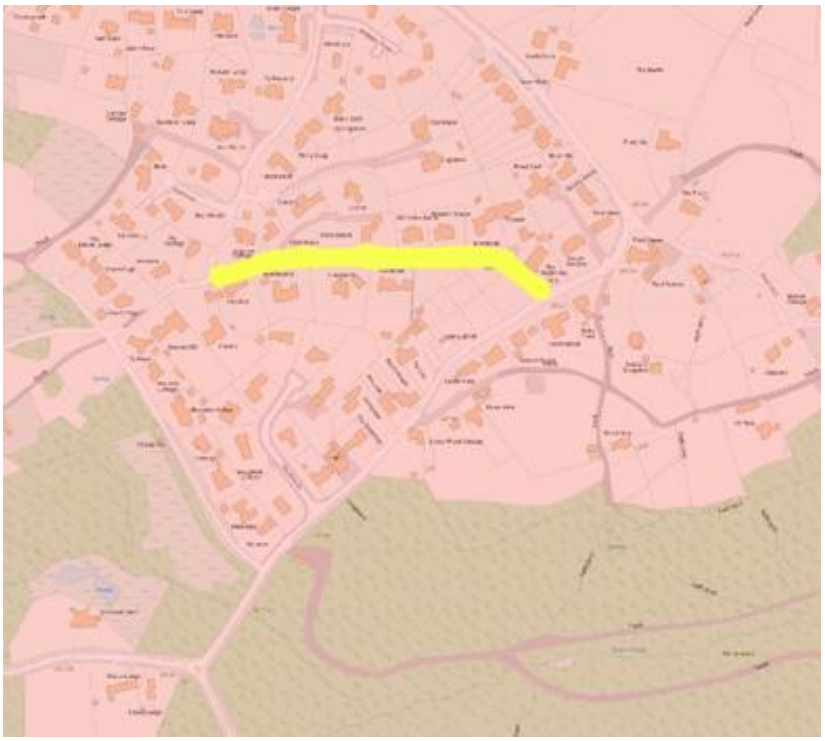
- The overhanging branches and encroaching vegetation should be cut back to improve visibility, reduce physical obstructions, and prevent moisture retention along the route's edge.
- The retaining wall, though structurally fair, should be gently cleared of dense moss and growth to enable periodic inspections and allow drying of the stonework, which will help preserve its longevity. Any gaps or signs of movement in the wall should be monitored and repaired using traditional dry-stone methods where applicable.

4 Whitebrook Pilot Area

4.1 School Lane

4.1.1 General Locations Details

School Lane starts at Grid Reference 352262E, 206475N and was followed to the termination of the route at Grid Reference 352495E, 206448N. The approximate route as presented by the Client is indicated on Insert 16 below.



Insert 16: School Lane

School lane consists of a wide gravel trail that appeared to be well-maintained and easily navigable. The surface was compact and generally even, making it suitable for walking, cycling, and vehicular access. The route was relatively flat throughout, with only gentle inclines that would pose little difficulty for most users, including those with mobility issues. As the route wound through the area, it passed by several residential properties, with homes situated on either side at various points. Mature trees lined parts of the route, and there were retaining walls along certain sections, likely serving to manage elevation changes and prevent soil erosion from adjacent properties (see Insert 13).

4.1.2 Drainage

No formal drainage infrastructure, such as culverts, side ditches, or cross-drains, was observed along the surveyed route. The absence of visible drainage features could typically raise concerns regarding the potential for surface water accumulation and subsequent erosion or deterioration of the routeway. However, in this case, the gravel construction of the route plays a critical role in mitigating such risks.

Gravel surfaces are inherently permeable and allow rainwater to infiltrate through the voids between the aggregate particles. This characteristic promotes natural infiltration and reduces the likelihood of surface runoff, ponding, or water channelling that could otherwise compromise the structural integrity of the route.

Insert 17: General View of Route

4.1.3 Structural

Retaining walls were observed on both sides of the route, the walls appeared to be primarily of dry-stone construction. Their alignment and overall geometry remained largely intact, indicating that they are still performing their intended purpose. Notably, the walls exhibited significant biological colonisation, with visible moss and other vegetative growth covering large surface areas. While such growth is often superficial, it may indicate prolonged exposure to moisture and, over time, could contribute to material degradation. Localised areas showed signs of deterioration, including displaced or loose stones, suggesting possible settlement or loss of material cohesion in those sections. Although these issues did not appear to compromise the overall stability of the structures at this stage, they may warrant further investigation to assess long-term performance and the potential need for targeted remediation. In general, the retaining walls were assessed to be in fair condition, but ongoing monitoring and maintenance would be advisable to prevent future structural decline.

4.1.4 Erosion

Tyre tracks were visible in several sections of the route, suggesting occasional vehicular use. Despite this, the route exhibited minimal signs of erosion or surface degradation. This can be attributed to the route's gravel construction, which is inherently permeable and capable of distributing loads more evenly compared to finer or more cohesive soils.

4.1.5 Signage

Whilst no particular signage is in use, the route is well maintained, appearing to serve all users. Whilst a combined use route, no evidence of substantial misuse is evident and there are some areas where space is available for users to pass each other.

4.1.6 Suggestions For Improvement

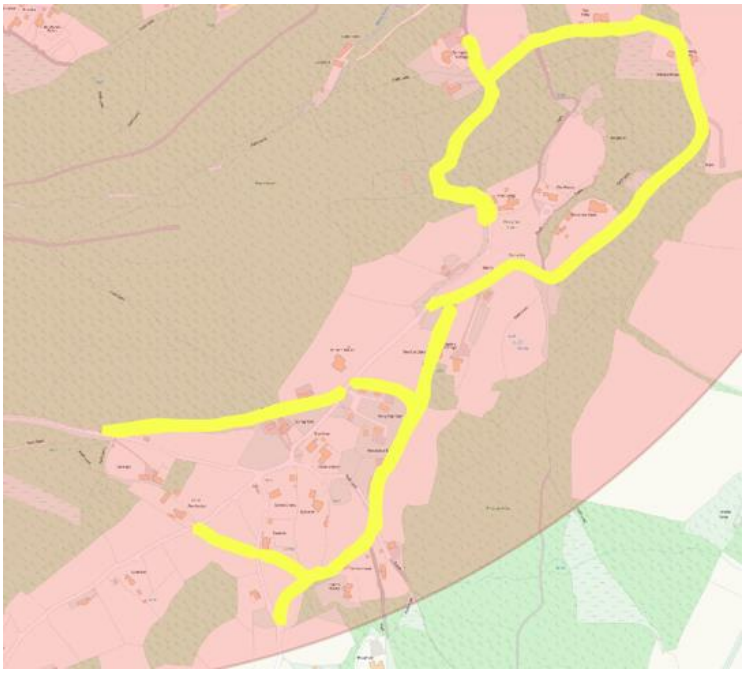
Although there was some minor wear and tear, the overall condition was good, and no suggestions were necessary aside from updated signage to advise that the route has multiple users and care/slow speed is required.

