

2026

Section of Manthrig Book, Caersws, Powys

Ecological Assessment of stream



Mid Wales Ecology

***Ecological
Consultants***

February 2026

Mid Wales Ecology Ecological Consultants

Section of Manthrig Brook

Caersws

Powys

Ecological Assessment of stream

Project Ref: 25.030

February 2026

Report Information			
Mid Wales Ecology project reference:		25.030	
Status:	Final	Date of Issue:	09/02/2026
Produced by:	Philip A. Ward MCIEEM, Principal Ecologist, Mid Wales Ecology		
Prepared for:	Caersws Community Council		
Documentation used:	-		

This report or any part of it shall not be reproduced without the permission of Mid Wales Ecology.

Ecological Assessment of stream

Section of Manthrig Brook, Caersws, Powys

Contents

	Summary	5
1	Introduction	6
2	Methodology	7
3	Site Description	9
4	Survey Results and Evaluation	9
5	Reasonable Avoidance Measures	11
6	Legislation and policy background	12
7	Bibliography	14
	Appendix 1: Site Photographs	15

Summary

Mid Wales Ecology was commissioned in February 2026 by Caersws Community Council to provide an ecological assessment of a c.300m length of Manthrig Brook, within the village of Caersws, Powys, in relation to concerns over increased flooding of Manthrig Lane and adjoining properties. Caersws Community Council have stated that they are looking into methods to see if they can help to reduce the flooding risk in the future, and this ecological assessment if required to firstly identify any ecological issues.

This report has been written by Philip Ward MCIEEM, Principal Ecologist, Mid Wales Ecology, following a site visit on 5th February 2026. A walkover ecological assessment was undertaken along the whole c.300m length of the relevant section of Manthrig Brook, which included an assessment of habitats, protected species and invasive non-native species.

A walk over ecological assessment was conducted along the whole 300m length of the brook on 5th February 2026 by ecologist surveyor Philip Ward, accompanied by two Caersws Community Council representatives. At 13:45 the weather was 100% cloud cover, light breeze, with air temperature 4°C, with light rain.

The site was assessed for protected and priority species. No statutory protected or important sites occur within 1km of the brook section.

The brook generally comprises of an open unhindered, muddy bottomed watercourse with a moderate flow in comparison to its relatively level landscape, with the adjoining bank sides varying from open grassland to hedges and trees with only minor overhanging tall bank side herb vegetation and bramble scrub, adjoining sections of garden hedges and trees (see photos Appendix 1).

Some minor tall herb and grass vegetation and occasional small trees occur in-stream, but these are generally not interfering with the flow. However, there are several short pinch point sections where the mostly 3m wide brook narrows to 1m width.

This report describes the survey methodology and evaluates the survey results. It assesses ecological value and provides appropriate Reasonable Avoidance Measures.

1 Introduction

Background to activity/development

- 1.1 Mid Wales Ecology was commissioned in February 2026 by Caersws Community Council to provide an ecological assessment of a c.300m length of Manthrig Brook, within the village of Caersws, Powys, in relation to concerns over increased flooding of Manthrig Lane and adjoining properties. Caersws Community Council have stated that they are looking into methods to see if they can help to reduce the flooding risk in the future, and this ecological assessment if required to firstly identify any ecological issues.
- 1.2 This report has been written by Philip Ward MCIEEM, Principal Ecologist, Mid Wales Ecology, following a site visit on 5th February 2026. A walkover ecological assessment was undertaken along the whole c.300m length of the relevant section of Manthrig Brook, which included an assessment of habitats, protected species and invasive non-native species.

Site location

- 1.3 The subject of this report is a c.300m length of the Manthrig Brook, hereafter referred to as the Site, and is located between National Grid Reference SO 0340 9212 (Downstream location: Main Street, B4569), and SO 0313 9207 (Upstream location: west of Llys Rhufain road bridge). The Site lies at approximately a 122m altitude.
- 1.4 The relevant brook section flows generally east through the residential village centre of Caersws, before running through the road culvert under Main Street (B4569), before heading north-east to join the River Severn/Afon Hafren c.350m away.

