Appendix 1.1: Author Qualifications and Experience

EIA Chapter	Contributor & Qualifications	Years of
		Éxperience
Chapter 1: Introduction	Mr. Andrew O'Grady, BSc., MSc. AIEMA, Senior Environmental Consultant, Jennings O'Donovan & Partners Limited	*b_3
Chapter 2: Project Description	Mr. Andrew O'Grady, BSc., MSc. AIEMA, Senior Environmental Consultant, Jennings O'Donovan & Partners Limited	17
Chapter 3: Alternatives Considered	Mr. Andrew O'Grady, BSc., MSc. AIEMA, Senior Environmental Consultant, Jennings O'Donovan & Partners Limited	17
Chapter 4: Planning Policy Context	Mr. David Kiely, B.E., M.Sc., Eur.Ing., C.Eng., FIEI, MICE, F.RConsEl, Director, Jennings O'Donovan & Partners Limited	39
	Ms. Karen O'Neill, BA, MSc, Environmental Consultant, Jennings O'Donovan & Partners Limited	2.5
Chapter 5: Population and Human Health	Mr. David Kiely, BSc MSc, Director, Jennings O'Donovan & Partners Limited	39
	Ms. Karen O'Neill, BA, MSc, Environmental Consultant, Jennings O'Donovan & Partners Limited	2.5
Chapter 6: Biodiversity	Mr. Pat Doherty, MSc., BSc., CIEEM, Director, Doherty Environmental Services	15
Chapter 7: Ornithology	Mr. Ben O'Dwyer, BSc., Ecologist, Fehily Timoney	5
	Mr. Brian Porter, Ornithologist, Fehily Timoney	30
	Ms. Chandra Walters, MSc., BSc., Ecologist, Fehily Timoney	4
	Mr. John Curtin, BSc., BCIC, Ecologist/CEO Eire Ecology	10
	Mr. Jon Kearney, MSc., BSc., Principal Ecologist, Fehily Timoney	17
	Ms. Niamh Graham, MSc., Ecologist, Eire Ecology	Niamh
	Ms. Phoebe O'Brien, B.Sc., BSBI, Ecologist	7
	Mr. Seán Ronayne, MSc., MSc, BSc., Surveying Ecologist, Fehily Timoney	10
Chapter 8: Soils and Geology	Mr. Andrew Garne, PGeo, BSc., MSc., MIGI, MIAH, Geologist, EcoQuest Environmental Limited	30
Chapter 9: Hydrology and Hydrogeology	Mr. David Parkinson, BSc., MIEMA, CEnv, Principal Environmental Consultant, EcoQuest Environmental Limited	10
Chapter 10: Noise	Mr. Brendan O'Reilly, MPhil., Director, Noise & Vibration Consultants Limited	38
Chapter 11: Landscape and Visual Amenity	Mr. Richard Barker, MLA, BA Env. PG Dip For MILI, Director, Macro Works Limited	21
Chapter 12: Material Assets and Other Issues	Mr. David Kiely, BSc., MSc., Director, Jennings O'Donovan & Partners Limited	39
	Mr. Andrew O'Grady, BSc., MSc. AIEMA, Senior Environmental Consultant, Jennings O'Donovan & Partners Limited	17
	Ms. Karen O'Neill, BA, MSc., Environmental Consultant, Jennings O'Donovan & Partners Limited	2.5
Chapter 13: Cultural Heritage	Mr. Tony Cummins, BA., MA., Senior Archaeologist, John Cronin & Associates	25

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January 2023

EIA Chapter	Contributor & Qualifications	Years of Experience
Chapter 14: Traffic and Transport	Mr. David Kiely, BSc., MSc., Director, Jennings O'Donovan & Partners Limited	39
	Mr. John Doogan, NDip. CEng. (HND), Senior Roads Technician, Jennings O'Donovan & Partners Limited	32
Chapter 15: Air and Climate	Mr. David Kiely, BSc., MSc., Director, Jennings O'Donovan & Partners Limited	COOPE COOPE
	Ms. Karen O'Neill, BA, MSc, Environmental Consultant, Jennings O'Donovan & Partners Limited	2.5
Chapter 16: Interactions of the Foregoing	Mr. David Kiely, BSc., MSc., Director, Jennings O'Donovan & Partners Limited	39
	Mr. Andrew O'Grady, BSc., MSc., AIEMA, Senior Environmental Consultant, Jennings O'Donovan & Partners Limited	17

2

Curriculum Vitae

Andrew O'Grady MSc, BA, AIEMA





ProfessionEnvironmental Consultant

Position with firm Senior Environmental Consultant

Years of Experience 17

Educational Qualifications

- Masters (MSc) in Environmental and Resource Management, Free University Amsterdam, The Netherlands, 2004
- Geography with Honours (2:1 BA), University of Coventry, United Kingdom, 2002

Professional Qualifications

 Associate with Institute of Environmental Management and Assessment (IEMA)

KEY HIGHLIGHTS

Andrew is a highly educated and flexible multilingual environmental professional with over 17 years' experience of Environmental Impact Assessment (EIA) project management and planning compliance for wind farm, solar, mining and other power projects in a range of geographies.

- Experienced in project management and administration of large EIA projects.
- Collation and review of EIS/EIAR and ESIA Reports.
- Preparation of environmental, construction and spoil management plans, SuDS reports, AA Screening and socio-economic and lighting assessments.
- · Skilled in financial management including budgeting and invoicing.
- Proficient in Microsoft Word, Excel, Outlook and PowerPoint.

EXPERIENCE

February 2015 - Present

Jennings O'Donovan & Partners Limited

Gortlougha Wind Farm, Co. Cork (54MW)

Preparation of EIAR and planning application documents for a wind farm project through the SID process. **Project Manager**

• Tullaghmore Wind Farm, Co. Galway (36MW)

Preparation of EIAR and planning application documents to the Local Authority. **Project Manager**

Killala Energy Storage Facility, Co. Mayo (15MW)

Preparation of a planning application and Environmental Report for an Energy Storage Facility (battery). **Project Manager**

• Barnesmore Wind Farm Repower Project, Co. Donegal (50MW)

Preparation of planning application documents for a wind farm repower through the SID process including Public Information Days. **Deputy Project Manager.**

Killala Community Wind Farm Turbine 6, Co. Mayo (3.4MW)

Preparation of planning application including an Environmental Report and associated documents for a single turbine extension for a wind farm in Co. Mayo. **Project Manager.**

Cloghan Wind Farm, Co. Offaly (36MW)

Preparation of planning compliance documents including CEMP, CMS and Spoil Management Plan.

Bunnahowen Wind Farm, Co. Mayo (3MW)

Preparation of an amendment planning application for a 3 turbine wind farm. **Project Manager**

Killala Community Wind Farm, Co. Mayo (17MW)

Preparation of planning application including EIAR and associated documents for a 5 turbine wind farm in County Mayo. Preparation of a Section 5 application for a grid connection between the wind farm and a 110kV substation. **Project Manager**

 Donegal Towns & Villages Wastewater Treatment, Ramelton-Milford-Rathmullan, Co. Donegal

Preparation of an Environmental and Planning Report for a new wastewater treatment plant, pumping stations and pipeline infrastructure.

- Wexford Untreated Agglomerations Study, Arthurstown, Co. Wexford
 - Preparation of an Environmental and Planning Report for a new wastewater treatment plant, pumping stations and pipeline infrastructure.
- Clonaslee Water Treatment Plant, Co. Laois

Preparation of a Construction Method Statement for a water pipeline from the borehole to the treatment plant as part of a Part 8 planning application.

Andrew O'Grady CV (cont'd)

Tullynamoyle Wind Farm, Co. Leitrim (18MW)

Preparation of Photomontages and Shadow Flicker assessment for a 7 turbine wind farm.

Cronalaght Wind Farm Extension, Co. Donegal (15MW)

Preparation of planning compliance documents for a 5 turbine wind farm in County Donegal. Project Manager

Yellow River Wind Farm, Co. Offaly (87MW)

Preparation of CEMP, Erosion Control Management Plan and other documents for planning compliance for a 29 turbine wind farm in County Offaly.

Meenadreen Wind Farm, Co. Donegal

Preparation of a Natura Impact Statement (NIS) for a new operations building to serve a 38 turbine wind farm.

BSB Community Wind Farm, Co. Waterford (36MW)

Preparation of EIS and associated documents for a 11 turbine wind farm in County Waterford, including liaison with Waterford County Council and scoping with relevant consultees. **Project Manager**

Ballytobin Solar Farm, Co. Kilkenny

Preparation of an Environmental Report and associated documents for a 5MW solar farm in County Kilkenny, including liaison with Kilkenny County Council. **Project Manager**

Rathmaiden Solar Farm, Co. Meath

Preparation of an Environmental Report and associated documents for a 5MW solar farm in County Meath. **Project Manager**

Pollnalaght Wind Farm, Co. Tyrone

Submission of a Schedule 6 application to the Rivers Agency and a Section 46/47 application to the Loughs Agency. **Project Manager**

Altamuskin Wind Farm, Co. Tyrone

Submission of a Schedule 6 application to the Rivers Agency and a Section 46/47 application to the Loughs Agency. **Project Manager**

Cloonty Wind Farm, Co. Antrim

Development of SuDS report and Schedule 6 application to the Rivers Agency to discharge planning conditions on a wind farm in County Antrim.

Crighshane Extension Wind Farm, Co. Tyrone

Preparation of a CMS, CEMP, SuDS and Spoil Management Plan for the proposed wind farm development in County Tyrone.

Seegronan Wind Farm Extension, Co. Tyrone

Preparation of various documents for a planning application for the proposed wind farm in County Tyrone, including CMS, CEMP, SuDS report and Spoil Management Plan. Submission of Schedule 6 application to the Rivers Agency and a Section 46/47 application to the Loughs Agency.

Foiladaun Wind Farm, Co. Cork (11.5MW)

Planning Compliance Report and associated reports and appendices for a 5 turbine windfarm in County Cork. Client liaison and consultation with Cork County Council and relevant statutory authorities such as IFI and NPWS. **Project Manager**

Derrinoghran Wind Farm, Co. Sligo (4.6MW)

Environmental Impact Statement for a 2 Turbine windfarm in County Sligo including client liaison, sub consultant management and consultation with Sligo County Council. **Project Manager**

• Cnoc Wind Farm, Co. Tipperary

Preparation of planning compliance documents including Construction Management Plan, Haul Route Survey and Spoil Management Plan for a wind farm in County Tipperary.

• Brockaghboy Extension Wind Farm, Co. Derry

Preparation of a CMS and CEMP and associated planning compliance documents for a proposed wind farm in County Derry. Advising client on spoil management areas and submission of a Schedule 6 application to the Rivers Agency.

Dromadda Beg Wind Farm, Co. Kerry

Planning application for additional works associated with a consented wind farm in County Kerry. Project Manager

Andrew O'Grady CV (cont'd)

Ballycumber Wind Farm, Co. Wicklow

Preparation of an Environmental Report and EIA Screening report for the underground cable grid connection from the wind farm to the ESB substation.

