

**Curriculum Vitae**  
**Dr. Alan D. Radbourne**  
December 2022

An environmental scientist, specializing in science project management, communication and engagement. My research is primarily interested in sustainable land management (national and local scale), in particular with the implementation of regenerative agriculture. Additional to my science management, I hold a wide range of leadership and communication experience, including current private activities of owning a 12-acre small holding and leading a local church community.

UKCEH staff profile: <https://www.ceh.ac.uk/staff/alan-radbourne>

Small holding social media: <https://www.facebook.com/ParadwysDiaries/>

Church community leadership: <https://lighthousechurchangeley.org/>

## **Employment**

Science Project Manager (Band 5). UK Centre for Ecology & Hydrology.  
02/2022 - Present

Soil & water Biogeochemist (Band 6 RA). UK Centre for Ecology & Hydrology.  
01/2020 – 02/2022

Research Scientist (Band 6). UK Centre for Ecology & Hydrology.  
12/2018 – 01/2020

Research Scientist (Band 7) UK Centre for Ecology & Hydrology.  
06/2018 – 12/2018

Ph.D. Student. Department of Geography, Loughborough University, UK.  
10/2014 – 03/2018

Entrepreneurial Business, The One Pound Challenge.  
06/2013 – 12/2017

Undergraduate Student. Department of Geography, Loughborough University.  
10/2010 – 06/2013

*Additional part time and casual work experience information available on request.*

## **Education**

Ph.D. Environmental Science, 2018. Loughborough University, UK.

B.Sc. Geography and Sport Science, 2013: 1<sup>st</sup> Class(*Hon*) Loughborough University, UK.

### ***Notable recent career highlights***

- Promoted to band 5 Science Project Manager for UKCEH in 2022.
- In 2021 became the site manager of the Plynlimon Research Catchments (<https://www.ceh.ac.uk/our-science/monitoring-sites/plynlimon-research-catchments>), a site of long-term (over 60 years) monitoring and research for upland conifer plantations and farmed moorland.
- Project manager for the UKCEH field trial site in a NERC Greenhouse Gas Removal (GGR) project looking at Enhanced Rock Weathering (ERW) application to an upland catchment (Plynlimon) to assess impact and potential for wider use. 4.5 year project (2021-2025) with a budget of ~£950,000. <https://www.ceh.ac.uk/our-science/projects/plynlimon-ggr-rockdust>
- Part of the ERAMMP project management team, with the role of leading all communications and building stakeholder engagement on the newly funded programme from the Welsh Government, totaling <£12million over 10 years. <https://erammp.wales/en>
- Research lead for the UKCEH contribution to the EU Interreg FABulous Farmers project, leading work package 1 in this 4 year project with a budget of ~£650,000. <https://www.nweurope.eu/projects/project-search/fabulous-farmers/>
- Awarded two small grants in a new work area and contacts (£3,000 + £14,000) to assess the current state and possible future environmental role and management options for the Church of England churchyards.
- During 2022, accepted onto the NERC Engage Academy (Engagement and Impact Leadership stream) public engagement with research training programme.
- A member of the UKCEH Public Engagement with Research (PER) committee, representing the UKCEH Bangor site (since 2021).
- Currently line manage 3 people and act as deputy group lead for the Catchment to Coast group within UKCEH.

### ***Publications (Most recent first)***

Maskell, L., A. D. Radbourne; L. Norton; S. Reinsch; J. Alison; L. Bowles; K. Geudens; D. A. Robinson (in review) Functional Agro-Biodiversity: An evaluation of current approaches and outcomes in an EU context.