There are some wider areas where passing places could be formalised to further improve safety among users.

4.2 Maypole Road, Pen Y Fan Road, Chapel Road, Glyn Road & Moor Lane

4.2.1 General Locations Details

This section of the Whitebrook pilot area comprises a number of individual road sections that form a roughly circular route. Approximate Grid References are indicated for the start of the wider route is 352590E, 205474N. The approximate route sections as presented by the Client is indicated on Insert 18 below.



Insert 18: Maypole Road Section (multiple sub-routes)

The route surveyed consisted predominantly of an unbound, muddy surface, which exhibited signs of poor drainage throughout. On steeper sections of the route, clear signs of water-induced erosion were observed. The surface had been visibly scoured by runoff, with material displacement forming shallow channels and gullies along the fall line. In some areas, the route had begun to resemble a dried-out riverbed, with exposed tree roots and loose stones scattered across the route, creating hazardous conditions for users. Much of the route was also covered in leaf litter, which, in combination with the saturated ground, could contribute to further surface softening and blockage of any informal drainage routes. Additionally, surrounding vegetation was found to be encroaching upon the route from both sides, narrowing the usable width and potentially deterring use or increasing the risk of slipping on wet foliage.

Evidence of motor vehicle/motorbike use was evident in the form of tyre ruts and vehicle parts left behind (presumably damaged during off road use).

4.2.2 Drainage

The drainage issues along the route are significant, contributing to the deterioration of the route. Poor drainage has resulted in muddy conditions in several sections, with water pooling and creating ponds in areas where it cannot effectively drain away.

The use of a concrete channel has been largely ineffective, as it is visibly eroded and in poor condition, failing to manage the water flow. This ongoing issue of water accumulation exacerbates the wear on the route and increases the risk of further damage from prolonged exposure to standing water.

4.2.3 Structural

The structural integrity of the route has also been compromised in various areas. Collapsed dry stone walls are present, marking a clear sign of neglect and natural wear over time. Additionally, the fencing along the route is in a dilapidated state, with vegetation interfering and obstructing its function. Exposed manhole covers, including one in the verge and another protruding from the route, present trip hazards for pedestrians and could potentially puncture tyres. These structural issues not only diminish the safety and functionality of the route but also indicate a lack of proper maintenance and oversight.

4.2.4 Erosion

Erosion is a notable concern, particularly along the steeper sections of the route. Water flow has severely eroded the route, creating a surface that resembles a riverbed in some places. The loose stones that have accumulated in these eroded areas further destabilise the route, making it difficult to traverse. Exposed tree roots and uneven surfaces add to the hazards, especially for pedestrians and vehicles. The combination of water erosion, poor drainage, and the loose, shifting materials has caused significant degradation of the route, reducing its overall usability and increasing the risk of further erosion without proper intervention.

4.2.5 Signage

Whilst some signage is in use at points of the route (see Insert 13), it is unclear, makes direction advice confusing and does not clearly identify allowable users. A single Natural Resources Wales sign was present identifying that unauthorised cycle trails were present, however, no clear prohibition signage is displayed.

4.2.6 Suggestions For Improvement

To address the defects along the route, a practical, low-impact approach is suggested:

- Installing shallow side ditches, stone-lined grips, and repairing or replacing the damaged concrete channel with natural stone drains or swales will help control water flow and reduce erosion.
- The muddy, unbound surface can be stabilised using compacted crushed stone or geotextile-reinforced gravel, especially on steeper sections, to improve durability and prevent washout.
- Structural issues such as collapsed dry-stone walls could be repaired using traditional methods and broken or overgrown fencing replaced to restore access and safety.
- Exposed manhole covers could be re-set to avoid trip hazards.
- Overhanging vegetation and leaf litter could be cleared to maintain the route's width and prevent further surface softening.

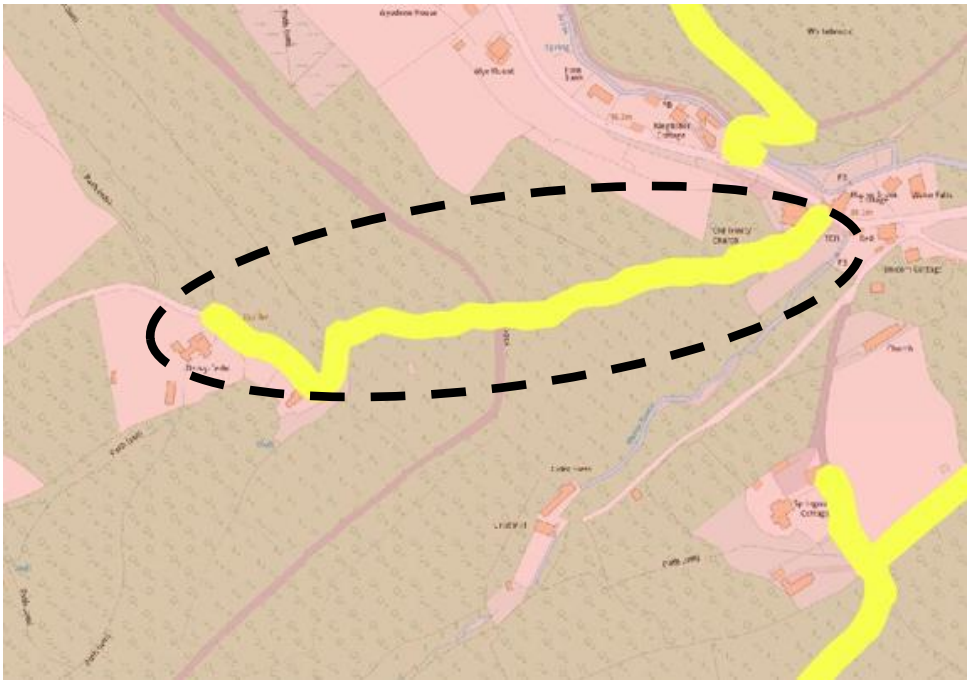
- Heavily worn sections should be regraded, infilled with stone, and supported with basic drainage breaks or planted banks where necessary.
- Significant improvements to signage including route markers, (particularly where the various routes interact) and prohibition markers.

Insert 19: Route Markers At Maypole Road

4.3 Ginny's Lane/Manor Road

4.3.1 General Locations Details

Ginny's Lane starts at Grid Reference 353387E, 206603N and was followed to the termination of the route at Grid Reference 353025E, 206488N. The approximate route as presented by the Client is indicated on Insert 20 below.