Ballybay Wind Farm Grid Connection, Co. Kilkenny & Co. Tipperary

Preparation of Section 5 application and associated documents for the grid connection route from Sallybay Wind Farm in County Kilkenny and Thurles Substation in County Tipperary. **Project Manager**

Stephenstown Small Scale Embedded Generation Facility, Co. Dublin (4MW)

Project management and development of planning application for 2 no. diesel generating facility. The role included development of an Environmental Report and Traffic Management Plan and client and local authority liaison. **Project Manager**

Ballincurry Wind Farm, Co. Tipperary

Project management of the design element for development of a 2 no. turbine windfarm in County Tipperary. **Project Manager**

July 2011 - Nov. 2014 Environmental Resources Management (ERM); Dublin - Consultant

- Project coordination of large ESIA (Environmental & Social Impact Assessment) projects in Ireland, the UK and West Africa to international standards such as IFC Performance Standards;
- Project Management of smaller EIA and Due Diligence projects;
- · Responsible for financial management and invoicing;
- · Ensuring reports delivered to deadline and within budget;
- Quality control and review of technical reports prior to delivery to client;
- Due Diligence data room reviews and risk assessments for capital acquisitions;
- Undertaking internal audits for ISO:9001 certification; and
- Compiling proposals and participating in business development activities such as the company strategy.

Jan. 2005 – June 2009 WSP Environmental Ltd, London, UK - Environmental Consultant

- Project management of large EIAs;
- Responsible for financial management and invoicing;
- Built and managed client relationships and liaised with design teams to ensure project delivery on time and within budget;
- BREEAM Environmental Audit Tool for Offices, Retail and Schools;
- Phase 1 environmental due diligence audits for mergers and acquisitions;
- Sustainability Appraisals; and
- Energy Performance Certificates (EPCs).

Curriculum Vitae

David Kiely B.E., M.Sc., Eur.Ing., C.Eng., FIEI, MICE, F.RConsEl





ProfessionCivil Engineer

Position with firm Director

Years of Experience 39

Educational Qualifications

- Bachelor of Engineering, University College Dublin, 1982
- Master of Science in Environmental Protection, Regional Technical College, Sligo, 1996
- Project Supervisor Design Process, 2014

Professional Qualifications

- FEANI European Engineer, European Federation of National Engineering Associations
- Fellow of Engineers Ireland
- Fellow of the Association of Consulting Engineers of Ireland
- Member of the Institution of Civil Engineers, U.K.

Technical Publications:

- Killybegs Water Supply Scheme Lough Adeery Dams – McAleenan, F.M., Kiely, D and Cooper, G.A., 1993
- Treatment of Wastewater and Water Sludges in Ireland – Kiely. D 1996
- Primary Treatment
 Options for Fish
 Processing Effluent in
 Ireland Dick, R.E.,
 Ferguson, J.A.E., Duddy,
 A-M. and Kiely, D., 2000

KEY HIGHLIGHTS

A Director and Partner at Jennings O'Donovan & Partners Limited, David is currently responsible for the following:

- Project Manager for Planning Applications, Environmental Impact Statement, Response to Appeal to An Bord Pleanála.
- Project Director for Pre-Construction activities such as Planning Compliance, Access Route improvements, Procurement, Civil Works Design, Environmental, Health and Safety, Contract Negotiations (including Turbine Supply).
- Project Director for construction administration of Turbine Supply Contract, Civil Works Contract and Grid Connection Cabling Contract.
- Responsible for Development, Monitoring and Control of Project Budgets.
- Overseeing the design of Wind Farm Infrastructure and Turbine Bases.
- · Geotechnical Evaluation of Wind Farm Sites.
- Overseeing the preparation of various forms of reports and studies.
- Technical Review of various forms of Contract Documentation.
- Tender Evaluation and Contract Administration of major Contracts.
- Project Management.
- Due Diligence Specialist Support to Potential Investors.

EXPERIENCE

1990 – Present Jennings O'Donovan & Partners Limited

Barnesmore Wind Farm Repower Project, Co. Donegal (50MW)

Oversee the Preparation of EIAR for a wind farm repower through the SID planning process including Public Information Days. Decision due Q1, 2021. **Project Director**

Killala Community Wind Farm, Co. Mayo (17MW)

Preparation of planning application including EIAR and associated documents for a 5 turbine wind farm in County Mayo. Preparation of a Section 5 application for a grid connection between the wind farm and a 110kV substation. Planning Permission for a 6th Turbine. Owner's Engineer for construction of the 5-turbine wind farm incl. 38kV substation. Complete August 2019. Owner's Engineer for construction of T6 complete November 2020. **Project Director**

Cronalaght Wind Farm, Co. Donegal (18MW)

Pre-construction, preparation of contract documents and tender assessment, construction administration and PSDP for this wind farm consisting of 5 x 3.45MW wind turbines. Construction complete. **Project Director**

• Lumcloon (100MW) BESS & Derrycarney 110kV Substation, Co. Offaly

This project consisted of the construction of a 100MW BESS project, the project is an open area BESS compound containing battery units and medium voltage power station (MVPS) enclosures, a 110/33kV Transformer and associated bay and a 33kV Substation. The construction of the new Derrycarney 110kV AIS loop in Substation and compound. The projects construction phase is ongoing. **Project Director**

Jennings O'Donovan carry out the role of Owners Engineer; including Contract Negotiation, administering the D&B Contract, General Project Management, reviewing Civil & Electrical Designs, acting as SPOC with EirGrid, monitoring quality and programme, site attendance and placement of a Resident Engineer, Monitoring interfaces, assessing payments and issuing Payment Certificates, Declaration of Identify, assisting in queries related to Financial Close.

Shannonbridge (100MW) BESS, Co. Offaly

This project consisted of the construction of 100MW BESS project, the project is an open area BESS compound containing battery units and medium voltage power station (MVPS) enclosures, a 220/33kV Transformer and associated bay and a 33kV Substation. The projects construction phase is ongoing. **Project Director**

Jennings O'Donovan carry out the role of Owners Engineer; including Contract Negotiation, administering the D&B Contract, General Project Management, reviewing Civil & Electrical Designs, acting as SPOC with EirGrid, monitoring quality and programme, site attendance and placement of a Resident Engineer, Monitoring interfaces, assessing payments and issuing Payment Certificates, Declaration of Identify, assisting in queries related to Financial Close.

David Kiely CV (cont'd)

• Ballycumber Wind Farm, Co. Wicklow (18MW) / 38kV Grid Connection

Project consisting of 6 x 3.2MW wind turbines, onsite 38kV substation, preparation of Land Transfer maps (Haul Route) and 23.5km of 38kV underground grid connection, liaison with ESBN and Wicklow County Council Area Engineers regarding Grid Route selection 20km of transport route accommodation works, and all civil and electrical associated works. Planning compliance / Section 5 submission through to client takeover. **Project Director**

Rathsherry Wind Farm, Co. Antrim (21.15MW)

Planning compliance, civil works design and pre-construction activities for 9 x 2.35MW turbines. Owner's Engineer for construction stage civil works. **Project Director**

Meenadreen Extension Wind Farm, Co. Donegal (95MW)

Planning stage, planning compliance, civil works design and pre-construction activities for 38 No. 2.5MW turbines. Owner's Engineer for construction of civil works. PSDP Assigned Certifier. Project encompasses four consented wind farms viz Meenadreen Extension, Straness, Croaghnameal and Lough Cuill, and includes 7.4km of 110kV contestable grid connection, Mulreavy AIS and Clogher GIS 110kV sub-stations. Also includes Operations Building. Construction complete January 2017. **Project Director**

Sliabh Bawn Wind Farm, Co. Roscommon (58MW)

Project Director for Planning Permission, Environmental Impact Assessment, Public Consultation, Response to Appeal to An Bord Pleanala. Permission granted 2012. The project comprised 20 No. 3MW turbines curtailed to 58MW together with a new 33kV/110kV substation. Owner's Engineer for construction of civil works. Construction complete 2016. **Project Director**

Long Mountain and Glenbuck Wind Farms, Co. Antrim (34.5MW)

Project Director / Owner's Engineer for Planning Compliance and Civil Works Balance of Plant Contract. Construction complete. **Project Director / Owner's Engineer**

Altaveedan Wind Farm, Co. Antrim

Project Director / Contractor's Designer for Civil Works. Civil Works complete 2016. **Project Director / Contractor's Designer**

Altamuskin, Gortfinbar and Eshmore Wind Farms, Co. Tyrone (36MW)

Project Director / Owner's Engineer for Planning Compliance and Civil Works Balance of Plant Contract. Construction complete December 2016. **Project Director / Owner's Engineer**

Molly Mountain Wind Farm, Co. Fermanagh (18MW)

Project Manager for Turbine Supply and Pre-Construction Works. Project Director for Construction Phase. Negotiate Turbine Supply contract and Turbine Service Agreement for 5 x 3MW turbines. Planning Compliance. Technical Assistance for Financial Close. Project management during Construction Phase. Complete 2015. **Project Manager** / **Director**

• Seegronan Wind Farm, Co. Tyrone (18.4MW)

This development consists of the construction of 6 No. wind turbines of up to 110m high each including associated transformers, hardstandings, substation, associated access roads and all ancillary works associated with the wind farm development. Project complete December 2016. **Project Director**

Crockandun Wind Farm, Co. Derry (18MW)

This Project consists of the construction of 6 No. wind turbines of up to 125m high each including associated transformers, hardstandings, substation, borrow pits, associated access roads and all ancillary works associated with the wind farm development. Construction complete February 2017. **Project Director**

. Booltiagh 110kV Substation Extension, Co. Clare

Owner's Engineer for the Booltiagh 110kV substation extension located in Booltiagh townland, County Clare. The existing 110kV substation is connected to the 110kV transmission network via connections to both Ennis 110kV substation and Moneypoint 110kV substation. The Booltiagh Substation was extended to facilitate the connection of Gate 3 wind farms in the area. Project complete. **Project Director**

Letteragh Wind Farm, Co. Clare

Design and project management services for the planning, design, construction, and commissioning of Letteragh Wind Farm consisting of 6 x 2.3MW wind turbines. **Project Director**

Tullynamoyle Wind Farm, Co. Leitrim, and Extensions (53MW)

Project Director for Planning for original 6 wind turbines project (Phase 1 and 2), 6 turbine extension (Phase 3), 3 turbine extension (Phase 4) and 6 turbine extension (Phase 5) to give overall capacity of 53MW. Planning Stage, Procurement (including Turbine Supply and Turbine Supply Agreement), Financial Close and Construction (including Engineer for Turbine Supply Contract) for Phase 1 (9.2MW) complete 2012. Phase 2 (13.8MW), Phase 3 (28MW) and Phase 4 (35MW) complete November 2017. Phase 5 (18MW) granted planning permission. Planning application for Phase 5 extension of 16MW. Project Director

David Kiely CV (cont'd)

• Holyford Wind Farm, Co. Tipperary (9MW)

Project Director for Pre-Construction and Construction Stages for Civil Works BOP Contract and 5.8km, 20kV overhead line grid connection. Complete 2013. **Project Director**

Screggagh Wind Farm, Co. Tyrone (20MW)

Project Director for Planning and Construction Stages for 8 x 2.5MW wind turbines. Complete 2017. Act as Engineer for Turbine Supply Contract. **Project Director**

Ballycurreeen Wind Farm, Co. Waterford (4.6MW)

