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MOTT MACDONALD
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Cefn Dryscoed DAF

Badger Survey Report

January 2026

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Cover Photo Source: Mott MacDonald Bentley, 2025

Contents

Executive summary

Mott MacDonald Bentley has been commissioned by Dŵr Cymru Welsh Water (DCWW, the Applicant) to undertake badger (*Meles meles*) surveys to inform the proposed improvement works at Cefn Dryscoed Water Treatment Works (WTW) (the 'Proposed Development').

A Preliminary Ecological Appraisal (PEA) was undertaken by Mott MacDonald Bentley in September 2024, which identified habitat with the potential to support badger both within and immediately adjacent to the Proposed Development (Mott MacDonald Bentley, 2026).

A review of biological records within 2.0km of the Proposed Development returned six records of badger; including road casualties, records of setts and a sighting. The nearest record of a badger sett was returned approximately 0.49km to the north.

No evidence of badger was recorded within 30m of the Proposed Development during the presence/likely absence surveys. Incidental evidence of other mammal species was recorded, consisting of mammal pathways and mole (*Talpa europaea*) hills.

On the basis of the current proposals, recommendations in line with legislative and planning requirements are included within this report and are summarised below:

Pre-works Check: To be carried out as close as reasonably practicable to the commencement of the works (no earlier than 12 weeks prior). The check should be undertaken by a suitably experienced ecologist and should aim to identify any new evidence of badger.

Mitigation: It is anticipated that working methods will be agreed at the appropriate stage, once all survey work is complete. It is likely to include the following to reduce impacts on badger and other mammal species:

- All stone walls, mammal burrows and molehills should be excavated by hand under ecological supervision, to prevent unnecessary suffering to any animals present.
- Excavations should be fenced off and/or covered to avoid animals becoming trapped.
- No ground works or the use of heavy machinery should be undertaken in the vicinity of mammal burrows or mole hills without first having implemented control methods to prevent unnecessary suffering to any animals present.

Opportunities for enhancement to benefit badger have been identified within this report. In particular, the enhancement of woodland and hedgerow habitats to increase connectivity and the availability of food resources.

