

Trail Expansion at BikePark Wales, Gethin Woodland Centre, Abercanaid, Merthyr Tydfil

Archaeological Desk-based Assessment

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The Urbanist

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- BLACK MOUNTAINS ARCHAEOLOGY -
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Crynodeb/Summary

Comisiynwyd Archeoleg Mynydd Du Cyf ga The Urbanist ar ran BikePark Wales i lunio Asesiad Desg archeolegol (DBA). Mae'r DBA wedi'i ysgrifennu i gefnogi ehangu llwybr arfaethedig BikePark Wales, Canolfan Coetir Gethin, Abercanaid, Merthyr Tudful.

*Mae'r asesiad wedi nodi effeithiau uniongyrchol ac anuniongyrchol posibl y Datblygiad arfaethedig ynghyd ag asesiad o leoliad ac arwyddocâd asedau gwerth uchel. Mae'r asesiad wedi dod i'r casgliad bod gan y datblygiad arfaethedig y potensial i effeithio'n uniongyrchol ar 13 o asedau treftadaeth, sy'n cynnwys Hen Lefel (HA2), Cist I (HA3), Carreg Ffin I Cwm-bach (HA4), Carreg Ffin Cwm-bach II (HA5), Troed- Corlan y-rhiw I (HA6), Troed-y-rhiw House I (HA7), Troed-y-rhiw Outhouse (HA8), Ysgubor Troed-y-rhiw (HA9), Waunwyllt Farmstead (HA11), Ysgubor Fferm y Graig HA12), Abercanaid Uchaf Domen I (HA13), Troed-y-rhiw Trig Point I (HA14) a Chwarel Goed Gethin (HA20). Daethpwyd i'r casgliad y gallai'r effeithiau uniongyrchol posibl ar yr asedau treftadaeth hyn amrywio o **isel** i **ganolig**. Daethpwyd i'r casgliad hefyd bod gan y datblygiad arfaethedig y potensial i achosi effaith **fach iawn** ar osodiad ac arwyddocâd y 13 ased treftadaeth hyn. Penderfynodd yr asesiad hefyd fod gan y datblygiad arfaethedig y potensial i effeithio'n anuniongyrchol ar dri ased treftadaeth, sy'n cynnwys Troed-y-rhiw House I (HA7), Troed-y-rhiw Outhouse (HA8) ac Ysgubor Troed-y-rhiw (HA9). Daethpwyd i'r casgliad y byddai difrifoldeb effaith o'r fath yn debygol o fod yn **fach iawn**. Yn olaf, daeth yr asesiad i'r casgliad y dylai rhaglen o liniaru archeolegol ar ffurf briff gwylio ddod gyda'r datblygiad arfaethedig. Yn olaf, daeth yr asesiad i'r casgliad y dylai rhaglen o liniaru archeolegol ar ffurf briff gwylio ddod gyda'r datblygiad arfaethedig.*

Mae'r asesiad desg archeolegol wedi'i baratoi i safonau proffesiynol 'Standard and Guidance for Archaeological Desk-based Assessments' gan y Chartered Institute for Archaeologists (2014, dywigiwyd 2020).

Black Mountains Archaeology Ltd/ were commissioned by The Urbanist on behalf of BikePark Wales to compile an archaeological Desk-based Assessment (DBA). The DBA has been written in support of a proposed trail expansion at BikePark Wales, Gethin Woodland Centre, Abercanaid, Merthyr Tydfil.

*The assessment has identified the potential direct and indirect effects of the proposed Development together with an assessment of the setting and significance of high value assets. The assessment has concluded that the proposed development has the potential to directly impact 13 heritage assets, which include Old Level (HA2), Cist I (HA3), Cwmbach Boundary Stone I (HA4), Cwmbach Boundary Stone II (HA5), Troed-y-rhiw Sheepfold I (HA6), Troed-y-rhiw House I (HA7), Troed-y-rhiw Outhouse (HA8), Troed-y-rhiw Barn (HA9), Waunwyllt Farmstead (HA11), Graig Farm Barn (HA12), Upper Abercanaid Spoil Tip I (HA13), Troed-y-rhiw Trig Point I (HA14) and Gethin Wood Quarry (HA20). It was concluded that the potential direct impacts on these heritage assets may range from **low** to **moderate**. It was also concluded that the proposed development had the potential to cause a **very slight** impact on the setting and significance of eight of these heritage assets. The assessment also determined that the proposed development has the potential to indirectly impact three heritage assets,*

which include Troed-y-rhiw House I (HA7), Troed-y-rhiw Outhouse (HA8) and Troed-y-rhiw Barn (HA9). It was concluded that the severity of such impact would likely be **very slight**. Finally, the assessment concluded that the proposed development should be accompanied by an programme of archaeological mitigation in the form of a watching brief.

The archaeological desk-based assessment has been prepared to the professional standards of the Chartered Institute for Archaeologists' Standard and Guidance for Archaeological Desk-based Assessments (2014, revised 2020).

Acknowledgements and Copyright

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1 Introduction

1.1 Project Background and Proposals

- 1.1.1 Black Mountains Archaeology Ltd/Archeoleg Mynydd Du Cyf were commissioned by The Urbanist on behalf of BikePark Wales to compile an archaeological Desk-based Assessment (DBA). The DBA has been written in support of a proposed trail expansion at BikePark Wales, Gethin Woodland Centre, Abercanaid, Merthyr Tydfil. The proposed expansion will involve the creation of an additional 33,407m of mountain bike trails. The new trails will be integrated into the existing network of trails in such a manner as to improve the layout and navigability of the site. To accomplish such integration, the new trails will be accompanied by an additional 2,986m of maintenance and emergency access tracks as well as 737m of uplift track extension. In the areas immediately surrounding the proposed development area, tree cover will be maintained, as agreed with the owners of the site, Natural Resources Wales (NRW). However, the proposed development will involve the removal of some low value conifer trees in overgrown areas, to allow more light to penetrate the canopy, therefore enhancing biodiversity.
- 1.1.2 The proposed trails will comprise linear excavations (Figure 2), which will be built up using re-deposited subsoils and, in places, crushed stone. Yet the trails will vary in overall appearance. Some trails will possess a 'natural' appearance, and attempts will be made to blend them in, as much as possible, to the local landscape. Other trails, however, will have a more contrived appearance and will incorporate such features as jumps and berms. The trails will comprise different grades depending on difficulty and complexity. In this regard, some trails will be suitable for novice and intermediate level bikers, whilst other will be more suitable for advanced or elite level bikers. Also incorporated into the network of trails will be two discrete skills areas, where bikers can practice their skills in isolation from the trails.
- 1.1.3 A planning application for the proposed trail expansion has yet to be submitted to the Merthyr Tydfil County Borough Council. The present DBA is intended to support any future planning applications relating to the development. However, two planning applications were previously submitted, both of which related to developments at BikePark Wales. The first application (P/19/0073) related to the construction of 36 camping pods, five chalets, a shower/toilet block, a play/picnic area, new parking areas, a trail maintenance yard, and new highway access routes. Also included in the application were associated groundworks, landscaping, and drainage. In 2019, an archaeological DBA and ASIDOHL2 were compiled by Black Mountains Archaeology Ltd in support of the first application (Lewis and Langlands 2019). The second application (P/22/01292) was a revision of the first. Parts of the two previously submitted planning applications will be realised in the proposed trail expansion, as it will involve the establishment of further visitor facilities and parking areas.

1.2 Objectives

1.2.1 The purpose of a DBA, as set out by the Chartered Institute for Archaeologists (2014, revised 2020), is to gain an understanding of the historic environment resource to formulate as required:

- an assessment of the potential for heritage assets to survive within the Area of Study.
- an assessment of the significance of the known or predicted heritage assets considering, their archaeological, historic, architectural and artistic interests.
- strategies for further evaluation whether or not intrusive, where the nature, extent or significance of the resource is not sufficiently well defined.
- an assessment of the impact of proposed Development or other land use changes on the significance of the heritage assets and their settings.
- strategies to conserve the significance of heritage assets, and their settings.
- design strategies to ensure new Development makes a positive contribution to the character and local distinctiveness of the historic environment and local place-shaping.
- proposals for further archaeological investigation within a programme of research, whether undertaken in response to a threat or not.

1.2.2 To this we can further add that the objectives of a DBA are:

- to assess available information to determine the extent and character of heritage assets, in local, regional and national contexts.
- to assess the significance of heritage assets considering all of the cultural heritage values that people associate with it, or which prompt them to respond to it.
- to assess the impact (physical or visual) on heritage assets and their setting.
- to carefully consider and present the mitigation recommendations aimed at reducing the impact of the Development on heritage assets and their setting.
- Finally, to present this information in a written report and the preparation and deposition of an archive of data generated by the assessment in line with professional standards.

1.3 Legislative Framework

1.3.1 Planning Policy Wales (PPW 11th Edition) sets out the land use planning policies of the Welsh Government. Chapter 6 sets out the Welsh Government's policy towards the historic environment. It states:

1.3.2 "The planning system must take into account the Welsh Government's objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations. The historic environment is a finite, non-renewable and shared resource and a vital and integral part of the

historical and cultural identity of Wales. It contributes to economic vitality and culture, civic pride, local distinctiveness and the quality of Welsh life. The historic environment can only be maintained as a resource for future generations if the individual historic assets are protected and conserved. Cadw's published Conservation Principles highlights the need to base decisions on an understanding of the impact a proposal may have on the significance of an historic asset." (2021, p126)

- 1.3.3 Underpinning PPW are a series of legislative powers and Technical Advice Notes (TANs). The Planning (Wales) Act 2015 sets out a series of legislative changes to deliver reform of the planning system in Wales, to ensure that it is fair, resilient and enables development. The 2015 Act also introduces a mandatory requirement to undertake pre-application consultation for certain types of development. The Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016 defines in Schedule 4(l) the parameters and definitions for the requirement of pre-application consultation by Welsh Ministers, particularly in response to the effect of statutory designated monuments, buildings, and parks and gardens.
- 1.3.4 Any works affecting an ancient monument and its setting are protected through implementation of the Ancient Monument and Archaeological Areas Act 1979. In Wales the 1979 Act has been strengthened by The Historic Environment (Wales) Act 2016. The 2016 Act makes important improvements for the protection and management of the Welsh historic environment. It also stands at the centre of an integrated package of secondary legislation (Annexes 1-6), new and updated planning policy and advice, and best-practice guidance on a wide range of topics (TAN 24 Historic Environment). Taken together, these support and promote the careful management of change in the historic environment in accordance with current conservation philosophy and practice.
- 1.3.5 The Ancient Monument and Archaeological Areas Act 1979 and The Historic Environment (Wales) Act 2016 sets out a presumption in favour of preservation in-situ concerning sites and monuments of national importance (scheduled/listed), and there exists in the current Planning Policy Wales (Chapter 6) a presumption in favour of preservation in-situ of all types of heritage assets.
- 1.3.6 Important or historic hedgerows (and boundaries) are protected under *The Environment Act 1995* (section 95). *The Hedgerow Regulations 1997* (under the 1995 Act) provides protection and guidance for those development/agricultural activities outside of planning. The regulations permit the removal of any hedgerow (including any length of hedgerow) for 'carrying out Development for which planning permission has been granted' provided the loss of the hedgerow has been properly assessed against the benefits of the proposed Development.
- 1.3.7 Following review in 1998, a simplified set of assessment criteria was proposed where all substantially complete boundaries (hedgerows) that predate 1845 were to be afforded consideration/protection. The Environment, Transport and Regional Affairs Committee's Report '*The Protection of Field Boundaries*' 1999 was acknowledged by Government but no amendments were made to the 1997 regulations. Judicial Review

of the application in 2002 of the regulations (Flintshire County Council v NAW and Mr J T Morris) has clarified the interpretation of some of the criteria (see *The Hedgerow Regulations 1997, Schedule 1, Part 2 Archaeology and History* and Section 1.5 below).

2 Methodology

2.1 Identifying Heritage Assets for Assessment

- 2.1.1 The assessment of the historic environment includes the interrogation of a number of sources (including, but not limited to):
- Statutory designated monuments, buildings and landscapes (including conservation areas, parks, gardens and battlefields).
 - Regional Historic Environment Record (HER).
 - National Monuments Record (NMR).
 - Aerial photographic archives.
 - Local and national archives.
 - Cartographic and documentary sources.
- 2.1.2 Information on statutory designated sites (World Heritage Sites, Scheduled Ancient Monuments, Listed Buildings, Conservation Areas, Registered Landscapes, Battlefields, Parks and Gardens) were obtained from Cadw on the 19th October, 2023 and accessed through *Cof Cymru – National Historic Assets of Wales* (a Welsh Government online mapping resource). Information recorded on the National Monuments Record (NMR) were obtained from the RCAHMW on the 2nd September 2019 and information recorded on the Regional Historic Environment Record were obtained from GGAT on the 19th October 2023 (RCAHMW License No RC19-0562 and GGAT Enquiry No 7092). An attempt was made to access RCAHMW data more recently for the current assessment, although this was unsuccessful due to staffing issues at the RCAHMW. Cartographic and documentary sources were also consulted as would the national and local archives.
- 2.1.3 The assessment reviewed the existing information pertaining to the Historic Environment based on a primary study area comprising a 250m radius centred on NGR SO 04796 28433 (the development area). A selection of statutory designated sites was also assessed within a secondary study area comprising a 1km radius centred on the same NGR, in order to assess the impact of the proposed development on their settings.
- 2.1.4 Important or historic hedgerows will be assessed according to current legislation that details the following criteria:
- The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township; and for this purpose, “historic” means existing before 1850.
 - The hedgerow incorporates an archaeological feature which is (a) included in the schedule of monuments compiled by the Secretary of State under Section 1 (schedule of monuments) of the Ancient Monuments and Archaeological Areas Act 1979(7); or (b) recorded at the relevant date in a Historic Environment Record.

- The hedgerow (a) is situated wholly or partly within an archaeological site included or recorded as mentioned in paragraph 2 or on land adjacent to and associated with such a site; and (b) is associated with any monument or feature on that site.
- The hedgerow (a) marks the boundary of a pre-1600 AD estate or manor recorded at the relevant date in a Historic Environment Record or in a document held at that date at a Record Office; or (b) is visibly related to any building or other feature of such an estate or manor.
- The hedgerow (a) is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Enclosure Acts; or (b) is part of, or visibly related to, any building or other feature associated with such a system, and that system (i) is substantially complete; or (ii) is of a pattern which is recorded in a document prepared before the relevant date by a local planning authority, within the meaning of the 1990 Act, for the purposes of development control within the authority's area, as a key landscape characteristic.
- There are other criteria relating to rights of way and ecology.

2.2 Assessing the Value of Heritage Assets

2.2.1 Cultural heritage assets are categorised according to the only values that are nationally agreed in the Department of Transport/Welsh Office/Scottish Office *Design Manual for Roads and Bridges Vol. 11 Section 3 Part 2 (HA 208/07 Cultural Heritage) 2007, amended 2009 (DMRB 2007), as amended January 2020 LA 106 Revision 1*. A cultural heritage asset is an individual archaeological site or building, a monument or group of monuments, an historic building or group of buildings, an historic landscape etc., which, together with its setting, can be considered as a unit for assessment.

2.2.2 Understanding value is subjective beyond any statutory or registered designation and is based on the professional experience and knowledge of the assessor. Other factors do contribute to the overall assessment of value (and significance) of heritage assets and the assessment criteria below contributes to an overall robust assessment framework.

Value			Criteria
A*	Very High	International/National	World Heritage Sites (including nominated sites). Assets of acknowledged international importance. Assets that can contribute significantly to acknowledged international research objectives.
A	High	National	Scheduled Monuments (including proposed sites). Undesignated assets of schedulable quality and importance. Assets that can contribute significantly to acknowledged national research objectives.
B	Medium	Regional	Designated or undesignated assets that contribute to regional research objectives.

Value			Criteria
C	Low	Local	Designated and undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value, but with potential to contribute to local research objectives.
D	Negligible	Local	Assets with very little or no surviving archaeological interest.
U	Unknown	Unknown	The importance of the resource has not been ascertained.

Table 1. Factors for assessing the value of heritage assets (after Table 5.1 DMRB 2009)

- 2.2.3 The criteria below are adapted from notes made in Annex 2 of the *DMRB Vol. 11 Section 3 Part 2 (HA 208/07 Cultural Heritage) 2007, amended 2009 (DMRB 2007), as amended January 2020 LA 106 Revision 1*. These notes refer to the Scheduling Criteria as set out by the *Ancient Monument and Archaeological Areas Act 1979* and *The Historic Environment (Wales) Act 2016* and finally Stage 4 Evaluating Relative Importance as set out in *ASIDOHL2, Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process* (2nd Edition 2007).
- 2.2.4 While comprehensive, the criteria should not be regarded as definitive, rather they are indicators which contribute to a wider judgement based on the professional experience of the assessor and the circumstance and context of the assessment and heritage asset.
- 2.2.5 **Rarity:** there are some monument categories, which in certain periods are so scarce that all surviving examples which still retain some archaeological potential should be preserved. This should be assessed in relation to what survives today, since elements of a once common type may now be rare. The criteria for assessment are:
- Very High: sole survivor of its type.
 - High: very few sites of this type are known.
 - Medium: the site is not unusual but cannot be considered common.
 - Low: the site is quite common.
- 2.2.6 **Documentation and Association:** the significance of a heritage asset may be enhanced by the existence of records of previous investigations or, in the case of more recent monuments, by the supporting evidence of contemporary written records. Furthermore, any important historical associations relating to the heritage asset, such as institutions, cultural figures, movements or events, will enhance value. The survival of documentation and/or historic association that increases our understanding of a heritage asset will raise its importance, though this is difficult to quantify owing to the extremely varied nature of documentary and historical material. Therefore, a professional judgment is given based on the actual amount or importance of evidence and its academic value. The criteria for assessment are:

- Very High: a highly significant, authentic and nationally well-known association(s) and/or complete documentary record, or exceptionally important sources available.
- High: a significant, authentic and regionally well-known association(s) and/or considerable quantity of relevant material, or highly important sources available.
- Moderate: an authentic, but less significant, perhaps locally well-known association(s) and/or some relevant material, or moderately important sources available.
- Low: unauthenticated or a little-known association(s) and/or little relevant material, or only modestly important sources available.
- None: no known associations and/or relevant material available.

2.2.7 Group Value: relates to the diversity (or similarity) of elements including their structural and functional coherence. The value of a single monument (such as a field system) may be greatly enhanced by its association with related contemporary monuments (such as a settlement and cemetery) or with monuments of different periods. The criteria for assessment are:

- Very High: largely complete interconnected complex of heritage assets or landscapes (e.g UNESCO World Heritage Site).
- High: significant survival of an interconnected complex of heritage assets.
- Moderate: some surviving elements of an interconnected complex of heritage assets; some disintegration has occurred.
- Low: single or unconnected/unrelated groups of heritage assets.

2.2.8 Survival/Condition: the survival of a monument's archaeological potential both above and below ground is a particularly important consideration and should be assessed in relation to its present condition and surviving features. The Historic Environment Records (HERs) of the four Welsh Archaeological Trusts note the condition of sites according to the following criteria:

- Intact: the site is intact.
- Near intact: the site is nearly intact.
- Damaged: the site has been moderately damaged.
- Near Destroyed: the site has nearly been destroyed.
- Destroyed: the site has been destroyed.
- Restored: the site has been restored.
- Moved: the site has been moved (usually finds).
- Not Known: the condition of the site is not known.
- To these criteria, we can add the following assessment:
- Very Good: elements surviving in very good condition for their class.
- Good: elements surviving in good or above average condition for their class.

- Moderate: elements surviving in moderate or average condition for their class.
- Fair: elements surviving in fair or below average condition for their class.
- Poor: elements surviving in poor condition for their class.

2.3 Assessing Direct Impacts

2.3.1 **Direct Impacts** are outcomes resulting from an assessment of the impact of the proposed development on the heritage asset or landscape. The direct impact of a course of action (e.g. development) can only be assessed once the assessment criteria above has been completed and potential outcomes fully understood (as far as any development proposal or construction design is reasonably understood). The direct impact of the Proposed Scheme on heritage assets has been assessed using the following criteria:

- Very High: total loss of the integrity of the heritage asset(s).
- High: significant loss of integrity to the heritage asset(s), significant reduction of group and rarity values.
- Moderate: some loss of integrity to heritage asset(s) and reduction in value.
- Low: slight loss of integrity to heritage asset(s) and value.
- None: no perceived or identified effect, or loss in value.
- Beneficial: Development will protect, preserve or enhance the heritage asset resulting in an increase in value.