- Robinson, D.A., Nemes, A., Reinsch, S., Radbourne, A.D., Bentley, L., Keith, A.M. (2022) Global meta-analysis of soil hydraulic properties on the same soils with differing land use. *Science of the Total Environment*. <https://doi.org/10.1016/j.scitotenv.2022.158506>
- Dai, L., Xu, Y., Harmens, H., Duan, H., Feng, H., Hayes, F., Sharps, K., Radbourne, A., Tarvainen, L.(2021) Reduced photosynthetic thermal acclimation capacity under elevated ozone in poplar (*Populus tremula*) saplings. *Global Change Biology*. <https://doi.org/10.1111/gcb.15564>
- Evans, C., et al (2021) A novel low-cost, high resolution camera system for measuring peat subsidence and water table dynamics. *Frontiers in Environmental Science (Soil Processes)*. <https://doi.org/10.3389/fenvs.2021.630752>
- Hayes, F., Harmens, H., Sharps, K., Radbourne, A. D. (2020). Ozone dose-response relationships for tropical crops reveal potential threat to legume and wheat production, but not to millets. *Scientific African*. <https://doi.org/10.1016/j.sciaf.2020.e00482>
- Keaveney, E.M., Radbourne, A.D., McGowan, S., Ryves, D.B., Reimer, P.J. (2020). Source and quantity of carbon influence its sequestration in Rostherne Mere (UK) sediment: a novel application of stepped combustion radiocarbon analysis. *Journal of Paleolimnology*. <https://doi.org/10.1007/s10933-020-00141-1>
- Ryves, D.B., Leng, M.J., Barker, P.A., Snelling, A.M., Sloane, H.J., Arrowsmith, C., Tyler, J.J., Scott, D.R., Radbourne, A.D., Anderson, N.J. (2020). Understanding the transfer of contemporary temperature signals into lake sediments via paired oxygen isotope ratios in carbonates and diatom silica: Problems and potential. *Chemical Geology*. <https://doi.org/10.1016/j.chemgeo.2020.119705>
- Radbourne, A.D., Ryves, D. B. (2020). Experimental assessment and implications of long-term within-trap mineralization of seston in lake trapping studies. *Limnology and Oceanography: Methods*. <https://doi.org/10.1002/lom3.10369>
- Radbourne, A. D. & Ryves, D. B. (2019) Secrets deep within: exploring the sediment archive (ch. 11). In: Wall & Wall (eds), *Rostherne Mere: Aspects of a wetland nature reserve. Wildlife, people and science through time*.
- Radbourne, A. D., Ryves, D. B., Madgwick, G., Anderson, N. J. (2019). The influence of climate change on the restoration trajectory of a nutrient rich deep lake. *Ecosystems*. <https://doi.org/10.1007/s10021-019-00442-1>
- Harmens, H., Hayes, F., Sharps, K., Radbourne, A., Mills, G. (2019). Can reduced irrigation mitigate ozone impacts on an ozone-sensitive African wheat variety? *Plants*, 220; <https://doi.org/10.3390/plants8070220>

- Radbourne, A. D., Elliott, J. A., Maberly, S. C., Ryves, D. B., Anderson, N. J. (2019). The impacts of changing nutrient load and climate on a deep, eutrophic, monomictic lake. *Freshwater Biology*, 64, 1169– 1182. <https://doi.org/10.1111/fwb.13293>
- Lacey, J. H., Leng, M. J., Vane, C. H., Radbourne, A. D., Yang, H. & Ryves, D. B. (2018). Assessing human impact on Rostherne Mere, UK, using the geochemistry of organic matter. *Anthropocene*, 21, 52-65.
- Radbourne, A. D. (2018). Disentangling the impacts of nutrient enrichment and climatic forcing as key drivers of change at Rostherne Mere. PhD Thesis, Loughborough University.
- Radbourne, A. D., Ryves, D. B., Anderson, N. J. & Scott, D. R. (2017). The historical dependency of organic carbon burial efficiency. *Limnology and Oceanography*, 62, 1480 - 1497.

### ***Reports and other project based outputs***

- Radbourne, A. D. (in progress, 2023) An improved churchyard carbon assessment using citizen science. Church of England commissioned study.
- Radbourne, A. D. (2022) Review of Decision Support tools for FAB implementation. EU Interreg FAB Farmers project
- Radbourne, A. D., C. Feeney, D. A. Robinson (2022) Rapid assessment of churchyard carbon and management practice. Church of England commissioned study.
- Lead compiler on 14 WOCAT sustainable Land Management technology publications. See: [https://qcat.wocat.net/en/wocat/list/?type=wocat&filter\\_qg\\_funding\\_project\\_funding\\_project=1059](https://qcat.wocat.net/en/wocat/list/?type=wocat&filter_qg_funding_project_funding_project=1059)
- ERAMMP UKCEH Impact Case Study, lead author.
- Radbourne, A. D (2020) Decision support toolkit. An information toolkit for the EU Interreg FAB Farmers project.
- Radbourne, A. D., Reinsch, S., Robinson, D. A., Norton, L., & Maskell, L. (2020) Review of decision support tools for FAB solutions. A report as part of the EU Interreg FAB Farmers project.
- Site manager of Beddgelert forest and Llyn Llazi Upland Water Monitoring Network field site (2020 to present).
- Site manager of Clocaenog moorland experimental site (maternity cover during 2020).