Figure 1: Site location (shown as red line) Map data©Google 2026



Objectives of the Survey

1.5 The objectives of this report are to:

- Document the methodologies and findings of the survey assessment;
- Assess and evaluate the Site regarding habitat and potential for protected species;

1.6 This report describes the survey methodology and evaluates the survey results. It assesses ecological value and provides appropriate recommendations.

2 Methodology

Desk study and pre-existing information

- 2.1 A search for statutory sites of ecological significance within a 1km radius of the site was conducted using the Multi-Agency Geographical Information for the Countryside website (MAGIC).
- 2.2 A historical data search from the Biodiversity Information Service (BIS), the Local Environmental Records Centre, was undertaken on 26th January 2026 by an undisclosed source, and provided to the author as confidential information.

Surveyor information

2.3 Brief surveyor details are in Table 1 below.

Table 1: Surveyor details and competency

Surveyor Name:	Philip A. Ward MCIEEM
Competency:	Phil has over 35 years' experience in wildlife survey and habitat management. He is a full member of the Chartered Institute of Ecology and Environmental Management. He managed conservation areas for over 20 years, before becoming an ecologist surveyor for 17 years. He has undertaken over 200 phase 1 and extended phase 1 habitat surveys and ecological assessments of a wide variety of habitats and species. He specialises in invertebrate surveys including standard river water quality surveys using invertebrates, but also carries out surveys on plants, birds (being a former licenced bird ringer for over 35 years), amphibians (including great crested newt surveys), reptiles and mammals and other protected species, having undertaken numerous surveys and reports. He was a former Invertebrate Specialist Tutor with Aberystwyth University for 10 years and is often called upon to provide talks and training courses. He holds NRW licences for birds of prey, great crested newt and marsh fritillary. He is the county invertebrate recorder for Radnorshire, secretary of the Radnorshire Invertebrate Group, member of the Coleopterist's Society, Bees Wasps & Ants Recording Society, and the British Trust for Ornithology.

Field survey

- 2.4 A walk over ecological assessment was conducted along the whole 300m length of the brook on 5th February 2026 by ecologist surveyor Philip Ward, accompanied by two Caersws Community Council representatives. At 13:45 the weather was 100% cloud cover, light breeze, with air temperature 4°C, with light rain.
- 2.5 During the survey, potential habitat, field signs and sightings of UK and EU protected species were recorded.

Invasive non-native species (INNS)

- 2.6 Non-native invasive species were noted and recorded during the Phase 1 habitat survey within and adjoining the Site.

Amphibians

- 2.7 During the Site survey water bodies and terrestrial habitats were assessed in view of potential to support amphibian species. Amphibians utilise a variety of ponds and other standing water bodies for breeding.

Reptiles

- 2.8 During the Site visit, habitats were assessed in view of potential to support grass snake (*Natrix natrix*) which is the only reptile associated with wetlands, where they feed mostly on amphibians, but they also occur in many other adjoining habitats which they use for basking, feeding and cover, laying eggs in warm damp sheltered locations, typically in compost heaps or similar vegetation. They require mostly standing water wetland areas with amphibian prey, and drier adjoining habitats for sheltering and hibernation.

Otter

- 2.9 Suitable riparian habitat and features close to water bodies with potential as lying up or denning were searched for use by otter (*Lutra lutra*) and evidence of presence such as spraints, anal jelly, tracks and feeding remains recorded. Special attention was paid to any drier lying up areas, the base of large trees, overhanging banks and areas of thick vegetation. Signs such as depressions in vegetation indicating resting places, paths/slides to and from the water, spraints, footprints and traces of hair were looked for.

Water vole

- 2.10 During the Site visit suitable habitat alongside the water body was walked and assessed in view of potential to support water vole (*Arvicola amphibius*). Where habitat was identified field signs such as footprints, latrines, droppings, burrows, runways and feeding stations were recorded.