Effect	Category					
	A*	A	B	C	D	U
Very High	Very Significant	Very Significant	Very Significant	Significant	Significant	Unknown
High	Very Significant	Very Significant	Very Significant	Significant	Significant	Unknown
Moderate	Very Significant	Very Significant	Significant	Significant	Slight Significance	Unknown
Low	Very Significant	Significant	Significant	Slight Significance	Slight Significance	Unknown
None	None	None	None	None	None	None

Table 2. Significance of effect to heritage assets (matrix)

2.4 Assessing Indirect (Visual) Impacts

2.4.1 Assessing the **Indirect (Visual) Impacts** to heritage assets is intrinsically linked to setting and significance (see Section 1.6). The criteria below are adapted from standard EIA evaluation criteria and Stage 3 Assessment of Indirect Impacts of Development as set out in *ASIDOHL2, Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process* (2nd Edition 2007). Assessment is confined to sites of International, National and in some cases regional value.

- Very Severe: the key views and/or essential lines of sight to and from the heritage asset are dominated or obscured by the Development resulting in severance of cultural heritage links.
- Severe: the key views and/or essential lines of sight to and from the heritage asset are interrupted by the Development resulting in partial severance of cultural heritage links.
- Considerable: the key views and/or essential lines of sight to and from the heritage asset are significantly visible resulting in limited severance of cultural heritage links.
- Moderate: the key views and/or essential lines of sight to and from the heritage asset are visible resulting in some severance of cultural heritage links.
- Slight: the key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in diminished cultural heritage links.
- Very Slight: the key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in little discernible severance of cultural heritage links.
- None: the key views and/or essential lines of sight to and from the heritage asset are not noticeable resulting in no severance of cultural heritage links.

2.5 Assessing Impact to Setting and Significance

2.5.1 The *Setting of Historic Assets in Wales 2017 (The Historic Environment (Wales) Act 2016, Annex 6)* explains what **setting** is, how it contributes to the **significance** of a historic asset and why it is important. It also outlines the principles used to assess the potential impact of development or land management proposals on the settings of World Heritage Sites, Ancient Monuments (scheduled and unscheduled), Listed Buildings, Registered Historic Landscapes, Parks and Gardens, and Conservation Areas. These principles, however, are equally applicable to all individual historic assets, irrespective of their designation.

2.5.2 Certain major developments require pre-application consultation with the local planning authority and, where specialist advice is required, the Welsh Ministers through Cadw. Any development likely to directly or indirectly (visual) effect a statutory designated heritage asset or high value undesignated heritage asset and its setting will likely require 'consultation before grant of permission' under the *Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016, schedule 4 (1)(i) and (ii)* if the proposed Development meets any of the following criteria:

- Development is likely to affect the site of a registered historic park or garden or its setting.
- Development is within a registered historic landscape that requires an Environmental Impact Assessment and ASIDOHL2.

- Development is likely to have an impact on the outstanding universal value of a World Heritage Site.
- Development is within a distance of 0.5 kilometres from any point of the perimeter of a scheduled monument.
- Development is within a distance of 1 kilometre from the perimeter of a scheduled monument and is 15 metres or more in height, or has an Area of 0.2 hectares or more.
- Development is within a distance of 2 kilometres from the perimeter of a scheduled monument and is 50 metres or more in height, or has an Area of 0.5 hectares or more.
- Development is within a distance of 3 kilometres from the perimeter of a scheduled monument and is 75 metres or more in height, or has an Area of 1 hectare or more.
- Development is within a distance of 5 kilometres from the perimeter of a scheduled monument and is 100 metres or more in height, or has an Area of 1 hectare or more.

2.5.3 An assessment of the impact of the proposed development on the setting of the statutory designated heritage asset or high value undesignated heritage asset will be required if any of the criteria above are met. The assessment of the setting of heritage assets follows the four-stage approach detailed in the *Setting of Historic Assets in Wales 2017 (The Historic Environment (Wales) Act 2016, Annex 6)*:

- Stage 1: Identify the historic assets that might be affected by a proposed change or development and their significance.
- Stage 2: Define and analyse the settings to understand how they contribute to the ways in which the historic assets are understood, appreciated and experienced.
- Stage 3: Evaluate the potential impact of a proposed change or Development on those settings.
- Stage 4: Consider options to mitigate the potential impact of a proposed change or Development on those settings. The assessment of significance is intrinsically linked to the setting (see paragraphs above) and value (see criteria above) of a heritage asset/registered landscape, park and garden.

2.5.4 The significance of an historic asset embraces all of the cultural heritage values that people associate with it, or which prompt them to respond to it. These values tend to grow in strength and complexity over time, as understanding deepens and people's perceptions evolve (*Conservation Principles for the Sustainable Management of the Historic Environment in Wales 2011*, p10).

2.5.5 There are **four values** that need to be considered when assessing significance and these are set out in *Cadw's Conservation Principles for the Sustainable Management of the Historic Environment in Wales*:

- **Evidential Value:** relates to those elements of a heritage asset that can provide evidence about past human activity, including its physical remains or historic fabric.

These may be visible and relatively easy to assess, or they may be buried below ground, under water or be hidden by later fabric. These remains provide the primary evidence for when and how a heritage asset was made or built, what it was used for and how it has changed over time. The unrecorded loss of historic fabric represents the destruction of the primary evidence. Additional evidential values can be gained from documentary sources, pictorial records and archaeological archives or museum collections. To assess the significance of this aspect of an asset, all this evidence needs to be gathered in a systematic way and any gaps in the evidence identified.

- **Historical Value:** a heritage asset might illustrate a particular aspect of past life or it might be associated with a notable family, person, event or movement. These illustrative or associative values of a heritage asset may be less tangible than its evidential value but will often connect past people, events and aspects of life with the present. Of course, the functions of a heritage asset are likely to change over time and so the full range of changing historical values might not become clear until all the evidential values have been gathered together. Historical values are not so easily diminished by change as evidential values and are harmed only to the extent that adaptation has obliterated them or concealed them.
- **Aesthetic Value:** relates to the way in which people draw sensory and intellectual stimulation from a heritage asset. This might include the form of a heritage asset, its external appearance and how it lies within its setting. It can be the result of conscious design or it might be a seemingly fortuitous outcome of the way in which a heritage asset has evolved and been used over time, or it may be a combination of both. The form of an asset normally changes over time. Sometimes earlier pictorial records and written descriptions will be more powerful in many people's minds than what survives today. Some important viewpoints may be lost or screened, or access to them may be temporarily denied.
- **Communal Value:** relates to the meanings that a heritage asset has for the people who relate to it, or for whom it figures in their collective experience or memory. It is closely linked to historical and aesthetic values but tends to have additional or specific aspects. Communal value might be commemorative or symbolic. For example, people might draw part of their identity or collective memory from a heritage asset, or have emotional links to it. Such values often change over time and they may be important for remembering both positive and uncomfortable events, attitudes or periods in Wales's history. Heritage assets can also have social value, acting as a source of social interaction, distinctiveness or coherence; economic value, providing a valuable source of income or employment; or they may have spiritual value, emanating from religious beliefs or modern perceptions of the spirit of a place.

- 2.5.6 The first stage of assessing significance is by understanding the value of the heritage asset by carefully considering its history, fabric and character and then comparing these values with other similarly designated or types of heritage asset locally, regionally or if necessary, nationally. The outcome of this process is a Statement of

Significance, which is partly a subjective exercise based on the assessor's experience and knowledge.

3 Baseline

3.1 Location, Topography and Geology

- 3.1.1 BikePark Wales is situated within the Gethin Woodland in Abercanaid, Merthyr Tydfil (Figure 1). The development area covers the entirety of BikePark Wales and is centred on NGR SO 04924 02951. At present, the site comprises a network of mountain trails set within an area of thick woodland and scrub. The site is also situated on the slopes of Mynydd Gethin. Towards the northeast edge of the site are the main visitor facilities, which include a bike shop, tool station, café/restaurant, as well as a toilet and shower block. Mynydd Gethin forms part of a mountain chain that extends along the western fringe of Upper Taff Valley to the east, as well as the eastern fringes of the Upper Cynon Valley to the west.
- 3.1.2 The geology of the proposed Development is the South Wales Middle Coal Measures Formation consisting of mudstone, siltstone and sandstone. These sedimentary rocks formed approximately 318 to 309.5 million years ago in the Carboniferous Period. These sedimentary rocks are fluvial in origin; its beds and deposits formed from detrital material reflecting a past local environment of swamps, estuaries and deltas. Overlying superficial deposits consist of Divensian and Diametcon Till; detrital sedimentary deposits formed up to 2 million years ago in the Ice Age conditions of the Quaternary Period (BGS 2023).

3.2 Conservation Areas

- 3.2.1 The study area does not fall within any Conservation Areas. However, there are Conservation Areas within the Merthyr Tydfil Registered Historic Landscape (HLW(MGI)2). These include Cyfarthfa (CA526) located c.3.5km to the northwest (of the Development Area), Morgantown (CA24), Town Centre (CA26), Thomastown (CA525) all located c.3km to the north, Council and Urban Street Penydarren (CA524) located c.4km to the northeast and Dowlais (CA23) located c.4.5km to the northeast.

3.3 Registered Landscapes, Parks and Gardens, Scheduled Ancient Monuments and Listed Buildings

- 3.3.1 The study area is located within the CADW Landscape of Outstanding Historic Interest of Merthyr Tydfil (HLW(MGI)2) (Figure 3). Designated in 2001, Merthyr Tydfil occupies a natural basin at the head of the Taff Valley and is celebrated as “probably the largest iron-making town in the world in the early to mid-19th Century...(that) rapidly transformed from a modest village in the 1750s to the largest town in Wales by 1801” (CADW 1998. p47). The Merthyr landscape contains a significant number of relics of this industrial past including remains of a number of “large ironworks, features relating to coal mining, waterpower leats, an early iron bridge, power and transportation systems including early tram roads, terraced industrial housing and Cyfarthfa Castle” (ibid).
- 3.3.2 The designated Historic Landscape of Merthyr Tydfil underwent a further Historic Landscape Characterisation Assessment, carried out by Glamorgan-Gwent

Archaeological Trust in 2003, which produced a total of 79 Historic Landscape Character Areas (HLCAs) (Roberts 2003).

- 3.3.3 There are no Scheduled Ancient Monuments within the Development Area (Figure 4). Within the primary study area, which comprises a 250m radius of the development area, four Scheduled Monuments are present, including Vale of Neath Railway (SMGm606), Cwm Pit and Head of Railway (SMGm607), Garn Las Earthwork (SMGm236) and Carn Castell y Meibion Ring Cairn (SMGm586). Within the secondary study area, which comprises a 1km radius of the development area, seven Scheduled Monuments are present, which include Abercanaid Haystack Boiler (SMGm572), Black Pins Ironstone Workings (SMGm609), Cyfarthfa Balance Pond and Leat (SMGm608), Ring Cairn South of Twyn Blaennant (SMGm368), Gwersyll (SMGm238), Graig-y-Gilfach Round Cairn and Earthwork (SMGm288) and Darren Fawr Round Cairns (SMGm287).
- 3.3.4 No Listed Buildings are present within the development area. Within the primary study area, one Listed Building is present – Cwm Pit Chimney Base (LB81752). Within the secondary study area, a total of 45 Listed Buildings are present, which are situated within and around the historic cores of Pentrebach and Troed-y-rhiw. These Listed Buildings are recorded as heritage assets in Table 3 below.
- 3.3.5 The Study Area does not include any Registered Parks and Gardens. However, within the wider HLW(MGI)2 Merthyr Tydfil Historic Landscape there are three Designated sites. These are PGW(GM)1(MER) 'Cyfarthfa Castle' (Grade II*) located c3.5km to the north of the development site, PGW(GM)70(MER) 'Cefn Coed Cemetery and Jewish Burial Ground' (Grade II) located c.5km to the north northwest and PGW(GM)69(MER) 'Aberfan Cemetery, Garden of Remembrance and Former Tips and Slide Area' (Grade II) located 1.6km to the south (CADW. 2000. p94). Both Cefn Coed Cemetery and Jewish Burial Ground and Aberfan Cemetery, Garden of Remembrance and Former Tips and Slide Area are not intervisible from the study area.

3.4 General – Archaeological and Historical

3.4.1 Prehistoric – up to 43 AD

- 3.4.2 The earliest evidence for human activity in the study area is a Mesolithic flint scatter (GGAT00880m) located 500m to the north of the development area. The findspot consists of a group of 2-10 Mesolithic blades, flakes and microliths of more than one tool type (HER, Wymer 1977). The find is the only evidence of Mesolithic activity in the Merthyr Vale although there are many examples further afield, particularly to the west in the uplands of the Cynon Valley.
- 3.4.3 Whilst there is no Neolithic evidence within the study area there have been a number of findspots just to the west near the summit of Mynydd Merthyr. Two Neolithic arrowheads (GGAT01642m and GGAT01643m) and a Neolithic adze (GGAT01209m) were discovered during the laying of Forestry Commission tracks in the 1970s (Savory 1971, 1972, 1973). The concentration of finds here suggests Neolithic settlement activity. Indeed, further axe fragments have been discovered in Merthyr Tydfil

- (GGAT00478m) and further north in the Vaynor Area (GGAT00804m) and (GGAT01118m), where a Neolithic hut site was excavated 1958 (GGAT01100m).
- 3.4.4 The Merthyr Vale is home to a remarkable number of Bronze Age monuments with strings of ring cairns and burial mounds featured along the ridges of Mynydd Merthyr to the West and Mynydd Cylfach-yr-encil to the East, known collectively as the 'Merthyr Tydfil Group'. The Group contains 34 cairns, 14 of which are ring cairns (RCAHMW 1976). The 1km Study Area features a Bronze Age cist (GGAT00498m) to the south west of the Development Area, which was reported prior to 1953 but has since been lost to afforestation (GGAT HER). Just outside the Study Area to the south west are Carn Castell y Meibion Ring Cairn (SAMGM586) and Darren Fawr Ring Cairns (SAMGB287) which, though in much disturbed condition, are scheduled due to their significant archaeological potential and high group value. The Scheduled Ancient Monument 'Merthyr Common Round Cairns' (GGAT04553m, NPRN305664, SAMGM222) is located c.2.6km to the east (RCAHMW 1976).
- 3.4.5 There is no evidence for Iron Age presence within the Study Area, the nearest being c.2.5km to the north west of the Development Area where a Scheduled probable Iron Age enclosure is situated at 'Gwersyll' (GGAT00483m, NPRN305673, SAMGM239). There are a number of defensive and settlement sites in the wider Merthyr Vale Area including the hut circles and enclosures at Buarth Maen (GGAT00449m, NPRN262046, SAMGM401).
- 3.4.6 Roman & Early-medieval
- 3.4.7 Similarly, Roman evidence is absent from the Study Area and is focused on Penydarren Fort (GGAT00823m, NPRN301352), a Roman military settlement located c.3.2km to the north of the Development Area. Roman finds at nearby Glenthorne House have been interpreted as a possible cemetery linked to the fort (GGAT00479m). Further afield, a Roman road (RR621, SAMGM556) between the Roman fort at Cardiff and Castell Collen in Brecon runs north/ south c. 5km east of the Development Area.
- 3.4.8 Early medieval activity in Merthyr Tydfil is indicated by a number of inscribed stones, the closest being within St Tydfil's Church in Merthyr Tydfil (GGAT04660m) and another found on Mynydd Merthyr to the south of the Development Area, now kept by the National Museum of Wales (GGAT00529m). The place-name is associated with Tudfyl, the daughter of 5th century king Brychan Brycheiniog. It is believed that the place name Merthyr meaning 'Martyr', together with the presence of an inscribed stone and a 13th century account of a shrine at Merthyr (GGAT04660m) confirms a pre-Norman foundation for St Tydfil's Church (GGAT00457m, LB11449) (GGAT HER, Evans 2003).
- 3.4.9 Medieval
- 3.4.10 In the medieval period Merthyr Tydfil was in the cantref on Senghenydd, which formed a part of the Lordship of Glamorgan. The Development Site at the time would have been situated within a pastoral landscape of grazing sheep and cattle. Nearby medieval sites include Court House (GGAT00477m, NPRN18415, LB11376) in Merthyr

Tydfil reported to be a 12th century manor house now incorporated within an 18th century structure. In addition, historical accounts suggest the presence of a watermill (GGAT00453m) at Merthyr Tydfil as well as a medieval bridge at Pontrhun (GGAT01816m), c.2km south east of the Development site. Further afield, the remains of long huts such as those at Cilfach-yr-encil (GGAT01723m, NPRN15375, GGAT01724, NPRN226565) offer an insight into the nature of rural upland hafodau settlement in the period (RCAHMW 1982).

3.4.11 Post-medieval

3.4.12 The Post-medieval period sees a shift from an agricultural economy in the 16th century to one dominated by industry with Merthyr Tydfil becoming the iron-producing powerhouse of the world by the end of the 19th century. It is for this reason that Merthyr Tydfil has been designated as an Outstanding Landscape of Historic Interest (CADW 1998).

3.4.13 *Agriculture*

3.4.14 A 1729 map illustrates a rural landscape of upland farmsteads and mountain paths (See 2.6.1). The 1850 tithe map also gives this impression with the land surrounding the Study Area recorded as predominantly pasture, with some arable and fir plantation (see 2.6.7).

3.4.15 The ruinous remains of the farmsteads of Pen-y-lan (GGAT03746m) and Graig (GGAT03753m) are situated within the 1km Study Area just to the North of the Development Area, whilst a large number of sheepfolds, including one in the 250m Study Area (GGAT03745m), are tangible evidence of the importance of sheep farming in the early Post-medieval period.

3.4.16 *Industry*

3.4.17 An earlier 1799 map shows a slightly different picture with coal and iron mines illustrated on the uplands of both sides of the valley including in close proximity to the Study Area. These mines existed to service the ironworks that had been founded at Merthyr: 'Dowlais' (founded 1759) (GGAT01615m, NPRN34084), 'Cyfarthfa' (1765) (GGAT01169m, NPRN34078), 'Penydarren' (1784) (GGAT01170m, NPRN34113) and 'Plymouth' (1763) (GGAT05237m, NPRN34114). 'Cwm Pit' (GGAT02821m, NPRN33467, SAMGM607) and 'Cwm Glo (Robbins) Pit' (GGAT02826m, NPRN262079, SAMGM611), which are located within the Study Area to the north of the Development Area, are known to be early collieries and are likely to be those depicted on the map. The layout and development of these sites, and their significant historical associations, have been discussed extensively by Lawler (2000) and includes the Listed 'Base of Chimney at Cwm Pit' (LB81752).

3.4.18 The early 19th century saw the coal industry intensify in order to meet with demand, with collieries opening all over Merthyr Tydfil and the neighbouring valleys. Gethin Colliery (GGAT02191m, NPRN33486), which is situated to the southeast of the Development Area and within the 1km Study Area, is one such example. Opened in

1849 by the Cyfarthfa Iron Company, the Gethin Colliery was the first deep pit sunk with the intention of mining the steam coal located at the south end of the valley (GGAT 1996). Gethin Colliery consisted of two pits; Pit No 1 on the eastern side of Glamorganshire Canal and Pit No 2 on the western side. GGAT (1996) concludes that Gethin No 2 Pit was originally powered using a water balance lift, utilising water from Webbers Pond (GGAT, before converting to steam power in the 1860s (p5). Gethin Pit was in operation in tandem with neighbouring Castle Pit until the end of the 1920s when it was used only as a ventilation shaft, before being abandoned in the 1950s and demolished in the late 1960s. The association with the Cyfarthfa Ironworks both commercially and physically via the Gethin Railway results in a high group value for Gethin Pit and Webbers Pond (GGAT02522m, GGATE000274).