Radbourne, A. D., Burden, A., Williamson, J., & Evans, C. (2020) Peatland Monitoring Manual. A detailed protocol deliverable for the SMS Peatland project.

Burden, A., Radbourne, A. D., Williamson, J., & Evans, C. (2020) A Rapid method for basic peatland condition and national-scale satellite analysis. A Protocol deliverable for the SMS Peatland project.

Site manager of Conwy Research Catchment sites (2018-2019)

Morrison, Ross ; Callaghan, Nathan; Cooper, Hollie ; Coyle, Mhairi; Cumming, Alex ; Evans, Chris; Farrand, Phil; Helfter, Carole; Jones, Matt; Leeson, Sarah; Lord, Will; McNamara, Niall; Mullinger, Neil; Nemitz, Eiko; Oakley, Simon; Radbourne, Alan; Rowe, Rebecca ; Scarlett, Pete; Warwick, Alan; Levy, Peter. 2019 UK-SCAPE flux tower network: monitoring terrestrial greenhouse gas, water and energy balance. [Poster] In: UK-SCAPE, CEH Wallingford, 20 Sept 2019. (Unpublished). <http://nora.nerc.ac.uk/id/eprint/525106/>

Radbourne, A. D., Evans, C., Monteith, D. (2019). Evaluation of three sub-programmes in the Swedish National Air Monitoring Programme. <http://www.naturvardsverket.se/upload/miljoarbete-i-samhallet/miljoarbete-i-sverige/miljoovervakning/Luft/ceh-sepa-report-2019.pdf>

Radbourne, A. D. & Ryves, D. B. (2017). Natural England Report: Management implications of legacy phosphorus replenishment at Rostherne Mere.

### ***Communications and Media contributions***

2023. Keynote speaker at Hazlenut community event discussing opportunities and challenges for the future of sustainable church land management.

2022. Communications lead for new ERAMMP contract, including the full redesign of site architecture and content writing for the website, developing a full communications plan for the duration of the contract and building working relationships with key partners and stakeholders

2022. Participation in NERC Engage Academy: Engagement and Impact Leadership cohort

2022. Plynlimon Research Catchments communications, including website updates, managing key relationships like engagement with the Ecological Continuity Trust for podcast recording, site registration on their register and future communication collaborations, listing on NREC infrastructure site, etc.

2022. Lead soils research presence at Grounswell agricultural show

2022. Lead soils research presence at Cereals agricultural show
2022. Lead ERAMMP communications for Welsh government RDP event
2022. Planning and hosting online ERAMMP stakeholder event
2022. ERAMMP article published in NFU Cymru and FUW magazines
2022. Chaired the FAB Farmers Agroforestry in Wales Policy webinar organized by Soil Association.
2022. Keynote speaker at launch of new strategy for sustainable church land in the UK
2021. Lead author on blog post for Soil Association outlining the exploration of the Church of England for application of FAB measures. [Blog here.](#)
2021. Lead on content writing and editing for a number of blog posts and press releases for the promotion and communication of ERAMMP.
2021. Lead on development of LOCATE legacy website summarizing and communicating the breadth and depth of the large Land to ocean carbon transfer project. <https://www.locate.ac.uk/>
2021. Lead author on blog post for the John Ray Initiative outlining aim for Sustainable Church Land project developments <https://jri.org.uk/a-new-partnership-for-sustainable-land-management/>
- 2020-2021. Creation of [Paradwys Diaries YouTube](#) and social media presence. To July 2021 created 60 episodes following life on our small holding, with 15,000+ video views and 35,000 media impressions.
- 2020 Alan D. Radbourne, Annette Burden, Jenifer Williamson, Rachel Harvey (2020). Peatland rapid assessment protocols for satellite analysis. IUCN Peatland conference, pre-recorded presentation online.
2020. Creation of Lowland Peat website for the Lowland Peat 2 UKCEH project. <https://lowlandpeat.ceh.ac.uk/>
2020. Radbourne, A. D. Improving Decision support tools – we need your help! Blog post on the Soil Association website as part of the FAB Farmers project. <https://www.soilassociation.org/farmers-growers/farming-news/2020/november/25/improving-decision-support-tools-we-need-your-help/>
2020. Runner-up FameLab UK communicating Science video entries
2015. Promotional video of The One Pound Challenge created working with award winning BBC production team led by Dr. Janet Sumner, See: <https://www.youtube.com/watch?v=F3Ytmbg9ihg>