Birds

- 2.11 During the Site visit birds were recorded and habitat assessed in view of potential to support nesting birds through feeding, shelter and potential nesting areas.

3 Site Description

- 3.1 The brook section comprises generally of an open c.3m width section, approximately 305m in length, with some short pinch points of 1m widths.
- 3.2 There are three pedestrian foot bridges across the brook, a private one located along the lower eastern section (see Photo 2) which is a low-profile metal/timber bridge, and two timber bridge located close together adjoining Manthrig Lane (see Photo 8).

4 Survey Results and Evaluation

Desk study and pre-existing information

Statutory protected and important sites

- 4.1 No statutory protected or important sites occur within 1km of the brook section.

Protected and priority species

- 4.2 No protected species were recorded along the brook section itself during the assessment, and no previous records exist along the current brook section. However, the data search provided 685 species records within 1km of the site, and relevant species are summarised below.
- 4.3 Fish including records of eel (*Anguilla anguilla*) nearest 228m away, river lamprey (*Lampetra fluviatilis*) nearest 295m away. Eels migrate away from British rivers during August through to June, so no impacts occur during this time. River lampreys spawn in gravelly rivers during April-May, and as the Manthrig Brook comprises of a muddy substrate, no issues are foreseen.
- 4.4 In terms of amphibians, no standing water bodies occur within the site itself for breeding amphibians, therefore no issues are foreseen.
- 4.5 No records of grass snake occur locally. They hibernate from October to March being inactive underground in sheltered terrestrial habitats.
- 4.6 Mammal records included otter (*Lutra lutra*) nearest 295m away. No signs of otter were found during the assessment. The Manthrig Brook section flows through private gardens within the centre of Caersws with high human disturbance, and potential for breeding areas is limited, although otters may occasionally use the brook for dispersal and seasonal feeding opportunities. Therefore, avoidance methods should be followed during any works. No records of water vole occur locally and although the brook bank sides do provide suitable nesting banks, it has high human disturbance and a lack of any dense tall ground cover habitat areas such as rushes, which water vole require for feeding. Therefore, no issues are foreseen.
- 4.7 No water birds were recorded within the site during the assessment. Numerous bird records occur locally, including several water birds nearest 44m away, kingfisher (*Alcedo atthis*) and sand martin (*Riparia riparia*) nearest 260m away, dipper (*Cinclus cinclus*) nearest 832m away. As the area is an urban stream with high human disturbance, it is assessed as of low potential for larger stream nesting birds. However, the stream does have moderate potential for smaller river birds such as grey

and pied wagtails, the latter being tolerant of human disturbance. The adjoining bankside tree habitats does hold high nesting potential for locally nesting common birds, which will be retained as existing, so no direct impacts are foreseen.

- 4.8 Invertebrates including the minutest diving beetle (*Bidessus minutissimus*) 832m away, and numerous other beetles nearest 260m away, mostly on the nearby River Severn/Afon Hafren. Therefore, no issues for priority invertebrates are foreseen. The Manthrig Brook is likely to have a typical range of common stream invertebrates present, and any in-stream work is assessed as being localised and have only temporary impacts on the stream invertebrates present.
- 4.9 The majority of the above records are associated with the nearby River Severn/Afon Hafren and adjoining areas around the wider Caersws area. It is assessed that any in-stream work within the Manthrig Brook will cause limited impact of the protected and priority species identified to occur in the wider local area.