1 Introduction

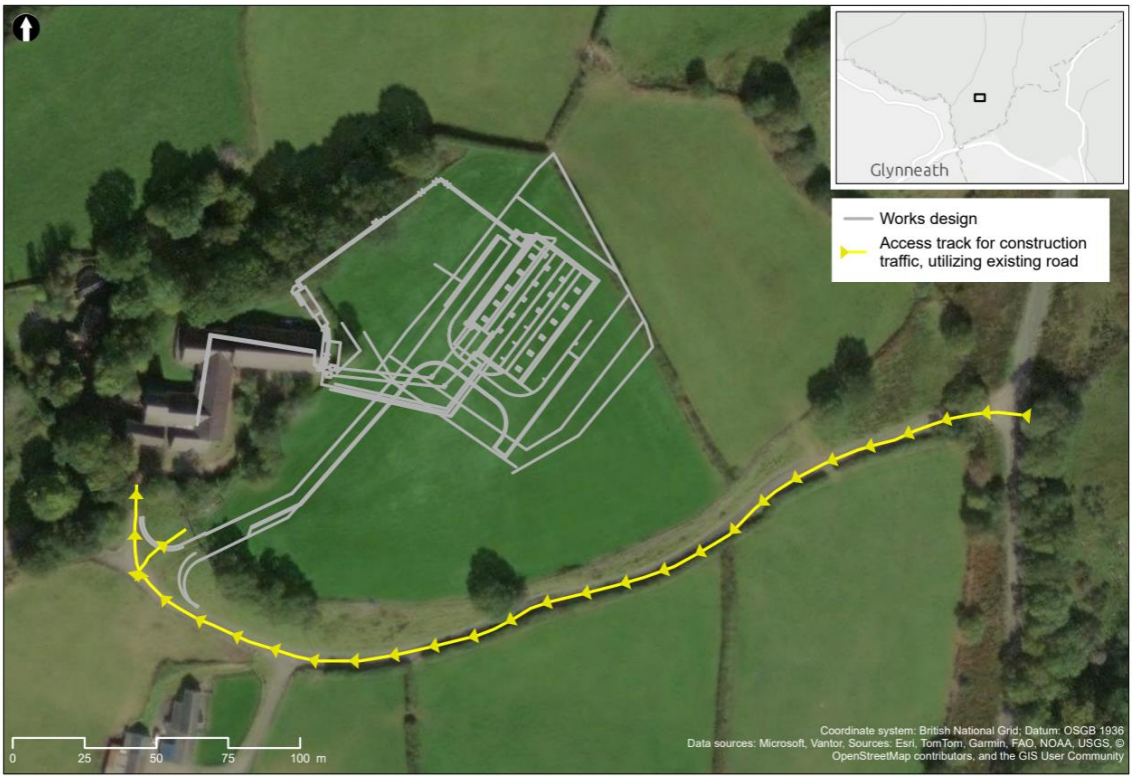
1.1 Background

Mott MacDonald Bentley has been commissioned by Dŵr Cymru Welsh Water (DCWW, the Applicant) to undertake badger (*Meles meles*) surveys to inform the proposed improvement works at Cefn Dryscoed Water Treatment Works (WTW) (the 'Proposed Development').

The proposed works consist of the construction of a new Dissolved Air Floatation (DAF) building to reduce manganese levels and increase water quality at the site. The existing WTW site is located within the Brecon Beacons National Park and consists of a collection of stone buildings built to resemble a farmstead.

The Proposed Development is shown within Figure 1.1 below.

Figure 1.1: Proposed Development Layout



Source: Mott MacDonald Bentley, 2026

A Preliminary Ecological Appraisal (PEA) undertaken by Mott MacDonald Bentley in September 2024 identified habitats with the potential to support badger both within and immediately adjacent to the Proposed Development (Mott MacDonald Bentley, 2026). As such, further survey was recommended, forming the basis of this report.

1.2 Site Context and Proposed Development

Cefn Dryscoed WTW is located in a rural setting in the Brecon Beacons National Park, to the north of Pontneddfechan, Neath (National Grid Reference SN 9089 0943). The site is

immediately surrounded by pasture fields and hedgerows, with a parcel of ancient woodland to the north and moorland to the north east.

The design of the works has been informed by ecology, with impacts minimised as far as possible. The Proposed Development comprises of the following:

- The construction of a new DAF building, including the installation of three new DAF tanks and flocculators, and other processing and ancillary equipment within the new building.
- Installation of pipelines to connect the new DAF building to the existing WTW and to connect the existing raw water main to the DAF plant. The pipelines will be installed by open-cut trenching with habitat mainly restored once complete, with the exception of re-planting mature tree species directly above the pipeline routes.
- Installation of a new access track to facilitate operational activities of the new DAF building.
- Replacement of existing and installation of new pumping equipment within Cefn Dryscoed WTW.
- Fencing and other soft-landscaping.
- Installation of new electrical cabling, distribution boards, PLC and instrumentation (e.g. water quality and turbidity monitors).
- Installation of a new DAF Motor Control Centre (MCC) within the new building.

1.3 Objectives

The objectives of the badger surveys and of this report are to:

- To undertake and present the results of a desk study to identify any existing information regarding badger.
- To undertake and present the results of field survey work to identify the presence/likely absence of badger within the survey area.
- To outline any ecological constraints to the Proposed Development in terms of presence of or suitability for badger.
- To provide recommendations for further ecological survey work, if considered necessary to inform an ecological baseline for the Proposed Development
- To identify any high-level mitigation or compensation measures that may be required to offset potential development impacts.
- To identify opportunities for enhancement in line with national and local planning policy.

1.4 Quality Assurance

All ecologists involved in the production of this report are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and are bound by its code of conduct (CIEEM, 2025). Additionally, this report has been subject to Mott MacDonald Bentley's internal quality assurance checks in line with ISO9001:2015.

All surveys and assessments were undertaken by suitably qualified and experienced ecologists as per CIEEMs competency framework (CIEEM, 2024) and have been undertaken with reference to the recommendations given in BS 42020:2013 Biodiversity: Code of practice for planning and development (British Standards Institute, 2013).