2015. Appearance on BBC Radio 4 Saturday Live program on 14<sup>th</sup> February 2015 to be a whole episode guest to discuss my One Pound Challenge business adventure. See: <https://www.bbc.co.uk/programmes/b0520pqz>
2015. Invited into studio for an interview on BBC Radio Leicester in January 2015 following increasing media coverage about The One Pound Challenge.
2015. One Pound Challenge story appears in print media (Daily Star, Daily Express & Real People Magazine) in February 2015.
2014. Released a self-published book about The One Pound Challenge business adventure. The book reached the top 1% (#517 of 70,000+ books) during free promotional download period on Amazon Kindle. And, #2 in Amazon Kindle business biography category with sustained period in the top 10 competing with celebrity biographies such as Karen Brady, Alan Sugar, Steve Jobs & Richard Branson. Also, #5 in small business & Entrepreneurship category, #8 in Entrepreneurship and #2,452 overall kindle sales. Overall over 2000 copies of book downloaded or purchased as paperback book within six weeks of sales, sales and downloads >3000 to date.

### ***Proposals and new projects***

- Lead author on EU Horizon soil mission living lab proposal in partnership with the FAB farmers' consortium (in progress)
- Developed and led the £14k churchyard assessment through citizen science project (successful)
- Developed and led on small grant (£3k) for Church of England for a rapid carbon and management assessment of English Churchyards (successful)
- Supported the development of the ERAMMP 2 application for <£12million over 10 years (successful)
- Named on the AI4SoilHealth EU Horizon application (successful)
- Lead of Sustainable Church Land project application to Heritage Lottery fund (unsuccessful).
- Support of FAB Farmers Capitalization project extension, totaling ~£500,000 (successful).
- Part of FLOCS large grant application (unsuccessful).
- Part of LOCATE extension project (successful).

## **Data papers**

Physical and geochemical properties of saltmarsh soils from narrow diameter gouge cores in UK saltmarshes collected between 2018 and 2021. NERC Environmental Information Data Centre. <https://doi.org/10.5285/d301c5f5-77f5-41ba-934e-a80e1293d4cd>

Physical and geochemical properties of saltmarsh soils from wide diameter gouge cores in UK saltmarshes collected between 2018 and 2021. NERC Environmental Information Data Centre. <https://doi.org/10.5285/279558cd-20fb-4f19-8077-4400817a4482>

Global positioning system (GPS) locations and elevations of soil sampling sites across UK saltmarshes 2018 to 2021. NERC Environmental Information Data Centre. <https://doi.org/10.5285/d61b6033-be45-4682-b4dc-a2f95feefa7d>

Radbourne, A.D.; Ryves, D.B.; Anderson, N.J. (2018). Lake and catchment nutrient, ecology and hydrology monitoring of Rostherne Mere, Cheshire, UK (2016-2017). NERC Environmental Information Data Centre. <https://doi.org/10.5285/5c6b2bcb-6b10-4c57-a595-ce94a655e709>

Radbourne, A.R.; Ryves, D.B.; Anderson, N.J.; Scott, D.R. (2018). Organic carbon burial calculation using sediment trap and sediment core records from Rostherne Mere, Cheshire, UK (1360-2016). NERC Environmental Information Data Centre. <https://doi.org/10.5285/8616c1a0-6c6d-441c-9b10-8464dc4ee346>

Radbourne, A.D.; Elliott, J.A.; Maberly, S.C.; Ryves, D.B.; Anderson, N.J. (2018). Potential future scenarios of nutrient and climate change using the model PROTECH at Rostherne Mere, Cheshire, UK (2016-2100). NERC Environmental Information Data Centre. <https://doi.org/10.5285/2f0eae1c-1512-4823-9cbe-cb54f05ee996>

Radbourne, A.D.; Ryves, D.B.; Anderson, N.J. (2018). Sediment trap diatom assemblages from Rostherne Mere, Cheshire, UK (2004-2017). NERC Environmental Information Data Centre. <https://doi.org/10.5285/16f52064-a19d-4cf5-a388-aff04a592179>