Project Director for Planning, Pre-Construction and Construction Stages of 2 x 2.3MW wind farm. Act as Owner Engineer for Turbine Supply Contract. Complete 2014. **Project Director**

Church Hill & Crigshane Wind Farms, Co. Tyrone (50.6MW)

Project Director for Planning Compliance, Civil Works Design, Road Improvement Works, Tendering and Construction Management for 2 wind farms with combined output of 50.6MW (22 x 2.3MW). Complete 2012. **Project Director**

Caherdowney Wind Farm & Garrow 110kV Sub-Station Extension (9.2MW)

Project Director for Pre-Construction and Construction Stages (planning compliance, civil and environmental) for 4 x 2.3MW turbines. Complete 2012. **Project Director**

Cloghboola Wind Farm, Co. Kerry (46MW)

Project Director Planning Applications for revised layout and sub-station for wind farms in SPA. Owner's Engineer for Phase 1 Construction work. Complete 2007. Civil / Structural design for new 110kV sub-station energised in 2014. **Project Director**

• Yellow River Wind Farm, Co. Offaly (96MW)

Project Director for Planning Application through S.I.D. route. Project Director

Lisheen II Wind Farm, Co. Tipperary (24MW)

Project Director for geotechnical investigations, civil works and turbine foundation design (including piled bases) for civil sub-contractor as part of overall EPC Contract. 12 x 2MW turbines. Complete 2012. **Project Director**

Corkermore Wind Farm, Co. Donegal (12MW Phase 1)

Project Director for Pre-construction and Construction Stage (planning compliance, pre-construction and construction) for civil works BOP Contract. 6 x 2MW turbines. Complete 2011. **Project Director**

Curraghgraigue Wind Farm, Co. Tipperary and Extension (5.1MW)

Project Director for firm's role as Client's Engineer for Turnkey Contract. 3 x 850 kW turbines original project plus 3 x 850kW turbine extension. Independent Engineer for funder. Original Project completed 2004. Extension completed 2012. **Project Director**

Flughland Wind Farm, Co. Donegal

Project Director for Construction and PSDP input for 11.5MW Wind Farm. Complete 2008. Project Director

Geevagh Wind Farm, Co. Sligo (5.1MW)

Project Director for firm's role as Client's Engineer for Turbine Supply Contract and for Civil Works Contract. 6 x 0.85MW turbines. Independent Engineer for funder. Planning Application, E.I.S., Pre-Construction Activities. Complete 2005. **Project Director**

Kilbranish North Wind Farm, Co. Carlow (5.2MW)

Project Director for firm's role as Client's Engineer for Turnkey Contract. 4 x 1.3MW turbines. Independent Engineer for funder. Complete 2004. **Project Director**

Sonnagh Old Wind Farm, Co. Galway (7.65MW)

Project Director for firm's role as Client's Engineer for Turnkey Contract. 9 x 850kW turbines. Independent Engineer for funder. Complete 2004. **Project Director**

Cuillalea Wind Farm, Co. Mayo (3.4MW)

Project Director for firm's role as Client's Engineer for Turnkey Contract. 4 x 850kW turbines. Independent Engineer for funder. Complete 2004. **Project Director**

• Raheen Barr Wind Farm, Co. Mayo (18.7MW)

Project Director for firm's role as Client's Engineer for Turnkey Contract. 22 x 850kW turbines. Independent Engineer for funder. Complete 2003. **Project Director**

Meenadreen Wind Farm, Co. Donegal (3.4MW)

Project Manager for Turbine Supply Contract and for Civil Works Contract. 4 x 850kW turbines. Complete 2003. **Project Manager**

David Kiely CV (cont'd)

Drumlough Hill Wind Farm Repowering Contract, Co. Donegal
 Project Manager for contract for replacement of turbine nacelles and blades. Complete 2003. Project Manager

Largan Hill Wind Farm, Co. Roscommon (5.94MW)
 Project Manager for Turbine Supply Contract and for Civil Works Contract. 9 x 660kW turbines. Complete 2002. Project Manager

WORK EXPERIENCE

July 1988 – March 1990 Enco Civil Engineering Ltd., Slough, U.K.

May 1987 – June 1988 Doherty Civil Engineering Ltd., Essex, U.K.

October 1985 – April 1987 Hawkins, Hawkins & Osborn, Consulting Engineers, Umtata Office, Transkei, South Africa

October 1982 - September 1985 Department of Water Affairs, Namibia, South West Africa

Curriculum Vitae Karen O'Neill MSc, BA





Profession Environmental Scientist

Position with firm Environmental Scientist/Consultant

Years of Experience 2.5

Educational Qualifications

- MSc Environmental Science, Trinity College Dublin, 2019
- BA Geography & Archaeology (Joint Hons) University College Dublin, 2018

Additional Experience and Certificates

- Diploma in Environmental Management (CPD) – Ongoing
- Emergency First Aid (2022)
- Safepass Certified (2021)
- Environmental Law (Single Module CPD).
- Diploma in Environmental Waste Management (online academies diploma)
- Integrated safety, health and environmental management (online course).
- Master's Thesis The Effect of Global Warming on The Spread of Infectious Disease. This was a wet lab based, sizeable experiment. Managed and directed a team of three volunteers on this project.

KEY HIGHLIGHTS

Karen is an Environmental Consultant working within the Planning and Environment department of JOD. She is proficient in the use of Microsoft Office Suite including Excel, Word and PowerPoint. She is also adept in the use of several software's and mapping tools including Google Earth, ArcGIS and WindPro3.5.

EXPERIENCE

March 2021 – Present: Jennings O'Donovan & Partners Limited

Environmental Scientist acting as part of the Planning and Environmental sector in JOD. Responsibilities include:

- Renewable energy feasibility assessment and associated site investigations;
- Preparation of Appropriate Assessment Screenings;
- Preparation of EIA Screenings;
- Preparation of various EIAR/ER Chapters;
- GIS related tasks (mapping and data manipulation/handling);
- Preparation of Photomontages and ZVI Maps for EIARs (WindPro);
- Shadow Flicker Modelling for EIARs (WindPro);
- Project Management of two small-medium scale wind energy development planning applications.

Environmental Scientist

November 2019 - March 2021: Evolution Environmental Services Ltd.

This role involved conducting environmental inspections on behalf of the water services authority in Ireland to ensure compliance with its Trade Effluent License and Inspection program. The position included such tasks as inspecting, training, advising, reporting environmental compliance, and communicating with the client. As part of this role, Karen is qualified to Irish and EU standards and has been trained in accordance with RMCEI guidelines (Recommended Minimum Criteria for Environmental Inspections). **Environmental Inspector**

Relevant Modules Completed

- Environmental Policies (EIA and SEA)
- GIS
- Data Handling and Analysis
- Hydrology & Groundwater Quality
- Environmental Monitoring
- Desk-Based Research Project
- Earth System Science
- Resource Development & Environmental Management

Skills

- Excellent communication skills at all levels.
- Excellent research skills.
- Good observation skills.
- Innovative and critical thinking.
- Commercial awareness.
- Highly proficient at Microsoft Office Suite, GIS and Data Analysis.
- Self-trained in the use of WindPro 3.5 Software.

Pat Doherty

Doherty Environmental Consultants Ltd

Mob: 087 9314907

Email: pdoherty@dohertyenvironmental.com

WEB: www.dohertyenvironmental.com

Address: Glanturkin, Guileen, Whitegate, Co. Cork

Work Experience

I am a practicing Environmental Consultant with over fifthteen years experience in the field of environmental, ecological and planning consultancy. I have considerable experience of:

- Undertaking Ecological Impact Assessments and Appropriate Assessments of Plan and Projects;
- Undertaking vegetation surveys and habitat mapping in a range of habitat types;
- Undertaking a range of fauna surveys including mammal, amphibian, bird, fish and specialised macro-invertebrate surveys;
- Liaising with regulatory authorities, planners, engineers, designers and site management;
- Liaising with clients and providing expert advise on sustainable development; and
- Issuing detailed reports for planning applications and representing clients to planning authorities.

Doherty Environmental

Jul. 2008 - Present

Responsibilities:

Director of Doherty Environmental, with responsibilities for business generation, project delivery and client liaison.

Activities included:

- Ecological and environmental sampling and monitoring services for a range of clients;
- Preparing Extended Phase I Habitat Assessments, Ecological Impact Assessments and Appropriate Assessments;
- Inputing specialist ecological advise into local and regional Land use plans
- Managing the delivery of all projects.

ERM Ireland

Feb. 2004 - Feb. 2008

Responsibilities:

As ERM Ireland's senior ecological consultant I was responsible for leading ERM Ireland's ecological team and managing a variety of projects, including Environmental and Ecological Impact Assessments.

Activities included:

- Managing environmental and ecological planning and assessment projects;
- Devising and undertaking field surveys in remote areas;
- Facilitating stakeholder consultation for development and policy related projects;



- Preparing project proposals and attending project interviews; and
- Providing evidence as an expert witness to Planning Tribunals in Ireland.

McGrath Environmental

February 2002 - January 2003

Responsibilities:

Undertaking field surveys and report writing for specific projects.

Activities included:

- Surveying, classifying and reporting of various habitats and land-use practices in Ireland; and
- Contributing to the EU Land Use/Cover Area Survey (LUCAS), which identified land cover and habitats throughout Ireland on repeatable survey basis and identifies changes in land cover/ habitats at a landscape level.

Education and Professional Development

- MSc in Applied Environmental Science (Ecology), University College Dublin, 2003;
- BSc (Honours) in Environmental Earth Science, University of Wales, Aberystwyth, 2000;
- Certificate in Geographical Information Systems
- Certificate in Project Management Basics and Advanced, ERM;
- Licensed Mammal Worker, National Parks and Wildlife Service, Ireland & Northern Ireland Environment Agency, Northern Ireland;
- Certificate in Habitat Assessment, Institute of Ecology and Environmental Management (IEEM);
- Bat Conservation Trust Certificate in Assessing Development Impacts to Bats.
- Bat Conservation Trust & NHBS Training for Automatic Bat Surveys using Wildlife Acoustics SM2 Bat Detectors.
- Bat Conservation Trust CPD Bats & Bridges
- Bat Conservation Ireland Bats and Windfarms
- Ongoing Training and CPD in Bat survey Techniques and Impact Assessment.

Professional Affiliations

Full Member and former committee member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Member of Bat Conservation Trust

CURRICULUM VITAE PAT DOHERTY

Key Projects

The following is a *selected* list of key projects involving protected habitats and/or species that I have been involved in.

Beltanonean Wind Farm, 2016

Responsibilities: Peatland habitat surveys and Phase 2 NVC vegetation surveys. Identification of Active Peatland Habitat. Fauna Surveys. Biodiversity Chapter.

Derrykillew Wind Farm, 2016

Responsibilities: Peatland habitat survey and Phase 2 vegetation surveys. Fauna surveys. Biodiversity Chapter; Natura Impact Statement.

Killpadoge to Moyvane Underground Cable Route Construction Phase, Ongoing

Responsibilities: Preparation and finalisation of CEMP. Preparation of Invasive Species Management Plan; Review of Construction Method Statements for trenching, ducting, bentonite injection; passing bay and joint bays. Pre-construction vegetation surveys. Suopervision of Construction Works. Preparation of Audit and Monitoring Reports. Liaison with NPWS & IFI.