Insert 20 Ginny's Lane

The route featured several very steep inclines, which significantly impacted both accessibility and surface stability. The route surface itself was primarily composed of compacted soil and mud, with no formal surfacing or reinforcement evident. Due to the combination of steep gradients and an unbound, muddy surface, the route appeared highly susceptible to erosion, particularly during periods of heavy rainfall. Scattered along the route were large, angular rocks — some partially embedded, others loose on the surface.

These presented clear trip hazards for pedestrians and could pose additional safety concerns for cyclists. Overgrown vegetation was also observed encroaching onto the route, further reducing the effective width and visibility of obstacles such as rocks and uneven terrain. In some sections, dense plant growth appeared to obstruct the route altogether, requiring users to navigate around or through thick underbrush. A general view of the route is presented as Insert 21.

Insert 21: General View of Ginny's Lane

4.3.2 Drainage

While no formal drainage features were noted in this section of the route, the presence of large rocks and uneven terrain suggests that surface water may be poorly managed, potentially leading to minor pooling or runoff issues. Overgrown vegetation could also be contributing to reduced water flow across the route, causing water to stagnate or divert irregularly. Although not as severe as in other areas, the lack of effective drainage may gradually worsen conditions, especially during periods of heavy rainfall.

4.3.3 Structural

Structural features along the route are visibly deteriorating. A fence is collapsing into the route, creating both a physical obstruction and a safety concern. Nearby, a dry-stone wall is in a state of collapse, further compromised by tree roots growing through the structure and displacing stones. These issues indicate a lack of maintenance and pose potential hazards to users. The structural instability also reduces the route's defined boundaries, making it feel narrower and less accessible.

4.3.4 Erosion

Erosion is evident in the general condition of the route, particularly where large rocks have become dislodged and now rest on the walking surface, presenting trip hazards. The encroachment of tree roots and vegetation into the routeway suggests soil movement and a gradual breakdown of the trail's edges. These signs of surface instability highlight ongoing erosion processes, which, if left unaddressed, could lead to further deterioration and reduced usability over time.

4.3.5 Signage

No clear direction or user signage is present at the outset of, or along the route.

4.3.6 Suggestions For Improvement

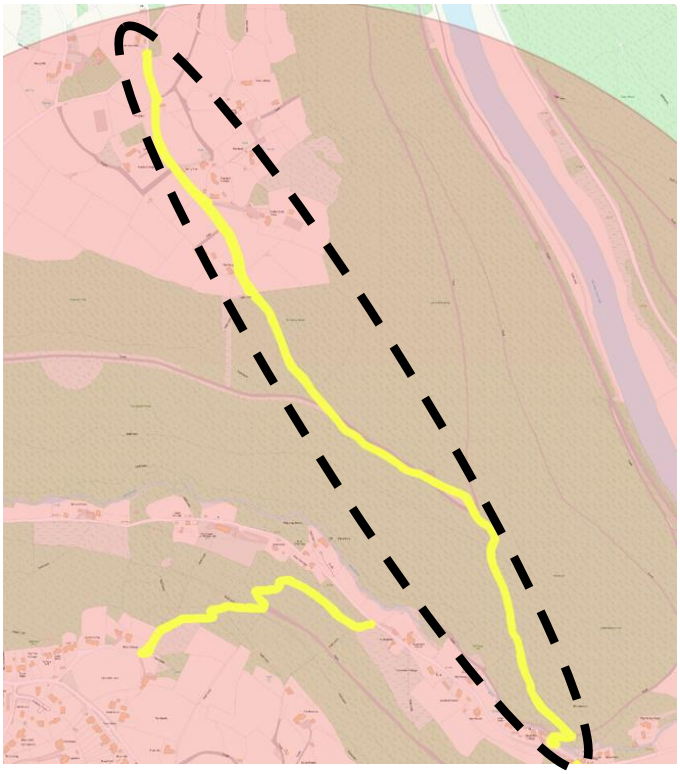
To address the defects along this route, a combination of structural reinforcement, drainage improvement, and vegetation management is needed:

- The steep inclines and unstable, muddy surface can be stabilised by introducing compacted gravel or crushed stone in key areas, particularly on the steeper sections. Loose or dislodged rocks should be removed or secured to prevent trip hazards.
- Proper drainage features such as swales, French drains, or surface water channels should be installed to manage water flow and reduce pooling, while overgrown vegetation should be trimmed to allow for better water flow and improve visibility of obstacles.
- Structural repairs are also necessary, including removing or replacing the collapsing fence and repairing the dry-stone wall by removing tree roots and re-fitting the stones to restore its stability.
- To prevent further erosion, simple measures like small retaining walls or timber edging should be installed in vulnerable sections, and tree roots should be trimmed back, with the surrounding soil reinforced to prevent degradation.
- Implementation of clear direction, user and prohibition signage.

4.4 Grove Road

4.4.1 General Locations Details

Grove Road comprises a long section of UCR, commencing at Grid Reference 353365E, 206603N and was followed to the termination of the route at Grid Reference 359562E, 207916N. The approximate route as presented by the Client is indicated on Insert 22 below.



Insert 22: Grove Road

Due to the varying nature along Grove Road, including changes to route, surface type and condition, a typical view has not been presented, and reference should be made to the photographic volumes in the appendices.

Grove Road showed clear signs of deterioration, particularly in the first third where significant erosion had occurred, resulting in the exposure of large boulders along the route. As the route progressed uphill, the route began to narrow, and the surface condition declined noticeably. Loose rocks and exposed tree roots were present along the route, creating potential tripping hazards and making navigation difficult. A deep central channel had formed within the route, likely because of repeated motorbike use, further contributing to the degraded condition. The upper section transitioned into a tarmac surface, which was observed to be in relatively good condition with minimal defects. Additionally, a collapsed tree was observed obstructing part of the route, compounding the accessibility and safety issues.

4.4.2 Drainage

Drainage infrastructure is present at the beginning of the route and appears to be in fair condition, effectively managing water at the upper section.

Further along, within a wider section of the route, several existing culverts were identified. However, these culverts require maintenance, as they are partially blocked with sediment and leaf build-up, limiting their effectiveness. If left unaddressed, this could contribute to water pooling and further surface degradation during periods of heavy rainfall.

4.4.3 Structural

Where retaining walls were present along the route, they appeared to be in a deteriorated state, with loose or dislodged stones and significant overgrowth of vegetation obscuring much of their structure. These conditions suggest a lack of recent maintenance and possible structural instability in some sections. Fencing and gates were intermittently present along the route, likely serving to control access or delineate boundaries. In areas with steep inclines, improvised steps had been constructed using timber and boulders, indicating an attempt to improve access and stability on challenging sections of the route. While functional to some degree, these makeshift solutions may require formalisation to ensure long-term safety and durability.