In line with CIEEM (2019) guidance on the lifespan of ecological surveys, the badger survey results are considered valid for up to 12 to 18 months. Following this, the survey data should be reviewed and, if appropriate, updated to ensure any assessment and mitigation approach remains valid.

2 Legislation and Policy

2.1 Legislation

Badger is protected in the UK under the Protection of Badgers Act 1992. In addition to offences relating to cruelty, under this legislation it is an offence to:

- Wilfully (or attempt to) kill, injure, take or possess a badger.
- Intentionally, recklessly or knowingly interfere with a sett. Sett interference includes:
  - Damaging or destroying a sett or any part of it.
  - Obstructing access to, or any entrance of, a badger sett.
  - Disturbing a badger when it is occupying a sett.

Penalties for breaking the law can include large fines, imprisonment, and the seizure of equipment. To undertake an activity which is protected under wildlife legislation, a protected species development licence may be applied for from Natural Resources Wales (NRW) as the statutory regulator.

Additionally, all wild mammals are protected under the Wild Mammals (Protection) Act 1996, such as rabbits (*Oryctolagus cuniculus*), foxes (*Vulpes vulpes*), moles (*Talpa europaea*) and polecats (*Mustela putorius*).

Under this Act, it is an offence to mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with the intent to inflict unnecessary suffering.

2.2 Planning Policy

In terms of planning policy, under Chapter 6 of Planning Policy Wales 2024, planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. Meaning that development proposals must provide a net benefit for biodiversity and should not cause significant loss of habitats and/or species. Therefore, development proposals must consider the need to:

- Support the conservation of native habitats and species, thus conserving biodiversity at a landscape scale and contributing to international responsibilities and obligations.
- Ensure that statutory and non-statutory designated sites are properly protected and managed.
- Safeguard protected and/or priority habitats and species from impacts which directly affect their nature conservation interests, compromise the resilience of ecological networks or the components which underpin them, such as water and soil, including peat deposits.
- Secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.

Although badger is not identified as a priority for conservation at a national or even local level, enhancement opportunities for this species would be in accordance with the principles of planning policy objectives and would also benefit other species.

3 Methodology

3.1 Desk Study

A desk study was undertaken and reported within the Preliminary Ecological Appraisal Report (PEAR) to collate any badger data within 2.0km of the Proposed Development (Mott MacDonald Bentley, 2026).

The following sources were reviewed/consulted:

- Biodiversity Information Service for Powys & Brecon Beacons National Park (BIS)[1].
- Multi Agency Geographical Information for the Countryside (MAGiC) (Magic Map Application).
- Natural Resources Wales (NRW) (Natural Resources Wales).

3.2 Identification of Survey Areas and Scope

Habitat with the potential to support badger was identified within and immediately adjacent to the Proposed Development during the Preliminary Ecological Appraisal (PEA) undertaken by Mott MacDonald Bentley in September 2024 (Mott MacDonald Bentley, 2026). Suitable habitats included broadleaved woodland, woodland edge, hedgerows and grassland. As such, further survey work was recommended.

Based on the design of the Proposed Development shown within Figure 1.1, the survey methodology and Zone of Influence (ZoI) defined within Table 3.1 were applied.

Table 3.1: Zone of Influence and Survey Scope

Zone of Influence (ZoI)	Survey Scope and Rationale
Footprint of the Proposed Development plus a 30m survey buffer	Presence/likely absence surveys were undertaken of a wider area to inform the design of the Proposed Development. As such, the survey area was variable but covers at least 30m around the Proposed Development shown within Figure 1.1.

Source: Mott MacDonald Bentley, 2026

The survey area is shown by a blue dashed line within Appendix A.

3.3 Presence/ Likely Absence Survey

A field survey was undertaken in accordance with best practice guidance as set out in Harris *et al.*, 1989 and the Badger Trust, 2023. The surveys were carried out by two experienced ecologists on 27 March 2025 to identify any evidence of badger activity or their setts within the survey area. The field signs described within Table 3.2 below were searched for and their locations recorded. Evidence of other mammals was also recorded, where encountered.

[1] Biological records were obtained in February 2025. The reference numbers are included within Section 6.