Ecological habitat assessment

- 4.10 The brook generally comprises of an open unhindered, muddy bottomed watercourse with a moderate flow in comparison to its relatively level landscape, with the adjoining bank sides varying from open grassland to hedges and trees with only minor overhanging tall bank side herb vegetation and bramble scrub, adjoining sections of garden hedges and trees (see photos Appendix 1).
- 4.11 Some minor tall herb and grass vegetation and occasional small trees occur in-stream, but these are generally not interfering with the flow. However, there are several short pinch point sections where the mostly 3m wide brook narrows to 1m width.
- 4.12 The private foot bridge located along the lower eastern section (Photo 2), being a low-profile metal/timber bridge, does have high potential to impede flow during higher flood levels as the bridge structure is closer to the surface of the brook than the other bridges, which may cause timer jams and subsequent local flooding issues.
- 4.13 The remaining two timber bridges adjoining Manthrig Lane (see Photo 8) are high enough above the brook watercourse as not to cause undue jamming and flooding.
- 4.14 Any proposed works are assessed as having a small localised and temporary impact on the habitat and species present locally.

Other protected and priority species

- 4.15 No signs or potential for other protected or priority species were recorded during the assessment.

Invasive Non-native species (INNS)

- 4.16 No invasive non-native species were recorded.

Constraints on the survey

- 4.17 No constraints were noted.

5 Reasonable Avoidance Measures (RAM's)

- 5.1 Without avoidance measures there is potential to cause impacts including injury or killing of animals or habitats during works. Avoidance measures can be implemented to prevent and minimise the impacts identified.

Nesting birds and Timing of works

- 5.2 As the site itself contains potential bird nesting adjoining tree cover habitats, all work that affects these bankside tree habitats should be undertaken outside the main bird nesting season (which is March to August inclusive).

Ground works

- 5.3 All works will comply with Environment Agency/Natural Resources Wales Pollution Prevention Guidance series particularly those below. Full details of these guidelines can be found at: <http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-andreplacement-series/guidance-for-pollution-prevention-gpps-full-list/>
- 'GPP 1: Understanding your environmental responsibilities –good environmental practices';
 - 'GPP6: Working at construction and demolition sites'; and
 - 'GPP21: Pollution incident response planning'.
- 5.4 Normal good practice will be followed as set out in the CIRIA guidance e.g. 'CIRIA Report C651 Environmental Good Practice on Site'. An agreed pollution prevention plan will be in place and appropriate pollution control equipment should be available in the event of any spillage, ie. from equipment or vehicle fueling.
- 5.5 Areas for **machinery refuelling, any necessary wash down and use of other potentially harmful substances should be undertaken as far away from all land drainage and watercourse areas.** Ideally this should be undertaken on concrete, tarmac or other impermeable hard standing areas to avoid soil contamination and to safeguard potential contamination of watercourses, within a designated area isolated from surface water runoff, and contained within a sump or metal container for later correct disposal. **The site manager or other designated person should be appointed to be present on Site during all works times, to take responsibility in case of pollution incident. A standard spill-kit will be kept on Site during construction works and its location and use known to all contractors, who will be made aware of the importance of protection from any pollutant on the adjoining land by the designated person.**
- 5.6 If periods of high rainfall or prolonged flooding occurs on the Site during construction, Pollution Prevention Guideline measures may need to be deployed. These may need to include temporary cessation of works, removal of machinery, equipment and material and temporary deployment of silt traps such as straw bales around soil excavations until surface water flooding recedes and the danger of runoff has receded. The designated person for pollution incident should take responsibility for these measures

Ground dwelling animals

- 5.7 Proposed works have potential to cause disturbance, displacement and injury to any locally foraging animals.
- 5.8 As precautionary, the following avoidance measures will be followed to avoid disturbance, harm and injury to animals during works:
- To minimise potential disturbance and allow animal movement through the area during nocturnal hours, only daytime working hours are adopted for any development work, which will be undertaken to commence no sooner than one hour after sunrise and finish no later than one hour before dusk. Noise will also be kept to a minimum during installation.
 - External lighting can cause a negative effect on local wildlife. As such, no lighting of the works area will be maintained throughout the works.