4.4.4 Erosion

Erosion is a prominent issue in the first third of the route, where the surface has deteriorated significantly. Large boulders have become exposed, and a deep channel, approximately 0.5 metres deep, has been carved into the route, likely because of repeated motorbike use. This concentrated wear has destabilised the surface, making it increasingly difficult to traverse and raising concerns about continued degradation without intervention. It was also observed that vehicle number plates had been repurposed and positioned along sections of the route, seemingly to mark out specific routes or checkpoints for informal motorbike races. The placement and frequency of these plates suggest organised or repeated use of the area for off-road riding activities. This informal signage, combined with visible tyre damage and erosion along the route, indicates that the route is being actively used by motorbike riders. Such activity poses a significant risk to the condition of the route, accelerates surface degradation, and may create conflicts with other users such as walkers or cyclists.

4.4.5 Signage

The top section is surfaced with tarmac and is currently in good condition, showing minimal signs of wear. A broken signpost marking unauthorised cycle trails was observed in the woodland area near the upper portion of the route, indicating a lack of upkeep in wayfinding infrastructure. Additionally, signs of motorbike and vehicle use were noted in this woodland section, which may be contributing to both structural wear and general trail disturbance.

No clear route marking is present for the Grove Road, and it is easy to stray from the route, into Grove Wood and adjacent forestry route, potentially increasing iteration between pedestrian and vehicular traffic.

4.4.6 Suggestions For Improvement

To address the defects on this route, several measures are necessary to stabilise the route, improve safety, and restore functionality:

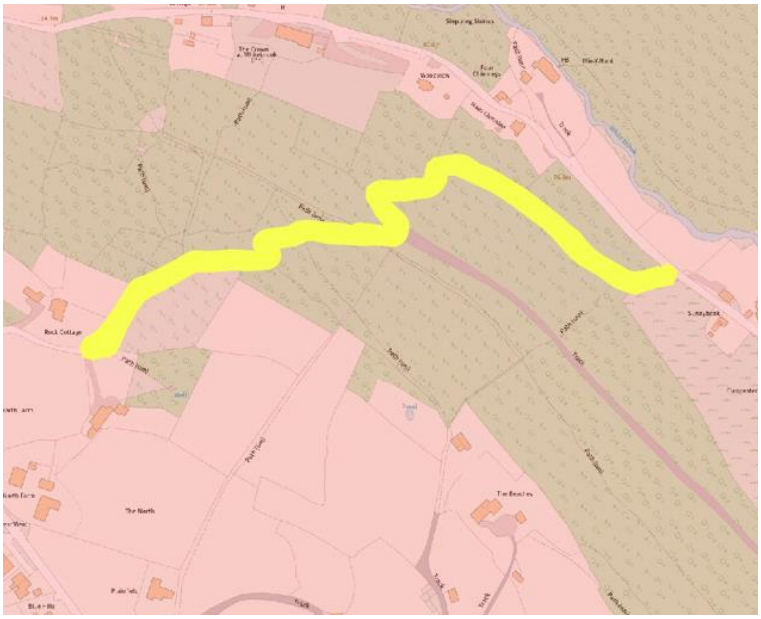
- Significant erosion and exposure of large boulders in the lower sections should be addressed by reinforcing the surface with gravel or compacted stone and creating drainage channels to redirect water away from these vulnerable areas.

- For areas which appear to be impacted by motorbike use, especially the deep central channel, the route could be regraded to restore its evenness. If restoration is not possible/feasible, it would be beneficial to install barriers or signage to limit vehicle access, however, the correct legal orders (TRO) would be required for this.
- The loose rocks and exposed tree roots should be removed or secured, and the route should be widened where necessary to ensure safe passage for all users.
- Culverts along the route must be cleared of sediment and debris to restore their full functionality and prevent further water buildup.
- The retaining walls should be repaired by securing loose stones and removing overgrowth to ensure structural stability.
- The use of improvised steps made of timber and boulders should be reviewed with regard to the suitability of their use on a UCR.
- The collapsed tree blocking part of the route should be removed, and any remaining obstructions cleared to maintain access.
- Improvement of signage. In this area, there is the potential for rerouting non vehicle users off the UCR and into Grove Wood/along the Forestry Track, as long as suitable signage and advice is provided. This signage will also need to dissuade vehicle users from then using the newly empowered pedestrian ways.

4.5 Robin's Way/Narth Road

4.5.1 General Locations Details

Robins Way/Narth Road starts at Grid Reference 352916E, 206888N and was followed to the termination of the route at Grid Reference 35250E, 206762N. The approximate route as presented by the Client is indicated on Insert 23 below.



Insert 23: Robins Way/Narth Road

The route surveyed consisted of a muddy, unbound surface with numerous loose rocks scattered along its length, creating uneven and unstable footing. A particularly notable feature was a deep, eroded channel that had formed across the full width of the route where the gradient increased. This channel appeared to be the result of both water runoff and mechanical wear. Evidence of frequent motorbike use was apparent throughout the route, with several sections showing significant surface disruption caused by tyre tracks. These disturbances had further destabilised the route, contributing to its overall poor condition and making it challenging for non-motorised users to navigate safely. A typical view of the route is presented as Insert 24.

4.5.2 Drainage

There is no formal drainage observed along this section of the route, and the lack of water management is contributing to significant surface damage. The deep channel that has formed across the full width of the steep route section indicates prolonged water runoff with no proper diversion, leading to concentrated flow and surface washout. Without intervention, the absence of adequate drainage will continue to accelerate surface degradation and impact the overall usability of the route.

Insert 24: Typical view of Robins Way

4.5.3 Structural

Structural issues are evident along the route, particularly in the condition of the dry-stone walls, which are collapsing in several areas. In some places, large stones from the walls have already fallen onto the route, further obstructing movement and indicating a loss of stability.

The ongoing erosion is likely to undermine these structures even further, especially as the eroded channel widens and continues to eat into the wall foundations. In addition, several fallen trees are blocking the route, and in at least one case, route users have created an informal detour to bypass the obstruction.

4.5.4 Erosion

Erosion is the most significant issue along this stretch of route. A deep eroded channel now spans the full width of a steep section, making the route increasingly difficult and hazardous to navigate. The channel formation appears to be both water and vehicle-induced, with clear signs of motorbike use contributing to surface disturbance. Tyre tracks have torn up several areas, loosening the soil and accelerating the erosion process. Rocks dislodged by the erosion now sit within the route, posing trip hazards and further indicating the ongoing instability of the surface.

4.5.5 Signage

A foot route sign present at the beginning of the route is in poor condition and overgrown. After this sign no other clear signage is present. This route presents as a pedestrian route; however, evidence of motorbike use is noted, suggesting the sign is being ignored, cannot be seen or is inappropriately placed.

