

Adon McFarlane- AMcF

Dr Adon McFarlane is a senior freshwater ecologist, specialising in protected species. He is an experienced field scientist, with extensive skills in the fields of freshwater habitat assessment; freshwater pearl mussel survey; white-clawed crayfish survey, macroinvertebrate survey, fish habitat assessment and electrofishing survey. He has built up skills in the collection of data both in the field and laboratory, analysis of data using statistical software programs such as R, BORIS, RAVEN and Minitab, creation of distribution maps using GIS. Adon has very strong technical skills in both freshwater and marine laboratory and fieldwork instrumentation and equipment usage. Adon has worked on a number of ecological reports, including Appropriate Assessments, Ecological Impact Assessments (EclA), Preliminary Ecological Appraisal Reports (PEAR) and Invasive Species Reports.

Amy Adwan- AA

Amy Adwan BSc- Senior Terrestrial ecologist with 8 years' experience in the ecological sector in Ireland. She holds a BSc in Environmental Science from the University of Limerick. Amy is a qualified ecologist experienced in a wide range of ecological survey techniques and methodology including bats, mammals, freshwater and habitats. Amy also has a licence to handle bats and is a licensed bat surveyor, with a Certificate in Bat Acoustics Analysis she is also proficient in using analysis software Kaleidoscope and Anabat Insight.

She has an extensive knowledge of environmental laws with reference to Ireland as well as the EU and the Habitats Directive. Her experience has involved regularly undertaking Appropriate Assessment reporting, including Screening for Appropriate Assessment and Natura Impact Statements, as well as legal reviews of same, in relation to relevant CJEU rulings and European Commission Guidance. She also undertakes Ecological Impact Assessments (EclA), Environmental Impact Assessment (EIAR) and Preliminary Ecological Appraisal (PEA) reporting.

Ajay Cheruthon- AC

Ajay Cheruthon, an Electrical Engineer with an MSc in Environmental Leadership from NUI Galway, has been serving as the Ecology Support and Data Manager at the Woodrow-APEM Group since March 2022. Previously involved in project coordination with the Government of India, Ajay's interest in nature prompted him to shift his career toward the environmental sector. In his current role, he manages a team of ornithological surveyors and oversees data handling and interim bird reporting for wind energy projects. Ajay is responsible for day-to-day fieldwork coordination, applying his project management skills and geospatial analysis expertise. He contributes to the Woodrow-APEM Group's efforts in managing ornithology surveys across Ireland, as well as windfarm project work and finance. Outside of work he likes hiking, cycling and guitar playing.

Aoife Hughes- AH

Aoife Hughes was an Ecologist with Woodrow Sustainable Solutions. She has worked on a wide range of projects, including NIS, EclAs, a successful EU Life Funding Application and various community projects. She has carried out various habitat and mammal surveys, with a specialist focus on botany. She completed a BSc (Hons) in Environmental Science at National University of Ireland, Galway. She was awarded the title of University Scholar for years one-three of her Environmental Science undergraduate course and graduated top of her class with a first-class honours degree. She completed a Masters by Research in University College Cork on how single-use plastics can be eliminated from the UCC campus.

Bridget Keehan- BK

Bridget Keehan is Senior Ecologist and Botany Lead at Woodrow Sustainable Solutions Ltd. She is an accomplished field botanist with over 30 years of experience in plant identification, including bryophytes, and fifteen years of experience working as a professional ecologist. With Woodrow, Bridget has worked on habitat surveys, monitoring and reporting for a wide range of developments including numerous wind farm and quarry sites. She has excellent habitat classification skills at Phase 1, Fossitt and NVC levels and regularly undertakes specialist surveys for Annex I habitats as well as protected plant, mammal and bird surveys. She is proficient in the analysis and interpretation of data, developing strategies and producing detailed reports. Bridget maintains a

thorough knowledge of both European and national environmental legislation, and has experience producing a wide range of reports as required by planning legislation, including Ecological Impact Assessments, Natura Impact Statements, Habitat Management Plans and Compliance Reports. Bridget is also experienced in preparing digital habitat maps using ArcGIS.