Table 3.2: Field Signs Recorded

Evidence Types	Sett Characteristics
Dung pits or latrines	Number of sett entrances
Scratching posts	Presence of bedding, badger hair or other litter in or close to the sett entrance
Snuffle holes	Signs of recent excavation or spoil at the sett entrance
Hairs	Presence of vegetation at the sett entrance
Footprints or pathways	Well-worn paths leading to and from the sett entrance
Foraging evidence	
Setts	

Source: Mott MacDonald Bentley, 2026; Harris *et al.,* 1989; and Scottish Badgers, 2018

3.4 Limitations

Biological records obtained from third parties and presented in the desk study do not represent a full and complete species list for the area. They are mostly given by individuals on an *ad-hoc* basis, often meaning there are areas of deficiency in the data. If records of a particular species are not returned, it may be as a result of the area being under surveyed opposed to an indication of the absence of that species. Therefore, a species should not be disregarded on this basis alone.

One small area of dense scrub to the west of the Proposed Development could not be safely accessed to survey (shown in red hatching within Appendix A). The land parcel was viewed from an adjacent field only. No mammal pathways were identified along the edge of the scrub. No direct impacts to the area are anticipated as a result of the Proposed Development, with no evidence of badger recorded in proximity. Subsequently, this is not considered to be a limitation to the survey and assessment included within this report.

4 Results

4.1 Desk Study Results

Only one record of badger was returned within 2.0km of the Proposed Development, within the last 10 years (2015 to 2025); a road casualty along the A465 from 2019. Subsequently, a search of historic records was undertaken, resulting in an additional five records of badger within 2.0km of the Proposed Development, consisting of a sighting, two road casualties and two setts.

A summary of the desk study results is included within Table 4.1.

Table 4.1: Desk Study Summary

Feature	Description
Records of badger within 2.0km	Only one record of badger was returned within 2.0km of the Proposed Development, within the last 10 years (2015 to 2025); a road casualty along the A465 (1.72km to the south of the Proposed Development) from 2019. Subsequently, a search of historic records was undertaken, resulting in an additional five records of badger within 2.0km of the Proposed Development; consisting of: ● A sighting, approximately 1.32km to the south west; ● Two road casualties, both along the A465, approximately 1.72km to the south; and ● Two setts, approximately 1.77km to the east and 0.49km to the north (nearest record).
Species Status	In the UK there is an estimated population of 485,000 badgers, with the highest population densities in the south west and south Wales, accounting for approximately 55% of the population (Judge *et al.*, 2017). The UK is considered to house approximately 25% of the global population of Eurasian badger, making it an important population and giving the UK responsibility to conserve the species, particularly its genetic variation (The Wildlife Trusts, 2022). However, badgers are considered to be at risk in several areas of the UK, due to road collisions and through persecution. An estimated population of 61,000 badgers are found within Wales (Judge *et al.*, 2017).

Source: BIS, 2025 and Mott MacDonald Bentley, 2026

4.2 Presence/Likely Absence Survey Results

No evidence of badger was recorded within 30m of the Proposed Development.

4.2.1 Incidental Evidence – Other Mammal Species

Incidental evidence of other mammal species was recorded during the presence/likely absence survey, including:

- Evidence of mole hills.
- Mammal pathways.

Additionally, a number of stone walls were present running along the access track to the south of the existing WTW site and along field boundaries, alongside a stone retaining wall within the existing WTW. Multiple gaps and access points were present providing suitable habitat for mustelid species such as weasel (*Mustela nivalis*), stoat (*Mustela erminea*) and other small mammals.

Example photographs are included within Appendix B, whilst the locations of the evidence recorded are shown within Appendix A.

5 Conclusions

5.1 Conclusion

No evidence of badger was recorded during the presence/likely absence survey. However, the majority of areas within and immediately surrounding the Proposed Development are considered suitable for badger. Habitats with suitability include dense scrub, woodland, hedgerows, pasture fields and grassland that provide suitable habitat for sett creation, foraging and commuting.

Evidence of other mammal species was recorded incidentally during presence/likely absence surveys, such as mole hills and mammal pathways.