4.5.6 Suggestions For Improvement

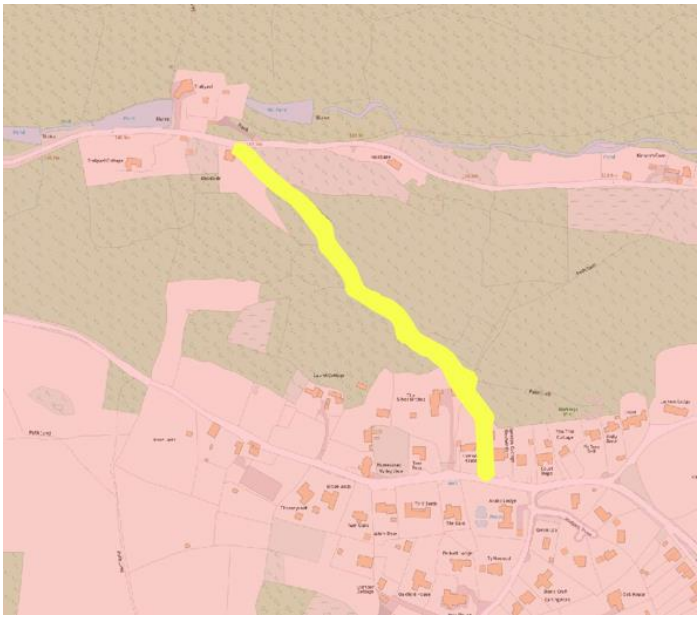
To address the defects observed, several solutions should be implemented to reduce erosion, improve drainage, and restore structural integrity:

- The deep eroded channel should be filled and reinforced with durable material such as gravel, stone, or a compacted base to stabilise the surface and restore a safer, even route.
- Installing proper drainage infrastructure, including culverts or water diversion channels, is crucial to manage water runoff effectively and prevent further surface washout. The channel should be redirected to avoid concentrated water flow that exacerbates erosion.
- To address vehicle-induced damage, restrictions could be used to limit vehicular access, perhaps with physical barriers, signage, or controlled entry points to preserve the route's condition, however, the correct legal orders (TRO) would be required for this.
- In areas with collapsing dry-stone walls, stones should be reset or replaced to restore structural integrity, and overgrowth should be cleared to maintain their stability.
- Fallen trees should be removed to ensure unimpeded passage, and any informal detours created by users should be closed or reformed to prevent further route degradation.
- Surface stabilising techniques, such as adding a gravel or compacted surface layer, would provide safer footing for non-motorised users while reducing the risk of further erosion.
- Improve both directional and useable/prohibition signage.

4.6 Woodland Road

4.6.1 General Locations Details

Woodland Road starts at Grid Reference 352256E, 206717N and was followed to the termination of the route at Grid Reference 352012E, 207054N. The approximate route as presented by the Client is indicated on Insert 25 below.



Insert 25: Woodland Road

Woodland Road consisted of a muddy, loose, uneven surface scattered with rocks, making footing unstable in many areas. Dense vegetation growth was present along much of the route, with some encroachment onto the route itself, contributing to reduced accessibility and visibility. A particularly degraded section featured a wide, eroded channel, where large protruding boulders and additional loose rocks created significant obstacles. Early signs of motorbike activity were also evident, with initial surface damage suggesting the route may be increasingly impacted by off-road use if left unmanaged. A general view of the route is presented as Insert 26.

4.6.2 Drainage

There is no clear indication of formal drainage along this section of the route, which contributes to surface instability and potential water-related damage. The lack of effective water management allows runoff to accumulate in certain areas, exacerbating the erosion process. Without proper drainage, water will continue to flow across the route, further destabilising the surface and contributing to the widening of the eroded channel.

4.6.3 Structural

The structural integrity of the route is deteriorating, particularly with the dry-stone walls, which are beginning to collapse in sections. These walls, which once provided boundaries and stability, are now compromised, with parts of them falling into the route. The lack of maintenance has allowed this process to worsen, and continued erosion may lead to further collapse if not addressed.

Insert 26: Contrasting Conditions Along the Route

4.6.4 Erosion

Erosion is a significant concern along the route, particularly in the areas where the surface is being disturbed by motorbike use. Early signs of tyre tracks tearing up the surface are already visible, which will likely accelerate the rate of erosion. A wide, eroded channel has developed in one section, with large protruding boulders and loose rocks making it increasingly difficult to navigate. These loose rocks and the uneven surface further destabilise the route, presenting potential hazards for pedestrians and vehicles.

4.6.5 Signage

No evidence of directional or permissible/prohibition signage was present along the route. Whilst there is space along areas of the route to accommodate pedestrians and vehicle users, there are pinch points at either end where interaction could occur. In addition to this, the route exists to the rear of a private property, and no signage is present to advise/direct away from the property onto the route.

4.6.6 Suggestions For Improvement

To address the defects on this route, several targeted interventions are needed to restore the route's stability, manage drainage, and ensure safety for all users:

- The route could be reinforced with a more stable surface, such as gravel, crushed stone, or compacted materials, to improve footing and reduce surface instability.
- The wide, eroded channel should be filled with suitable materials like gravel or stone and reinforced with retaining structures to prevent further erosion and stabilise the surface.
- To combat the effects of vehicle use restrictions could be enforced to limit access, or barriers can be implemented to prevent off-road vehicles from damaging the route, however, the correct legal orders (TRO) would be required for this.

- Effective drainage solutions must be installed, such as cross-drains, culverts, or water diversion channels, to manage surface runoff and prevent further water-related damage.
- Vegetation encroaching on the route should be cleared regularly to improve visibility, maintain a safe width, and reduce the risk of slips and falls.
- The dry-stone walls should be repaired by resetting or replacing displaced stones and removing any overgrowth that may compromise their stability.
- Significant improvement to signage. If route is to remain usable for all users, consideration could be given to reroute non vehicle users away from pinch points at the start/finish of the route.

5 Ecological Assessment

An ecological assessment undertaken by TACP has been included as part of this scope of works for both the Tintern and Whitebrook areas.

As discussed/agreed with the Client team, whilst this report has been reviewed and a summary provided below, the full reports are presented as a standalone Phase 1 ecological assessment in Appendix A and should be reviewed separately and in full.

The survey involved a site walkover and preliminary assessment of key habitats, land use and ecological features. The plant species defining the habitat types on site were recorded. Evidence of any invasive plant species subject to legal controls was recorded. The site was assessed for its potential to support protected or notable species in order to identify potential ecological constraints and to guide recommendations for further surveys

5.1 Tintern Study Area

The habitats identified during the Extended Phase 1 Habitat Survey within the site, whilst some key points and their descriptions are summarised below, and an extract of recorded locations is presented as Insert 27 the full ecological surveys (see Appendix A) should be referred to for full detail and context.