3.4.19 Of most significance for this study, the 1919 Ordnance Survey map places 'Waunwylt Colliery' on, or in close proximity to, the Development Site (see 2.6.10). Whilst the features of the colliery, Level (GGAT06431m) and Airshaft (GGAT06429m), are not marked on previous maps, the 1919 map illustrates an 'Old Tramway' suggesting at least one earlier phase. The Waunwylt Level was opened in 1828 by Robert and Lucy Thomas to access the 4 foot seam of steam coal that they would sell both locally and in Cardiff. This was closely followed by the opening of Graig Pit in the 1830s (welshcoalmines.co.uk Accessed 18/09/19). As a result, they were celebrated as the "pioneers in 1828 of the South Wales Steam Coal Trade" and a memorial fountain (LB11448) was erected in the late 19th century, adjacent to St Tydfil's Church (CADW).

3.4.20 However, the 'Waunwylt Colliery' in the Study Area does not appear on the Ordnance Survey map until 1919 showing that the site represents a later phase of industry. James (2003) states that the workings on Nant Graig were developed some time after 1898 (p.148) and the 'Welsh Coalmines' website expands that 'New' Waunwylt Level was opened in 1909 by Thomas Merthyr Colliery Company and in 1918 employed 117 men underground and 20 on the surface before being closed on 13th July 1920 (Accessed 18/09/19).

3.4.21 *Transport*

3.4.22 In the early industrial phase of the 18th century, Merthyr Tydfil was serviced by the Cyfarthfa Canal (SAMGM467), which was cut in the late 1770s to transport coal from Cwm Pit to Cyfarthfa Ironworks (CADW) and the Glamorganshire Canal (GGAT01682.0s) opened in 1794 to transport iron to Cardiff. In addition, the Merthyr Tramroad (GGAT05202m, SAMGM573) was opened in 1802 to bypass the Glamorganshire Canal for the benefit of the ironworks on the eastern side of the valley (AIA 2003).

3.4.23 In the 19th century the canals were gradually superseded by the introduction of the railways. The Taff Valley Railway (running North/ South) was incorporated in 1836 to connect Merthyr Tydfil with Cardiff and the Vale of Neath Railway (running east/ West) was incorporated in 1846 to connect Merthyr Tydfil with the docks at Neath and Briton Ferry (Barrie 1980). Both were engineered by Isambard Kingdom Brunel. The Vale of Neath Railway route included a tunnel through Mynydd Aberdare, which

is Designated as “a monument of national importance to enhance and illustrate our knowledge and understanding of the development of the transport network in South East Wales in the 19th Century” (CADW). The cutting and tunnel entrance survive within the 1km Study Area (GGAT02500.4m, SAMGM606) and are described as “unaltered since their completion and the best examples of the work of Isambard Kingdom Brunel to survive in Wales” (ibid). In addition to these large cross-country lines there were a number of smaller industrial lines such as the Gethin Line (discussed above) and the Cwm Pit Line (GGAT02858.0m).

3.4.24 *Workers’ Housing and Listed Buildings*

3.4.25 In addition to the agricultural, industrial and transport sites, the Merthyr Tydfil Historic Landscape Area is characterised by a significant number of examples of workers’ housing. Whilst there are no examples within the Development Area, the village of Abercanaid is within the 1km Study Area and contains a large number of Grade II listed examples. The oldest of these dating to the 1830-40s consisted of three rows of terraced cottages known as ‘The Squares’. ‘David Square’ (GGAT01215m, NPRN18543), ‘Catherine Square’ (GGAT04370m, NPRN18261 and GGAT04371m, NPRN18263) and ‘Henry Square’ (GGAT04368m, NPRN18960 and GGAT04369m, NPRN18122) are illustrated on the 1850 tithe map, but have been demolished in favour of modern housing. However, the later c.1860s terraces, sandwiched between the river and the Glamorganshire Canal, have survived including the Grade II listed Nightingale Street, Quay Row and River Row. Further listed buildings in Abercanaid include Sion Independent Chapel (LB21318) and Industrialists’ houses Pentrebach House (LB11503) and Llwyn-yr-Eos House (LB11497).

3.5 Cartographic Evidence

3.5.1 A 1729 map of South Wales (Figure 13) shows the Area of Merthyr Tydfil in impressive detail. The landscape surrounding the Study Area is illustrated as mountainous uplands without the tree cover illustrated further down the valley. The substantial Taff river provides the boundary between Caerphilly Hundred to the east in which Merthyr Tydfil village is located, and Glamorgan to the west. The landscape is characterised by farmsteads and unmade roads with occasional churches, bridges and manor houses, all consistent with what was then an agrarian economy. The evidence for industry is slight and is limited to mills and coal pits, the nearest being to the north east of the Study Area on the Monmouthshire border.

3.5.2 A 1799 map of the County of Glamorgan (Figure 14) shows the Merthyr Tydfil Area to be much changed. Coal and iron mines are marked within the vicinity of the Study Area. Further afield, the Cyfarthfa Iron works and Penydarren works are established as are ‘Dowlais Furnace’ and ‘Plymouth Furnace’. This new industrial landscape is serviced by the ‘Cyfarthfa Canal’ and the ‘Cardiff (Glamorganshire) Canal’ located to the east of the Development Area as well as a network of turnpike routes. Merthyr Tydfil is illustrated as a market town. The present village of Abercanaid is not yet constructed.

- 3.5.3 The 1850 tithe maps for the parish of Merthyr Tydfil (*Plan of the parish of Merthyr Tydfil in the County of Glamorgan* and *Plan of the parish of Merthyr Tydfil in the County of Glamorgan*) (Figure 11) records that the development area covers several land parcels, the majority of which are owned at this time by William Crawshay – owner of the Cyfarthfa Ironworks in Merthyr Tydfil. The overall impression provided by the tithe map is that the development area comprised collections of farmsteads situated in amongst industrial features associated with the nearby ironworks, including waterways, ponds and rail systems.
- 3.5.4 Further afield the Plymouth Ironworks and Dyffryn Furnaces to the east and Ynys Fach and Cyfarthfa Works to the North. The tithe map does not mark the locations of coal workings, however, several parcels of land described as ‘rubbish tip’ are evidence of this activity in the wider Area. Also of note is the increased number of terraced worker’s housing including the first rows at Llwyn-yr-Eos that would develop into the present village of Abercanaid.
- 3.5.5 The 1881 Ordnance Survey Map (1st Edition 1:2500) (Figure 15) highlights the enormous scale of development in the Merthyr Tydfil Area in the late 19th Century and how the natural basin within the Taff valley could accommodate this growth. The map shows a significant number of new collieries surrounding the Study Area that were established to provide coal to the ironworks. These include Gethin Pit, Graig Pit and Upper Abercanaid Pit to the east and Cwm Pit, Rhyd-y-Car Pit and Glyndyrys Pit to the north. The village of Abercanaid is shown to have expanded to accommodate planned streets of terraced worker’s cottages as well as a school and chapel. The map also shows that the Study Area is largely cut off from this development both by topography and by the intercutting transport networks of the Glamorganshire Canal, the new Taff Vale Railway and the industrial Gethin railway on the east and the Neath Valley Railway to the north. The Development Area itself remains a fir plantation within an upland landscape of woodland and pasture.
- 3.5.6 The 1919 Ordnance Survey Map (3rd Edition 1:2500) (Figure 16) there is little change to the landscape setting of the Development Area however ‘Waunwylt Colliery’ is marked in close proximity, just to the north of the River Graig. A ‘Level’ is illustrated from which a tramway extends to a station near Graig Cottage. In addition, there is an ‘Old Tramway’ indicating an earlier phase of working. An ‘Airshaft’ is also marked.
- 3.5.7 The 1957-1964 Ordnance Survey Map (4th Edition 1:2500) (Figure 17) illustrates that by this time the ‘Waunwylt Colliery’ was disused with features described as ‘Old Level’ and ‘Old Shaft’ and ‘disused tramway’. An area in close proximity to the Development Area is marked with various ‘sinks’, ‘issues’ and ‘collects’ and there are numerous slag heaps illustrated. Graig Farm and Pen-y-lan Farm are marked as ‘ruins’. The wider industrial landscape has also transformed with Gethin Pit and the majority of others disused and a large factory at Pentrebach. Glamorganshire Canal is also marked as disused.

3.6 Aerial Photographic Evidence

- 3.6.1 Aerial Photographs of the Development Area were sourced from the Central Register of Aerial Photos Wales and were found to be in line with the map evidence.
- 3.6.2 In particular, aerial photograph 3408 taken in 1951 (Plate 6) shows the remains of Graig Farm, Waunwylt Colliery and Gethin Pit 2 including Webbers Pond in very clear detail. The old tramroad from Waunwylt Level to Graig can be seen where there is a very large tip adjacent to the railway. The Development Area appears to include a small copse of woodland surrounded by open heathland or pasture.
- 3.6.3 An aerial photograph dated to 1975 (Plate 7) shows the Development Area as rather scoured pasture with much less tree cover in the surrounding area than present (Plate 54).
- 3.6.4 Further aerial photographs dated to 1990 (Plate 8) and 2009 (Plate 9) show the current layout of access roads. They also show the Development Area and the surrounding land becoming increasingly wooded in character.

3.7 Previous Studies

- 3.7.1 In 1991, a DBA was undertaken by GGAT (GGATE003675) in advance of land reclamation for the construction of the A470 which identified a number of industrial relics that required further assessment and recording prior to their demolition. Subsequently a detailed field survey was carried out in 1995 which included Webbers Pond (GGAT02522m, GGATE000274), which lies on the eastern edge of our 250m Study Area (GGAT, 1991) (Plate 14). Webbers Pond was found to be a large pond measuring 130 x 38m and was presumed to be for the provision of a water balance lift at Gethin No. 2 Pit (Lawler 1995).
- 3.7.2 A DBA was undertaken in 2000 for a large proposed Development site at Rhyd-y-Car to the north west of the current Development Area (GGATE002656). The Study collated and assessed a large number of archaeological sites and features relating to coal mining at Cwm Glo (Robbins) Pit and Cwm Du Colliery, as well as farmsteads and domestic structures, and stretches of industrial tramroads, canals and railways. Archaeological Areas 6 and 7 fall within the current 1km Study Area. Area 6 is described as 'Canal and Cwm Pit Railway Corridor characterised by substantial terraced embankments, waste tips and frequent structures' and Area 7 is described as 'GWR and Gethin Railway corridor characterised by substantial terraced embankments, with much recent reclamation' (Lawler 2000).
- 3.7.3 A historic landscape study was undertaken in 2004 by Archaeological Investigations Ltd (GGATE005424) covering a similar area of West Merthyr as the Rhyd-y-Car Study described above.
- 3.7.4 In 2019, an archaeological DBA and ASIDOHL2 was compiled by Black Mountains Archaeology Ltd (Lewis and Langland 2019), which was commissioned by The Urbanist on behalf of BikePark Wales. The report assessed the potential impacts of a proposed development comprising related to the construction of 36 camping pods, five chalets,

a shower/toilet block, a play/picnic area, new parking areas, a trail maintenance yard, and new highway access routes (P/19/0073). The DBA concluded that the proposed development would likely lead to neither direct nor indirect impacts on heritage assets within the study area. The ASIDOHL2 concluded that the likely overall significance of the impact of the proposed development on the historic landscape would be slight.

3.8 Walkover Survey

- 3.8.1 A walkover survey was conducted on the 12th January 2024 by Dr Rhys Morgan (Plates 1–5). During this survey, the development area was photographed from key views to establish more thoroughly the effects, both direct and indirect, of the proposed development on its setting. Furthermore, heritage assets within a primary 250m radius and designated sites within a secondary 1km radius were visited and assessed for indirect and setting effects and key views to and from the development area were photographed. Due to the thick tree cover present in most of the development area (which obscured views at ground level and made traversing the area difficult), a UAV was mainly relied upon to capture photographs. The survey was undertaken in overcast and mild conditions.

4 Assessment of Heritage Assets

4.1 Identified Heritage Assets

- 4.1.1 Across the entirety of the study area, a total of 136 heritage assets were identified. Within the confines of the development area, a total of 25 heritage assets were identified (Figure 5 and 6). Of these 25 heritage assets, it was deemed that nine failed to survive as visible features within the landscape and were therefore assigned a Value of D. A further two of these 25 heritage assets were newly identified during the 2019 Black Mountains Archaeology Ltd DBA and ASIDOHL2 (Lewis and Langlands 2019), written in support of development P/19/0073. These two heritage assets comprised Old Tramway (HA1) and Old Level (HA2). Within the primary study area, which comprises a 250m radius surrounding the development area, a total of 21 heritage assets were identified (Figure 7). Of these 25 heritage assets, it was deemed that ten failed to survive as visible features within the landscape and were therefore assigned a Value of D. Within the secondary study area, which comprises a 1km radius surrounding the development area, a total of 90 heritage assets were identified (Figure 8–10). Of these 90 heritage assets, it was deemed that 19 failed to survive as visible features within the landscape and were therefore assigned a Value of D.
- 4.1.2 All known heritage assets identified during the assessment are detailed in Table 3 below.

Fig ID	ID	Name	NGR	Period	Type	Designation	Grade	Designation ID	Value
Within Development Area									
HA1	n/a	Old Tramway	SO0482303438	Post-Medieval	Tramway	None	n/a	n/a	C
HA2	n/a	Old Level	SO0461703431	Post-Medieval	Level	None	n/a	n/a	C
HA3	GGAT00498m	Cist I	SO04500255	Bronze Age	Cist	None	n/a	n/a	D
HA4	GGAT03737m	Cwmbach Boundary Stone I	SO0435302703	Post-Medieval	Boundary Stone	None	n/a	n/a	C
HA5	GGAT03738m	Cwmbach Boundary Stone II	SO0448302569	Post-Medieval	Boundary Stone	None	n/a	n/a	C
HA6	GGAT03745m	Troed-y-rhiw Sheepfold I	SO0524403173	Post-Medieval	Sheepfold	None	n/a	n/a	D
HA7	GGAT03746m	Troed-y-rhiw House I	SO0455203474	Post-Medieval	House	None	n/a	n/a	C
HA8	GGAT03747m	Troed-y-rhiw Outhouse	SO0459103437	Post-Medieval	Outhouse	None	n/a	n/a	C
HA9	GGAT03748m	Troed-y-rhiw Barn	SO0456503537	Post-Medieval	Barn	None	n/a	n/a	C
HA10	GGAT03749m	Pen-y-lan Well	SO0463003285	Post-Medieval	Well	None	n/a	n/a	D
HA11	GGAT03750m	Waunwylt Farmstead	SO0432704114	Post-Medieval	Farmstead	None	n/a	n/a	D
HA12	GGAT03753m	Graig Farm Barn	SO0477703849	Post-Medieval	Barn	None	n/a	n/a	D
HA13	GGAT03759m	Upper Abercanaid Spoil Tip I	SO0455504106	Modern	Spoil Tip	None	n/a	n/a	C
HA14	GGAT03933m	Troed-y-rhiw Trig Point I	SO0454702890	Post-Medieval	Trig Point	None	n/a	n/a	D
HA15	GGAT03934m	Troed-y-rhiw Sheepfold II	SO0521902954	Post-Medieval	Sheepfold	None	n/a	n/a	D

Fig ID	ID	Name	NGR	Period	Type	Designation	Grade	Designation ID	Value
HA16	GGAT03937m	Troed-y-rhiw Quarry	SO0439903659	Post-Medieval	Quarry	None	n/a	n/a	C
HA17	GGAT03938m	Troed-y-rhiw Sheepfold III	SO0438903629	Post-Medieval	Sheep Fold	None	n/a	n/a	D
HA18	GGAT03939m	Troed-y-rhiw Trig Point II	SO0424903580	Post-Medieval	Trig Point	None	n/a	n/a	D
HA19	GGAT03940m	Troed-y-rhiw Sheepfold IV	SO0439003181	Post-Medieval	Sheepfold	None	n/a	n/a	D
HA20	GGAT03945m	Gethin Wood Quarry	SO0455003955	Post-Medieval	Quarry	None	n/a	n/a	C
HA21	GGAT03946m	Troed-y-rhiw Sheepfold V	SO0425803975	Post-Medieval	Sheepfold	None	n/a	n/a	D
HA22	GGAT05188m	Gethin Ropeway Tower	SO04440386	Post-Medieval	Tower	None	n/a	n/a	C
HA23	GGAT06429m	Waunwylt Colliery Air Shaft	SO0483303481	Post-Medieval	Air Shaft	None	n/a	n/a	C
HA24	GGAT06430m	Waunwylt Colliery Structure	SO0472903388	Post-Medieval	Structure	None	n/a	n/a	C
HA25	GGAT06431m	Waunwylt Colliery Level	SO0493403485	Post-Medieval	Level	None	n/a	n/a	C
Within Primary (250m radius) Study Area (All Heritage Assets)									
HA26	LB81752	Cwm Pit Chimney Base	SO0442204312	Post-Medieval	Chimney	Listed Building	LB81752	II	B
HA27	GGAT00880m	Flint Scatter	SO050040	Mesolithic	Findspot	None	n/a	n/a	D
HA28	GGAT02191m	Gethin Colliery No 2 Pit	SO056034	Post-Medieval	Colliery	None	n/a	n/a	D
HA29	SMGm606; GGAT02500.4m; GGAT02500.5m	Vale of Neath Railway	SO0434604154	Post-Medieval	Railway	Scheduled Monument	SMGm606	n/a	A

Fig ID	ID	Name	NGR	Period	Type	Designation	Grade	Designation ID	Value
HA30	GGAT02524m	Gethin Colliery Engine House	SO05670337	Post-Medieval	Engine House	None	n/a	n/a	D
HA31	GGAT02526m	Gethin Colliery Compressor House (South Range)	SO05600341	Post-Medieval	Compressor House	None	n/a	n/a	D
HA32	GGAT02527m	Gethin Colliery Compressor House (North Range)	SO05600341	Post-Medieval	Compressor House	None	n/a	n/a	D
HA33	SMGm607; GGAT02819m; GGAT02820m; GGAT02821m; GGAT02858.0m	Cwm Pit and Head of Railway	SO04530434	Post-Medieval	Colliery/Railway	Scheduled Monument	SMG m607	n/a	A
HA34	GGAT08240m	Old Waunwyllt Farmstead	SO04400416	Post-Medieval	Farmstead	None	n/a	n/a	D
HA35	GGAT03757m	Upper Abercanaid Spoil Tip II	SO0469404274	Modern	Spoil Tip	None	n/a	n/a	C
HA36	GGAT03756m	Upper Abercanaid Spoil Tip III	SO0477104214	Modern	Spoil Tip	None	n/a	n/a	C
HA37	GGAT06429m	Cwm Pit Air Shaft	SO0481404132	Modern	Shaft	None	n/a	n/a	D
HA38	GGAT03755m	Upper Abercanaid Spoil Tip IV	SO0472404071	Modern	Spoil Tip	None	n/a	n/a	C
HA39	GGAT03754m	Cwm Pit Spoil Tip	SO0490504037	Modern	Spoil Tip	None	n/a	n/a	C
HA40	GGAT03941m	Abercanaid Trig Point	SO0519503499	Post-Medieval	Trig Point	None	n/a	n/a	D
HA41	GGAT02522m	Webber's Pond	SO05560334	Post-Medieval	Pond	None	n/a	n/a	C
HA42	GGAT06432m	Troed-y-rhiw Structure	SO0560903305	Post-Medieval	Structure	None	n/a	n/a	D
HA43	GGAT03744m	Troed-y-rhiw Sheepfold VI	SO0592003061	Post-Medieval	Sheepfold	None	n/a	n/a	D