Millstreet Wastewater Treatment Plant Upgrade, Construction Phase, Ongoing

Responsibilities: Preparation and review of CEMP. Review of Construction Method Statements. Preconstruction vegetation and fauna surveys. Supervision of Construction Works. Preparation of Audit and Monitoring Reports. Liaison with NPWS & IFI.

Slieve Blooms Mountain Bike Trail, Construction Phase, Ongoing

Responsibilities: Preparation and review of CEMP. Review of Construction Method Statements. Preconstruction fauna surveys. Supervision of Construction Works at sensitive locations.

IDA Flood Mitigation Scheme, Carrigtwohill Co. Cork, Construction Phase, Ongoing.

Responsibilities: Preparation and review of CEMP. Review of Construction Method Statements. Preconstruction vegetation and fauna surveys. Liaison with IFI. Licence Application to IFI and Department of Electrofishing Surveys. Supervision of Stream Channel De-watering. Ongoing site inspection and monitoring of construction works.

Cloghboola Wind Farm, Construction phase & Operation phase Co. Kerry 2014 - 2017

Responsibilities: Ornithological monitoring at the Cloghboola Wind Farm, which is located with the Stacks to Mullaghareirk Mountains SPA. Both construction phase and operation monitoring has been undertaken at this, now operation wind farm. Monitoring focused on the presence of breeding hen harrier and curlew within and surrounding the proposed wind farm site.

Cordal Wind Farm, Construction Phase Co. Kerry 2016 - 2017

Responsibilities: Ornithological monitoring at the Cordal Wind Farm during the construction phase. Monitoring focused on the presence of breeding hen harrier within and surrounding the proposed wind farm site.

Altgolan Wind Farm, Co. Tyrone

Responsibilities: The proposed seven turbines Altgolan wind farm is located within a complex of peatland habitats. As the project ecologist Doherty Environmental was responsible for undertaking a range of surveys and identifying sensitive habitat constraints such as Annex 1 active blanket bog and wet heath habitats; Bat Impact Assessment; Expert witness at the Altgolan Wind Farm planning appeal hearing.

Derreenacrinnig Wind Farm Grid Connection Route. Responsibilities:

Peatland Habitat Management Plans for a range of Approved Wind Farms

Responsibilities: Peatland Habitat Management Plans prepared for Crighshane Extension Wind Farm, Co. Tyrone; Pollnalaght Wind Farm, Co. Fermanagh; Teiges Mountain Wind Farm, Co. Fermanagh; Dooish Wind Farm, Co. Tyrone; Croaghan Wind Farm, Co. Derry; Derrykillew Wind Farm, Co. Donegal; Cronalaght Wind Farm Co. Donegal; Seegronan Wind Farm, Co. Tyrone. HMPs included detailed Phase 2 NVC surveys of peatland habitats, identification of areas of active blanket bog, provision of construction phase habitat management measures. Provision of operational phase habitat management measures.

Ecological Impact Assessment for Multiple Wind Farm Planning Applications in Peatland Environments

Responsibilities: Responsible for completing detailed habitat, vegetation community and fauna surveys for a range of wind farms located in peatland habitats including Crighshane Wind Farm, Seegronan Wind Farm, Gronan Wind Farm, Pollnalaght Wind Farm, Teiges Mountain Wind Farm, Tullynamoyle Wind Farm, Derrinoghran Wind Farm, Corkermore Wind Farm, Slieveglass Wind Farm, Altgolan Wind Farm, Beltonanean Wind Farm, Derrykillew Wind Farm, Owenreagh Wind Farm, Croaghan Wind Farm, Cronalagh Wind Farm, Loughderryduff Wind Farm, Altcor Wind Farm, Maas Wind Farm, Derrinacrinnig Wind Farm, Crilly Wind Farm, Barony Road Wind Farm, Curraghamulkin Wind Farm

CURRICULUM VITAE PAT DOHERTY



Ben O'Dwyer Project Ecologist



Profile

Ben O'Dwyer is a Senior Project Ecologist working as part of the Energy and Environment Team at Fehily Timoney and Company. Ben has five years' experience as an ecologist working on a range of projects. He Holds a fist class honours Bachelor of Science (BSc) in Wildlife Biology from Institute of Technology Tralee. His degree focused on conservation of habitats, flora and fauna, with strong emphases on European and international legislation, and practical field skills. Environmental science including laboratory and field sampling skills, in addition to legislation was also a key element throughout.

Ben carried out reporting and assessment including Ecological Impact Assessments, AA Screening Reports and Natura Impact Statements for a wide variety of projects and as such is experienced in assessing the environmental and ecological effects of proposals in a variety of categories (housing developments, gas networks, transport, waste management, commercial/industrial projects, aquaculture, wind and solar energy projects). His experience across a broad range of projects has given him an extensive knowledge of the protected sites and species in Ireland.

Ben is an experienced and versatile field surveyor, and as such is familiar with the survey standards and level of information required to complete robust assessments. His experience across a broad range of projects in Ireland has given him an extensive knowledge of the protected sites and species across the country.

Relevant Experience

- Annagh wind farm Co. Cork Biodiversity Chapter for EIAR, VP surveys, breeding bird and wader surveys, Habitat survey, Mammal survey, Static bat detector survey, Ecological walkover, grid connection and TDR survey
- Bilboa wind farm Co. Carlow Biodiversity Chapter for EIAR; detailed Biodiversity
 & AA RFI responses.
- Croaghaun Wind Farm, Co. Carlow NIS; RFI Responses
- Barranafaddock Wind Farm AA Screening Report Updates
- Confidential Windfarm, Co. Cork Summer & Winter VP surveys; Hinterland/I-WeBS Surveys
- Dernacart Windfarm Co. Laois Biodiversity Chapter for EIAR
- Confidential Windfarm, Co. Cork Turbine delivery route nodes survey, passive bat detector survey
- Barranafaddock Windfarm Post-Construction Collision Monitoring Survey & Scavenger Trial
- Moanvane Windfarm Bat Survey; Bird Survey Data Collation; Habitat Surveys;
 Mammal Survey; Replant Lands Habitat Survey
- Meenwaun Windfarm Pre-Construction Badger, Otter & Bat Surveys; Badger Sett Exclusion & Monitoring
- Moanincha Windfarm Post-Construction Collision Monitoring Survey; Bat Survey; Post-Construction VP Surveys
- Confidential Windfarm Co. Cork Summer & Winter VP surveys; Breeding Birds Survey; Breeding Moorland Birds Survey; Merlin Survey
- Derragh Windfarm- preconstruction ornithological and mammal surveys, preconstruction survey report
- Raragh Windfarm Habitat Survey and Bat Survey (Cable Route)

Key Information

Qualifications

BSc. Wildlife Biology (1st Class Hons.), ITT, 2016

Employment History 2016- Present

Fehily Timoney and Company Ecologist

2015

Malachy Walsh & Partners, Tralee
Work Placement

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Ben O'Dwyer Project Ecologist



- Galway Wind Park Doon Bypass Habitat Survey
- Dromada Windfarm Baseline Vegetation Survey for Hen Harrier Breeding Habitat Management Programme
- Knockacummer Windfarm Grid Connection Cable Route Ecological Clerk of Works; Invasive Species Survey; Otter Survey; Hen Harrier winter roost surveys
- Derragh Windfarm- preconstruction ornithological and mammal surveys, preconstruction survey report

Other Experience

Solar Energy Projects

- Keiloge Solar Farm AA Screening Report
- Glenamoy House Solar Farm Habitat Survey and Desktop Study for AA Screening
- Ballyhale Solar Farm –Bat Survey
- Barrowsiders Solar Farm Carrigtwohill –Habitat Survey and AA Screening Report
- Casteltownbere Solar Farm Habitat Survey and Ecological Feasibility Assessment
- Piercetown Solar Farm AA Screening Report
- Meelshane Solar Farm Habitat Survey, Site Walkover, Ecological Appraisal & Ecological Enhancement Plan.
- Furryhill Solar Farm Habitat Survey, Site Walkover, AA Screening Report, Ecological Appraisal & Ecological Enhancement Plan. Cable Route Section 5 Application AA screening Report
- Clondardis Solar Farm AA Screening Report
- Ballyduff Solar Farm Habitat Survey, Site Walkover, Cable Route Survey
- Johnstown North Solar Farm Habitat Survey, Site Walkover, Cable Route Survey, AA Screening Report, Ecological Appraisal & Ecological Enhancement Plan.
- Rosspile Solar Farm Habitat Survey, Site Walkover, Cable Route Survey, Bat Survey, Mammal Survey, NIS & Ecological Appraisal.

Miscellaneous Projects

- Dunkettle Interchange preconstruction mammal & botanical surveys, reporting, otter & badger surveys and mitigation measures, rare plant and moth foodplant translocations, bat surveys, ornithological surveys, amphibian surveys
- N4 Sligo preconstruction mammal, bat & amphibian surveys, ecological supervision, wildlife licence applications (frog, bat, badger, smooth newt), ecological design
- Cork County Bridge Rehabilitation, South & West Regions- AA Screening Reports
- Tipperary Town Historic Landfill Remediation Habitat & General Ecology Surveys, Invasive Species Survey, Appropriate Assessment Screening, Invasive Species Management Plan
- Knockharley Landfill Bat Survey & Desktop Study for EIS, Botanical & Habitat surveys and FI response Botanical & Habitat report
- Monart Spa Q sampling (Aquatic Macroinvertebrate Identification & Analysis), biological water quality report
- Ballyogan Landfill Aquatic Macroinvertebrate Identification & Analysis (Q values, SSRS)
- Dunsink Landfill Aquatic Macroinvertebrate Identification & Analysis (Q values, SSRS)
- North Kerry Line Habitat & General Ecology Surveys
- Burlington Facility Habitat & General Ecology Surveys, AA Screening Report
- Center Parcs Gas Pipeline Route Habitat & General Ecology Surveys
- Enniscorthy Residential Development Habitat & General Ecology Surveys, with focus on hydrological connections for AA
- Great Southern Trail Greenway General Ecology Survey (Barnagh Tunnel Section)

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Brian Porter contactnature@eircom.net 0872230004 4 Kent Terrace, Barnhill Road, Dalkey, Co. Dublin

CURRICULUM VITAE

EDUCATION:

- 1967 - 1974 St Patricks National School, Dalkey, Co Dublin Primary School

ENED. 26/07/2023 Secondary School - 1974 - 1980 Newpark Comprehensive School, Blackrock,

Co Dublin

- 1983 – 1984 Merristwood Agricultural College, Surrey, England Tertiary Education

Certificate of Horticulture, Landscape Construction

- 2003 — 2005 University College Cork

Diploma Field Ecology.

EDUCATIONAL ACHIEVEMENTS:

Leaving Certificate Results 1980, passed with 3 honours & 3 passes.