5.1.1 Woodland and Scrub

Broad-leaved Woodland

Semi natural areas that do not obviously originate from planting and plantation areas that do, which are dominated by broadleaved trees (less than 10% conifer in the canopy). Species include sycamore (Acer pseudoplatanus), willow (Salix sp.), beech, hazel (Corylus avellana), alder (Alnus glutinosa). Cherry laurel (Prunus laurocerasus) and buddleja (Buddleja davidii) are also present in places. Ground flora species include dogs mercury (Mercurialis perennis)(lesser celandine (Ficaria verna), dandelion (Taraxacum offincionale), herb robert (Geranium robertanium), dock (Rumex sp.)

Coniferous Woodland

Semi natural areas that do not obviously originate from planting and plantation areas that do, which are dominated by coniferous trees (less than 10% broadleaved in the canopy).Species include scots pine (Pinus sylvestris) and douglas fir (Pseudotsuga menziesii).

Areas of recently felled trees, both broadleaved and mixed where the future land use is uncertain, for instance when it is not clear whether they are to be replanted or used for crops.

Scrub (Dense/Continuous and Scattered)

Scrub is seral or climax vegetation dominated by locally native shrubs, usually less than 5 m tall, occasionally with a few scattered trees. Species include hawthorn (Crataegus monogyna), bramble (Rubus fruticosus), dog rose (Rosa canina), blackthorn (Prunus spinosa) and willow species (Salix sp.)

5.1.2 Improved and Semi Improved Grassland

Improved grasslands are those meadows and pastures which have been so affected by heavy grazing, drainage, or the application of herbicides, inorganic fertilisers, slurry or high doses or manure that they have lost many of the species which one could expect to find in an unimproved sward. They have only a very limited range of grasses and a few common forbs, mainly those demanding of nutrients and resistant to grazing. Perennial rye-grass (*Lolium perenne)*, crested dogs tail, white clover *(Trifolium repens)*, sorrel *(Rumex acetosa)*, daisy *(Bellis perennis),* dandelion and buttercup species *(Ranunculus acris* and *Ranunculus bulbosus)*, are typical of improved grassland, while stands of dock Rumex species, common nettle (*Urtica dioica*) and thistles Cirsiurn species indicate local enrichment of the soil by grazing animals

Semi-improved grassland is a transition category made up of grasslands which have been modified by artificial fertilisers, slurry, intensive grazing, herbicides or drainage, and consequently have a range of species which is less diverse and natural than unimproved grasslands. Such grasslands are still of some conservation value.

Neutral grassland is typically enclosed and usually more intensively managed than acid or calcareous grassland (except on roadside verges), this category encompasses a wide range of communities occurring on neutral soils (pH 5.5-7.0).

Species including The following were present which are indicative of neutral conditions when frequent or abundant: Meadow foxtail (Alopecurus pratensis), False Oat-grass (Arrhenatherum elatius), crested dog's-tail Cock's-foot (Dactylis glomerata), Tufted Hair Grass (Deschampsia cespitosa), Tall fescue (Festuca arundinacea) and Meadow fescue (Festuca pratensis). Perennial rye-grass may be present, but when abundant it is indicative of improved grassland (see B4).

5.1.3 Wildlife

Bats

There are many historical bat records throughout Tintern. There are also several stone walls, trees and buildings lining the trails that have potential to support roosting bats throughout the site. The sealed road A466 has a historical record of a Brown Long Eared bat hibernation roost in St. Michael's Church confirmed through DNA analysis. There are other buildings, the majority of which appear to be on private property, that may also support bat roosts. There are several trees within the scheme that have been identified during the Phase 1 assessment as having potential roost features.

Otters

An otter holt was identified on east side of river, approximately 30m from track on east side and 70m on west side of the river. The closest studied UCR is Church Wood Road (see note annotation #56 on Insert 27 below). Supported by SEWBReC records of otter prints on near side of river beside Tintern Abbey Mill from 2018.

Badgers

A badger latrine (one dung pit and one fresh deposit) was spotted in the hedgerow on the southern end of unsealed trail C53.7/U4 on the east side. Badger hair snagged on barbed wire was found on the west side of the trail and a faint trail was seen moving through a western farmer's field. This is likely to be a regular crossing point marked by the latrine, the hair and clear badger routes.

Reptiles

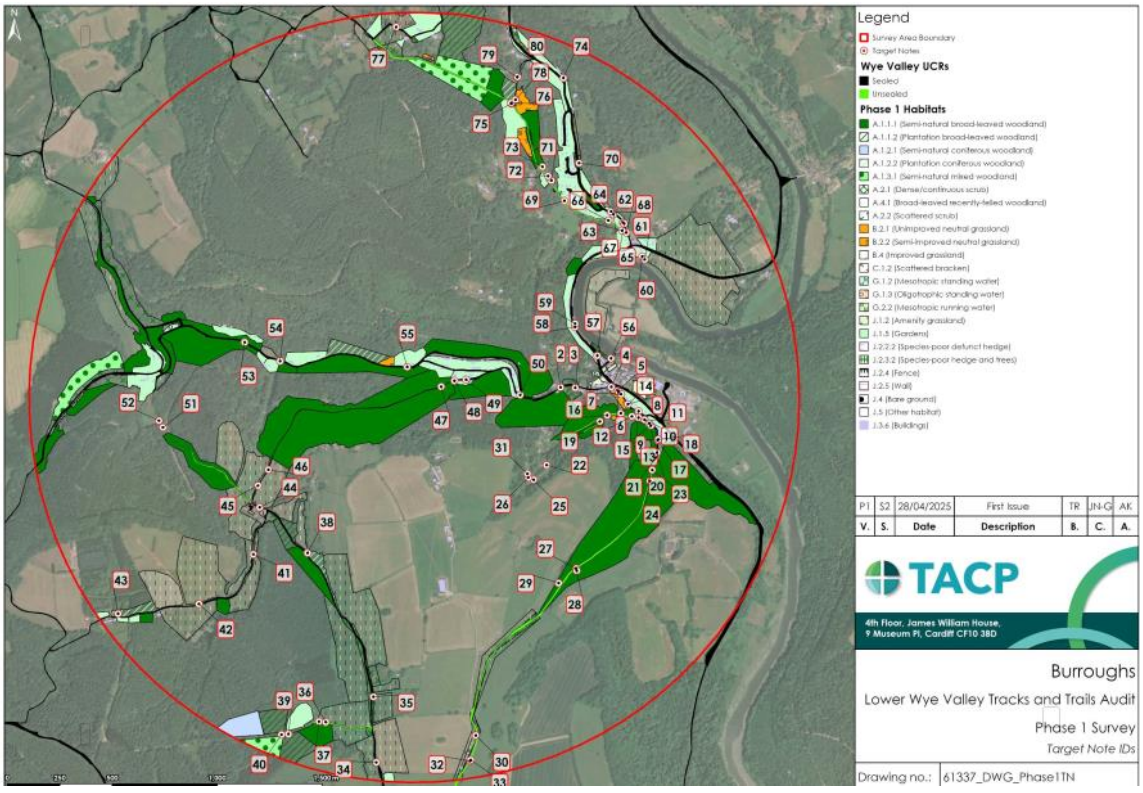
Suitable reptile habitat was identified on site. The stone walls lining many of the tracks and trails could also make suitable reptile hibernacula.

