

CV Barry Wright

Personal Information

Name	BARRY WRIGHT PhD BSc (Hons)
Date of Birth	24 April 1955
Nationality	British
Present Position	Owner and Principal Ecologist Dryad Ecology

Key Attributes

Environmental assessment/monitoring, botany, entomology, freshwater biology, ornithology, mammology, herpetology

Personal Profile

My key skills and expertise are in the following areas:

Environmental - Assessment and Monitoring for major development schemes and agri-environment schemes like Environmentally Sensitive Areas and Countryside/Environmental Stewardship, including the development of monitoring techniques for measuring sheep grazing pressures on heather moorland. Developing mitigation and restoration strategies for developers and minerals operators. Doing Ecological Environmental Impact Assessments and Habitats Regulations Appropriate Assessments. Preparing Evidence for National Infrastructure Directorate submissions and for Public Inquiries. Attending and defending schemes at Public Inquiries and NID hearings.

Botany - The identification of vascular plants and the interpretation of vegetation changes. Use of the National Vegetation Classification system to classify and evaluate habitats. Experienced in field surveys using a version of the JNCC Phase 1 habitat survey system modified by myself to make a better record of vegetation than standard Phase 1 for very little extra time spent recording. I call this phase 1.5 as it is intermediate between phase 1 and NVC. Special interest in ferns and fern allies and their occurrence in the wild as part of the Yorkshire Fern Group of the British Pteridological Society. I also have a developing interest in using botanical data to study the historical aspects of sites. This includes a particular interest in hedgerows, woodland flora and notable (ancient and/ or veteran) trees that I studied for my PhD at Sheffield Hallam University. This is invaluable when considering appropriate restoration or creation of a wildlife resource. Injurious weed surveys.

Entomology - The sampling, collection and identification of ground beetles - Carabidae - with a view to interpreting their significance in agricultural and semi-natural ecosystems. Carrying out dragonfly, damselfly and butterfly surveys.

Freshwater Biology - Surveying for White-clawed Crayfish in streams and rivers using torch searching. Sampling, collecting and identifying freshwater invertebrates with a view to interpreting their ecological significance.

Ornithology - Doing Common Bird Censuses/Breeding Bird Surveys in accordance with the British Trust for Ornithology techniques (Common Bird Census and Breeding Bird Survey). Collecting data on breeding upland wader populations and on the breeding biology of Yellow Wagtails and threats to their nesting success in hay fields in the Pennine Dales ESA. Vantage point surveys for raptors, waders and wildfowl to inform applications for potential wind farms.

Mammalogy - Live trapping small mammals using Longworth traps as part of research projects to census populations in a range of habitats. Using hair tubes to record the range of small mammal species present on sites, also Water Vole surveys and bait marking to determine the home ranges of Badgers. I am a licensed Bat worker and hold, or have held a licence to disturb Water Voles and bats. Surveys for Otters and Mink. I have developed methods for monitoring bat movements along linear features (Wright and Darwin 2010) and using Infrared, night vision equipment to detect bat emergences and re-entries.

Herpetology - Surveying to detect the presence of Great Crested Newts and other herpetiles.

Training - Running training courses in ecological subjects e.g., hedgerows surveying techniques for the Field Studies Council and local branch of CIEEM on hedgerow surveys methods (in both summer and winter) and Woodland surveying for ecological assessment. As well as testing a method for assessing the ecosystem services and biodiversity aspects of notable and/ or veteran trees. Providing in-house training on the Phase 1 habitat survey method. Tutoring on workshops run by the Biodiversity and Landscape History Research Institute (BaLHRI)

Recent work experience 1990-Date

Bats - Using my roost visitor's licence I inspect buildings, structures and trees for bats and undertake emergence and activity surveys in support of planning applications for developers. This often involves preparing mitigation plans and applying for EPS licences from Natural England. Three applications to destroy roosts and provide compensation were successfully completed in 2006-2007 and a further one completed in December 2013. I have developed a unique approach for monitoring the directional movement of bats along hedgerows as a means of better assessing the impact on bats of the severance of connectivity across developments like road schemes (see Wright and Darwin 2010). I have done bat emergence/ re-entry surveys on many projects including small housing developments to major road schemes and the HS2 proposed railway line. I have developed an economical infrared video recording system for doing emergence/ re-entry surveys for bats at both buildings and potential tree roosts. This equipment can also be used inside buildings to detect precisely where bats emerge from internal walls etc. I am conversant with doing bat transects and using static bat detectors to monitor landscape activity.

Vegetation - I have done aquatic plant surveys (submerges and emergent species) for British Waterways seeking to assess the condition of their canal network prior to planning dredging operations.

Great Crested Newts - I was involved with a utility company in applying for a licence to disturb Great Crested Newts along the route of a proposed new water

pipe. This was successfully completed in 2007. A similar licence has been approved to develop housing on land near Kendal in 2013.