Certificate in Horticulture 1984 - Distinction

Diploma Field Ecology 2005 - Distinction

Included 2nd Year Project on: "Study of sample population of Mediterranean Gulls in Dublin Bay South"

European Seabirds At Sea 'ESAS' Certified with Joint Nature Conservation Committee

WORK EXPERIENCE:

1980 - 1981	Garden Nursery and Arboriculture Labourer
1981 - 1983	Landscape Gardener
1984 - 1986	Project Officer with British Trust for Conservation Volunteers
1986 - 1991	Conservation Landscape Business "Wildscapes"
1991 - 1993	Graphic Design Assistant
1993 - 2001	Retail Proprietor - Antiques and Pine Furniture
2001 - present	Wildlife Consultancy 'Contact Nature'

ECOLOGICAL WORK UNDERTAKEN:

Contracts as 'Contact Nature' Include:

-Hen harrier surveys largely using SNH methodology within 16 counties in Ireland for private contractors and for all the major windfarm developers. Surveys both in the Republic and in Northern Ireland include collating data for Collision Risk Modelling. For Coilte and NPWS hen harrier territory surveys in hill ranges of highest hen harrier densities and SPA's from Cork to Donegal.

-Several bird survey methodologies specially adapted and applied to large scale proposed wind farm, cable route and power line developments in bog, forestry and agricultural lowlands within five midland counties and uplands of Donegal Including: Winter Dawn & Dusk fixed Vantage Point Survey, modified Brown & Sheppard Survey, Breeding Wader Surveys, Merlin & Barn Owl Surveys, Phase 1 Habitat Surveys, Hedgerow Structure Survey, Mammal Surveys, Swan & Goose Flight Line Surveys and small aircraft flyover swan survey.

-Offshore Seabird Survey for proposed windfarm developments in the Irish Sea. Kish Bank, Codling Bank & Arklow Bank.

-Countryside/Breeding Bird Surveys for BWI since 1998 and many private contractors on Landfill and Windfarm sites plus Streams Survey for Dun-Laoghaire/Rathdown County Council

- -Wildfowl, Red Grouse, Wader and raptor monitoring along Power line route for ESBi
- -Pre Winter Atlas methodology test project in County Wicklow for **BWI&BTO**.
- -Annex 1 wildfowl survey for road scheme in the mid-west
- -Range of bird surveys undertaken for pre-construction of Flood Defence Scheme. Enniscorthy, Co. Wexford including Heronry and Raptor Territory

surveys

- -Radio tracking for Red Kite re-introduction programme in North Dubiiii
 -Brown & Sheppard Surveys on upland bogs in Northern Ireland for **National Trust**
- -Coastal Breeding Seabird Survey in Co Wicklow
- -Winter Bird Monitoring on Intertidal Estuaries and Coasts including:
- -Several bird monitoring projects with various consultants at pre and post planning stages within Dublin Bay for various clients such as Birdwatch Ireland and The Dublin Port Authority including study of Brent Goose occurrence in public parks for both sewage and fuel pipeline construction projects.
- -Using 'Waterbirds Surveys within Irish Coastal Special Protection Areas survey methods' for an extension to aquaculture planning application in Bannow Bay Co.Wexford
- -Winter Estuarine bird surveys for the Malahide Weir Reconstruction Project and for proposed pier development also in Bannow Bay Co. Wexford
 - -Host of Irish Wetlands Bird Survey (I-WEBS) Workshops for BWI
 - -Host of Birdwatch Ireland/ENFO Garden Birds Exhibition Workshops
- -Former I.N.T.O. Heritage in Schools Specialist for 5 years giving illustrated talks on birds & wildlife to Primary School children.

Voluntary Bird Survey work

Countryside Bird Survey since 1998 Irish Wetlands Bird Survey 'I-WEBS' former contributor Birdwatch Ireland Winter Garden Bird Survey since 1996/7 Contributor to Dublin Field Club annual butterfly survey Contributor to Bird Atlas 2007-2011 'Seatrack' sea bird monitoring volunteer Extensive contributor to each National Hen Harrier Surveys 1998/2000; 2005; 2010 & 2015 Hen Harrier Winter Roost Survey volunteer

OTHER ACHIEVEMENTS & HOBBIES:

Birdwatch Ireland Member 1975 to present Member of Irish Raptor Study Group, Dublin Naturalists Field Club, Birdlife International, Irish Whale and Dolphin Group & RSPB Active Birdwatcher in Ireland, Europe and Tropics Certified Padi Open Water Diver Full Driving Licence Fás Safepass **ESAS** Certified with JNCC

PUBLICATIONS

Co-author of scientific papers published in Birdwatch Ireland annual publication 'Irish Birds'

- Brian Madden and Brian Porter (2007). Do wind turbines displace Hen Harriers Circus cyaneus from foraging habitat? Preliminary results of a case study at the Derrybrien Wind Farm, County Galway. Irish Birds Volume 8 No.2
- Merne, Oscar J., Brian Madden, Eugene Archer & Brian Porter (2008). Autumn roosting by terns in south Dublin Bay; Irish Birds Volume 8 No.3

 Merne, Oscar J., Brian Madden, Eugene Archer, Brian Porter & Stewart Holohan (2009). Abundance of non-breeding gulls in Dublin Bay, 2006-2007; Irish Birds Volume 8 No.4

PRORING SOOTSONS



Chandra Walter Project Ecologist



Profile

Chandra holds a BSc in Ecology and an MSc in Organic Horticulture, both degrees were awarded with Honors by University College Cork.

Chandra is a dedicated ecologist, with excellent report writing and data management skill. She is skilled with QGIS and SPSS statistics. Chandra has good plant and insect identification skills, particularly for pollinators and freshwater macro-invertebrates.

Chandra is experienced in both terrestrial and freshwater ecology.

Key Skills

- Data Management in Excel
- Habitat surveys
- Bat activity surveys
- Freshwater Macro-invertebrate surveys
- Pollinator surveys, focused on Hymenoptera, Lepidoptera and Syrphidae
- Mapping in QGIS
- Statistics SPSS
- Preliminary Ecological Appraisal
- Appropriate Assessment
- Ecological Impact Assessment

Previous Experience Essentials for this Project

• Graduate Ecologist at Fehily Timoney 2021-Present

Chandra has been working on several wind and solar farm projects, as well as on numerous civil and commercial infrastructure projects. Her role involves surveying, data management, mapping and report writing.

Laois/Offaly Wind Farm (Bord na Móna) (ongoing)

Bat activity survey required for the Strategic Infrastructure Development application to An Bord Pleanála for a proposed wind farm comprising up to 12 turbines in counties Laois and Offaly.

Dunkettle Interchange (TII)

Breeding survey for Grey Heron and Little Egret as part of the ecological mitigation requirement for a large road project. This project involves a series of direct road links between the N8, the N25 and the N40 and links to the R623 Regional Road in Little Island and Burys Bridge in Dunkettle; 1 grade separated junction arrangement at the existing N25 to the east of the existing Dunkettle Interchange; 4 roundabouts – 2 at the grade separated junction and 2 at tie ins with the existing road network; 51 major structures of various forms; several culverts where the scheme crosses watercourse or intertidal area; pedestrian and cyclist facilities; and modification of existing Silversprings junction on the N8 Lower Glanmire Road.

Cork Bridge Rehabilitation, Cork, Ireland / Cork County Council (2016 – 2022)

Key Information

Qualifications

MSc Organic Horticulture, University College Cork, 2017

BSc Ecology, University College Cork, 2014

Employment History

2021 - Present

Fehily Timoney & Company Graduate Ecologist – Energy & Planning Team

2019 - 2021

German speaking technical support at Telus International

2018 - 2019

Environmental Lab Technician and Ecological Fresh Water surveyor

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Chandra Walter Project Ecologist



Bat emergence survey at a Bridge near Dunmanway as part of ecological mitigation for the repair of approximately 50 road bridges located around the Cork region. Development of an Invasive species management plan for repair works to a bridge in Co. Cork. The list of structures included predominately masonry structures dating from the 13th to 19th centuries, including a number of protected structures.

• Tipperary Wind Farm (Bord na Móna) (ongoing)

Management of bird data for a large wind project across bogland in Co. Tipperary. Bat activity surveys required for the planning application for a proposed wind farm comprising up to 12 turbines.

Fahybeg Wind Farm (RWE) (ongoing)

Survey of oak woodland to find preferred suitable route for access road. Other surveys at this site included mammal surveys, invasive species surveys, habitat assessment and bat roost assessment along the proposed cable route.

• Maynooth rotating stabilizers (Statkraft) (2021)

Preparation of the Ecological impact section for an NIS for the proposed development of a synchronous compensator and ancillary equipment at Maynooth Co. Kildare. Challenges included a hydrological link that was identified to the Rye Water Valley/Carton SAC.

Acorn Water, 2018 — 2019

Chandra was a freshwater macro-invertebrate surveyor, responsible for evaluating long term water quality around dairy plant discharge sites which are under license from the EPA. Chandra also had responsibilities as a lab technician, analysing private and industrial water samples for biological and chemical parameters, and involved in developing quality control procedures for lab procedures and water samples.

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JOHN CURTIN



2015

Moyglass, Kylebrack, Co. Galway, Ireland | 00353 (0)85 1179428 | Info@Ene Ecology.ie

DIRECTOR | PRINCIPAL ECOLOGIST

I am an experienced ecologist with a high skillset over several disciplines. Primarily a fieldworker with experience in ornithological surveys & monitoring, botanical & habitat identification and mammat surveys. I have also completed season long bat surveys for several large scale wind farm projects. In addition have prepared numerous stage 1 and 2 Natura Impact Statements and Environmental Impact Statements.

EDUCATION

2004 – 2009
999 – 2000

MEMBERSHIP

- B	at Conservation Ireland Council Member	2017- Present
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- Botanical Society of Britain & Ireland

NPWS LICENCES

- C231/2020 (Licence to handle bats; excluding Lesser Horseshoe)
- DER/BAT 2020-114 (Licence for roost disturbance; all bat species)
- 123/2019 (Licence to photograph & film bats)

- I-WeBS counts - Galway Bay Counts

VOLUNTEERING

-	Bat Conservation Ireland	
	BATLAS 2020 volunteering	2019 -2016
	Assisted organising and teaching bat roost in trees course	March 2019
	Talk on New Technologies 9th Irish Bat Conference	Oct 2017
	Daubenton's Bat Waterway Survey,	2014 – 2015
-	Vincent Wildlife Trust	
	Roost Count Portumna Bat Box Scheme	2018
-	Galway Bat Group	
	Guided walk Kinvara	2017
-	NPWS Rebecca Teesdale	
	Static Monitoring of cave occupied by Lesser Horseshoe	2018
-	Hen Harrier Survey	2015
-	Moyglass Group Water Scheme - Assistant Secretary	

EMPLOYMENT HISTORY

- ORNITHOLOGICAL SURVEYS

The windfarm industry rightly requires exhaustive ornithological surveys prior and post construction in order to assess the potential risks to birds. John has taken an active role in such surveys since 2014. He has in-depth experience covering a variety of species and methodologies including; Breeding bird Surveys, Wintering Birds, Hen Harrier Surveys, Red Grouse Tape Lure Surveys, and Waterbird point counts.

- BAT SURVEYS

Over 120 nights (excluding voluntary work) of bat surveys completed since 2012 including wind farms, industrial developments, hotels, period homes and one off houses. Includes; roost identification, dawn and dusk transects and erection of static detectors. Also experienced in call analysis and report writing. Successfully applied for derogation licenses for counts, destruction and modification to roosts. Performed as Ecological clerk of works.