Birds

Birds could nest in the hedgerows lining many of the tracks and trails. Frequent bird activity within hedgerows and around site was spotted during the site walkover.

5.1.4 Invasive Species

There are historical records of Japanese Knotweed (Fallopia japonica), Cotoneaster (Cotoneaster sp.), Cherry laurel (Prunus laurocerasus), Variegated yellow archangel (Lamiastrum galeobdolon subsp. argentatum) and Himalayan balsam (Impatiens glandulifera) within and around site. Very few invasive species were found other than the remains of treated Japanese knotweed by the riverbank on the east side of the sealed road A466 and cherry laurel hedges expanding from private gardens.



Insert 27: Key points of interest identified during ecological survey (full reference is directed toward Appendix A).

5.2 Whitebrook Study Areas

The habitats identified during the Extended Phase 1 Habitat Survey within the site, whilst some key points and their descriptions are summarised below, and an extract of recorded locations is presented as Insert 27 the full ecological surveys (see Appendix A) should be referred to for full detail and context.

5.2.1 Woodland and Scrub

Broad-leaved Woodland

Semi natural areas that do not obviously originate from planting and plantation areas that do, which are dominated by broadleaved trees (less than 10% conifer in the canopy). Species include sycamore (Acer pseudoplatanus), willow (Salix sp.), beech, hazel (Corylus avellana), alder (Alnus glutinosa). Cherry laurel (Prunus laurocerasus) and buddleja (Buddleja davidii) are also present in places. Ground flora species include dogs mercury (Mercurialis perennis)(lesser celandine (Ficaria verna), dandelion (Taraxacum offincionale), herb robert (Geranium robertanium), dock (Rumex sp.)

Coniferous Woodland

Semi natural areas that do not obviously originate from planting and plantation areas that do, which are dominated by coniferous trees (less than 10% broadleaved in the canopy).Species include scots pine (Pinus sylvestris) and douglas fir (Pseudotsuga menziesii).

Areas of recently felled trees, both broadleaved and mixed where the future land use is uncertain, for instance when it is not clear whether they are to be replanted or used for crops.

Scrub (Dense/Continuous and Scattered)

Scrub is seral or climax vegetation dominated by locally native shrubs, usually less than 5 m tall, occasionally with a few scattered trees. Species include hawthorn (Crataegus monogyna), bramble (Rubus fruticosus), dog rose (Rosa canina), blackthorn (Prunus spinosa) and willow species (Salix sp.)

5.2.2 Improved and Semi Improved Grassland

Semi-improved grassland is a transition category made up of grasslands which have been modified by artificial fertilisers, slurry, intensive grazing, herbicides or drainage, and consequently have a range of species which is less diverse and natural than unimproved grasslands. Such grasslands are still of some conservation value.

Neutral grassland is typically enclosed and usually more intensively managed than acid or calcareous grassland (except on roadside verges), this category encompasses a wide range of communities occurring on neutral soils (pH 5.5-7.0).

Species including The following were present which are indicative of neutral conditions when frequent or abundant: Meadow foxtail (*Alopecurus pratensis*), and tufted hair grass (*Deschampsia cespitosa*), perennial rye grass (*Lolium perenne*) was also present, but not enough to be indicative of improved grassland (see B4).

Improved grasslands are those meadows and pastures which have been so affected by heavy grazing, drainage, or the application of herbicides, inorganic fertilisers, slurry or high doses or manure that they have lost many of the species which one could expect to find in an unimproved sward. They have only a very limited range of grasses and a few common forbs, mainly those demanding of nutrients and resistant to grazing. Perennial rye-grass, crested dogs tail, white clover, sorrel, daisy and buttercup species are typical of improved grassland, while stands of dock, common nettle (*Urtica dioica)* and thistles (*Cirsiurn* sp.) indicate local enrichment of the soil by grazing animals

Amenity Grassland comprises intensively managed and regularly mown grasslands, typical of lawns, in which perennial rye-grass, with or without white clover, predominates. Herbs including daisy,

5.2.3 Wildlife

Bats

There are many historical bat records throughout Whitebrook. There are also several stone walls, trees and buildings lining the trails that have potential to support roosting bats throughout the site. There is a historical bat roost record on C49.6 roughly 40m from the track (see Insert 28).

There are other buildings, the majority of which appear to be on private property, that may also support bat roosts. There is a bat box in a wooded area approximately 25 metres from the road at C50.5 (see Insert 28). Considering the droppings present and a ground level visual inspection without the use of artificial light the box appears to be in use, though the species could not be determined.

There are several trees within the scheme that have been identified during the Phase 1 assessment as having potential roost features,

Great Crested Newts

Very few records of great crested newts have been recorded within 5km, however watercourses and garden ponds are present on site, which may provide suitable habitat.

Other Amphibians

Very few records of other amphibians have been recorded within 5km, however watercourses and garden ponds are present on site, which may provide suitable habitat.