Public Inquiries - I have prepared proofs of evidence and attended public inquiries both in support of developments and in objection based on objective assessments of the predicted impacts. This includes the successful support of the Heysham to M6 link road, that is entering its construction phase this year, a successful defence of a proposed car showroom development on a brownfield site and failed attempts to protect rural developments sites in Wales that were not sufficiently valued compared with the overriding public interest for housing.

Hedgerows - I was the lead editor from the ADAS team during the preparation of the second edition of the DEFRA-funded 'Hedgerow Survey Handbook' in 2006.

I have produced a local handbook to recognising old and ancient hedgerows based on the woody species and ground-flora species compositions. And am also developing a hedgerow assessment system, HEDGES (Hedgerow Ecological Description, Grading and Evaluation System). I tutored on a Field Studies Council course each year on hedgerows; survey techniques and historical interpretation. I am also working with local groups funded by lottery grants to investigate the hedgerow histories of their local townships using the novel survey system and developing new methods for interpreting the data.

Major infra-structure schemes

Roads - I was the ecology manager for the proposed new link from Heysham to the M6 near Lancaster, and am now an consultant on the Scheme. This involved co-ordinating all ecological surveys and inputs, effecting quality controls and overseeing and writing reports and mitigation strategies. Including Phase 1 + 2 surveys (NVC mapping), hedgerow surveys, bird studies, freshwater sampling (aquatic flora sampling and assessment) and work on protected and Biodiversity Action Plan species and habitats. I also developed translocation strategies for grassland waxcap fungi scheduled for removal as part of site clearance work. This has been to public inquiry in 2007 and approved; I represented the Council as their expert witness in support of the scheme. This has now been through the National Infrastructure Directorate (formerly the Infrastructure Planning Commission) and construction has started with an expected completion in 2015. I expect to be consulted during this period because of my long-standing involvement and deep understanding of the ecological issues.

Powerlines - As part of a new powerline construction through the Vale of York I have been the project ecologist doing surveys and providing advice and mitigation strategies for potentially damaging operations resulting from undergrounding and overhead pylon construction. This includes vegetation mapping, recording and evaluation, protected species surveys and the identification of Biodiversity Action Plan habitats and species.

As part of determining the best access routes to access construction sites for power pylons I have been involved in assessing the risks of root disturbance and branch pruning on trees, and particularly old and / or otherwise notable trees. This involved species identification in both winter and summer and estimating the vigour of each specimen. These surveys also detect the presence of protected species like bats and Barn Owls.

Pipelines - The construction of a gas pipeline in Lancashire required the collection of data in sufficient detail to enable the developer to reinstate hedgerows and ditches to their former condition. This involved using my

enhanced NCC Phase 1 system (referred to as Phase 1.5) of habitat classification to collect species and structural data to the required detail and to produce a reinstatement protocol to satisfy the planning authority. The survey method developed was detailed enough to provide the contractor with precise species mixtures and content to ensure that the new hedgerow sections blended in to the landscape rather than appearing as incongruous stretches betraying the fact that they were clearly planted.

Agri-environment schemes - I provide advice on conservation and the environmental benefits of agri-environment schemes, such as Countryside Stewardship and Set-aside, to farmers and landowners. This requires being aware of the needs of the farmer and the range of support grants available.

As part of the environmental monitoring in the Lake District ESA I was involved in assessing the level of sheep grazing on heather moorland. This used the technique I helped to develop for the North Peak ESA and involved field collection of samples and critical laboratory assessment and calibration. I was also responsible for project management and quality assurance of this work. This included collating information on stocking levels, burning practices and weather conditions to interpret the unexpected results.

Also, within the Lake District ESA I monitored the success of drystone wall restoration projects and interviewed farmers as part of an attitude survey and feedback exercise.

I was involved in project managing and vegetation monitoring on upland moors in the Lake District ESA where stocking levels were to be reduced on fields containing valuable wetland communities.

As part of the DEFRA funded Moorland Scheme, I was involved in organising and doing similar sheep grazing monitoring on four moors entered into that scheme. This work also included intensive vegetation monitoring similar to that done for the wetland monitoring outlined above. This work looked specifically at the interface between heather and other vegetation, notably acid grassland.

The same technique as that outlined above was also used to monitor the effects of reduced grazing pressures on upland acidic grass pastures and open fell land within the Lake District ESA.

As part of both the Lake District and Pennine Dales ESAs I helped develop a technique for monitoring seedling regeneration in upland woodlands following stock exclusion.

I was part of the team commissioned by the DOE to determine the criteria for assessing the 'most important hedgerows'. This included studying the flora, fauna, landscape and historical aspects. This work was used to formulate the 'Hedgerows Regulations 1997'. I subsequently was involved in a farmer attitude survey of the regulations and did work to review the regulations with a possibility of making changes based on user experiences.