Flg ID	ID	Name	NGR	Period	Type	Designation	Grade	Designation ID	Value
HA44	GGAT06431m	Troed-y-rhiw Level	SO0493403485	Post-Medieval	Level	None	n/a	n/a	C
HA45	SMGm236	Garn Las Earthwork	SO0289403839	Bronze Age	Cairn	Scheduled Monument	SMG m236	n/a	A
HA46	SMGm586	Carn Castell y Meibion Ring Cairn	SO0353203119	Bronze Age	Cairn	Scheduled Monument	SMG m586	n/a	A
Within Secondary (1km radius) Study Area									
HA47	GGAT00530m	Cwm Gwernlas Forge	SO0604	Post-Medieval	Forge	None	n/a	n/a	D
HA48	GGAT00883m	Park Houses	SO06130326	Post-Medieval	House	None	n/a	n/a	C
HA49	GGAT01215m	3-13 David Square	SO05620385	Post-Medieval	House	None	n/a	n/a	D
HA50	GGAT01625m	Abercanaid Bridge	SO05680401	Post-Medieval	Bridge	None	n/a	n/a	D
HA51	GGAT01682.24s	Glamorganshire Canal Overflow	SO05240425	Post-Medieval	Canal	None	n/a	n/a	C
HA52	SMGm572; GGAT02137m; NPRN309757	Abercanaid Haystack Boiler	SO0561303785	Post-Medieval	Boiler	Scheduled Monument	SMG m572	n/a	A
HA53	GGAT02521m	Graig Road Railway Bridge	SO05270381	Post-Medieval	Bridge	None	n/a	n/a	D
HA54	GGAT02523m	Gethin No 2 Pit Incline	SO05730337	Post-Medieval	Incline Plane	None	n/a	n/a	C
HA55	GGAT02525m	Gethin No 2 Pit Winding Engine House	SO05580343	Post-Medieval	Engine House	None	n/a	n/a	D
HA56	GGAT02809m	Lower Colliers' Row	SO04430506	Post-Medieval	House	None	n/a	n/a	D
HA57	GGAT02812m	Ynysfach and Gethin Railways Signal Box	SO04690498	Post-Medieval	Signal Box	None	n/a	n/a	D

Flg ID	ID	Name	NGR	Period	Type	Designation	Grade	Designation ID	Value
HA58	GGAT02813m	Ynysfach Ironstone Level	SO04700498	Post-Medieval	Level	None	n/a	n/a	C
HA59	GGAT02815m	Glyndyrys Pit Smithy	SO04620468	Post-Medieval	Smithy	None	n/a	n/a	D
HA60	GGAT02816m	Glyndyrys Pit	SO04670467	Post-Medieval	Colliery	None	n/a	n/a	D
HA61	GGAT02817m	Cyfarthfa Level Crossing	SO04790468	Post-Medieval	Level Crossing	None	n/a	n/a	D
HA62	GGAT02818m	Vale of Neath Railway Footbridge	SO04630479	Post-Medieval	Bridge	None	n/a	n/a	D
HA63	GGAT02822m	Troed-y-rhiw Ironstone Workings	SO04150479	Post-Medieval	Ironstone Mine	None	n/a	n/a	D
HA64	GGAT02830m	Lower Colliers' Row Spoil Tip	SO045048	Post-Medieval	Spoil Tip	None	n/a	n/a	C
HA65	GGAT02842m	Lower Colliers' Row Level	SO04390480	Post-Medieval	Level	None	n/a	n/a	D
HA66	GGAT02858.0m	Cwm Pit Narrow Gauge Railway	SO04150435	Post-Medieval	Railway	None	n/a	n/a	C
HA67	GGAT02861.0m	Cwm Pit Incline	SO04350458	Post-Medieval	Incline Plane	None	n/a	n/a	C
HA68	GGAT02867.0m	Melin-ganaid Trackway	SO04050443	Post-Medieval	Trackway	None	n/a	n/a	C
HA69	GGAT03758m	Troed-y-rhiw Spoil Tip V	SO0491404153	Post-Medieval	Spoil Tip	None	n/a	n/a	C
HA70	GGAT03947m	Upper Abercanaid Coal Shaft	SO0489204218	Post-Medieval	Shaft	None	n/a	n/a	D
HA71	GGAT04368m	1 Henry Square	SO05650383	Post-Medieval	House	None	n/a	n/a	D
HA72	GGAT04369m	2-3 Henry Square	SO05600380	Post-Medieval	House	None	n/a	n/a	D
HA73	GGAT04370m	1-10 Catherine Square	SO05600387	Post-Medieval	House	None	n/a	n/a	D

Flg ID	ID	Name	NGR	Period	Type	Designation	Grade	Designation ID	Value
HA74	GGAT04371m	15-24 Catherine Square	SO05540389	Post-Medieval	House	None	n/a	n/a	D
HA75	GGAT04441m	Ynysfach Spoil Tip	SO04750490	Post-Medieval	Spoil Tip	None	n/a	n/a	C
HA76	GGAT06422.32m	Pentrebach Railway Station	SO05960380	Post-Medieval	Railway Station	None	n/a	n/a	C
HA77	GGAT06434m	Nant Canaid Weir	SO0514504258	Post-Medieval	Weir	None	n/a	n/a	D
HA78	GGAT08262m	Ynysfach Railway	SO05130440	Post-Medieval	Railway	None	n/a	n/a	C
HA79	GGAT08772m	The Colliers Arms	SO0568603749	Post-Medieval	Public House	None	n/a	n/a	C
HA80	GGAT08783m	Llwyn-Yr-Eos Inn	SO0558803828	Post-Medieval	Inn	None	n/a	n/a	C
HA81	GGAT09212m	Richards Arms	SO0588103586	Post-Medieval	Public House	None	n/a	n/a	C
HA82	GGAT09228m	Church of St Peter and St Paul	SO0586603736	Post-Medieval	Church	None	n/a	n/a	C
HA83	GGAT09268m	Hoover Factory	SO0586204103	Post-Medieval	Factory	None	n/a	n/a	C
HA84	GGAT09269m	Hoover Factory Security Hut	SO0587904077	Post-Medieval	Hut	None	n/a	n/a	C
HA85	GGAT09278m	Abercanaid Engine House	SO0518204323	Post-Medieval	Engine House	None	n/a	n/a	C
HA86	LB11493	Blain Canaid Farmhouse	SO0351504688	Post-Medieval	Farmhouse	Listed Building	LB114 93	II	B
HA87	LB11494	Upper Abercanaid House	SO0518704275	Post-Medieval	House	Listed Building	LB114 94	II	B
HA88	LB11495	Upper Abercanaid House Garde Walls and Gate Piers	SO0517904302	Post-Medieval	Wall/Gate Piers	Listed Building	LB114 95	II	B
HA89	LB11496	1 and 2 Quay Row	SO0521704262	Post-Medieval	House	Listed Building	LB114 96	II	B

Flg ID	ID	Name	NGR	Period	Type	Designation	Grade	Designation ID	Value
HA90	LB11497	Llwyn-Yr-Eos House	SO0556003927	Post-Medieval	House	Listed Building	LB11497	II	B
HA91	LB11498	1 Nightingale Street	SO0564903840	Post-Medieval	House	Listed Building	LB11498	II	B
HA92	LB11499	7 Nightingale Street	SO0567603796	Post-Medieval	House	Listed Building	LB11499	II	B
HA93	LB11500	70 Nightingale Street	SO0567003784	Post-Medieval	House	Listed Building	LB11500	II	B
HA94	LB11501	76 Nightingale Street	SO0565703802	Post-Medieval	House	Listed Building	LB11501	II	B
HA95	LB11502	1-6 River Row	SO0571503789	Post-Medieval	House	Listed Building	LB11502	II	B
HA96	LB11503	Pentrebach House	SO0614903857	Post-Medieval	House	Listed Building	LB11503	II	B
HA97	LB11504	Pentrebach House Garden Walls	SO0611403906	Post-Medieval	Wall	Listed Building	LB11504	II	B
HA98	LB11506	Church of St John the Baptist	SO0682002107	Post-Medieval	Church	Listed Building	LB11506	II	B
HA99	LB15676	Rhydycar Skew Bridge	SO0500705086	Post-Medieval	Bridge	Listed Building	LB15676	II	B
HA100	LB21818	Sion Independent Chapel	SO0585603661	Post-Medieval	Chapel	Listed Building	LB21818	II	B
HA101	LB81722	Troed-y-Rhiw War Memorial	SO0696202580	Modern	War Memorial	Listed Building	LB81722	II	B
HA102	LB81724	2 River Row	SO0571103794	Post-Medieval	House	Listed Building	LB81724	II	B
HA103	LB81725	3 River Row	SO0570803799	Post-Medieval	House	Listed Building	LB81725	II	B
HA104	LB81726	4 River Row	SO0570503804	Post-Medieval	House	Listed Building	LB81726	II	B
HA105	LB81727	5 River Row	SO0570003811	Post-Medieval	House	Listed Building	LB81727	II	B

Flg ID	ID	Name	NGR	Period	Type	Designation	Grade	Designation ID	Value
HA106	LB81728	6 River Row	SO0569703816	Post-Medieval	House	Listed Building	LB81728	II	B
HA107	LB81729	2 Nightingale Street	SO0565203834	Post-Medieval	House	Listed Building	LB81729	II	B
HA108	LB81730	3 Nightingale Street	SO0565503827	Post-Medieval	House	Listed Building	LB81730	II	B
HA109	LB81731	4 Nightingale Street	SO0566003820	Post-Medieval	House	Listed Building	LB81731	II	B
HA110	LB81732	5 Nightingale Street	SO0566403815	Post-Medieval	House	Listed Building	LB81732	II	B
HA111	LB81733	6 Nightingale Street	SO0566803809	Post-Medieval	House	Listed Building	LB81733	II	B
HA112	LB81734	8 Nightingale Street	SO0567403802	Post-Medieval	House	Listed Building	LB81734	II	B
HA113	LB81735	9 Nightingale Street	SO0568203791	Post-Medieval	House	Listed Building	LB81735	II	B
HA114	LB81736	10 Nightingale Street	SO0568503783	Post-Medieval	House	Listed Building	LB81736	II	B
HA115	LB81737	11 Nightingale Street	SO0568903777	Post-Medieval	House	Listed Building	LB81737	II	B
HA116	LB81738	12 Nightingale Street	SO0569203774	Post-Medieval	House	Listed Building	LB81738	II	B
HA117	LB81739	71 Nightingale Street	SO0567803771	Post-Medieval	House	Listed Building	LB81739	II	B
HA118	LB81740	72 Nightingale Street	SO0567703764	Post-Medieval	House	Listed Building	LB81740	II	B
HA119	LB81741	73 Nightingale Street	SO0567303778	Post-Medieval	House	Listed Building	LB81741	II	B
HA120	LB81742	74 Nightingale Street	SO0566603789	Post-Medieval	House	Listed Building	LB81742	II	B
HA121	LB81743	75 Nightingale Street	SO0566003793	Post-Medieval	House	Listed Building	LB81743	II	B

Flg ID	ID	Name	NGR	Period	Type	Designation	Grade	Designation ID	Value
HA122	LB81744	77 Nightingale Street	SO0565303806	Post-Medieval	House	Listed Building	LB81744	II	B
HA123	LB81745	78 Nightingale Street	SO0565103812	Post-Medieval	House	Listed Building	LB81745	II	B
HA124	LB81746	79 Nightingale Street	SO0564903817	Post-Medieval	House	Listed Building	LB81746	II	B
HA125	LB81747	80 Nightingale Street	SO0564403824	Post-Medieval	House	Listed Building	LB81747	II	B
HA126	LB81748	81 Nightingale Street	SO0563503829	Post-Medieval	House	Listed Building	LB81748	II	B
HA127	LB81751	Gethin Tramway Bridge	SO0579003373	Post-Medieval	Bridge	Listed Building	LB81751	II	B
HA128	LB81753	3 Quay Row	SO0521504270	Post-Medieval	House	Listed Building	LB81753	II	B
HA129	LB81754	4 Quay Row	SO0521504270	Post-Medieval	House	Listed Building	LB81754	II	B
HA130	LB81755	5 Quay Row	SO0521204283	Post-Medieval	House	Listed Building	LB81755	II	B
HA131	SMGm609	Black Pins Ironstone Workings	SO0397404932	Post-Medieval	Ironstone Mine	Scheduled Monument	SMGm609	n/a	A
HA132	SMGm608	Cyfarthfa Balance Pond and Leat	SO0453604537	Post-Medieval	Pond/Leat	Scheduled Monument	SMGm608	n/a	A
HA133	SMGm368	Ring Cairn South of Twyn Blaennant	SO0254004377	Bronze Age	Cairn	Scheduled Monument	SMGm368	n/a	A
HA134	SMGm238	Gwersyll	SO0269804033	Prehistoric	Earthwork	Scheduled Monument	SMGm238	n/a	A
HA135	SMGm288	Graig-y-Gilfach Round Cairn and Earthwork	SO0298603384	Bronze Age	Cairn/Earthwork	Scheduled Monument	SMGm288	n/a	A
HA136	SMGm287	Darren Fawr Round Cairns	SO0334802422	Bronze Age	Cairn	Scheduled Monument	SMGm287	n/a	A

Table 3. Identified heritage assets

5 Assessment of Heritage Assets

5.1 Potential Direct Impacts of the Development on Heritage Assets

- 5.1.1 The proposed expansion will involve the creation of an additional 33,407m of mountain bike trails. The new trails will be integrated into the existing network of trails in such a manner as to improve the layout and navigability of the site. To accomplish such integration, the new trails will be accompanied by an additional 2,986m of maintenance and emergency access tracks as well as 737m of uplift track extension.
- 5.1.2 The assessment considered the potential direct impacts of the proposed development on heritage assets situated directly within the development area. As detailed in Table 3 above, 25 heritage assets were identified within the confines of the development area. It was also noted that a significant portion of these heritage assets are of Value D and fail to survive as visible features within the landscape (or simply could not be found). In total, it was noted that 11 heritage assets belonged to this category. However, it is possible that these Value D heritage assets survive as subterranean features and may therefore still be disturbed by any potential groundworks that would occur within their vicinity. Also, the possibility must be recognised that some of these Value D heritage assets may become visible if de-vegetation efforts were made within areas that they occupy. Therefore, it was not assumed during the assessment that heritage assets were automatically free from potential direct impacts on the sole basis that they were of Value D.
- 5.1.3 During the assessment, it was determined that 12 of the 25 heritage assets were situated sufficient distances beyond the proposed trail network to suggest that they would likely not be impacted. Moreover, many of these 12 heritage assets are situated in areas occupied by existing trails, highlighting the possibility that they have already been directly impacted by groundworks associated with the original trial network. These 12 heritage assets include:
- Old Tramway (HA1)
 - Pen-y-lan Well (HA10)
 - Troed-y-rhiw Sheepfold II (HA15)
 - Troed-y-rhiw Quarry (HA16)
 - Troed-y-rhiw Sheepfold III (HA17)
 - Troed-y-rhiw Trig Point II (HA18)
 - Troed-y-rhiw Sheepfold IV (HA19)
 - Troed-y-rhiw Sheepfold V (HA21)
 - Gethin Ropeway Tower (HA22)
 - Waunwylt Colliery Air Shaft (HA23)
 - Waunwylt Colliery Structure (HA24)
 - Waunwylt Colliery Level (HA25)

- 5.1.4 In considering their positions, the assessment has concluded that the potential direct effects on the 12 heritage assets detailed above will likely be **none**, implying “no perceived or identified effect, or loss in value.”
- 5.1.5 The remaining 13 heritage assets identified within the development are situated within the immediate vicinity of the proposed trail network, and include:
- Old Level (HA2)
 - Cist I (HA3)
 - Cwmbach Boundary Stone I (HA4)
 - Cwmbach Boundary Stone II (HA5)
 - Troed-y-rhiw Sheepfold I (HA6)
 - Troed-y-rhiw House I (HA7)
 - Troed-y-rhiw Outhouse (HA8)
 - Troed-y-rhiw Barn (HA9)
 - Waunwyllt Farmstead (HA11)
 - Graig Farm Barn (HA12)
 - Upper Abercanaid Spoil Tip I (HA13)
 - Troed-y-rhiw Trig Point I (HA14)
 - Gethin Wood Quarry (HA20)
- 5.1.6 In comprising Value D heritage assets, the assessment determined that the potential direct impacts on Cist I (HA3), Troed-y-rhiw Sheepfold I (HA6), Waunwyllt Farmstead (HA11), Graig Farm Barn (HA12) and Troed-y-rhiw Trig Point I (HA14) will likely be **low**, implying a “slight loss of integrity to heritage asset(s) and value”. As these Value D heritage assets are not visible, or at least not immediately identifiable, within the landscape, then there exists the potential that they have already been disturbed. The assessment also determined that the potential direct impacts on Old Level (HA2), Cwmbach Boundary Stone I (HA4), Cwmbach Boundary Stone II (HA5), Troed-y-rhiw House I (HA7), Troed-y-rhiw Outhouse (HA8), Troed-y-rhiw Barn (HA9), Upper Abercanaid Spoil Tip I (HA13) and Gethin Wood Quarry (HA20) may be **moderate**, implying “some loss of integrity to heritage asset(s) and reduction in value.” Although these heritage assets are situated within the immediate vicinity of the proposed trail networks, and demonstrably survive as physical features, they are, on the whole, found in poor condition and have already been significantly disturbed.

5.2 Potential Indirect (Visual) Impacts of the Development on Heritage Assets

- 5.2.1 The indirect (visual) effect of the proposed development on heritage assets was assessed via, on the one hand, field observations derived from walkover survey and, on the other, ZTV, cartographic regression and topographic analysis. ZTV analysis (Figure 12) implements LiDAR data to determine lines of sight to and from a set of pre-determined viewpoints within the landscape using a GIS intervisibility algorithm. These viewpoints were set up along the boundary of the proposed development.

5.2.2 Of those heritage assets situated within the development area, the assessment determined that three heritage assets may be subject to indirect (visual) effects, which include:

- Troed-y-rhiw House I (HA7)
- Troed-y-rhiw Outhouse (HA8)
- Troed-y-rhiw Barn (HA9)

5.2.3 These heritage assets were chosen as, although their overall preservation is relatively poor, their physical survival is nonetheless high enough to warrant the possibility of potential indirect impacts. The assessment determined that the potential indirect (visual) impacts on these three heritage assets may be **very slight**, implying that “the key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in little discernible severance of cultural heritage links.” The reason for this determination is twofold. Firstly, the heritage assets are situated in an area that has already been disturbed by the construction of BikePark Wales. Secondly, the heritage assets, which are intimately connected, and which originally belonged to the same farm, are situated very close to one another. Therefore, it is unlikely that the proposed development will sever essential lines of sight between them. On the other hand, the proposed development will likely lead a partial impingement on lines of sight between the heritage assets and elsewhere in the landscape.

5.2.4 Within the primary study, which comprises a 250m radius of the development area, it was determined via a combination of ZTV analysis (Figure 12) and observations in the field that three heritage assets were intervisible with the development area. These three heritage assets included:

- Cwm Pit Spoil Tip (HA39)
- Webber’s Pond (HA41)
- Troed-y-rhiw Level (HA44)

5.2.5 However, it was also determined that the lines of sight that existed between the three heritage assets and the development were obscured by tree cover. Moreover, the heritage assets survived in poor condition and were set in areas of thick vegetation, which further obscured the lines of sight that existed between them. Therefore, the assessment determined that the potential indirect (visual) impacts of the proposed development on the three heritage assets detailed above may be **none**, implying that “the key views and/or essential lines of sight to and from the heritage asset are not noticeable resulting in no severance of cultural heritage links.”

5.2.6 Only heritage assets of Value A were considered for indirect (visual) impact assessment within the secondary study area, which comprises a 1km radius of the development area. Within the secondary study area, it was determined via a combination of ZTV analysis (Figure 12) that two Value A heritage assets may possess partial intervisibility with the development area, which include:

- Black Pins Ironstone Workings (HA131)

- Cyfarthfa Balance Pond and Leat (HA132)

5.2.7 However, it was also determined during the walkover survey that such lines of sight were heavily obscured by tree cover. Therefore, the assessment determined that the potential indirect (visual) impacts on these two heritage assets may be **none**, implying that “the key views and/or essential lines of sight to and from the heritage asset are not noticeable resulting in no severance of cultural heritage links.”

5.2.8 The last column “Setting Effects Y/N” identifies those heritage assets that may have indirect visual impacts to the setting of the monument (Stage 1 as set out in *Setting of Historic Assets in Wales 2017 (The Historic Environment (Wales) Act 2016, Annex 6)*).