Other Protected Species

- 5.9 There appear to be no obvious and immediate issues for the proposed works in view of other protected species within the area. However, in the **unlikely event that any protected species are found on the Site during works, all works must cease immediately, and the advice of a suitability qualified ecologist must be sought.**

6 Legislation and Policy background

- 6.1 The Natural Environment and Rural Communities (NERC) Act (England) 2006 includes a duty on all public authorities, including Local Authorities, to have regard to biodiversity conservation. Section 42 species of principal importance under the NERC Act in Wales protects those Species and Habitats that are of Principal Importance (SOPs and HAPs, respectively) for the purpose of conserving biodiversity.
- 6.2 European Protected Species (EPS) include all bat species and great crested newts. All bat species and their roosts are legally protected. It is illegal to deliberately capture, kill, injure or disturb an EPS animal. Breeding sites and resting places of EPS animals are also protected from reckless damage, destruction and obstruction through inclusion of Schedule 5 of the Wildlife and Countryside Act (WCA) 1981 (as amended) and listing under The Conservation of Habitats and Species Regulations 2017 (as amended) which transcribes the EC Habitats Directive into UK law. In combination, this legislation makes it an offence to:
- Deliberately or recklessly capture, injure or kill a EPS species;
 - Deliberately or recklessly disturb a EPS species;
 - Deliberately or recklessly take or destroy the eggs of a EPS species
 - Deliberately or recklessly damage or destroy a breeding site or resting place used by a EPS species
- 6.3 The Countryside and Rights of Way Act (CROW) 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to 'recklessly' harm or disturb a place of rest or shelter of a protected species.

- 6.4 Under the Wildlife and Countryside Act 1981 (as amended) all birds, their nests and eggs are protected during the breeding season (typically March to August inclusive) from killing/destruction, damage and disturbance.
- 6.5 The UK is bound by terms of the Habitats Directive, and the Habitats Regulations 2017 (as amended). The protection given by the Habitats Directive is transposed into UK legislation through the Habitats Regulations. SAC's, candidate SAC's, SPA's are protected under the Habitats Regulations. As a matter of policy the UK government also applies the procedures to potential SPA's and Ramsar sites.
- 6.6 The Conservation of Habitats and Species Regulations 2017 (as amended) affords protection to: sites known as Special Areas of Conservation (SACs) that are of importance at a European level for habitats and species, excluding birds; sites known as Special Protection Areas (SPAs) that are of importance to birds; and it also protects certain species of plant and animal that are considered to be most in need of conservation at a European level.

National Planning Policy

- 6.7 The relevant adopted policy at the national level is set out in Technical Advice Note 5: Nature Conservation and Planning (TAN5) (2009) comprises the Government's guidance on nature conservation. It sets out the principles for ensuring that the potential impacts of planning decisions on biodiversity conservation are fully considered. These include:
- The need for up-to-date assessments;
 - The aim of maintaining and enhancing, restoring or adding to biodiversity and geological conservation interests;
 - The need to take a strategic approach to the conservation, enhancement and restoration of biodiversity and geology; and
 - Planning decisions should be to prevent harm to biodiversity and geological conservation interests and this may include consideration of mitigation/compensation measures, implemented where appropriate using planning controls.
- 6.8 TAN5 provides guidance on the protection of statutory designated sites, including international sites, National Nature Reserves (NNRs) and SSSIs, as well as non-statutory regional and local sites. TAN5 also addresses development and wildlife issues outside these sites and seeks to ensure that planning policies minimise any adverse impacts on wildlife.
- 6.9 TAN5 places emphasis on local authorities to further the conservation of those HAPIs, or those SOPI, which are identified.
- 6.10 TAN5 requires that opportunities for improving biodiversity within developments should be maximised. It states that development proposals provide many opportunities for building-in beneficial biodiversity features as part of good design and also suggests that networks of natural habitat should be protected and repaired, and the fragmentation and isolation of natural habitats avoided.

Local Planning Policy

- 6.11 The following policies are relevant to nature conservation and development within the current Powys County Council Local Development Plan (LDP) and associated policies mostly covered by LDP Police DM2, DM4 & DM7.
- 6.12 The Biodiversity Conservation and Enhancement in Development Proposals Supplementary Planning Guidance provides additional and specific guidance on ecological information required to support a development, including the need for robust and up to date survey work, biodiversity enhancements and objective evaluation of the resources within the Site. This guidance has been incorporated into this report.