Brittany Arendse- BA

Brittany joined the Woodrow team in January 2024 as an Ecologist within the Botany team. She hails from South Africa where she completed her tertiary education at the University of Cape Town and obtained her MSc in Pollination biology, focusing on Ericaceae (heath family). She went on to work for the South African National Biodiversity Institute (SANBI) surveying for and monitoring endangered wildflowers in South Africa. She then spent a further eight years working for a conservation NPO on the southern coast of South Africa. Here she honed her skills in a myriad of different biomes and landscape types including, endemic fynbos, forests, dune systems, rivers and estuaries as well as in the social and human-animal conflict spaces. In her spare time, Brittany enjoys hiking and has an array of creative outlets. She also does website design and dabbles in illustrations, both traditional and digital.

Bruno Mels- BM

Bruno joined the Woodrow team in September 2022. He obtained a MSc in Conservation Biology at the University of Antwerp and worked for several conservation organisations in South-Africa and Seychelles after his studies. His main duties there were to monitor the breeding success of shorebirds and to ensure the protection of endangered species such as the green turtle and the Aldabra giant tortoise. Besides being a biologist, Bruno is also a self-taught digital illustrator. He is capable of creating infographics and animations and, among others, has designed several information boards for UNESCO world heritage sites in the Seychelles.

Emma Horgan- EH

Emma Horgan was an Assistant Project Manager within Woodrow Sustainable Solutions (APEM Group). During her time at Woodrow, she first joined as a scientist, and soon progressed to the project management team after proving exceptional competence in the area. She has amassed experience in different field survey methods and scientific analysis as well as strongly developed skills in project management. She has completed a BSc. in Marine science from University College Galway (previously National University of Ireland, Galway) and a MSc. in Applied Environmental Geoscience from University College Cork. For her final dissertation as part of her masters degree, she partnered with INFOMAR, Ireland's marine mapping programme. She used statistical means in GIS software to classify offshore seabed by sediment classification Folk 7. This was a comprehensive reclassification of the Porcupine Seabight and first ever classification of the Rockall Trough. The data she produced was donated to the EU to become part of EMODnet, the European Union's online data viewer. Since coming to Woodrow, Emma has been trained in bat survey, botany survey and mammal survey skills. She has honed her GIS skills and used them to create a new standardised template for Woodrow projects in GIS. After developing skills in project management and financial tracking software, she advanced to take on the role of assistant project manager, where she now liaises with the 13 technical leads across Woodrow to deliver projects.

Emmeline Cosnett- EC

Emmeline is a field ecologist and part of the botany and habitat team with Woodrow Sustainable Solutions Ltd who has worked in a variety of terrestrial and aquatic environments. She has carried out published research on independent botany/pollination ecology as well as two academic internships with Dr Dara Stanley's Ecology lab NUIG, with a focus on agri-environmental schemes and botanical habitat surveys across Ireland. Emmeline has worked as part of the Eva Crane Project creating a pollen library of the Burren and is currently completing an accredited CIEEM MSc on Wildlife Biology and Conservation with Edinburgh Napier University. She has an BSc (Hons) in Environmental Science from NUI Galway (2018) with a focus on Botany and Entomology. Emmeline has excellent habitat classification skills at Phase 1, Fossitt and NVC levels as well as experience with mammal surveys, bird and bat surveys and with reporting requirements for clients.

Frederico Hintz

Frederico Hintze is an Ecologist at Woodrow and has quality assured this report. He holds a B.Sc. in Biology-Geology and an M.Sc. in Ecology from the University of Minho (Portugal), as well as a PhD in Animal Biology from the Federal University of Pernambuco (Brazil). FH's passion for bat research and monitoring began during his undergraduate thesis in 2009. For his master's thesis, he focused on assessing the impact of agricultural dams on bat populations in North-eastern Portugal. During his PhD, FH utilized bioacoustics and species distribution modelling to enhance our understanding of the distribution of Neotropical bat species. Subsequently, FH's post-doctoral work led him to the world's largest iron ore mine in Carajás, Pará, Brazil. Here, he aimed to characterize the vocalizations of Amazonian bats and assess the impacts of mining on bat populations. Throughout his career, FH has actively participated in more than 10 Environmental Impact Assessment (EIA) projects in Portugal, covering various topics such as dams, wind farms, roads, and transmission lines. He also served as the coordinator of the Bioacoustics Committee at the Brazilian Bat Research Society. In addition to his academic contributions, FH has authored over 15 scientific publications and sampling event datasets, showcasing his expertise in the field. As an ecologist with Woodrow, FH's work focuses on bat data analysis, including bat call identification, bat roost/habitat suitability surveys, and report writing and review. He possesses a high level of proficiency and experience with various analysis software used to assess bat calls and activity.

