

# Exploring Behavioural Science Research Opportunities to Improve Mountain Safety



**Role title:** Behavioural Science Officer

**Number of placements available:** 1

**Coordinated by:** Partnerships and Communications teams, the Eryri National Park Authority

**Place of work:** Hybrid (office once a week), LL48 6LF. Homeworking for the other 4 days of the week.

**Working hours:** Flexible (core hours 7am-7pm), 37 hours per week. Full time.

**Anticipated start date:** July 2026

**Placement length:** 13 weeks

**Support:** Local travel expenses (from applicant's place of residence to National Park HQ, expenses covered up to a maximum of 60 miles per day at £0.45 per mile). The Eryri National Park Authority will not be able to cover accommodation or subsistence costs for candidates. Successful applicants will need to use their own IT equipment for the placement. Training will be provided, relevant to the work to be undertaken.

**Health & Safety:** Successful candidates will be required to complete the Authority's onboarding and induction processes, including familiarisation with relevant health and safety policies, procedures, and safe systems of work.

**Skills Required for the role:** The ENPA is keen to work with PhD students with a specialism in behavioural science, who could contribute through applied research projects that both support academic requirements and strengthen the Authority's mountain safety messaging and reduce callouts on Yr Wyddfa.

No specific professional experience is required for this role, although experience working in a Local Authority or public sector setting may be advantageous.

Welsh language skills are not essential for the role, but are desirable.

**Skills to be developed during the role:** Research skills, Communication skills, Project Management, Data collection, Collaboration/Teamwork, Partnership Building, Relationship Management, Policy drafting

## Desired outcomes

- A robust framework or methodology for quantifying the successes of Mountain Safety behavioural change interventions on Yr Wyddfa. This framework will be utilised after the placement, and as a way of measuring outcomes in future interventions by the

Eryri National Park Authority and Bangor University (principally academic research projects with MSc students)

- An improved understanding of the motivations that shape why and how people climb specific paths on Yr Wyddfa, and how these motivations change over the course of a walk.
- Clearer insight into distinct visitor or “character” profiles on the various paths of Yr Wyddfa, including associated behaviours, decision-making patterns, and the types of interventions most likely to be effective for each.
- The development of a practical, evidence-informed communications toolkit that ENPA can use to engage mountain users more effectively and support safer decision-making through proportionate, autonomy-supportive behavioural nudges.

## **Background and Evidence Base**

Yr Wyddfa is one of the busiest mountains in the world, regularly receiving more than half a million visitors each year. Alongside this popularity, Llanberis Mountain Rescue Team (LLMRT) has experienced a sustained increase in demand, becoming the busiest mountain rescue team in Wales and England. Analysis of LLMRT incidents between 2018 and 2023 shows that approximately one in every 1,000 visitors to Yr Wyddfa requires some form of rescue assistance, with incident numbers closely tracking overall visitor volume.

The incident data suggest clear and persistent temporal and spatial patterns. Rescues are most likely to occur on weekends, particularly Saturdays, and there is a consistent peak in incidents during the afternoon, around 4pm. Spatially, incidents cluster on the busiest and highest sections of the mountain, especially the Llanberis Path, summit approaches, and technically demanding routes such as Crib Goch. A notable proportion of callouts involve people who are uninjured but benighted, lost, crag fast, or otherwise ‘unable to continue’, particularly on the upper sections of popular routes. ‘Unable to continue’ is anecdotally explained by the MRT as those who are often exhausted and unprepared for the challenge they have committed to – i.e. cramps, aching joints, panic attacks due to low sugar levels and lack of sustenance, difficulty dealing with wet, dry or windy conditions etc...

While the report does not seek to attribute simple causes to these patterns, it points toward the importance of situational factors such as fatigue, time pressure, navigation challenges, and decision-making under physical and cognitive strain. The data also highlight that many incidents occur well after walkers have committed to their route, suggesting that safety outcomes may be shaped as much by decisions made during the walk as by preparation at the outset.

## **Work Undertaken to Date**

In response to these patterns, Eryri National Park Authority (ENPA) has been trialling applied, behaviourally informed approaches to mountain safety, building on previous collaboration with Bangor University.

In both 2024 and 2025, ENPA ran a six-week face-to-face engagement intervention on the Llanberis Path, staffed by the Partnerships team. This “trailer” intervention focused on direct conversations with walkers about weather conditions, appropriate clothing and equipment, navigation, and general mountain safety. The intervention drew explicitly on motivational

interviewing techniques previously explored through COM-B-informed work with Bangor University.

Although this intervention did not lead to a measurable reduction in mountain rescue callouts, it was nonetheless considered a valuable engagement and learning exercise. It demonstrated that meaningful conversations with visitors are feasible at scale but also highlighted the limitations of influencing behaviour at the very start of a walk, when people tend to feel confident, motivated, and physically capable. These insights have informed a shift away from viewing early-stage messaging as the sole or primary opportunity for influence.