Fig ID	ID	Name	NGR	Period	Type	Designation	Designation ID	Value	Rarity	Documentation / Association	Group Value	Survival/ Condition	Direct Effect	Significance of Direct Effect	Indirect Effect	Setting Effect Yes/No
Within Development Area																
HA1	n/a	Old Tramway	SO0482303438	Post-Medieval	Tramway	None	n/a	C	Low	Moderate	High	Near Destroyed/Poor	No	None	No	No
HA2	n/a	Old Level	SO0461703431	Post-Medieval	Level	None	n/a	C	Low	Moderate	High	Near Destroyed/Poor	Yes	Low	No	Yes
HA3	GGAT00498m	Cist I	SO04500255	Bronze Age	Cist	None	n/a	D	Medium	Low	High	Damaged/Poor	Yes	Low	No	Yes
HA4	GGAT03737m	Cwmbach Boundary Stone I	SO0435302703	Post-Medieval	Boundary Stone	None	n/a	C	Low	Low	Low	Damaged/Poor	Yes	Low	No	Yes
HA5	GGAT03738m	Cwmbach Boundary Stone II	SO0448302569	Post-Medieval	Boundary Stone	None	n/a	C	Low	Low	Low	Damaged/Poor	Yes	Low	No	Yes
HA6	GGAT03745m	Troed-y-rhiw Sheepfold I	SO0524403173	Post-Medieval	Sheepfold	None	n/a	D	Low	Low	Moderate	Damaged/Poor	Yes	Low	No	Yes
HA7	GGAT03746m	Troed-y-rhiw House I	SO0455203474	Post-Medieval	House	None	n/a	C	Low	Moderate	Moderate	Damaged/Good	Yes	Low	Yes	Yes
HA8	GGAT03747m	Troed-y-rhiw Outhouse	SO0459103437	Post-Medieval	Outhouse	None	n/a	C	Low	Moderate	Moderate	Damaged/Good	Yes	Low	Yes	Yes
HA9	GGAT03748m	Troed-y-rhiw Barn	SO0456503537	Post-Medieval	Barn	None	n/a	C	Low	Moderate	Moderate	Damaged/Good	Yes	Low	Yes	Yes
HA10	GGAT03749m	Pen-y-lan Well	SO0463003285	Post-Medieval	Well	None	n/a	D	Low	Moderate	Moderate	Damaged/Good	No	None	No	No
HA11	GGAT03750m	Waunwylt Farmstead	SO0432704114	Post-Medieval	Farmstead	None	n/a	D	Low	Moderate	Moderate	Damaged/Poor	Yes	Low	No	Yes
HA12	GGAT03753m	Graig Farm Barn	SO0477703849	Post-Medieval	Barn	None	n/a	D	Low	Moderate	Moderate	Damaged/Good	Yes	Low	No	Yes
HA13	GGAT03759m	Upper Abercanaid Spoil Tip I	SO0455504106	Modern	Spoil Tip	None	n/a	C	Low	Low	High	Damaged/Poor	Yes	Low	No	Yes
HA14	GGAT03933m	Troed-y-rhiw Trig Point I	SO0454702890	Post-Medieval	Trig Point	None	n/a	D	Low	Moderate	Low	Intact/Poor	Yes	Low	No	Yes
HA15	GGAT03934m	Troed-y-rhiw Sheepfold II	SO0521902954	Post-Medieval	Sheepfold	None	n/a	D	Low	Low	Moderate	Damaged/Poor	No	None	No	No
HA16	GGAT03937m	Troed-y-rhiw Quarry	SO0439903659	Post-Medieval	Quarry	None	n/a	C	Low	Moderate	Moderate	Intact/Poor	No	None	No	No
HA17	GGAT03938m	Troed-y-rhiw Sheepfold III	SO0438903629	Post-Medieval	Sheepfold	None	n/a	D	Low	Low	Moderate	Damaged/Poor	No	None	No	No
HA18	GGAT03939m	Troed-y-rhiw Trig Point II	SO0424903580	Post-Medieval	Trig Point	None	n/a	D	Low	Moderate	Low	Intact/Poor	No	None	No	No
HA19	GGAT03940m	Troed-y-rhiw Sheepfold IV	SO0439003181	Post-Medieval	Sheepfold	None	n/a	D	Low	Low	Moderate	Damaged/Poor	No	None	No	No
HA20	GGAT03945m	Gethin Wood Quarry	SO0455003955	Post-Medieval	Quarry	None	n/a	C	Low	Moderate	Moderate	Damaged/Poor	Yes	Low	No	Yes
HA21	GGAT03946m	Troed-y-rhiw Sheepfold V	SO0425803975	Post-Medieval	Sheepfold	None	n/a	D	Low	Low	Moderate	Damaged/Poor	No	None	No	No
HA22	GGAT05188m	Gethin Ropeway Tower	SO04440386	Post-Medieval	Tower	None	n/a	C	Low	Moderate	High	Damaged/Good	No	None	No	No
HA23	GGAT06429m	Waunwylt Colliery Air Shaft	SO0483303481	Post-Medieval	Air Shaft	None	n/a	C	Low	Moderate	High	Near Destroyed/Poor	No	None	No	No
HA24	GGAT06430m	Waunwylt Colliery Structure	SO0472903388	Post-Medieval	Structure	None	n/a	C	Low	Low	High	Damaged/Good	No	None	No	No

Fig ID	ID	Name	NGR	Period	Type	Designation	Designation ID	Value	Rarity	Documentation / Association	Group Value	Survival/ Condition	Direct Effect	Significance of Direct Effect	Indirect Effect	Setting Effect Yes/No
HA25	GGAT06431m	Waunwylt Colliery Level	SO0493403485	Post-Medieval	Level	None	n/a	C	Low	Moderate	High	Near Destroyed/Poor	No	None	No	No
Within Primary (250m Radius) Study Area																
HA26	LB81752	Cwm Pit Chimney Base	SO0442204312		Post-Medieval	Listed Building	LB81752	B	Moderate	Medium	High	Damaged/Good	No	None	No	No
HA29	SMGm606; GGAT02500.4m; GGAT02500.5m	Vale of Neath Railway	SO0434604154		Post-Medieval	Scheduled Monument	SMGm606	A	Moderate	High	High	Damaged/Good	No	None	No	No
HA33	SMGm607; GGAT02819m; GGAT02820m; GGAT02821m; GGAT02858.0m	Cwm Pit and Head of Railway	SO04530434		Post-Medieval	Scheduled Monument	SMGm607	A	Moderate	High	High	Damaged/Good	No	None	No	No
HA35	GGAT03757m	Upper Abercanaid Spoil Tip II	SO0469404274		Modern	None	n/a	C	Low	Low	High	Damaged/Poor	No	None	No	No
HA36	GGAT03756m	Upper Abercanaid Spoil Tip III	SO0477104214		Modern	None	n/a	C	Low	Low	High	Damaged/Poor	No	None	No	No
HA38	GGAT03755m	Upper Abercanaid Spoil Tip IV	SO0472404071		Modern	None	n/a	C	Low	Low	High	Damaged/Poor	No	None	No	No
HA39	GGAT03754m	Cwm Pit Spoil Tip	SO0490504037		Modern	None	n/a	C	Low	Low	High	Damaged/Poor	No	None	No	No
HA41	GGAT02522m	Webber's Pond	SO05560334		Post-Medieval	None	n/a	C	Medium	Moderate	High	Damaged/Poor	No	None	No	No
HA44	GGAT06431m	Troed-y-rhiw Level	SO0493403485		Post-Medieval	None	n/a	C	Low	Low	High	Intact/Poor	No	None	No	No
HA45	SMGm236	Garn Las Earthwork	SO0289403839		Bronze Age	Scheduled Monument	SMGm236	A	Medium	Low	High	Intact/Poor	No	None	No	No
HA46	SMGm586	Carn Castell y Meibion Ring Cairn	SO0353203119		Bronze Age	Scheduled Monument	SMGm586	A	Medium	Low	High	Damaged/Good	No	None	No	No
Within Secondary (1km Radius) Study Area																
HA52	SMGm572; GGAT02137m; NPRN309757	Abercanaid Haystack Boiler	SO0561303785	Post-Medieval	Boiler	Scheduled Monument	SMGm572	A	High	High	High	Intact/Poor	No	None	No	No
HA131	SMGm609	Black Pins Ironstone Workings	SO0397404932	Post-Medieval	Ironstone Mine	Scheduled Monument	SMGm609	A	Medium	Moderate	High	Damaged/Good	No	None	No	No
HA132	SMGm608	Cyfarthfa Balance Pond and Leat	SO0453604537	Post-Medieval	Pond/Leat	Scheduled Monument	SMGm608	A	Medium	High	High	Damaged/Good	No	None	No	No
HA133	SMGm368	Ring Cairn South of Twyn Blaennant	SO0254004377	Bronze Age	Cairn	Scheduled Monument	SMGm368	A	Medium	Low	High	Damaged/Good	No	None	No	No
HA134	SMGm238	Gwersyll	SO0269804033	Prehistoric	Earthwork	Scheduled Monument	SMGm238	A	Medium	Low	High	Damaged/Good	No	None	No	No
HA135	SMGm288	Graig-y-Gilfach Round Cairn and Earthwork	SO0298603384	Bronze Age	Cairn/Earthwork	Scheduled Monument	SMGm288	A	Medium	Low	High	Damaged/Good	No	None	No	No
HA136	SMGm287	Darren Fawr Round Cairns	SO0334802422	Bronze Age	Cairn	Scheduled Monument	SMGm287	A	Medium	Low	High	Damaged/Good	No	None	No	No
Registered Landscapes																
n/a	HLW(MGI)2	Merthyr Tydfil	SO0546906374	n/a	Registered Landscape	Landscape of Outstanding Historic Interest	HLW(MGI)2	n/a	n/a	n/a	n/a	n/a	Yes	Very Slight	No	No

Table 4. Assessment of direct and indirect impacts on heritage assets

6 Assessment of Impacts to Setting and Significance

6.1 Stage 1: Identifying Heritage Assets for Setting and Significance Impact Assessment

- 6.1.1 Potential indirect impacts of the proposed development on the setting and significance of heritage assets are confined to International and National value heritage assets (A* and A class); these include Scheduled Monuments, Registered Landscapes, Parks and Gardens and sometimes Grade I Listed Buildings. Grade II and II* buildings are considered if their setting includes or is included with a Registered Landscape or Park and Garden.

6.2 Stage 2 and 3: Defining and Evaluating the Setting and Significance of Heritage Assets

- 6.2.1 Section 4 and 5 above set out the context and extent of the identified heritage assets, which contribute to the Stage 1 and 2 assessment of setting and significance.
- 6.2.2 Section 4 sets out the value and Section 5 the direct and indirect effects, which also contribute to the overall understanding of heritage assets and their setting (Stage 2 assessment of setting and significance).
- 6.2.3 The assessment has determined that the proposed development has potential to impact on the setting of thirteen heritage assets. Some heritage assets situated within the development area may have their settings impacted due to the potential that they may be physically disturbed. Others, situated both within and beyond the development area, may have their settings impacted due to the potential severance of essential lines of sight with other heritage assets. However, as detailed above, due to thick tree cover in the region, it is likely that such severance will be very partial.

ID	PRN	Name	Value	Evidential Value	Historical Value	Aesthetic Value	Communal Value	Type of visual effect/change	Magnitude of Effect	Significance of Effect	Cumulative Visual Effect
HA2	n/a	Old Level	C	Low	Moderate	Low	Low	Slight interruption	Low	Significant	Very Slight
HA3	GGAT00498m	Cist I	D	Low	Moderate	Low	Low	None	n/a	None	None
HA4	GGAT03737m	Cwmbach Boundary Stone I	C	Low	Low	Low	Low	Slight interruption	Low	Significant	Very Slight
HA5	GGAT03738m	Cwmbach Boundary Stone II	C	Low	Low	Low	Low	Slight interruption	Low	Significant	Very Slight
HA6	GGAT03745m	Troed-y-rhiw Sheepfold I	D	Low	Low	Low	Low	None	n/a	None	None
HA7	GGAT03746m	Troed-y-rhiw House I	C	Moderate	Moderate	Low	Low	Slight interruption	Low	Significant	Very Slight
HA8	GGAT03747m	Troed-y-rhiw Outhouse	C	Moderate	Moderate	Low	Low	Slight interruption	Low	Significant	Very Slight
HA9	GGAT03748m	Troed-y-rhiw Barn	C	Moderate	Moderate	Low	Low	Slight interruption	Low	Significant	Very Slight
HA11	GGAT03750m	Waunwylt Farmstead	D	Low	Low	Low	Low	None	n/a	None	None
HA12	GGAT03753m	Graig Farm Barn	D	Low	Low	Low	Low	None	n/a	None	None
HA13	GGAT03759m	Upper Abercanaid Spoil Tip I	C	Low	Low	Low	Low	Slight interruption	Low	Significant	Very Slight
HA14	GGAT03933m	Troed-y-rhiw Trig Point I	D	Low	Low	Low	Low	None	n/a	None	None
HA20	GGAT03945m	Gethin Wood Quarry	C	Moderate	Moderate	Low	Low	Slight interruption	Low	Significant	Very Slight
n/a	HLW(MGI)2	Merthyr Tydfil	n/a	n/a	n/a	n/a	n/a	n/a	Low	Significant	Very Slight

Table 5. Assessment of the impact of the development on the setting and significance of selected designated heritage assets

6.3 Summary of Significance and Setting

6.3.1 The assessment has considered the potential impact of the development on the setting and significance of designated heritage assets and has concluded that eight of these will be subject to a potential **very slight** setting and significance impact (as outlined in Table 5 above). To reiterate, the thirteen heritage assets include:

- Old Level (HA2)
- Cwmbach Boundary Stone I (HA4)
- Cwmbach Boundary Stone II (HA5)
- Troed-y-rhiw House I (HA7)
- Troed-y-rhiw Outhouse (HA8)
- Troed-y-rhiw Barn (HA9)
- Upper Abercanaid Spoil Tip I (HA13)
- Gethin Wood Quarry (HA20)

6.3.2 As detailed above, the thirteen heritage assets included in Table 5 are all located within the development area. Seven of these heritage assets survive in an overall poor condition and have been assigned a Value of C.

6.3.3 The assessment also determined that the impact of the proposed development on the setting and significance of those heritage assets of Value D, which comprised five in total, would likely be **none**. It was determined that the setting and significance of these heritage assets had already been irreversibly negatively impacted. These five heritage assets included:

- Cist I (HA3)
- Troed-y-rhiw Sheepfold I (HA6)
- Waunwylt Farmstead (HA11)
- Graig Farm Barn (HA12)
- Troed-y-rhiw Trig Point I (HA14)

6.3.4 Finally, it was determined that the proposed development may potentially have a **very slight** impact on the setting and significance of Landscape of Outstanding Historic Interest of Merthyr Tydfil (HLW(MGI)2). The proposed development will serve to physically alter part of the landscape. However, the proposed development is situated within an area already altered by the establishment of BikePark Wales. Moreover, efforts to maintain the woodland surrounding the site, and thus partially retain its present visual character, will likely mitigate the negative impacts of the proposed development.

7 Mitigation Recommendations

- 7.1.1 The assessment has identified the potential direct and indirect impacts of the proposed development on heritage assets. It has also considered the potential impact to the setting and significance of heritage assets.
- 7.1.2 The assessment has concluded that groundworks associated with the proposed development be accompanied by a programme of archaeological mitigation in the form of an archaeological **watching brief**.
- 7.1.3 The assessment has demonstrated moderately low direct impacts to 25 known heritage assets found within the proposed development area, specifically **None**, **Low** and **Moderate** direct effects, due to the poor survival of heritage assets or that known heritage assets are partially or wholly obscured by the modern forestry (see Section 5 above). However, the development area covers a wide region in which it is known that significant historic activity took place from the Bronze Age through to the Industrial period. As noted above, activity associated with such significant Post-medieval industrial sites as Waunwylt Colliery and Gethin Colliery encroached into the development area. Moreover, it is clear that the development area has a historic connection with Post-medieval agricultural activity, as indicated by the historic mapping evidence and the character of the heritage assets that occupy the local area. Nationally important Bronze Age monuments in the form of burial cairns (SMGm236, SMGm239, SMGm288, SMGm368 and SMGm586) also survive in the forestry along the western boundary of the proposed development area. These prehistoric funerary monuments have the potential to extend, but likely obscured by the forestry, into the proposed development area. Therefore, any groundworks conducted within the development area has the potential to disturb archaeological remains associated with the above. The watching brief should be conducted in accordance with the Chartered Institute for Archaeologists' *Standard and Guidance for an Archaeological Watching Brief* (published 2014, revised 2020) and the now updated *Universal Guidance for Archaeological Monitoring and Recording* (2023).

8 Assessment of Residual Impacts

- 8.1.1 Provided that the archaeological **Watching Brief** is implemented, it has been determined that the potential residual direct impacts of the proposed development on the archaeological resource within the proposed development area are **None**. The **Very Slight** indirect (visual) impacts will remain for the lifespan of the proposed development.

9 Bibliography

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10 Appendices

10.1 Appendix I – Figures

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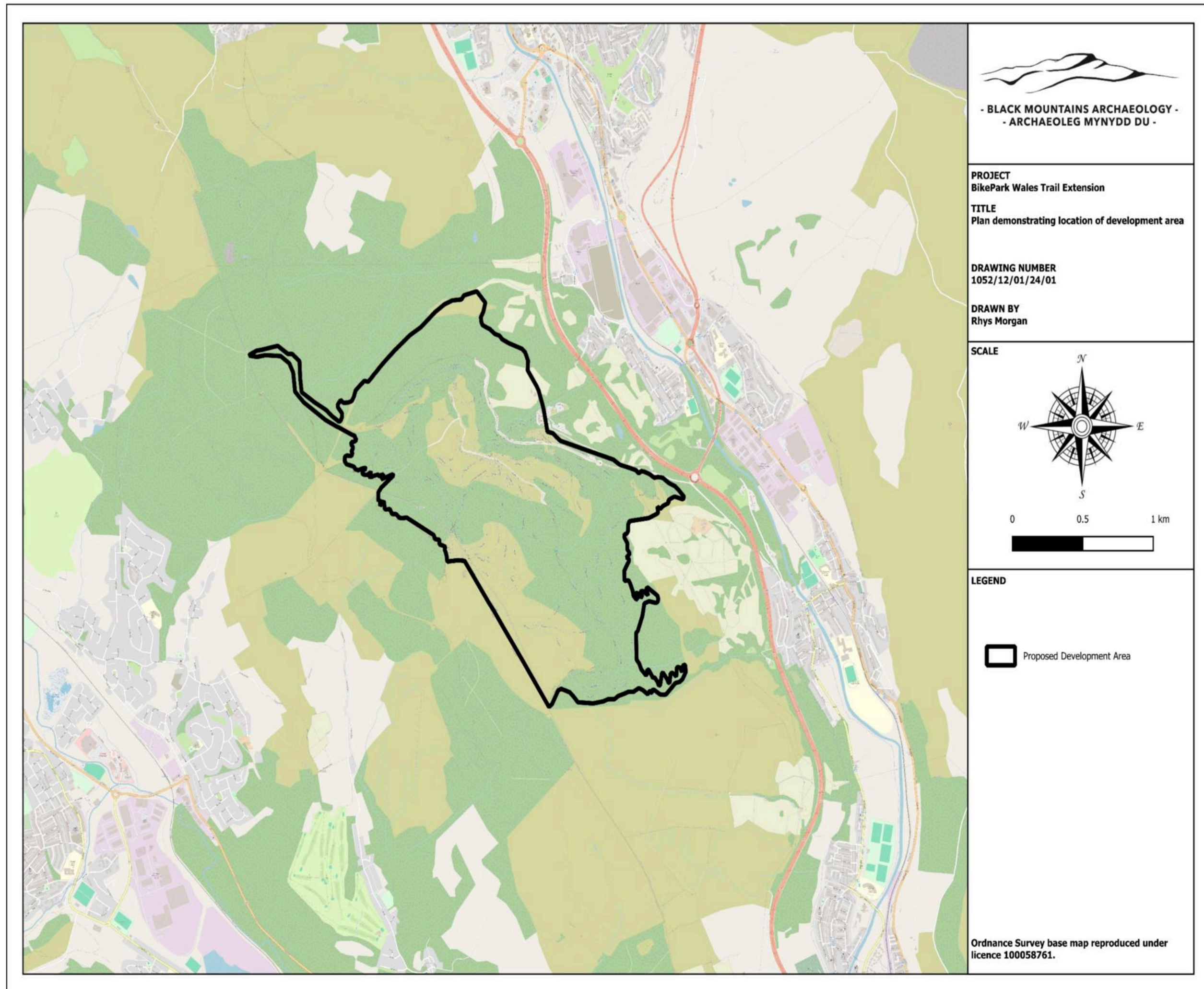