5.2 Recommendations

It is anticipated that full mitigation and enhancement measures will be laid out within an Ecological Impact Assessment (EcIA). However, based on the assessment of effects and current proposals it is anticipated that any mitigation strategy would include the measures laid out within the following sections, to comply with legislation and planning requirements.

5.2.1 Pre-Works Check

As badger is a mobile species which readily moves between setts and/or creates new setts, a pre-works check should be undertaken as close to the commencement of the works as reasonably practicable (no earlier than 12 weeks prior to the commencement of works). The walkover should be undertaken by a suitable qualified ecologist and should establish whether there is any new evidence of badger within proximity to the Proposed Development.

5.2.2 Mitigation, Avoidance and Works Design

Based on the current works design and the results of the survey work carried out to date, the Proposed Development has the potential to impact badger, through the loss of suitable habitat, indirect impacts such as pollution and dust deposition. Evidence of other mammal species such as mole hills and mammal pathways have been recorded within the footprint of the Proposed Development, and as such, the Proposed Development also has the potential to impact these species.

It is recommended that the design of the works seeks to minimise the impact on habitat suitable for badger where possible.

It is anticipated that working methods will be agreed at the appropriate stage, but are likely to include the following to reduce impacts on badger and other mammal species:

- Toolbox talks should be delivered to all site personnel.
- Stone walls, mammal burrows and molehills should be excavated by hand under ecological supervision, to prevent unnecessary suffering to any animals present.
- All construction works should be restricted to daylight hours. Where this cannot be avoided, advice should be sought from an ecologist in order to design a sensitive lighting strategy.
- Pollution prevention methods should be included within a Construction Environmental Management Plan (CEMP) and should be adhered to for the duration of the works.
- Excavations should be fenced off and/or covered to avoid animals becoming trapped. Open trenches should incorporate shallow gradients or, where this cannot be accommodated, use

of mammal ladders within any open trenches to allow any animals that may become trapped to escape. All excavations should be checked each morning to ensure no animals have become trapped overnight.

- No ground works or the use of heavy machinery should be undertaken in the vicinity of mammal burrows or mole hills without having first implemented control methods to prevent unnecessary suffering to any animals present.
- Open pipework should be properly covered or capped at the end of the working day to prevent mammals entering and becoming trapped.
- Consideration should be given to the placement of spoil bunds throughout the design process. If spoil is to be stored for a long period of time, badger proof fencing should be considered.

5.2.3 Opportunities for Enhancement

Section 6 of the Environment (Wales) Act 2016 requires new development to maintain and enhance biodiversity and promote resilience of ecosystems. On this basis, and in line with national and local planning policy objectives, development in Wales should deliver net benefits for biodiversity in ways that enhance ecosystem resilience. It is recommended that advice is sought from an ecologist to review opportunities for biodiversity enhancement in a holistic manner across the scheme as a whole.

Opportunities for enhancement to benefit badger have been highlighted below:

- Introduction of favourable management practices of woodlands and hedgerows to increase the diversity of foraging resources available.
- Improving habitat connectivity by supplementary planting of broadleaved tree and scrub species within defunct hedgerows or the creation of new hedgerows to connect existing habitats.
- Collaboration with the local Badger Trust to raise awareness of the species within the area and reduce persecution of the species.