I was involved in planning, managing and doing surveys to monitor the breeding populations of upland waders within the Pennine Dales ESA. This included completing a Phase I habitat survey, relating bird numbers to vegetation and field management practices, managing a team of surveyors and completing the surveys within a specified period.

I have been actively involved in developing methods, organising and carrying out wildlife monitoring in Environmentally Sensitive Areas, both in the Pennine Dales grasslands and on the North Peak upland heather moorland since these

schemes began. This has given me a grounding in ecological evaluation and vegetation monitoring and management.

Notable/ veteran trees - I am involved with providing training in species identification and veteran tree assessment under a system I am developing based on published works. This system, TREES. (Tree Recording and Ecological Evaluation System) links in with my PhD and the contribution I made to the 'Woodland Heritage Manual' (Rotherham 2008). This work includes the production of field keys to identifying trees and shrubs in winter, using twig characters only, and in summer, using leaf characters only.

Several recent contracts have involved studies to determine the status of protected and Biodiversity Action Plan animal species such as Water Voles, White-clawed Crayfish, Great Crested Newts and Badgers. This involved using established survey methods, including torchlight surveys for the Newts and Crayfish. The results of these surveys are used when I assist clients to draw up mitigation and restoration proposals.

Birds - I carried out surveys in accordance with the British Trust for Ornithology techniques (Common Bird Census and Breeding Bird Survey) on lowland and upland farmland habitats as part of EIA assessments for potential open-cast coal extraction.

I collected data on breeding upland wader populations and on the breeding biology of Yellow Wagtails within the Pennine Dales ESA. This required accurate mapping of breeding territories and ultimately of nesting sites. I also advised farmers in Environmental Stewardship schemes and Set-Aside on optimising the wildlife benefits of the management prescriptions and options, and did vantage point surveys focusing on raptors, waders and wildfowl, for wind farm developments.

Environmental assessments - I have been involved in preparing ecological reports as part of the Environmental Statements presented by mineral operators when applying for planning permission to extract coal or other minerals. This includes surveying and evaluating wildlife habitats and making any necessary recommendations for amelioration and/or restoration. As part of a major project I was in charge of planning, project managing and quality controlling surveys of the vegetation along a 9km corridor of a river valley to create a detailed NVC map of the vegetation 700m either side of a river channel. This required familiarisation with a range of NVC vegetation types from mesotrophic grasslands to swamp vegetation. These data were used in a planning application to abstract coal by deep-mining underneath a National Nature Reserve. As part of this work I also used methods of sampling freshwater invertebrates and for recording the aquatic vegetation in drainage ditches.

I have done surveys for injurious weeds like Indian (Himalayan) Balsam *Impatiens glandulifera* both in summer and winter and Japanese Knotweed *Fallopia japonica* to advise on land clearance strategies on road schemes, landfill sites and derelict hospital sites.

I have undertaken Appropriate Assessment methods for determining the impact on an SPA of replacing an electric cable under an estuary, and a Habitats Regulations Assessment for land at 2Km from an SPA/ SAC/ RAMSAR site.

Education and Qualifications

2016 - PhD - Sheffield Hallam University - "A critical assessment of botanical indicators as historic markers in wooded landscapes"; investigating the use and interpretation of botanical indicator species in hedgerows and woodlands.

1976 - BSc (Hons) Zoology - The University of Hull.

Other Skills and Courses Attended

2006 - Creative minds – Hedgerows and ancient trees

2006 - BCT - Surveying Barns for Bats.

2010 - ADAS – Contract management training

2010 - BCT - Analysis of bat calls using ANALOOK

2011 - TSLA – Essential sales skills – Bronze award

2011 - BCT - Surveying Trees for bats

2011 - Baker Consultants - The use of the SM2 bat detector

2012 - CIEEM – Master class: EPS update for consultant ecologists

2012 - APM - Introduction to project management

2012 - QA Ltd – Organising work and time

2013 - CSCS – Construction site visitor permit

2013 - First aid in the workplace

2014 - QGIS – An introduction to GIS mapping

2015 - ROLO site visitors training

Training and experience as an expert witness at Public Inquiries

Have good working knowledge of computers and applications including MS Word, Excel, Access, Adobe Illustrator, Photoshop and InDesign, desk-top publishing and CAD programs. I am familiar with the GIS system Mapmaker and QGIS.

Basic mountain safety techniques, first aid and navigation

Hold English Nature licences to live trap small mammals, survey for Great Crested Newts and to disturb Water Voles and hold a current Bat handler's licence for science and education in all English counties.