Alongside this engagement work, ENPA has recently installed signage on Yr Wyddfa marking the halfway point on the Llanberis Path. This signage explicitly frames reaching this point as an achievement in itself. The intention is to legitimise turning back as a positive outcome, rather than a failure to reach the summit, and to introduce a psychologically salient decision point at a stage where fatigue may already be emerging. This intervention is now in place and offers an opportunity for evaluation and further refinement.

The ENPA has been working closely with AdventureSmart, an organisation in Llanberis, offering a communications toolkit focusing on three foundational questions to stimulate self-reflection and better preparedness.

### **Emerging Perspectives from Discussion with Prof. John Parkinson, formally the Head of the School of Behaviour Change, Bangor University (2024)**

Ongoing discussions with Prof. John Parkinson have helped to reframe mountain safety as a complex behavioural challenge rather than a simple information deficit.

One such lens is affective forecasting: the idea that people may be poor at predicting how they will feel later in the day when tired, cold, or under time pressure. This may help explain why early warnings or advice, delivered when walkers feel fresh and optimistic, have limited impact on later decision-making.

Another emerging consideration is the role of commitment and goal fixation. The strong cultural emphasis on “doing the summit” may unintentionally make it harder for people to reassess plans, even when conditions or personal capacity change. From this perspective, interventions that create alternative points of achievement, or that normalise route changes and turning back, may help reduce escalation of commitment without relying on fear-based messaging.

Discussions have also raised the possibility that mountain safety interventions need to be highly context-specific. Different locations on the mountain may engage different combinations of capability, opportunity, and motivation, and therefore require different approaches. This includes considering physical “off-ramps” such as alternative routes, as well as psychological off-ramps that allow people to stop or change plans while preserving a sense of autonomy and success.

### **Example Research and Intervention Opportunities**

#### **1. Affective forecasting and effort miscalibration**

How accurately do walkers predict fatigue, mood, confidence, and time taken at

different stages of a walk, and how do these predictions compare with lived experience later on the route?

**2. Timing of influence and receptivity**

Are walkers more receptive to safety messaging and decision prompts once fatigue or uncertainty has begun to emerge, compared with earlier stages of the walk?

**3. Decision points and commitment escalation**

How do progress markers such as halfway signage, altitude indicators, or time-to-go estimates influence willingness to reassess plans or turn back?

**4. Non-summit achievement framing**

Does framing mid-route locations as achievements in their own right reduce summit fixation and support safer decision-making?

**5. Volunteer warden interactions**

How do different COM-B-informed or motivational interviewing-style conversations affect perceived autonomy, confidence, and behavioural intention when walkers are already fatigued?

**6. Physiological depletion and decision-making**

What role do hunger, low energy, or prolonged rest play in impaired decision-making, and can simple interventions (e.g. energy provision) support safer outcomes?

**7. Risk communication on high-exposure routes**

How do non-specialist walkers interpret terms such as “Grade 1 scramble,” and which alternative framings improve understanding of risk without inducing fear or disengagement?

**8. Choice architecture and route selection**

Does presenting explicit alternatives (physical or psychological “off-ramps”) support better route choices and reduce commitment to higher-risk options?

**9. Norms and expectations**

How do perceptions of what “most people do” or experience on Yr Wyddfa influence preparation, confidence, and persistence? What is the impact of social media on expectations?

**10. Intervention suitability and limits**

Which categories of mountain rescue incidents appear most amenable to behavioural intervention, and which are likely to remain largely unavoidable?

HOW TO APPLY	
Closing date and time for applications	June 19th 2026
How to submit an application	Please submit your CV (including reference contact details) and cover letter expressing your interest in the role.

Recruitment process	The Eryri National Park Authority will review applications received for this opportunity and will conduct interviews online in the week commencing June 22nd 2026
Contact name and email for any queries related to the placement:	Alec.young@eryri.llyw.cymru

This opportunity is only accepting applications from Postgraduate Researchers with secured funding and authorisation from their doctoral funding body to undertake a three-month placement.

<b>EQUALITY, DIVERSITY AND INCLUSION</b>	
Equality, diversity and inclusion in the workplace is about valuing all people equally, fairly and with respect, avoiding all forms of unlawful discrimination irrespective of their age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.	
Do you agree to uphold the principles of equality, diversity, and inclusion throughout the placement process and experience.	Yes/No
Does your organisation have an EDI policy?	Yes / No
<b>FINANCIAL ASSISTANCE</b>	
WGSSS Postgraduate Researchers receive their studentship stipend whilst attending their Research in Practice placement/opportunity.	
It is expected that any travel expenses incurred during the course of the placement i.e. travelling to business meetings or placement events, will be covered by the placement host.	
Please confirm if your organisation would be willing to contribute towards additional expenses	Yes / No