Figure 1. Plan of development area

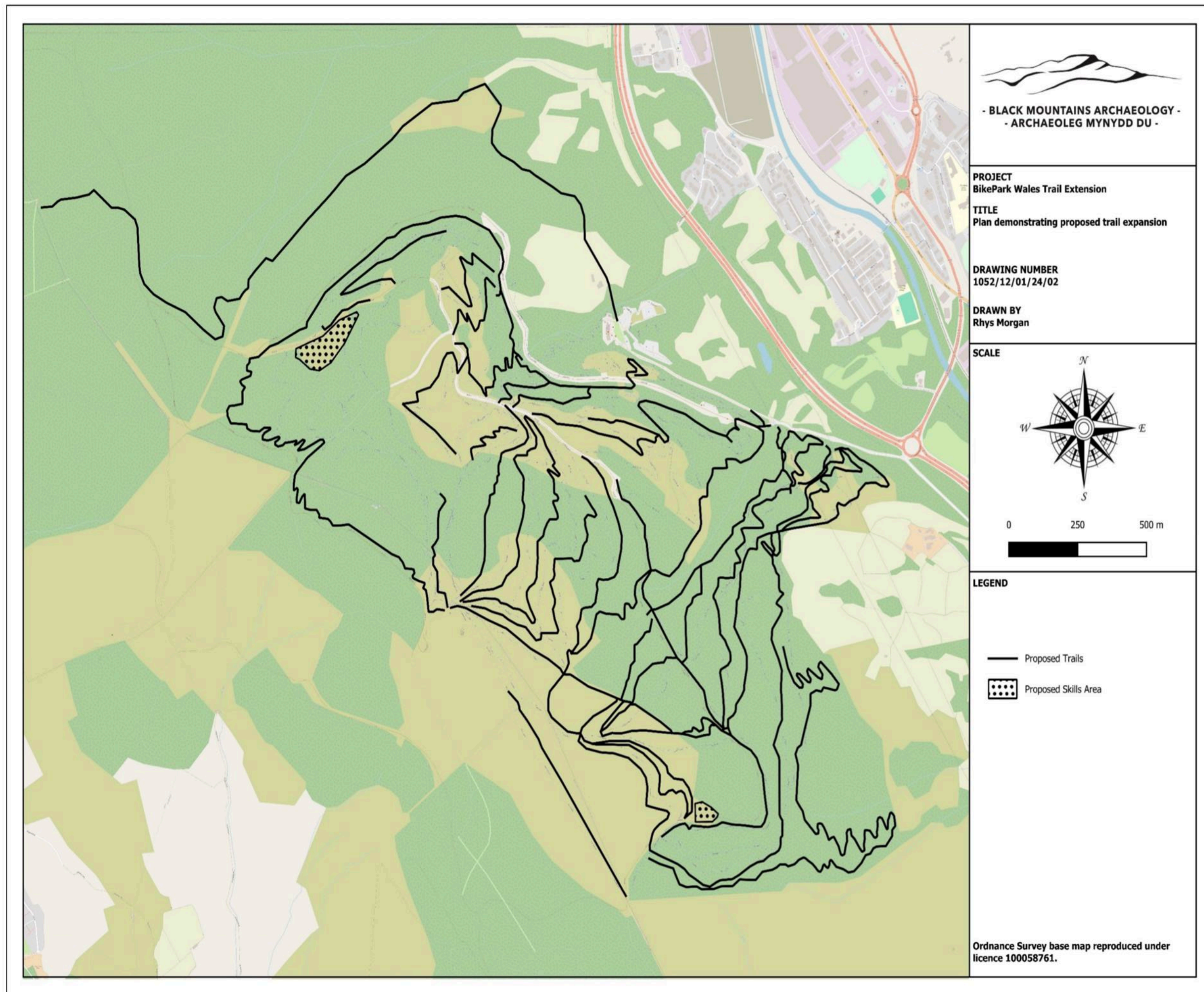


Figure 2. Detailed plan of proposed trail extension

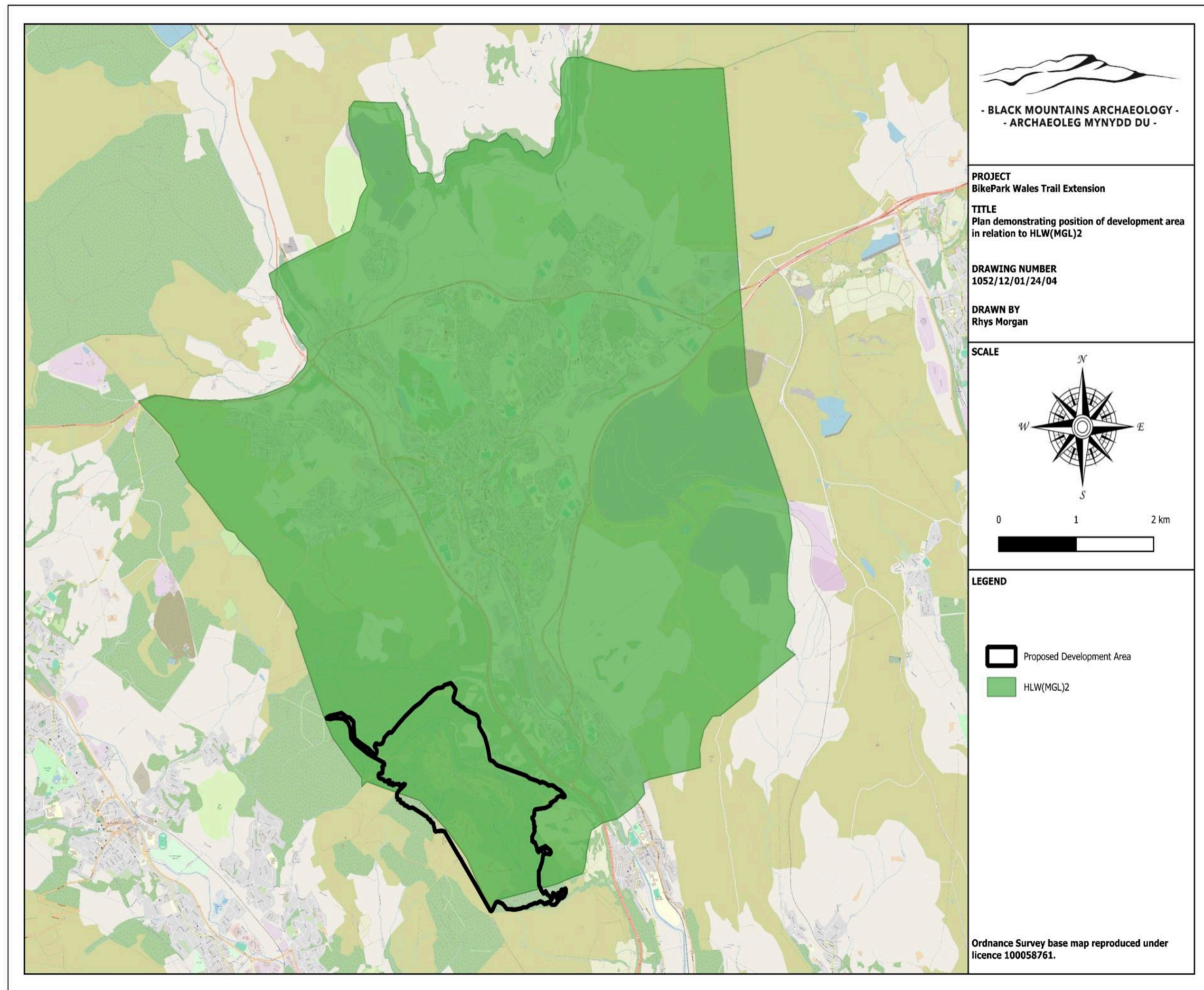


Figure 3. Plan of development area in relations to HLW(MGL)2

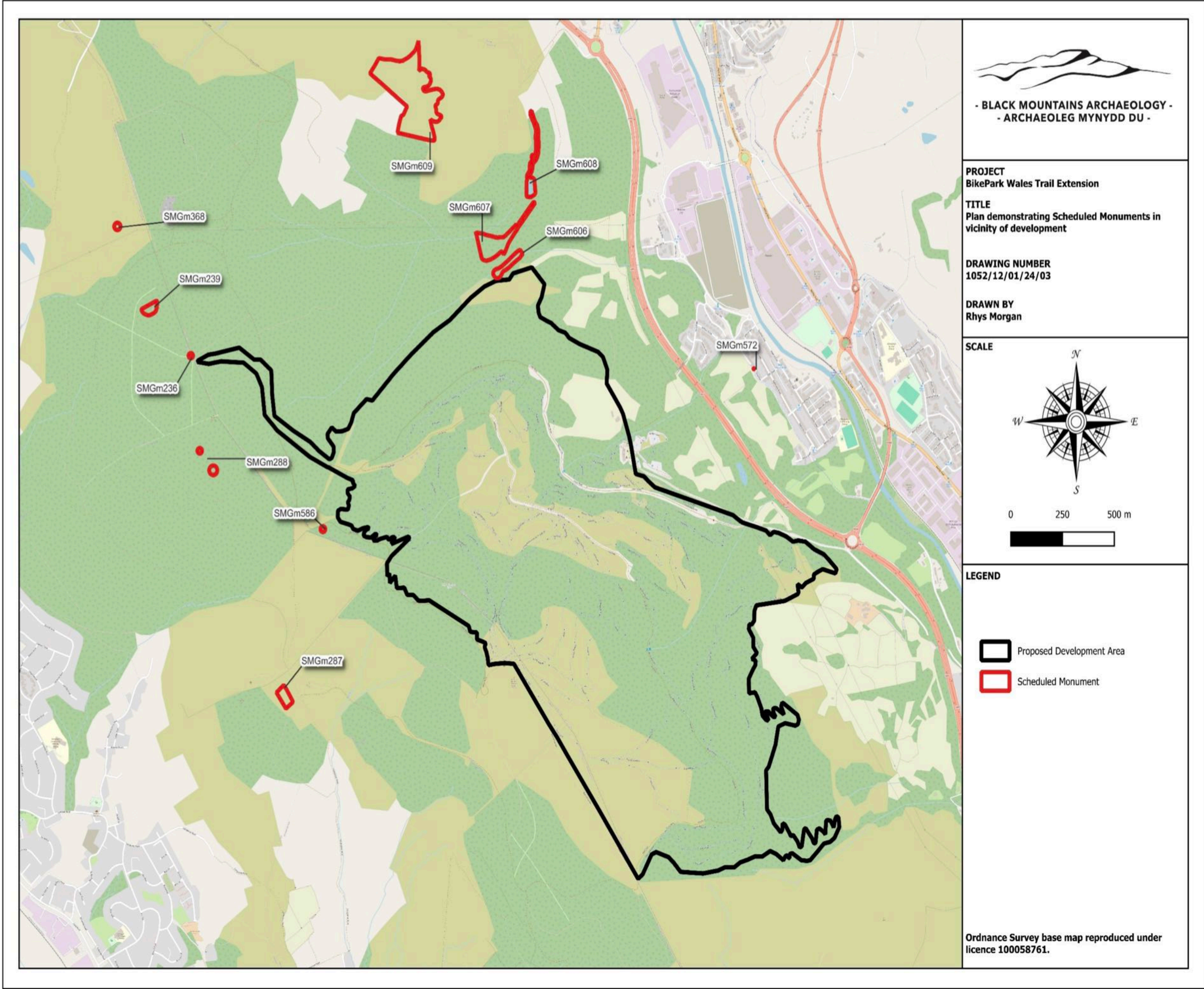


Figure 4. Plan demonstrating Scheduled Monuments in vicinity of development area

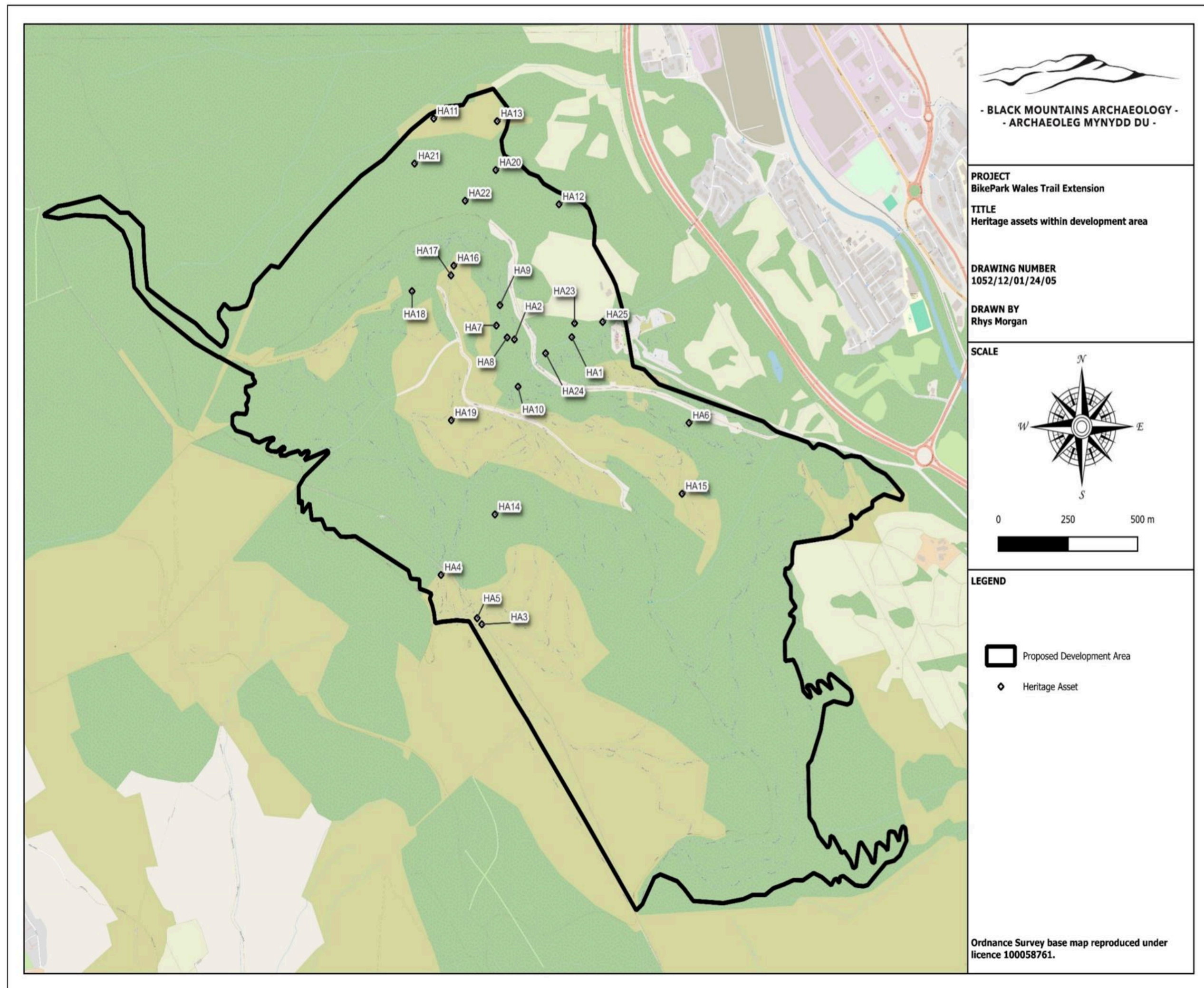


Figure 5. Plan of heritage assets within development area

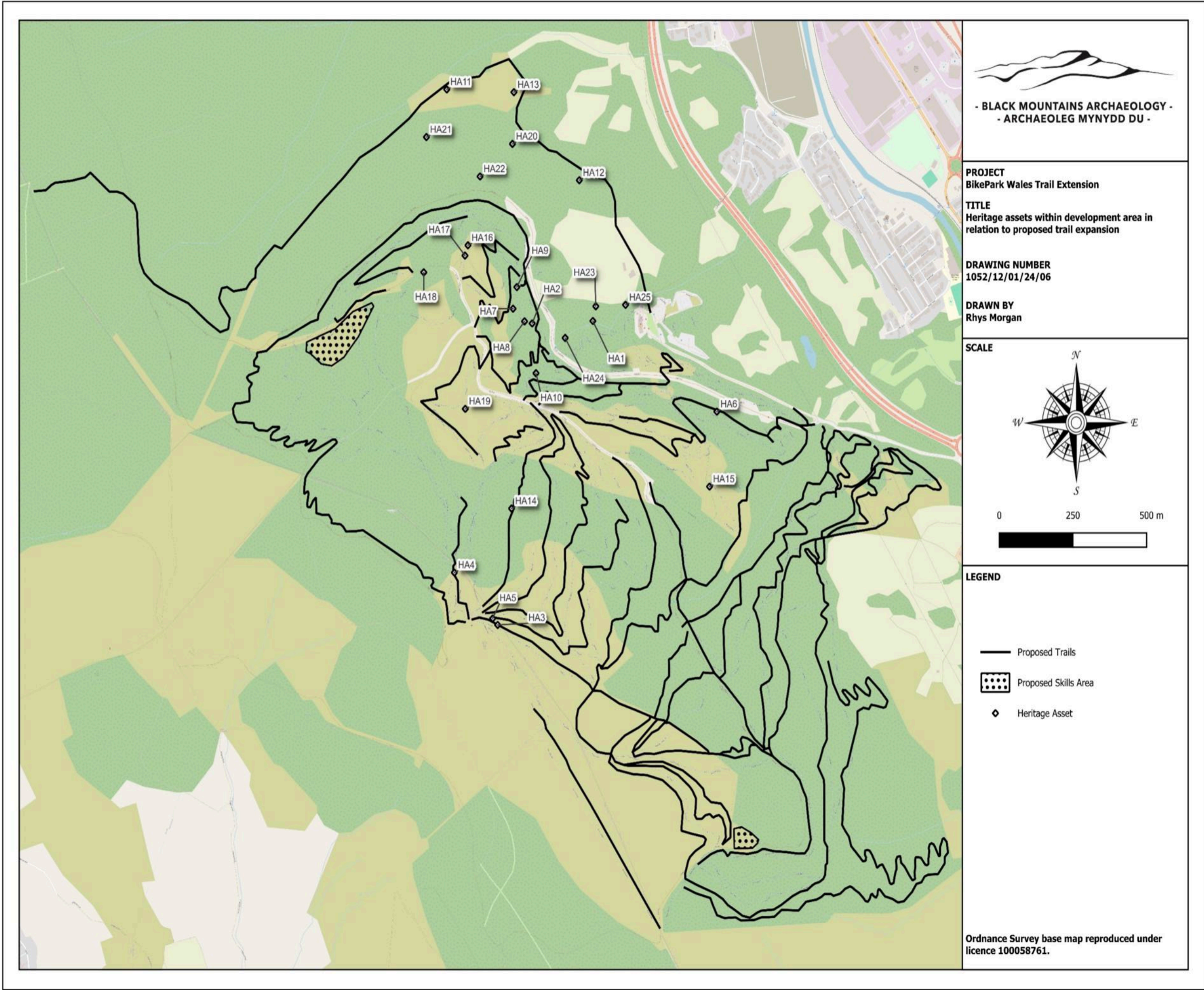


Figure 6. Plan of heritage assets within development area in relation to proposed trails