Professional and Amateur Memberships

Ainsty Conservation Society

Bat Conservation Trust

Boston Spa Heritage and Archaeology Group

Botanical Society of the British Isles

British Bryological Society

British Pteridological Society

East Yorkshire Bat Group

Field Studies Council

Friends of Hagg Wood (Dunnington, York)

Leeds Microscopical Society
Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM)
The Milestone Society
National Geographic Society
North Yorkshire Bat Group
People, Landscape and Cultural Environment (PLACE)
Postal Microscopical Society
Royal Horticultural Society
Royal Society for the Protection of Birds
York Mammal Group (Mammal Society affiliated)
Yorkshire Wildlife Trust
Woodland Trust

Employment History

1978-1987	Vertebrate Pest Control Adviser - MAFF/ADAS
1987-1990	Wildlife and Storage Biology Adviser ADAS
1990-2012	Senior Wildlife Ecologist, ADAS
2012-2014	Senior Wildlife Ecologist, Energyline Ltd.
2014-2015	Principal Ecologist, Baker Consultants
2015-date	Owner and Principal Ecologist - Dryad Ecology

Selected Publications

Churchward, J., Britt, C., McLeish, A., Davis, M. and Wright, B. (1996). The Hedgerow Evaluation System. A system for identifying important hedgerows. Contract report by ADAS for the Department of the Environment.

Critchley, C. N. R., Fowbert, J. A. and Wright, B. (2007). Dynamics of species-rich upland hay meadows over 15 years and their relation with agricultural management practices. *Applied Vegetation Science* **10**, 307-314.

Feare, C. J., Milsom, T. P., Wright, B. and Lane, P. (1989). The effects of boundary strips on the flora of cereal fields. Proc of the Brighton Crop Protection Conference - Weeds - 1989.

Goulder, R., Blanchard, A. S., Sanderson, P. L. and Wright, B., (1980), Relationships between heterotrophic bacteria and pollution in an industrialised estuary. *Water Research* **14** 591-601.

Goulder, R., Blanchard, A. S., Sanderson, P. L. and Wright, B., (1979), A note on the recognition of pollution stress in populations of estuarine bacteria. *Journal of Applied Bacteriology* **46**, 285-289.

Goulder, R., Blanchard, A. S., Metcalfe, P. J. and Wright, B., (1979), Inhibition of estuarine bacteria by metal refinery effluent. *Marine pollution Bulletin* **10** 170-173.

Rotherham, I. D., Wright, B. and Smith, L. (2008). Ancient woodland botanical indicators - a survey guide. in Rotherham, I. D., Jones, M. & Smith, L, Handley, C (Eds). *The woodland heritage manual - a guide to investigating wooded landscapes*. 142-146. Wildtrack publishing. Sheffield.

Rotherham, I. D. and Wright, B. (2008). Searching for ghosts - how a forester reads the woodland landscape. *A world of trees* **16** 40-41. A world of trees, Penkrigde.

Wright, B. and Darwin, N. (2010). Batpods – a method for monitoring bat activity along linear features. *In Practice* **69**, 18-21. IEEM Winchester

Wright, B. and Rotherham, I D. (2011). Assessing woodland history and management using vascular plant indicators. *Aspects of Applied Biology* **108**, 2011 Vegetation Management 105. 105-112

Wright, B. and Rotherham, I. D. (2011). Surveying and assessing vascular plants in Wright hedgerows to inform historic interpretation, planning decisions and conservation strategies. *Aspects of Applied Biology* **108**. 23-131.

Rotherham, I. D., Graves, P. and Wright, B. (undated). Evidencing ancient woodlands. *A world of trees*, **20**, 42-44.

Wright, B., Rotherham, I. D., Darwin, N. A. and Hall, R. (2012a). A new approach to practical survey and interpretation of hedgerows: An introduction to the "Hedgerow Ecological Description Grading and Evaluation System" (HEDGES). *Arboricultural Journal*, **34** (3), 134-150.

Wright, B., Rotherham, I. D., Darwin, N. M. A. and Hall, R. (2012b). HEDGES - Hedgerow Ecological Description Grading and Evaluation System - A new approach to surveying and interpreting hedgerows. In Dover, J. W. (ed.). *Hedgerow futures - Proceedings of the first international Hedgeline conference held at Staffordshire University, Stoke-on-Trent, UK 3-5 September 2012*. Hedgeline, Stoke-on-Trent.

Wright, B. (2015a). A novel approach to waxcap translocation. *CIEEM In Practice* **89**, 23-27. CIEEM, Winchester

Wright, B. (2015b). Translocating waxcaps. *British Wildlife* **26** 417-420.

Wright, B. (2015c). Waxcap conservation in England and Wales and a new approach to translocation. *Australasian Plant Conservation* **24** (3) (December 2015-February 2016) 12-14. Canberra, Australia.

Wright, B. and Rotherham, I. D. (2015). Creating replica historical hedgerows. *Conservation Land Management*. **13**, (2), 4-8.