Giulia Mazzotti- GM

Giulia Mazzotti was a Graduate Ecologist and Data Co-Ordinator with Woodrow Sustainable Solutions Ltd. She has completed a B.Sc. in Biological Sciences at University of Bologna and obtained full marks with honours (110/110 Cum Laude) in Ecology and Nature Conservation M.Sc. from University of Parma. During her studies she learnt to use R for data analysis and became proficient in the use of ArcGIS and QGIS for mapping. Since joining Woodrow Giulia developed experience undertaking ecological surveys including habitat mapping using Fossitt (2000) in ROI and Phase 1 classifications in NI, mammal, bat, and invertebrate surveys. She also assists senior members of staff with GIS mapping activity and reporting for Ornithology Report, Ecological Impact Assessment (EclA) and Biodiversity Chapters for Environmental Impact Assessment Reports (EIAR). Furthermore, Giulia took the lead of the H&S of the company, producing risk assessments and RAMS, keeping track of all the new hazards, near misses and incidents related to fieldwork. She is a qualifying member of CIEEM.

James O'Connor- JOC

James O'Connor is a senior ecologist with Woodrow, who has a PhD in aquatic sciences and a primary technical specialism in freshwater ecology. James has prior experience in monitoring wild bird populations with Birdwatch Ireland and is heavily involved in ornithological work as part of his role with Woodrow. Here, he regularly carries out mammal surveys and also performs a supporting role as Ecological Clerk of Works (ECoW). James is first author on several peer-reviewed academic research papers and has helped draft reports to disseminate key research findings to state agencies such as the Irish Environmental Protection Agency (EPA) as well as Irish county councils.

Jason Guile- JG

Principal Ecologist at Woodrow Sustainable Solutions Ltd trading as APEM Ireland, part of the APEM Group. He has over 12 years' relevant industry experience in ecological assessment and has worked in both Ireland and the UK. Jason has a B.Sc. in Marine Biology and Oceanography at University of Wales, Bangor. Jason holds a lead role on numerous projects undertaken by APEM Ireland and provides technical expertise and experience for other significant projects.

Since moving to Ireland Jason's work has involved coordinating, surveying, analysing data, and writing technical reports for several species and numerous projects including renewables, infrastructure, landfill remediation works, urban planning applications and commercial regeneration sites. Jason is currently lead author of the chapters for several Environmental Impact Assessments (EIA) and AA.

Julie Kohlstruck- JK

Juliane Kohlstruck is senior ecologist at Woodrow. Juliane holds a MSc and BSc in landscape ecology. During a semester at NUI Galway she was able to expand her knowledge on European environmental legislation and its

implementation in Irish law. She has carried out extensive vegetation and habitat surveys for research projects in Northern Germany, Central America, and South America, and with Woodrow she regularly undertakes JNCC Phase 1, Fossitt, and National Vegetation Classification (NVC) surveys. She has worked on many upland sites, undertaking pre-development site assessments as well as post-construction compliance monitoring. Her faunistic survey skills include mammals, bats, amphibia, and invertebrates. Her abiotic skills include chemical analysis of soil and water as well as pedological/ geological mapping of soils. Juliane is proficient in mapping, spatial analysis, and data analysis using ArcGIS, QGIS, Excel, R, and SPSSis, QGIS, Excel, R, and SPSS.

Louise Gannon- LG

Louise Gannon is an ecologist with Woodrow. Louise has completed a B.Sc. in Environmental Science. Her main experience lies in carrying out protected species surveys for bats (preliminary roost assessments, emergence/re-entry survey and activity transect surveys) as well as the deployment of static bat detectors and reporting on the same. She also carries out bat call analysis using Kaleidoscope and BatExplorer, the analysis software used to assess bat calls and activity. She also has experience in carrying out otter, badger and red squirrel surveys. She has volunteered in various surveys such as the BCI All Ireland Daubenton's bat survey, the Countryside bird survey and is a seal rescue volunteer. Louise is a licenced bat surveyor (DER/BAT 2024-27) and a Qualifying member of CIEEM.