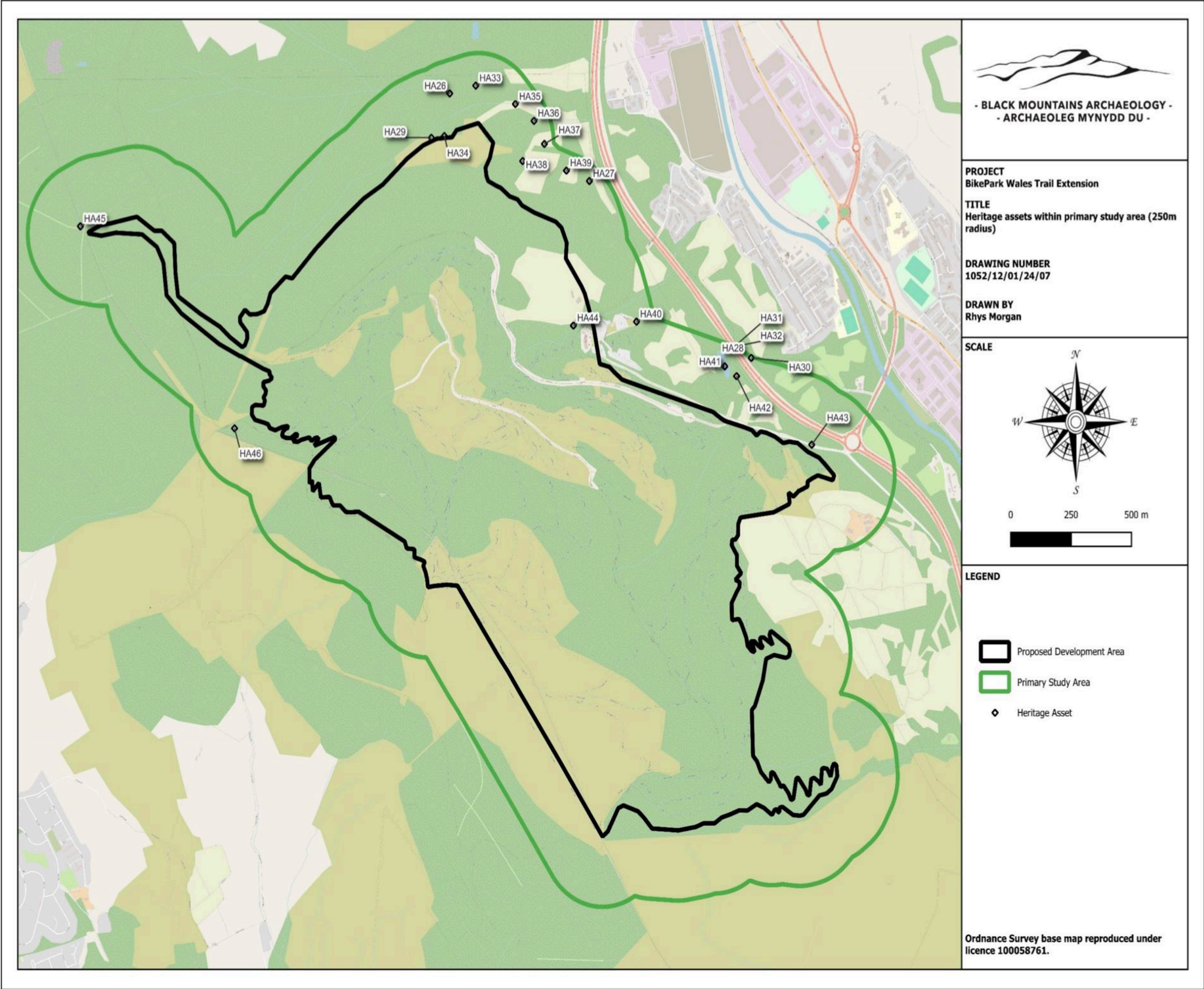


Figure 7. Plan of heritage assets within primary study area (250m radius)

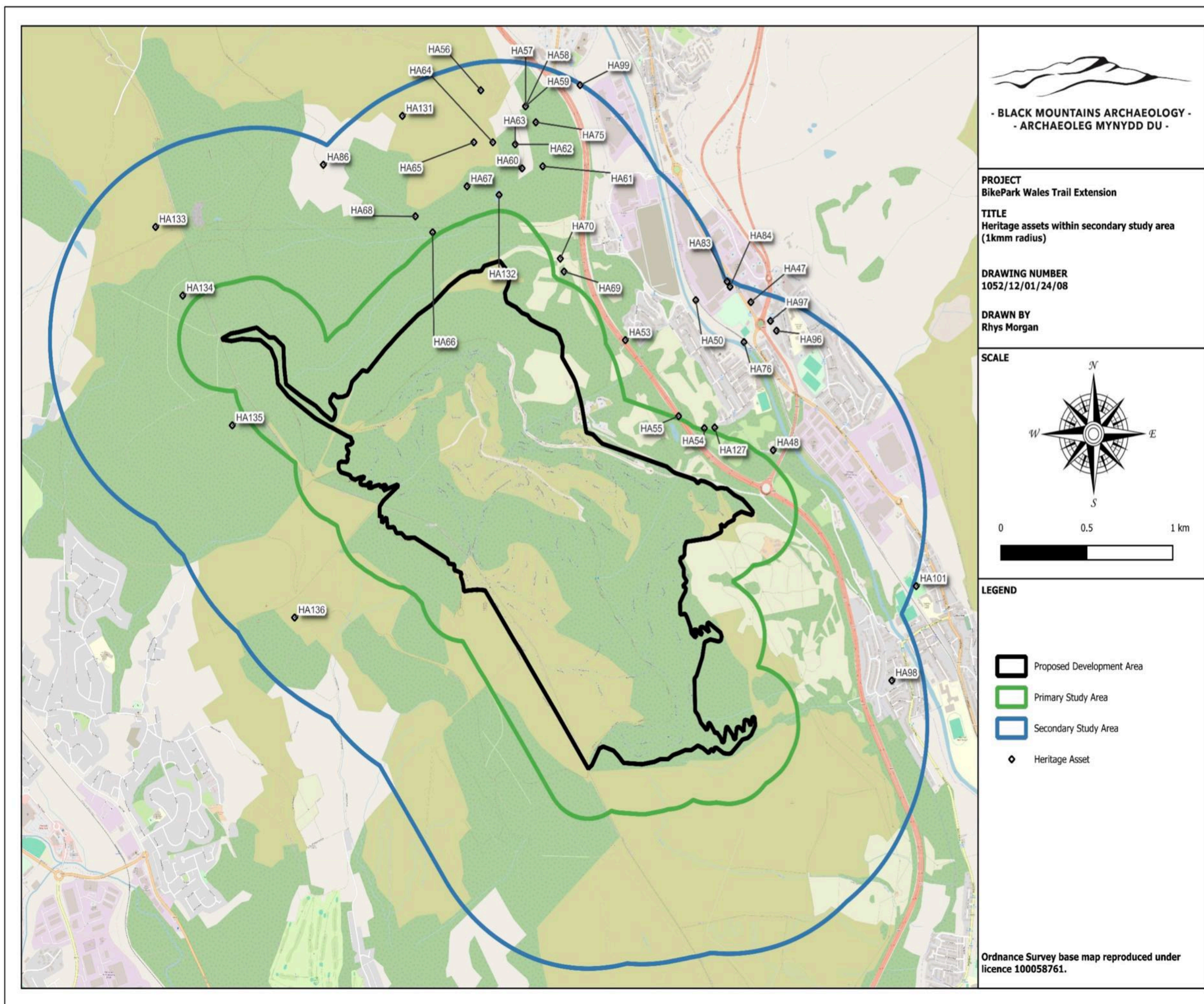


Figure 8. Plan of heritage assets within secondary study area (1km radius)

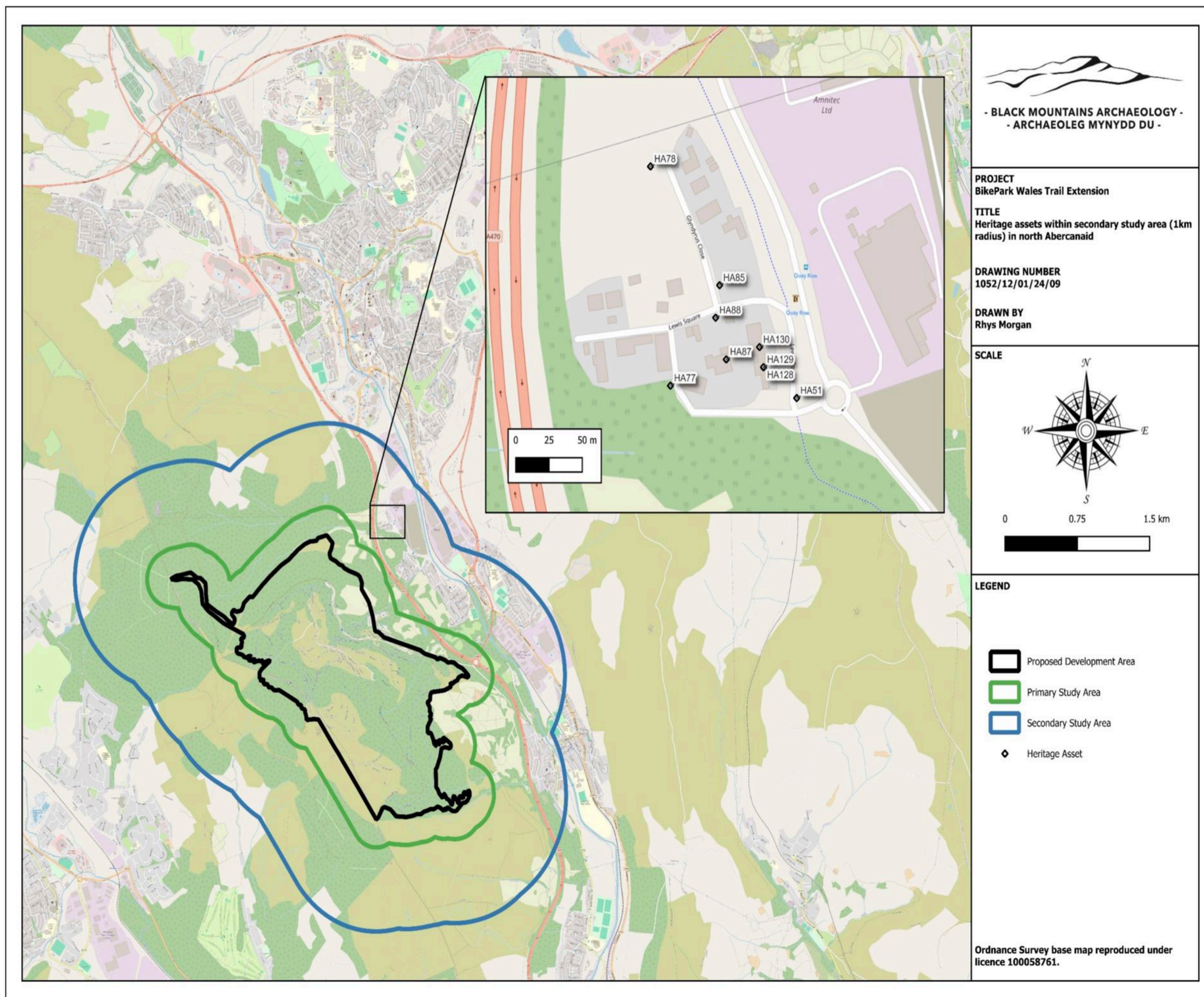


Figure 9. Plan of heritage assets within secondary study area (1km radius) on north end of Abercanaid

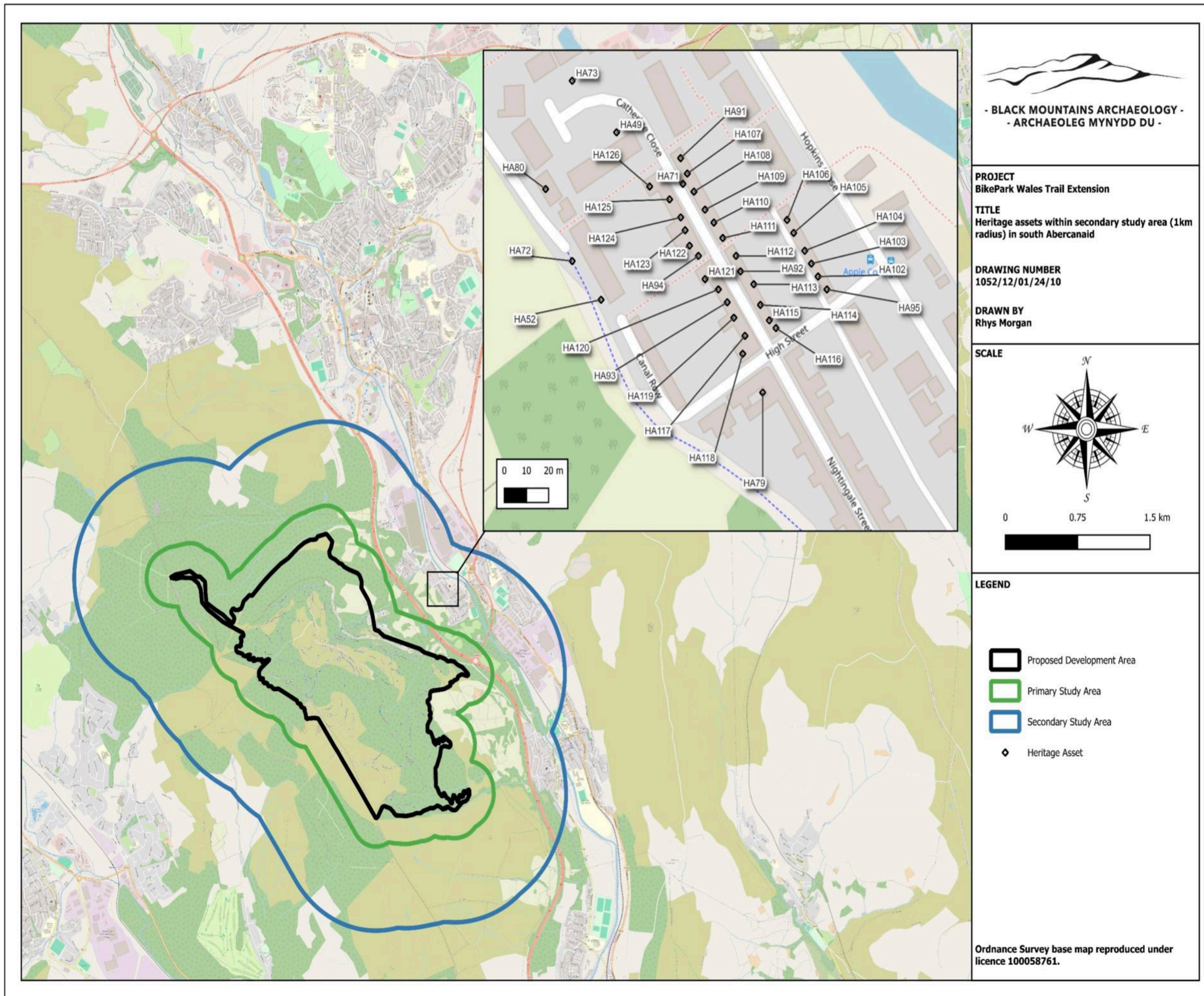


Figure 10. Plan of heritage assets within secondary study area (1km radius) on south end of Abercanaid

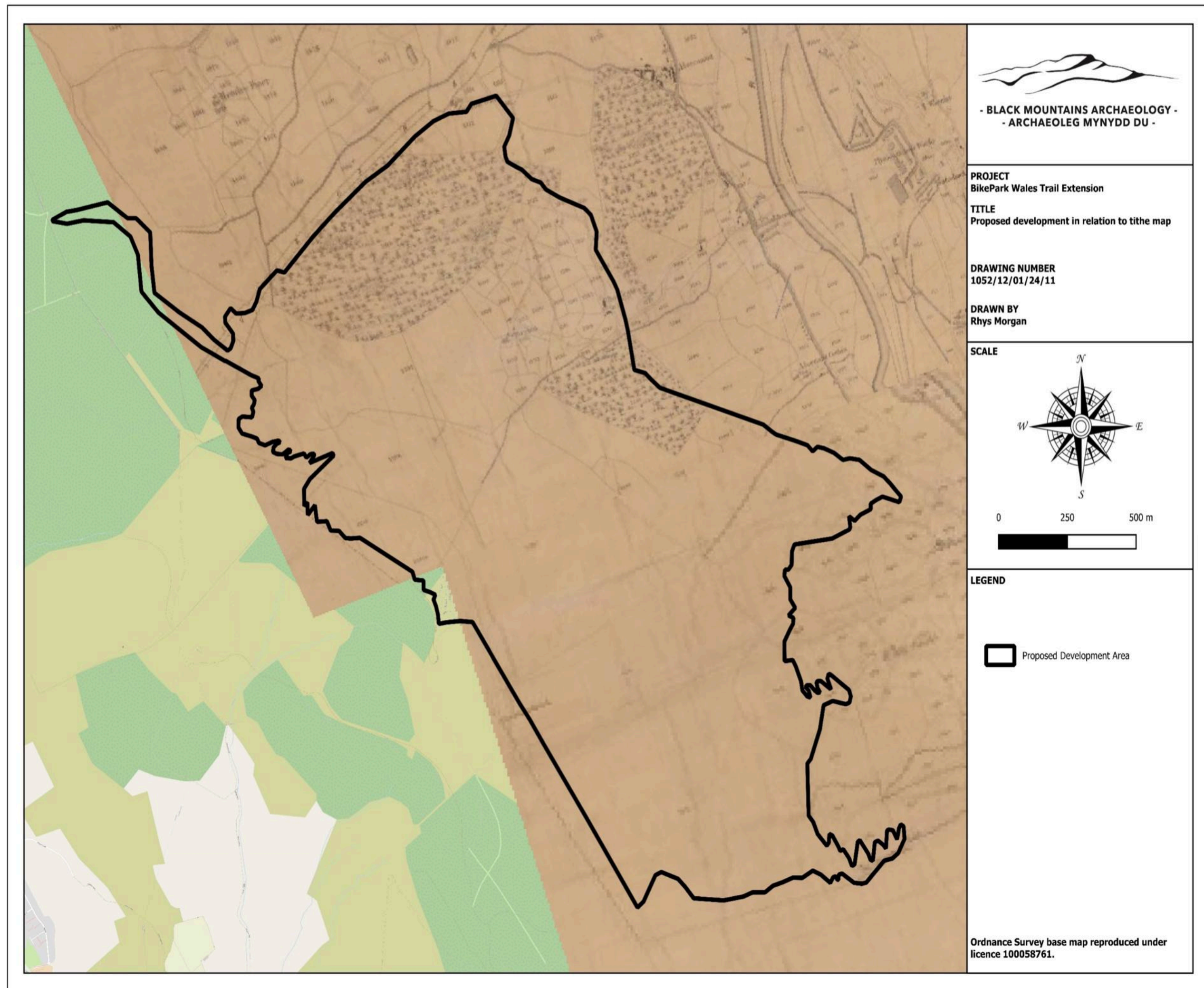


Figure 11. Plan of development area in relation to tithe maps of the region (*Plan of the parish of Merthyr Tydfil in the County of Glamorgan and Plan of the parish of Merthyr Tydfil in the County of Glamorgan*) (© National Museums of Wales)