- HABITAT & BOTANICAL SURVEYS

Numerous surveys since 2010 for projects ranging from screening assessments, windfarm sites, road schemes, industrial developments and community biodiversity. Habitats surveyed include woodland, peatland, grasslands, intertidal. Identification of Annex I habitats. Species surveys completed for presence of *Vicia orobus* (Apple Data Centre site, Athenry 2014) & *Eriophorum gracile* (R336 road widening 2012).

- NATURA IMPACT STATMENTS

Over 40 Stage 1 and 2 Natura Impact Statements since 2010 alongside Environmental Impact Statements and rEIA's for quarry sites.

KEY SKILLS

Ornithological Surveys| Breeding Bird transects, Brown & Shepard Upland Breeding Wader, Hen Harrier Breeding & Winter Roost Surveys, Vantage Point, Tape Lure Surveys for Red Grouse under license.

Bat survey| Roost identification, dusk & dawn surveys for windfarms, EIA's and AA's

Windfarm Collision Searches| Searches conducted with trained dog. GPS routes logged

Habitat survey| Annex | habitats, Fossitt (Irl), NVC (UK)

Report writing| Appropriate Assessment Screening, Bat report, Biodiversity report

Mapping | Mapinfo, GPS

Other | Plant identification, mammal tracks, Marsh Fritillary (Euphydryas aurinia)

COMPUTER LITERACY & EQUIPMENT

Microsoft | Word, Excel, PowerPoint

Environmental Software | Mapinfo 10.0, Kaleidoscope Pro, GPS, R

Equipment | EM Touch Pro, EM3 Bat Detectors, SM3, SM4, SM Mini & Audiomoth Static Detectors, Night Vision camcorders with IR floodlights; Canon XA10 and Sony nightshot, Infra-red camera; Seek Reveal XR, Garmin GPS, Leica Trinovid 10x42 Binoculars, Leica Televid 77 20-60x 80mm Spotting Scope

REFEREES

- Professional,

Dervla O Dowd, McCarthy Keville O' Sullivan [091 735611 dodowd@mccarthykos.ie]

- Academic,

Dr Micheline Sheehy Skeffington [091 492682 michelinesheehy@gmail.com]





CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE & PLANNING

Key Information

Qualifications

M.Sc. Ecological Management and Biological Conservation, Queens University Belfast, 2005

BSc. Applied Ecology University College Cork 2004

Employment History July 2015- Present

Fehily Timoney & Company Principal Ecologist / Environmental Scientist

2010 - 2015

Malachy Walsh and Partners

2009 - 2010

Renewable Energy Systems Ltd.

2007 - 2009

RPS Consulting Engineers

2007

Mott McDonald

2006 – 2007

Mouchel

2005 - 2006

Freelance Ecologist

Expert Witness

Expert Witness at the following oral hearings:
Pairc Uí Chaoimh
Doolin Pier

Publications

Jon Kearney (2010). Kerry slug (Geomalacus maculosus) recorded at Lettercraffroe, Co. Galway. Irish naturalists Journal **31** No. 1 p68 - 69

Profile

Jon is a principal ecologist with over 17 years' experience in both the UK and Ireland. His skills include an extensive knowledge of planning environmental law and planning requirements for ecology and biodiversity. Jon's experience spans ecology survey techniques and methodology, ornithological surveys, mitigation design, water quality assessment, Appropriate Assessment and Ecological Impact Assessment. Jon has completed ecological assessments, EcIAs, Environmental Impact Assessment Reports (EIAR) and Appropriate Assessments for a wide variety of projects in Ireland and the UK. Jon has completed ecological assessments, EcIAs, and Appropriate Assessments for a wide variety of projects in Ireland and the UK including over 75 wind farms, solar farms, pipelines, road schemes, greenways and commercial developments. He has considerable experience of EIS/EIAR and ecological constraints work, which often includes extensive reference to, and interpretation of, Article 6 of 'The Habitats Directive', and to other EU, UK and Irish conservation legislation.

Key Skills

Jon has experience in the following:

- planning environmental law and planning requirements for ecology and biodiversity.
- ecology survey techniques and methodology,
- ornithological surveys,
- mitigation design,
- water quality assessment,
- Appropriate Assessment
- Ecological Impact Assessment.

Previous Experience

Upperchurch Wind Farm, Co. Tipperary

Jon was the lead ecologist for Upperchurch Wind Farm in Tipperary. He both coordinated and conducted bat, mammal, habitat and ornithological surveys within the study area of the 22 turbine Wind Farm. He prepared the Ecological Impact Assessment, Appropriate Assessment and Ecological Management and Habitat Restoration Plan. Jon was also involved in the consultation process with NPWS.

• 'O Grianna Case' Derragh Wind Farm, Co. Cork

Jon was the lead ecologist for Derragh Wind Farm for the most recent application in 2015. The planning for the previous application had been over turned in the high court in the 'O' Grianna Case' due to lack of consideration for the Grid Route. Jon prepared the Natura Impact Statement and Flora and Fauna Chapter of the EIS for the most recent revised application which received planning from An Bord Pleanála.

• Moanvane Wind Farm, Co. Offaly

Moanvane is a 12-turbine project in Co. Offaly. FT are acting as the planning consultant for the client and project supervisor for the design stage of the project. Jon was the lead ecologist for the project coordinating ecological survey for both the wind farm and grid route including ornithological, mammal, habitat, bat, aquatic and botanical survey. He coordinated the consultation process with NPWS and other relevant consultees for ecology. Jon prepared the Natura Impact Statement and Biodiversity chapter of the EIS.

Baseline Surveys for bat at 34 Bord na Mona bog sites in the midland, Counties Kildare and
Offalv

Jon coordinated and conducted a full suite of bat surveys at 34 Bord na Mona bogs in the midlands. A full year of surveys were carried out in 2015 including activity surveys, roost surveys and surveys from height using both automated and manned bat detectors.

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CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE & PLANNING

Knockranny Wind Farm 42MW

Jon was the lead ecologist for Knockranny. He carried out Ornithological surveys, habitat surveys, bat surveys and Kerry slug surveys within the site and the greater surroundings. He prepared the Ecological Impact Assessment, Appropriate Assessment, Ecological Management and Habitat Restoration Plan and the Haul Route Selection Report. Jon was also involved in the consultation process with NPWS.

Athea Wind Park 40MW

This project, consist of three adjacent wind farms, consists of 20 turbines. A large majority of the site is located within the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (Site Code: 004161). This site and has been designated as a Special protection area (SPA) under the E.U. birds directive of special conservation interest for the hen harrier. Jon was the lead ecologist for Athea. He carried out ornithological surveys, small mammal survey, habitat surveys, vegetative quadrat surveys and bat surveys within the site and the greater surroundings. He prepared several preplanning reports and the ecological monitoring report for 2013. Jon was also involved in the consultation process with NPWS and IFI.

• Lettercraffroe Wind Farm 24MW

This project, in two phases, consists of 31 high mast low wind speed 2.5mw turbine generators. Jon was the project ecologist for Lettercraffroe. He carried out ornithological surveys, habitat surveys, bat surveys and Kerry slug surveys within the site and the greater surroundings. He prepared the Ecological Impact Assessment, Appropriate Assessment, Ecological Management and Habitat Restoration Plan and the Haul Route Selection Report. Jon was also involved in the consultation process with NPWS

Lenamore Wind Farm, Co. Kerry 24MW

Jon was the lead ecologist for Leanamore Wind Farm. Jon prepared the Ecological Impact Assessment ecological restoration and management plan for hen harrier and the Appropriate Assessment for the proposed Wind Farm. He carried out ecological field surveys of the entire site including habitat and mammal surveys.

Toberatoreen Wind Farm, Co. Kerry 17MW

Lead Ecologist responsible for the Natura Impact Statement, ornithological surveying, terrestrial and aquatic ecological assessment, EcIA and ecological restoration and management plan. Jon was also involved in the consultation process with NPWS and IFI.

• Ecological Surveys Knockacummer Permanent 110kV Underground Grind Connection

Lead Ecologist for the project. Reviewed the final report and managed junior ecologists for the ecological surveys

• Lisheen Wind Farm Phase I Post-Construction Monitoring 54MW

The 18 turbine Lisheen Wind Farm became fully operational in 2009. Planning permission was granted for the development with the condition that three years of post-construction monitoring be conducted within the wind farm site. Jon was the project manager for Lisheen Wind Farm Post-construction monitoring. He has carried out vantage point, transect and I-WeBS surveys for birds. Jon is also coordinating fatality searches for both bats species and birds within the site. He is also coordinating the liaison process.

• Glentane phase II Wind Farm Ecological Clerk of Works water quality monitoring

Jon carried out weekly audits at the wind farm site during the construction period in relation to sediment and erosion control measures. He also conducted both biological and physio-chemical water quality sampling at sampling stations within the greater catchment area of the wind farm and produce weekly reports for the developer.

Jon has coordinated ornithological surveys at the following (non-exhaustive list of site)

- Waterford Airport
- Dunkettle interchange, Cork City
- Annagh Wind Farm, Co. Cork
- Drehid Wind Farm, Co. Kildare
- Moanaincha Wind Farm, Co. Tipperary
- Barranafaddock Wind Farm, Co. Waterford
- Meenwaun Wind Farm, Co. Offaly
- Raragh Wind Farm, Co. Cavan
- Inchamore and Gortyrahilly Wind Farm, Co. Cork
- Dromada Wind Farm, Co. Limerick
- Carrickeeny Wind Farm, Co. Cork
- Coumnagappul Wind Farm, Co. Waterford
- Croughaun Wind Farm, Co. Carlow
- Bilboa Wind Farm, Co. Carlow
- Castlewaller Wind Farm, Co. Tipperary
- Shonagree Wind Farm, Co. Cork
- Derrycoffey Wind Farm, Co. Offaly
- Goulacullin Wind Farm, Co. Cork
- Gortloughra Wind Farm, Co. Cork

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CONSULTANTS IN ENGINEERING,
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Other notable projects

• Guidance for Public Authorities on the Provision of Article 6(3) and Article 6 (4) of the Habitats Directive

Public Authorities and AA practitioners require updated guidance on the Article 6(3) and 6(4) to ensure that assessments are robust and legally compliant. The existing national guidance document published in 2009 requires updating and needs to be reviewed to consider requirements due to the evolving case law and to ensure its alignment with European best practice. FT are preparing this updated national guidance document for Appropriate Assessment with NPWS currently. Jon is the Project Manager for this project.

Pairc Ui Chaoimh Redevelopment Cork City

Lead ecologist for the redevelopment of Pairc Ui Chaoimh. Jon prepared the Flora and Fauna chapter of the EIS and the Natura Impact Statement. Jon was the expert witness for ecology representing the GAA at the subsequent An Bord Pleanála oral hearing following which the project received full planning.

• Dunkettle Interchange, Client: Sisk Group (2018 - Present)

Jon is responsible for managing planning conditions and ecology EIA and NIS commitments for the reconfiguration of the Dunkettle Interchange to a free flow interchange including:

- A series of direct road links between the N8, the N25 and the N40 and links to the R623 regional Road in Little Island and Burys Bridge in Dunkettle;
- 1 grade separated junction arrangement, 4 roundabouts, 51 major structures of various forms;

• EIAR for Proposed Development at Knockharley Landfill (2018)

Jon was responsible for the Biodiversity chapter of the EIAR for a SID development submitted to ABP in December 2018.