Meadhbh Costigan- MC

Meadhbh Costigan is an Ecologist with Woodrow. Since joining the Woodrow APEM Group, Meadhbh has conducted fieldwork in the Republic of Ireland and Northern Ireland – gaining experience in habitat identification (according to Fossitt 2000, Phase 1 JNCC, NVC, and the National Survey of Upland Habitats), botanical identification, the biodiversity-metric, and specialised marsh Fritillary surveys. She has been lead author on Appropriate Assessment's, Habitat Regulation Assessment's, Ecological Impact Assessments', Habitat Management Plans, and Local Biodiversity Action Plan's. She is a qualifying member of CIEEM and is an elected member of the CIEEM Irish Section Committee.

Mike Trewby- MT

Mike is an Assistant Director with APEM Group Woodrow and is the Division's lead ornithologist and field work manager. Mike worked for Birdwatch Ireland from 2003 to 2010 conducting research on red-billed chough, red grouse and breeding seabirds. Prior to joining Woodrow in 2016, Mike worked as an independent ornithological consultant, and he has over 20 years fieldwork and research experience in the field of ecology. Mike regularly undertakes impact assessments for large scale developments and is a full member of CIEEM (MCIEEM).

QUALIFICATIONS

B.Sc.- Zoology & Botany, University of Namibia, 1997.

PGDip- Environmental Studies, University of Strathclyde, 2002.

Oisín O'Sullivan- OOS

Oisín O'Sullivan is an Ecologist with Woodrow. Oisín has completed a B.Sc. in Ecology and Environmental Biology at University College Cork. His final year thesis involved bat surveys of urban habitats in Cork City. His work as a graduate ecologist with Woodrow was focused on bat data analysis including bat call identification and bat roost/habitat suitability surveys. Oisín has developed a high level of proficiency with Kaleidoscope, Ecobat and BatExplorer, all of which are analysis software used to assess bat calls and activity Since joining Woodrow, Oisín current work involves coordinating, surveying, analysing data, and writing summary bat activity reports for all onshore wind developments that Woodrow has worked on in the 2021 and 2022 survey seasons. This also involves the use of R to provide data on bat activity relative to weather conditions with the goal of informing curtailment as a mitigation measure. During 2022 Woodrow began undertaking offshore bat surveys including Oisín as a technical lead on these projects. These surveys involve the long-term recording of activity on islands and headlands to record migration events. Oisín is a Qualifying member of CIEEM and holds a license to survey bat roosts from the Department of Culture Heritage and the Gaeltacht.

Patrick Power- PP

Patrick Power is an ecologist with Woodrow. Patrick has completed a BSc in Forestry, BSc (Hons) in land management in Forestry with Waterford Institute of Technology and a PGCert in Wildlife Biology and Conservation.

His work with Woodrow is focused on bat data analysis including bat call identification and bat roost/habitat suitability surveys. Patrick has developed a high level of proficiency with Kaleidoscope and BatExplorer, the analysis software used to assess bat calls and activity. Patrick also possess Reptile, mammal and woodland habitat surveying skills. Patrick is a student member of CIEEM and currently has a training licence to survey bat roosts from the Department of Culture Heritage and the Gaeltacht.

Patrick Quinn- PQ

Patrick Quinn has over 7 years' experience in a wide array of construction projects, including large scale wind farm construction, 110kV overhead transmission lines, roads/bridges and other infrastructure projects, including works within sensitive and designated areas (including Natura 2000 sites).

He has a significant level of experience in aquatic ecology and monitoring include water treatment plants and water scheme infrastructure projects that require ecological supervision throughout Ireland

Róisín O'Connell- ROC

Róisín O'Connell an assistant ecologist at Woodrow APEM Group. Róisín obtained a B.Sc. (Hons) in Environmental Science at Atlantic Technological University in Sligo, Ireland. Her final year thesis involved carrying out aquatic macrophyte surveys of lough Doon in County Leitrim. Róisín possesses marine and freshwater habitat survey skills from her time studying at ATU. Róisín has authored multiple bat activity reports, and contributed to sections in EcIA, HRA and NIS reports. Since joining Woodrow, she has developed excellent field survey skills and regularly conducts a broad range of protected species surveying including bats, badger, otter, and amphibians. Róisín is also trained in habitat assessment and has knowledge and experience of JNCC Phase 1 and Fossitt 2020. Róisín is a qualifying member of the Chartered Institute of Ecology and Environmental Management and holds a license to survey bat roosts from the Department of Culture Housing. Local Government and Heritage.