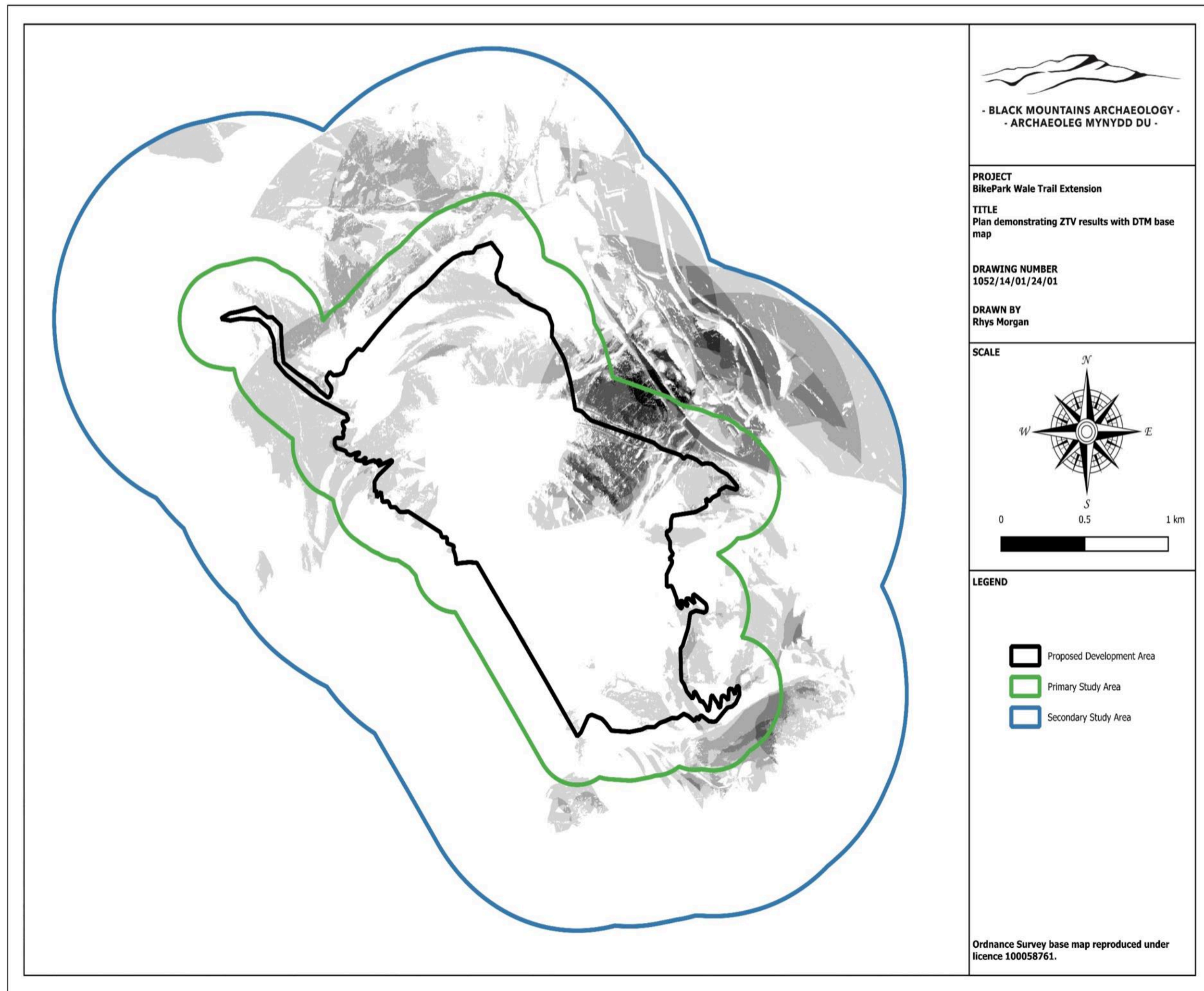


Figure 12. ZTV analysis results with DTM basemap (white = low intervisibility, black = high intervisibility)



Figure 13. Detail of 'A New and Accurate Map of South Wales containing the counties of Pembroke, Glamorgan, Carmarthen, Brecknock, Cardigan and Radnor wherein are exactly laid down and delineated from an actual survey and admeasurement all the towns, villages, chapels, gentlemen's seats'. Emanuel Bowen, 1729. Published by Owen and Bowen, London.' (©NLW)

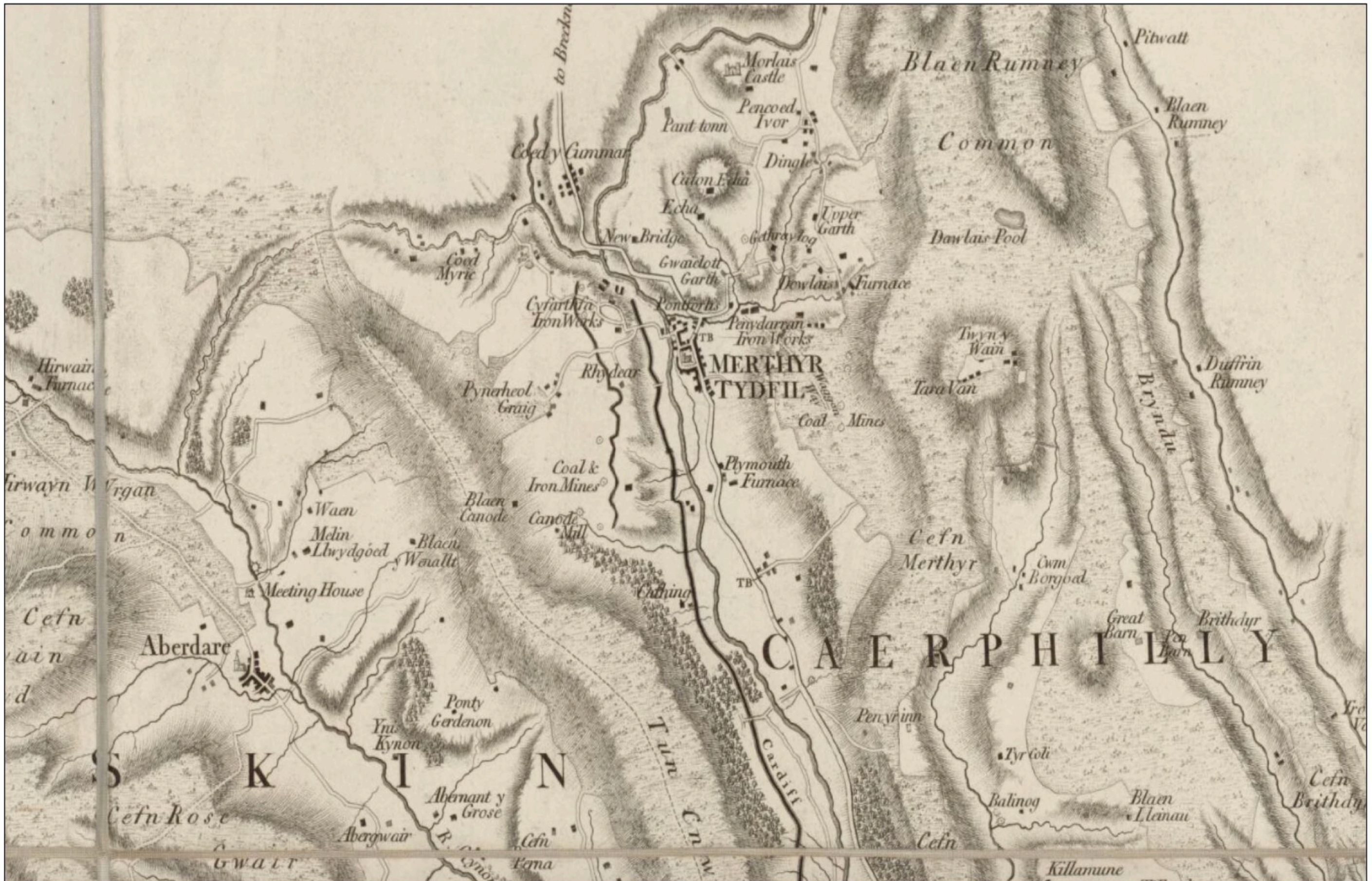


Figure 14. A map of the County of Glamorgan: from an actual survey, by George Yates of Liverpool: on which are delineated the course of rivers, and navigable canals; with the roads, parks, gentleman's seats, castles, woods, etc. George Yates, John Cary and William Daniel Conybeare. J. Cary, London (181 Strand) May 21st 1799. (©NLW)

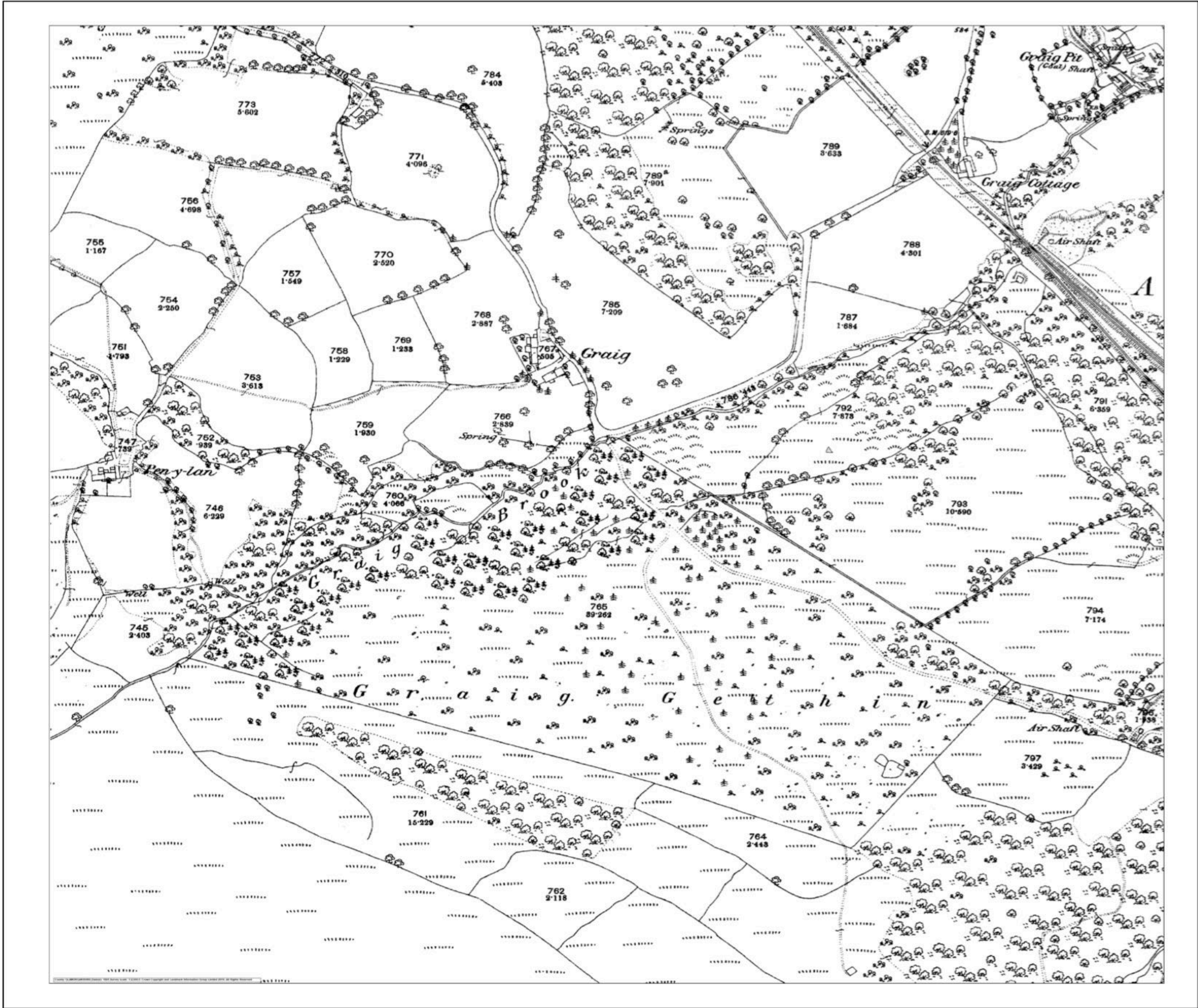


Figure 15. 1st Edition 1881 OS map of area (© Landmark Information Group)



Figure 16. 3rd Edition 1919 OS map of area (© Landmark Information Group)

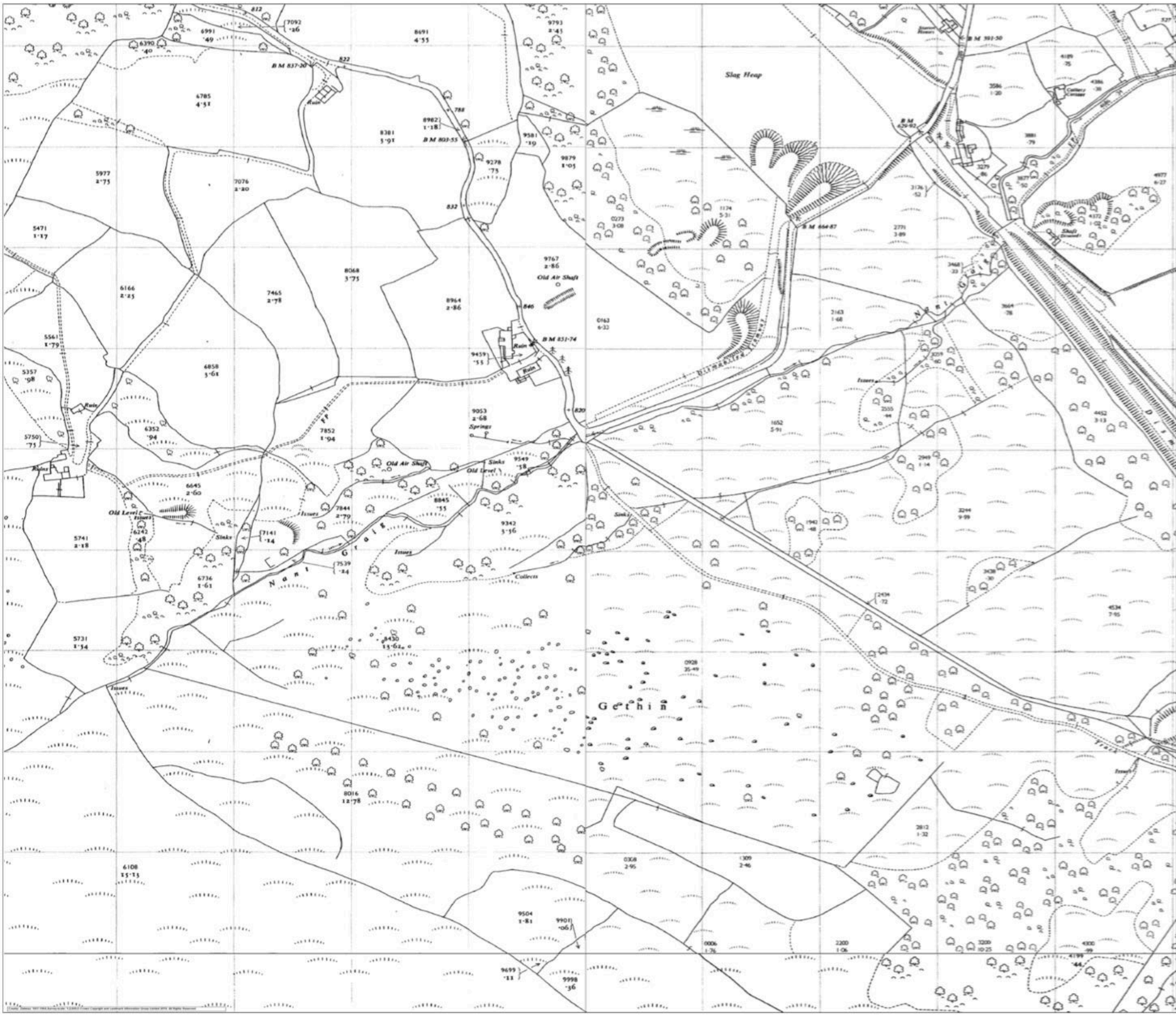


Figure 17. 1964 OS map of area (© Landmark Information Group)

10.2 Appendix II – Plates

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Plate 1. South facing aerial view of development area

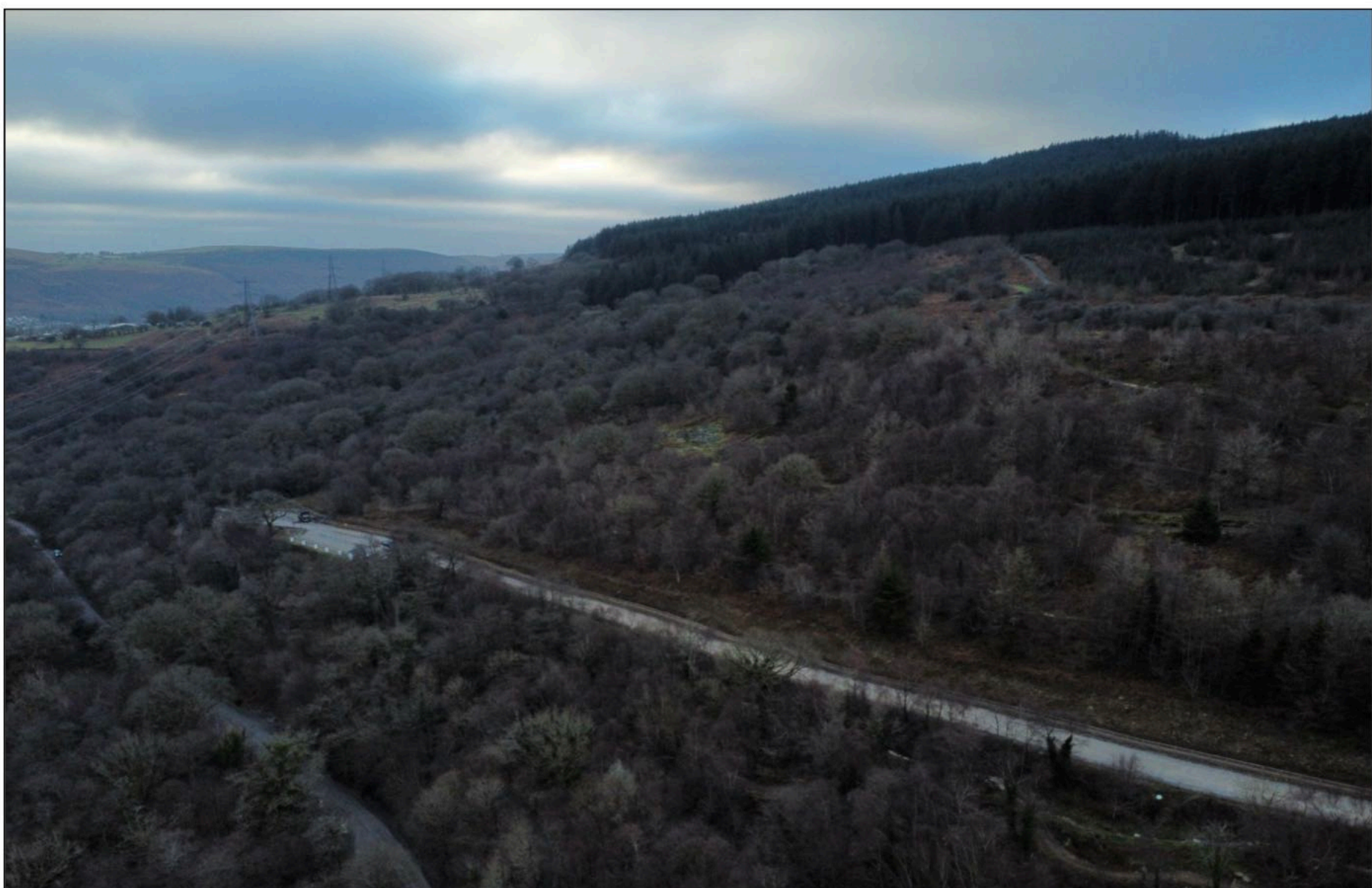


Plate 2. Southeast facing aerial view of development area



Plate 3. Southwest facing aerial view of development area



Plate 4. Views of tree cover within development area



Plate 5. General view of development area from access road



Plate 6. Aerial photo dated to 1951 showing the Development Area (Middle Left). (© CRAPW)



Plate 7. Aerial photo dated to 1975 showing the Development Area (Bottom Left). (© CRAPW)



Plate 8. Aerial photo dated to 1990 showing the Development Area (Middle Left). (© CRAPW)



Plate 9. Aerial photo dated to 2009 showing the Development Area (Bottom Left). (©CRAPW)

10.3 Appendix III – Aerial Photographs

10.3.1 The following is a list of the aerial photographs with coverage of the Study Area held by the Central Registry of Air Photography for Wales (CRAPW). The images largely followed the chronology of historic maps. No new heritage assets were identified.

WO no	Sortie No	Date	Ph type
5086	3G/TUD/T19 PART II	03/8/45	B&W
196	C.P.E/UK/2326 PART II	26/9/47	B&W
198	C.P.E/UK/2326 PART II	26/9/47	B&W
3408	58/676	12/05/51	B&W
0189	F21.58.RAF.1110	05/05/53	B&W
Unmarked photo			B&W
V	OS/63/74	31/05/63	B&W
7167175	71/67	23/07/67	B&W
Unmarked photo			B&W
75 037	WILD 687	24/04/75	B&W
1741	No 667	19/05/77	B&W
201	196	10/06/84	B&W
202	54	10/6/84	B&W
86188	WILD 13095	09/09/86	B&W
0196	900424	24/04/90	B&W
Unmarked photo			Colour
Unmarked photo			Colour
Unmarked photo			Colour
Unmarked photo			Colour



**- BLACK MOUNTAINS ARCHAEOLOGY -
- ARCHAEOLEG MYNYDD DU -**

Yn rhan o'n hawydd i wella ansawdd ein gwasanaeth, rydym yn croesawu unrhyw adborth y gallwch ei ddarparu.

As part of our desire to improve our quality of service we welcome any feedback you are able to provide.

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