Thornton's Millennium Park Recycling, Client: Thornton's Recycling (2017)

Thornton's sought SID permission for a major waste management facility in Dublin. Jon directed preparation of ecology inputs to SID application. Led consultation with NPWS and biodiversity stakeholders. Directed and was responsible for quality assessments of EIS ecology chapters, Natura Impact Statements. Input to project design relating ecology and advised on permission conditions and pre-development compliance.

Baile Bhuirne Bypass M22 (Ciient: NRA)

Jon conducted extensive ecological surveys as part of route options assessments for the M22 bypass around Baile Bhuirne including Kerry slug, habitat and mammal surveys for badgers, otters, red squirrel, etc.

• M1/N1 (Drogheda to Newry) (Client: NRA)

Jon conducted ecological surveys as part of motorway and conducted audit of mitigation measure implemented as part of the planning conditions for the motorway during the construction phase including the provision of mammal fencing and underpasses and as well as landscaping and enhancement planting.

• Doolin Pier Development, Co. Clare

A new harbour development comprising of a 103 metre pier new pier structure, revetment, bed rock dredging, access road and associated works at Doolin, Co Clare. The new facility offered improved access to the Aran Island from the mainland. Jon was the lead ecologist for the EIA. Coordinating and undertaking: Ecological survey (fauna, flora and habitats). Production of an NIS and terrestrial ecology chapter of the EIS. Expert witness at oral hearing for project which received planning

• Dungarvan Outer Bypass Route Selection Report (Client: NRA)

The National Roads Authority plan to construct an Outer Bypass of Dungarvan, Co. Waterford. Carried out phase I habitat survey of the entire study area, consisting of a corridor of 200m wide along each Route Option. A protected species survey was also carried out for both flora and fauna along each route option.

M8/N8 (Horse and Jockey to Urlingford) (Client: NRA)

Jon conducted ecological surveys as part of development and conducted audit of mitigation measure implemented as part of the planning conditions for the motorway during the construction phase including the provision of mammal fencing and underpasses and as well as landscaping and enhancement planting.

M20 Controlled Motorway - London to Dover Motorway (Client: NRA)

Carried out protected species surveys for Highways Agency at 23 sites on the M20 Motorway including a full botanical survey of each site. The information was then incorporated into the environmental works information to ensure that environmental legislation was adhered to during works. Protected species identified included dormice, common lizard, slow worm, otter and badger. The role also involved the onsite supervision of works and auditing to ensure that the subcontractor was adhering to mitigations.

Glenbeigh to Cahersiveen Greenway, Client: Kerry County Council (2017)

Kerry Co. Co. propose to construct a walkway/cycleway along a 17km stretch of dismantled railway line. Jon was the project ecologist for the development. He both coordinated and carried out a full suite of ecological studies including ornithological surveys, habitat surveys, bat surveys and Kerry slug surveys along the entire corridor of the route and the greater surroundings. He prepared the Ecological Impact Assessment route selection report and directed the Appropriate Assessment. Jon was also coordinated in the consultation process with NPWS and conservation stakeholders.

Cahir Solar Farm, Co. Tipperary

Jon was the senior ecologist for Cahir Solar Farm. He coordinated the ornithological surveys, habitat surveys, mammal surveys within the site and the greater surroundings. He reviewed and managed the preparation of the Ecological Report, designed the ecological enhancement measures, Appropriate Assessment Screening Report and ecological enhancement measures. Jon was also involved in the consultation process with NPWS.

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Carrick Solar Farm, Co. Tipperary

Jon was the senior ecologist for Carrick Solar Farm. He coordinated the ornithological surveys, habitat surveys, mammal survers within the site and the greater surroundings. He reviewed and managed the preparation of the Ecological Report, designed the ecological enhancement measures, Appropriate Assessment Screening Report and Natura Impact Statement. Jon was also involved in the consultation process with NPWS.

Ballyhale Solar Farm, Co. Kilkenny

Jon was the senior ecologist for Ballyhale Solar Farm. He carried out Ornithological surveys, habitat surveys, mammal surveys within the site and the greater surroundings. He reviewed and finalised the Ecological Report, designed the ecological enhancement measures, Appropriate Assessment Screening Report and Natura Impact Statement. Jon also coordinated the consultation process with NPWS.

Carragraigue Solar Farm, Co. Cork

Senior ecologist prepared Natura Impact Statement for the Carragraigue Solar Farm, consultation with statutory bodies, designed the ecological enhancement measures and conducted ecological surveys at the site including habitats, mammals, birds and bats.

• Glenamoy House Solar Farm, Co. Meath

Senior ecologist prepared the Natura Impact Statement and Ecological Appraisal for the project, coordinated consultation with statutory bodies, designed the ecological enhancement measures for protected species including yellowhammer and conducted ecological surveys at the site including habitats, mammals, birds and bats for the site located near Laytown, Co Meath.

Cork Area Strategic Pan Strategic Environmental Assessment (SEA)

The Cork Area Strategic Plan (CASP), adopted in 2001, provides a framework for the full integration of land use, transportation, social and economic elements for the Cork area up to 2.020. Prepared ecology chapter of the SEA.

Strategic Area Plans Cork County

Prepared the biodiversity, flora and fauna chapter for the Strategic Environmental Assessment for the following towns:

- Macroom
- Clonakilty
- Kinsale
- Skibbereen
- Fermoy
- Mallow

Southeast Clare Habitat Mapping

Carried out phase I habitat survey for Clare County Council of all habitat types within a total study area of 400km2. Habitats were classified to level 3 according to a guide to habitats in Ireland (Fossitt, 2000). The information gathered was used to produce a comprehensive habitat map of the region. Among the EU Annex I habitats recorded during the survey was 'depressions on peat substrates of the rhynchosporion (7150)'. This habitat was previously unrecorded within the region and maybe designated as a site of international importance following further investigation.

Ardcooney Integrated Tourism Masterplan, Co. Clare

Fehily Timoney & Company prepared an Integrated Eco-Tourism Masterplan for Ardcooney in County Clare. The masterplan consisted of the development of land along the River Shannon for tourism including a Caravan Area, Mobile Homes, Glamping, Kayak Storage and camping pods. Jon conducted ecological surveys within the study area and prepared a subsequent Stage Two NIS assessing phase of project along with the overall Masterplan for the area which received planning.

• Ballynora to Lehenaghmore Bord Gais Pipleine

Bord Gáis proposed to construct a natural gas pipeline 5.5km in length extending from Ballynora to Lehenaghmore, Co. Cork. A Preliminary Environmental Assessment (PEA) was prepared in order to assess the environmental constraints associated with the proposed pipeline. A desktop review was carried out to identify features of ecological importance within the study area followed by a phase I habitat survey and mammal survey. Prepared flora and fauna chapter of the Environmental report.

• Doon Post Primary School Badger Derogation Licence, Co. Limerick

Provided ecological expertise during the construction phase of Doon Post Primary School. Project manager/ecologist coordinating badger mitigation measures. Jon conducted activity study for badgers (14 setts), bats and amphibians. Consultation with NPWS and IFI. Application for wildlife licence and coordinating mitigation measures stipulated in licence including the building of an artificial badger sett, exclusions, hard blocking and sett removal.

Poorman's Bridge, County Laois

Project ecologist conducted ecological surveys for bats, mammals, as well as habitat and aquatic surveys for Annex I habitats, white-clawed crayfish, salmonids and lamprey. The bridge is located upstream of the only population in the world of the Nore Freshwater Pearl Mussel. Prepared Natura Impact Statement and reviewed detailed construction works method for submission to An Bord Pleanala.

• Delphi Bridge Restoration Works, Co. Mayo

The role involved the on-site supervision of construction works to ensure that the agreed method statement was being adhered to for this extremely sensitive site. The bridge was situated on the most important river in Ireland for Freshwater Pearl Mussel. The first year of works was cancelled due to a catastrophic flooding event resulting in damage through the movement of and spillage of sandbags downstream into freshwater pearl mussel habitat, and damage to the riparian vegetation, which was not mitigated against at the time. Project ecologist for the

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second year of proposed works (2012) following this event. There was ongoing consultation with directors and regional officers within NPWS and IFI. Jon conducted daily turbidity and water chemical analysis which was reported daily to NPWS, IFI and Mayo County Council

• Development of Beamish and Crawford Site, Cork City

Heineken Ireland Ltd. and BAM applied successfully for planning permission to build a multi-purpose development on the site of the old Beamish and Crawford Brewery on South Main Street, Cork City centre. Jon was the project ecologist for the project. He carried out habitat surveys and bat surveys within this urban site and the greater surroundings. He prepared the Ecological Impact Assessment and Appropriate Assessment. Jon was also involved in the consultation process with NPWS and designed a habitat enhancement plan including the installation of green roof as part of the design of the development

GlaxoSmithKlien Coastal Revetment

Project ecologist for GSK coastal revetment. He conducted ornithological, habitat and protected species surveys at the proposed site. He is also coordinated the liaison process with NPWS, prepared an Appropriate Assessment and successfully completed a derogation license for an otter holt recorded within the footprint of the development.

• M23 Passive Sign Installation, London

Project involved the installation of signs along the M23, the main motorway linking London to the south coast of England. A full ecological survey was carried out for 5 sites looking at the presence of protected species and noxious weeds onsite. Prepared a Preliminary Environment Assessment citing possible risks and mitigations for these risks before works could commence. The role also involved the onsite supervision of works, auditing to ensure that the subcontractor was adhering to mitigations and conducting tool-box talks to all on-site personnel.

• The Highways Agency Japanese Knotweed Management Plan, UK

Carried out survey for the invasive species Japanese Knotweed for the counties of Kent, Surrey, East Sussex and West Sussex. The information gathered was incorporated into a Management Plan for all Highway Agency land within Southeast England.

Daventry Canal Development, UK

Daventry District Council was developing a new canal arm linking Daventry town centre with the Grand Union Canal about 3 miles to the north. Carried out ecological surveys for mammals (badger, otter and dormouse) and reptiles within the footprint of the development.

Aughinish Alumina Ltd. (AAL) BRDA Extension, Co. Limerick

AAL operate a bauxite refinery plant situated on Aughinish Island, Co. Limerick. Residues from the extraction process are directed to the Bauxite Residue Disposal Area (BRDA). The proposed extension of the BRDA resulted in the loss of three old disused badger setts and one otter holt. The project involved the removal, under licence, of the three disused badger setts. Badger and otter field surveys determined the optimal location for artificial sett/holts. The project involved the constant liaison with statutory bodies to ensure that the client was meeting the requirements specified in the EIS. I designed and supervised the construction of three artificial otter holts and one artificial badger sett.

• Water Quality Assessment Knockathea & Dromada Wind Farms

Airtricity proposed to develop two wind farms near Athea village in the west of Co. Limerick. A benthic macro invertebrate survey was carried out within the rivers and invertebrates identified to the taxonomic level required to calculate Q-ratings. A Physico-chemical survey was also carried out at all waterways potentially at risk from the development. A Water Quality Assessment was prepared for the development of two wind farms at Knockathea & Dromada.