## **List of current or previous involvement in UKCEH projects:**

- English Churchyard Carbon Assessments (current)
- Enhanced Rock Weathering GGR (current)
- Plynlimon Research Catchments (current)
- ERAMMP (current)
- FAB Farmers (current)
- SOC-D



- Freedom-BCCR
- Freedom
- SMS peat
- Swedish EPA Air Pollution Monitoring Programme Evaluation
- Sustain Peat
- LOCATE WP1 (Conwy Sampling)
- LOCATE WP3 (Model development)
- LOCATE extension (communications)
- PASSES
- C-Side
- Reservoir DOCs
- UKSCAPE GHG
- Lowland Peat 2
- Sunrise Ozone

### ***Notable early career developments***

2020: Visual Storytelling course completion – UKSCAPE & InfoHakit

2020. Runner-up FameLab UK communicating Science video entries

2019. Completion of the Outdoor First Aid for Fieldworkers course (Level 2)

2019. Completion of the Remote Safari 4x4 driver training course

2016. FBA Freshwater algae identification 2-day course

2016. John Carter Memorial Trophy 2016 for best student presentation at the British Diatomist Meeting 2016.

2015. NERC funded Engaging research media 5 day course held at the Open University. Course explored how to ensure research is engaging for end users with a focus on funding applications impact requirements and practical media training with focus on presenting to camera.

[https://www.youtube.com/watch?v=2n4cq\\_LM6VI](https://www.youtube.com/watch?v=2n4cq_LM6VI)

<https://www.youtube.com/watch?v=0QrnV-ryOlo>

<https://www.youtube.com/watch?v=z05dK-Ns6PUMERC>

2015. NERC funded advanced multivariate statistics and geostatistics using R 5-day course held at the British Geological Survey, Keyworth. Course spent time understanding and practically applying various data sets in the programming language R.

2014. RYA powerboat level 2 certification.

2014. 5 day CENTA international residential training in Tenerife. Involved completing a speed PhD to give a good background of what to expect during the DTP.

2014. Teaching practice training provided by Loughborough University as a prerequisite to teaching within the university.

2014. Various training days held as part of the CENTA doctoral training partnership, including: designing engaging posters, writing abstracts, time management, planning a conference, communicating your research & introduction to R programming.

Teaching experience, including; Lake System Dynamics one-day field trip – 2nd year module - 2015 & 2016. MSc lake systems and diatom analysis practical's - 2015 & 2016. Alpine environments 6-day fieldtrip (Arolla, Switzerland) & follow up practical's – 3rd year module - 2015 & 2016. Quantitative methods lab teaching assistant - 1st year module – 2016. Global change on a local scale teaching assistant - 1st year module – 2016.

### ***Notable other experience***

Own and manage a 12-acre smallholding on Anglesey, sharing our experiences since April 2020 through various [social media platforms](#) (18,000+ Facebook reach) and a [YouTube video series](#) (5,700+ video views).

Started and co-lead a family focused church on Anglesey, called Lighthouse Church, [www.lighthousechurchanglesey.org](http://www.lighthousechurchanglesey.org). Involves overall organization management and leadership, including: Team leadership, volunteer management, vision and communication, charitable organization health management, trustee liaison, community projects (Advent-ure, Make Lunch, etc), finance oversight, events development (Church gatherings, small groups, etc), online presence & social media.

Previous development of a paid public speaking profile primarily speaking about entrepreneurial businesses and pursuing a pioneering leadership spirit. Between 2015-2018, spoke at over 80 events for conferences, community initiatives, schools, colleges and universities, including key speaker at Dream Nation London 2015 event to an audience of 200+ people, Fail Forward Conference Loughborough 2015 event to 50+ people and NACUE Student Enterprise Conference in which 800+ student entrepreneurs attended.

Awarded Startacus Self-started of the week and Self-Starter of the Year top 8 nominee.

Awarded Loughborough University Postgraduate Entrepreneur of the year 2014.

Development of a web-presence based on the One Pound Challenge that achieved 20,000+ unique visitors to website, 1100+ twitter followers, 300+

facebook page likes, and 10,000+ blog views from 44 blogs posted  
(Figures correct between June 2013 to December 2017).

Good understanding of conversational Welsh, ongoing learning to improve.