Biodiversity Action Plans & S7/42 habitats and species

- 6.13 The Site is covered by the Powys LBAP (2002), which was reviewed in 2016 (Powys LBAP Review) to produce the current Powys Nature Recovery Action Plan (PNRAP) (2021 on). It identifies local priorities for the protection of key habitats and species and sets out targets and actions for conserving the county's biodiversity.

Table 3: LBAP habitats and species relevance to the proposed Site

Fauna	Habitat/Species
Habitats	<u>Freshwater & Wetland Habitats:</u> Rivers. <u>Urban:</u> Water quantity regulation - greenspaces, including private gardens, and particularly those with hedgerow boundaries and trees, are beneficial for storing and slowing water run-off from adjacent sealed surfaces so can help to alleviate flooding.
Species	<u>Locally Important species associated with freshwater and wetland habitats:</u> Dipper, Kingfisher, several fish species including Eel, Water Vole, Otter.

- 6.14 Relevant Section 7/42 habitats and species that should be taken into consideration include the brook habitat and urban setting, and stream species including dipper, kingfisher, fish species, water vole and otter.

7 Bibliography

Edgar, P., Foster, J. and Baker, J. (2010) *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.

Appendix 1: Site Photographs

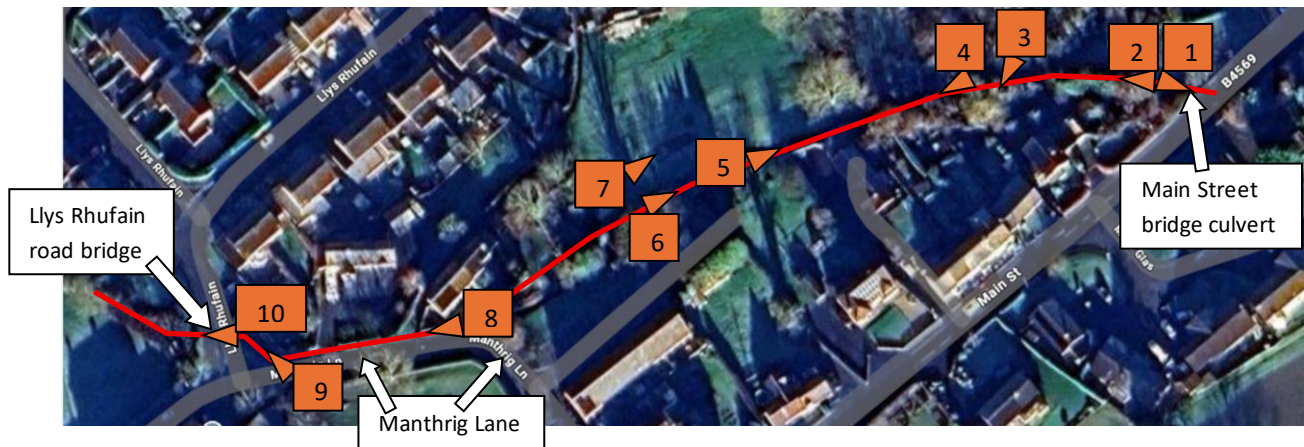


Figure 2: Location of numbered photographs.



Photo 1: Lower section culvert under Main Street (B4569). Photo 2: Lower section looking north-west.



Photo 3: Lower section showing foot access bridge.

Photo 4: Lower section looking north-west.



Photo 5: Central section looking south-east.



Photo 6: Central section looking south-east.



Photo 7: Field adjoining to north of central section.



Photo 8: Upper section foot bridge alongside Manthrig Lane.



Photo 9: Upper section south of Llys Rhufain road bridge.



Photo 10: Upper section north-west of Llys Rhufain bridge.