6 References

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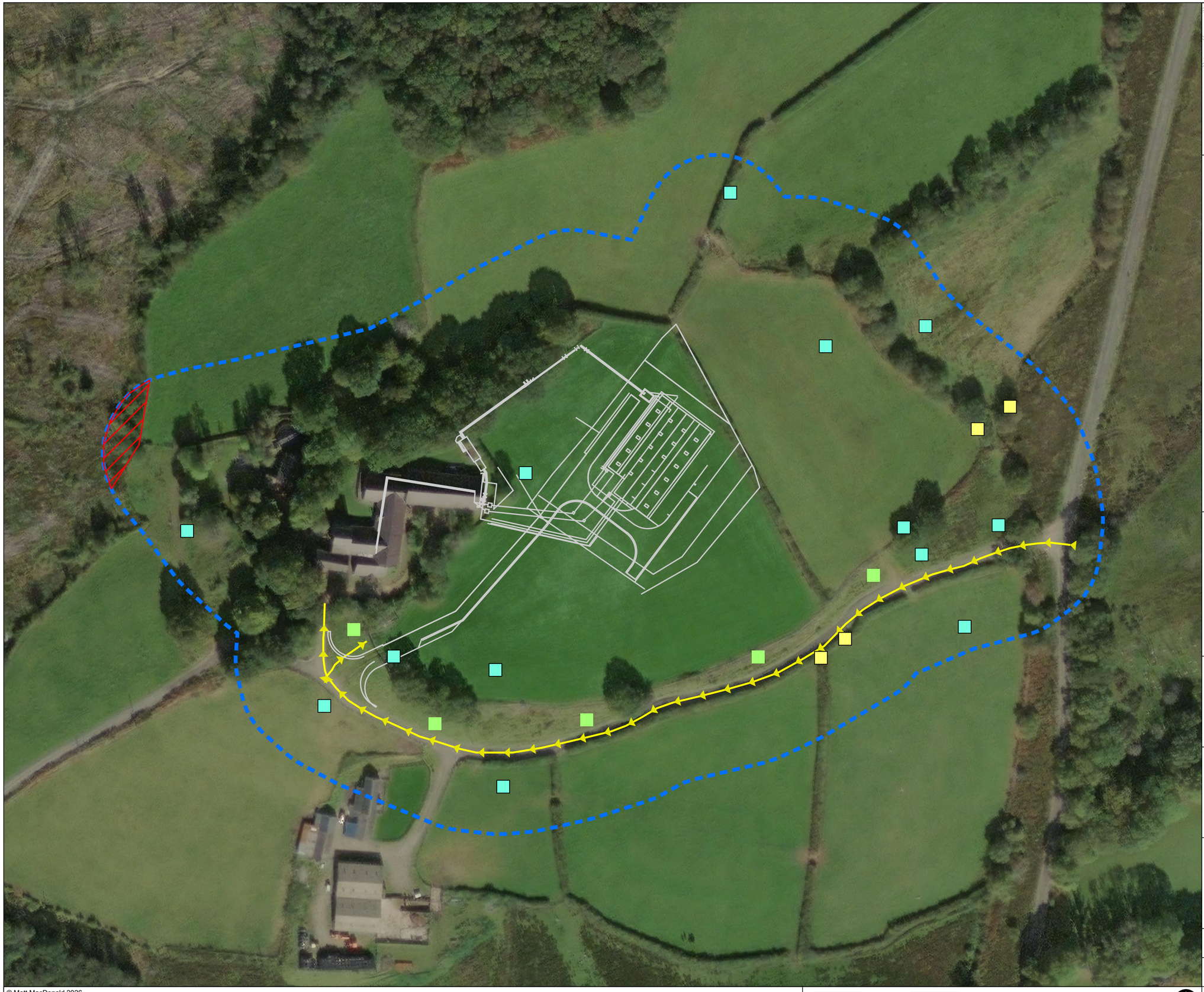
Appendices

A. Presence/ Likely Absence Survey Results



Works design
Access track for construction traffic, utilizing existing road
Presence/ likely absence survey area
No access to survey

Mammal evidence type

Deer droppings
Mammal pathway
Molehill

Coordinate system: British National Grid; Datum: OSGB 1936

Microsoft, Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
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Badger Presence/Likely Absence Survey Results

Drawn	GIS Checked	Checked	Approved
K Toth	**S Baldwin**	**A Davies**	**LW**
Scale at A3	Status	Revision	Security
1:1,500	**INF**	**01**	**STD**

0 20 40 60 80 Metres

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B. Mammal Evidence Photographs

Figure B.1: Mole hills

Source: Mott MacDonald Bentley, 2025

Figure B.2: Mole hills

Source: Mott MacDonald Bentley, 2025

Figure B.3: Mammal pathway

Source: Mott MacDonald Bentley, 2025

Figure B.4: Mammal pathway

Source: Mott MacDonald Bentley, 2025

Figure B.5: Habitat suitable for small mammals

Source: Mott MacDonald Bentley, 2025

Figure B.6: Habitat suitable for small mammals

Source: Mott MacDonald Bentley, 2025