Reptiles

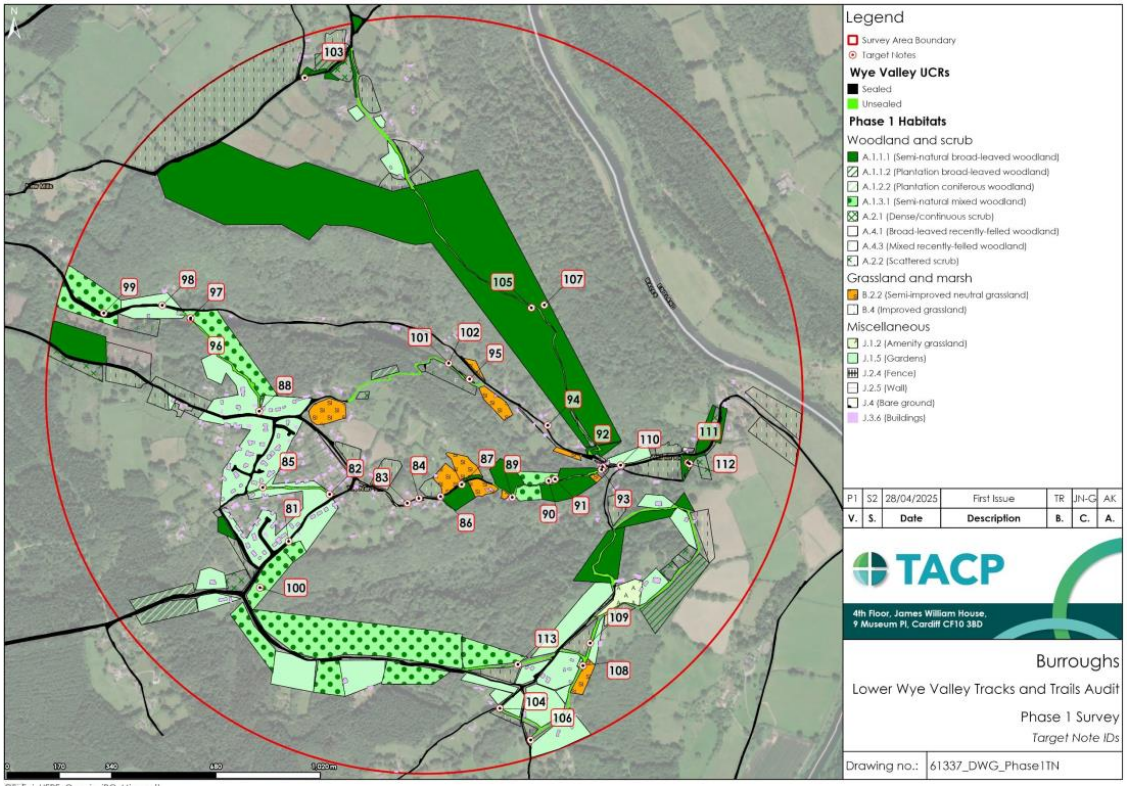
Suitable reptile habitat was identified on site. The stone walls lining many of the tracks and trails could also make suitable reptile hibernacula.

Birds

Birds could nest in the hedgerows lining many of the tracks and trails. Frequent bird activity within hedgerows and around site was spotted during the site walkover.

5.2.4 Invasive Species

There are historical records of Japanese Knotweed (*Fallopia japonica*), Cotoneaster (*Cotoneaster sp.*), Cherry laurel, Variegated yellow archangel (*Lamiastrum galeobdolon subsp. argentatum),* Rhododendron (*Rhododendron ponticum*) and Himalayan balsam (*Impatiens glandulifera*) within and around site, very little evidence of invasives was found other than some patches of variegated yellow archangel and a shrub of Rhododendron (see full report – Appendix A).



Insert 28: Key points of interest identified during ecological survey (full reference is directed toward Appendix A).

6 Discussion, Review and Suggestions

6.1 Aims

The preliminary assessment undertaken to date has focussed on a series of Unclassified County Roads (UCRs) within two pilot areas in Tintern and Whitebrook.

Unsealed Unclassified County Road (UCRs) are part of the public highway network and legally open to all users, under the remit of the Highways Authority at Monmouthshire County Council. Whilst they may run concurrently with foot routes, bridleways or restricted byways, they are not a sub-category of public rights of way.

Due to topography, some route restrictions and surface conditions, they are often inaccessible to standard road vehicles and are primarily used by off road type vehicles, walkers, cyclists and horse riders. Reference should be made to the Client provided Addendum (see Appendix E) which contains definitions for permitted users, the legal status of UCRs and client management responsibilities

The pilot assessment undertaken to date, has considered a series of issues such as:

- Degradation of the surface and structure of the UCRs, exacerbated by steep slopes and high-impact use.
- Potential safety risks to “users” of the UCRs.
- Areas of potential restricted access caused by poor surface conditions/route narrowing/interaction between varying users etc.
- Loss of the natural and cultural fabric of the countryside, including dry stone walls lining sections of the UCRs.

6.2 Suggestions

As part of the scope of works, the Client has requested proportionate suggestions to help improve the conditions along the UCRs, encourage responsible and sustainable use and establish a longer term study for other UCRs.

At present the routes are being utilised by a variety of users. Evidence of warning signage from Natural Resources Wales (NRW) and Gwent Police indicates the misuse of routes (private and public rights of way) adjoining the UCRs by some motorbike/e-bike users.

Along the majority of the routes, there is little scope to fully separate out walkers from other UCR users. As outlined in the discussion for each route throughout this report, there are a number of suggestions which could be utilised as initial steps in improving the concerns/interactions:

6.2.1 Signage

Signage is generally quite poorly implemented along all routes in the pilot study. This relates to both direction/way markers and authorised users signage, however, the is no specified requirement to sign UCRs.

The use of modern, clear markers directing UCR routes and adjoining public rights of way is suggested. Consideration could be given for QR codes/weblinks to be installed on the posts, linking to the Local Authority website for further information.

In some areas where multiple users are accommodated (separate routes for walkers and equine users for example) the signage should be clear in direction. Similarly in areas where 4x4 and motorbike users are/are not permitted (where UCRs are adjacent to other rights of way), this should be clearly communicated, however, this may require involvement of adjacent land owners.

6.2.2 Nuisance

It was evident talking to local users and residents, that there is frustration over UCRs being used by motor vehicles, causing a perceived nuisance. The concern is exacerbated because reports to police can sometimes take many hours to be responded to (due to distance for police travel).

Residents and route users could be encouraged to ensure that extraordinary use/excessive nuisance use is reported. Whilst immediate action may not be possible due to the distances involved, it will help the authorities compile a database of frequency/times etc. which could be used to review legal avenues/recourse.

6.2.3 Erosion/Stability

As outlined in individual sections, some areas/routes would benefit from improvements due to erosion, potential instability in some of historic dry stone walls and man-made widening of the UCRs (e.g. Church Road). The implementation of this and its benefit/importance would need to be addressed on a route by route basis, as whilst general commentary is similar, individual route conditions are quire unique.

6.2.4 Prohibition

UCRs are accessible to all users, however, in some areas restrictions or conditions along the route can affect accessibility. If it became necessary to restrict access to any users (on grounds of safety etc.) each route would need to be examined, and restrictions adopted that were sympathetic in implementation. It would also be necessary implement the correct legal orders (such as TROs) for this.

6.2.5 Continued Review

Following review of this draft report, ESP are to meet with the Client team and local steering group to discuss the findings/suggestions presented. Whilst individual route features were limited, this liaison will also include discussions on whether a GIS record plan can be implemented and also the creation of a risk assessment matrix that route users could download, complete and submit to the Local Authority to keep a “live” record of route conditions and use.