Other Ecological Projects completed by Jon

- Client: Dairygold Ltd. Dairygold Redevelopment, Co. Cork (2014)
- Client: Louis Keating / Clare County Council Kilrush Marina redevelopment and dredging, Co. Clare (2012)
- Client: GSK Various projects including a coastal revetment, and several new buildings within the plant, Co. Cork (2010-2015)
- Client: Fenit Harbour Board Fenit Marina and Harbour Extension Preliminary Ecological Studies & EIA Screening, Co. Kerry (2011)
- Client: The Department of Arts, Heritage and the Gaeltacht Clifden and Inishbofin Airport Terminals (2011)
- Client: Kerry County Council Ballyseedy Woods River Improvement Scheme, Co. Kerry (2011)
- Client: Coollegrean Wind Farm Ltd Coolegrean Wind Farm, Co. Cork(2014)
- Client: Scartaglen Wind Farm Ltd Scartaglen Wind Farm Phases I and II, Co. Kerry (2012 -2015)
- Client: Castlegregory golf club Castlegregory golf course club house (2013)
- Client: Ecopower Glencarbry Wind Farm, Co. Tipperary
- Client: Ecopower Boolabrien Wind Farm, Co. Waterford
- Client: Ecopower Knocknamona Wind Farm, Co. Waterford
- Client: Ecopower Derrynadivva Wind Farm, Co. Mayo
- Client: Ecopower Killavoy Wind Farm, Co. Cork
- Client: Met Eireann Valentia Met Eireann Air Monitoring Facility
- Client: Longford County Council Four bridge restoration projects, Co. Longford
- Client: Kerry County Council N70 Kilderry Road, Co. Kerry
- Client: ACARD Ltd. Cahersiveen to Reenard Point Walkway, Co. Kerry

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CONSULTANTS IN ENGINEERING, ENVIRONMENTAL SCIENCE & PLANNING

Key skills and experience

- Have applied for, conducted surveys and supervised construction work under the terms
 of and completed final reports for several derogation licences for bats, badger, otter,
 pygmy shrew, electrofishing, reptiles, water vole, dormouse and Kerry slug.
- Expert Witness (Project Ecologist): at three An Bord Pleanála Oral Hearings, Cluddaun Wind Farm (Mayo), Pairc Ui Chaoimh (Cork) and Doolin Pier (Clare)
- Phase I habitat surveys, Fossitt (2000), vantage point survey (birds), transect surveys (birds), point count (birds), AnaBat (Bats), Q sampling (kick samples), White clawed crayfish surveys, electrofishing, mammal surveys (Longworth traps, field surveys, dormouse tubes, motion detection cameras).

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Niamh Graham

Pollough, Rosscahill, Co.Galway.

Tel: 0879943297

graham.niamh76@gmail.com

Educational & Professional Qualifications

 2019 – M.Sc. Conservation Behaviour – Marine and Terrestrial Science. Galway Mayo Institute of Technology.

Modules: Studies in Conservation Behaviour, Animal Behaviour, Recording and Analysis, Acoustic Monitoring, Residential Field Work, ArcGIS, R and R-Studio, Marine Survey Tender Application, S.M.A.R.T (Strategic Marine Alliance for Research and Training Programme)-Application for Ship time with the Marine Institute.

Final Dissertation Title: "An Investigation into the Call Acoustics of the Corncrake (*Crex crex*) of Five Donegal Islands".

- 2018 Marine Mammal Observer Training –JNCC (Joint Nature Conservation Committee) certified.
- 2009 M.Sc. Health Services Research-Research Methodology. NUI Galway.
- 2003 Higher Diploma. Health Promotion. NUI Galway.
- 1998 B.Sc. (General) NUI Galway.
 Modules: Zoology, Palaeontology, Oceanography.

Skills Profile

- Bird Survey Techniques-Vantage Point Surveying, Walkovers (Brown & Shepherd), Raptor monitoring, Woodcock surveys, Swift counts.
- Ecological sampling techniques such as pit fall trapping (invertebrates), kick sampling, small mammal observation-use of camera traps, bat detectors and Longworth trap.
- Field Skills- Use of Passive Acoustic Monitoring (PAM) equipment in a marine environment.
- Identification of species, recording and counts.
- IT Skills- Raven Pro 1.3 (Cornell Lab of Ornithology), R Studio, ArcGIS, Distance 7.2, Minitab.
- Other Skills Coastal Skipper License RYA, Power Boat level 2 RYA, VHF Marine Radio License, Sea Kayak level 2.
- Full Clean Driving License

Health & Safety

- Occupational First Aid (2021)
- Manual Handling (2021)
- ENG 11(2019)
- SCTW-95 (PST) Personal Safety Techniques (2019)
- ISAF- World Offshore Sailing safety techniques (2017)



Continuous Professional Development

itis. Poor Road BTO, Bird Survey Techniques for Environmental and Ecological Professionals 2020 (Sritish Trust of Ornithology, The Nunnery, Thetford, Norfolk)

Wild eye Training – Sea bird and Sea Mammal Identification 2019.

BTO-Ringing- currently apprenticed to a licensed bird ringer to learn bird handling and ringing procedures.

IWebs – Birdwatch Ireland, 2019-2020.

Hobbies

- Sailing Racing inshore and offshore. Crew assistance on boat deliveries
- Mountaineering and Hillwalking
- Multidisciplinary Adventure Racing

Phoebe O'Brien BSc. Hons Botany

Lower Lecarrow, Feakle, Co. Clare.

phoebeob@gmail.com
+353 87 4140357

Joint vice-county recorder for County Clare for the Botanical Society of Britain and Ireland (BSBI). Freelance ecologist, primarily botany with over ten years' experience including Article 17 Annex 1 habitat assessments for National Parks and Wildlife Service. Co-author on Plant Identification Key for Rural AgriEnvironment Project (EU). Experienced teacher at second and third level. Keen interest in birds and wildlife. Outreach, design and social media content creation.

Qualifications

2009-2013: National University of Ireland Galway: Bachelor of Science degree with First class honours in Botany

Experience

January 2014-present: Self-employed Ecologist

- * Great Irish Grasslands outreach project NPWS
- * Unusual Grasslands Survey with Nimbosa Ecology 2022
- * National Fen Survey with BEC 2021-ongoing
- * Plant identification key booklet for REAPs, 2021 Department of Agriculture (ACRES update 2023)
- * Ornithological surveys, Tullaghboy Bog, 2020 Eire Ecology
- * Castlesampson Botanical baseline, 2020-ongoing NPWS
- * Burren Data Project, 2020 NPWS
- * Survey Glenbrohane and Doonbeg, 2020 CFI
- * Biodiversity Action Plans, 2020 Clare County Council
- * Fieldwork and desk study for invasive plants study, Limerick Council
- * Grass identification and field surveys throughout the island of Ireland Queen's University Belfast
- * Plant identification service and teaching Galway County council
- * Field assistant OPWALL Honduras: Sample collection, data collection, identification
- * Herbarium Tegucigalpa with Daniel Kelly: Identification, data and sample preparation
- * Researching rare plants with Colin Kelleher Dublin Botanic Garden: fieldwork, seed and leaf material collection. Lab work: DNA extraction and molecular work
- * Ballyvaughan Survey of Wildlife and Amenity for Burren and Cliffs of Moher Geopark and Ballyvaughan Community Development Group

March 2022- ongoing: Identiplant course Tutor

*Mentoring students through the online course

May 2014-May 2019: Teaching demonstrator, NUIG

*Yearly second year field trip to the Burren, Plant identification module

May-June 2017: surveyor, Irish Seaweed Research group, Ryan Institute, NUIG

*Survey of Himenthalia elongata

October 2013: Team leader, Irish Seaweed Research Group, Ryan Institute, NUIG

* Quantitative survey of Ascophyllum nodosum resources * Intertidal flora and fauna survey June-July 2013: Intern, Irish Seaweed Research Group, Ryan Institute, NUIG * Surveying seaweed resources on the west coast of Ireland May – July 2011: Intern, Professor Charles Spillane's research lab, Botany & Plant Science, NUIG * Lab assistants Crowing Archidonsis theliang plants and molecular analysis

- * Lab assistant: Growing Arabidopsis thaliana plants and molecular analysis
- * Field work: hunting for the Burren ecotype of Arabidopsis thaliana

Voluntary experience

May 2020-Present: BSBI Vice County Recorder for Clare (H9)

- *Joint recorder for vascular plants in County Clare
- *Entering and editing data in the Ddb.
- *Organising group meetings, posting on social media.

January 2018-June 2018: Team member, Herbology hunt

*Preparation of monthly wildflower hunt identification sheets for children in UK and Ireland

October 2011-2018: Founder, Director and Company Secretary, Galway Botanic Garden project

*Project management and seed bank manager

March 2015-June 2015: Creation of webpages for Botanical Society of Britain and Ireland (BSBI)

* Creating 8 species profile pages for the Irish Species Project, hosted by NDBC

January-February 2014: Volunteer, Bryophyte Herbarium, NUIG

* Digitising the collection, reorganising and updating species names

May-June 2013: Volunteer, Herbarium, Botany and Plant Science, NUIG

* Photographing the collection for inclusion in Herbarium@home, BSBI

Dec 2011: Volunteer, Herbarium, Botany & Plant Science, NUIG

* Re-shelving specimens and reorganising the families according to Webb's Irish Flora 2012

Teaching and other experience

September 2018-March 2021: Tutor, Certificate in Transition to Higher Education at ALFA for LIT

* Computer Applications and Study skills level 6 modules

February-May 2019: Adjunct lecturer, Certificate in Transition to Higher Education, LIT (TUS)

*Study skills module

March 2014-May 2019: Laboratory and field demonstrator, NUIG.

*Extensive laboratory and field demonstration to Biology and Botany students in the topics of general botany, taxonomy, bryology, ecology, vegetation analysis and soil science. Carried out in both a laboratory environment and in a wide range of habitats in the field, including woodland, grassland, and limestone pavement

November 2018-December 2018 Teacher, Botany Main Lesson, ALFA project

*3 weeks covering main plant groups and botanical skills to students aged 13-17

August-December 2015: Coordinator and floor leader NUIG BO101 practical classes (633 students)

- * Editing lab manual and slide presentations
- * Recruiting and training 10 demonstrators
- * Teaching 7 two hour labs per week
- * Marking scheme

October-December 2013: Floor leader, Botany and Plant Science NUIG, BO101 Practical Classes

- * Teaching 5 weekly classes of 80 students
- * Organising 15 demonstrators
- * Supervising exam invigilation

Skills

Waxcap and grassland fungi identification

Article 17 Annex habitat assessments

Excellent vascular plant identification

Fair bryophyte identification skills, in both the field and under the microscope in own lab

Fair aquatic plant identification

Good vegetative grass identification

Good seaweed identification skills, particularly intertidal species

Fair intertidal fauna identification skills

Good ornithological identification

Experience of surveying, monitoring and seed bank collection of rare vascular plant species

Collection curation and excellent herbarium skills

Own reference collections, grasses, sedges and bryophytes

Competent fieldworker, both as part of a team and alone, having carried out fieldwork in a wide variety of difficult terrain and conditions

Experienced in using GIS and GPS, for habitat mapping

Wide knowledge of conservation issues and threats

Experience of monitoring and recording local climate.

Proficient use of a wide range of software, including Microsoft Office, and Q-GIS

Experienced vascular plant recorder

Excellent report and paper writing skills

Experienced public speaker

Extensive teaching skills in the classroom and field

Lab skills including soil analysis, DNA extraction, gels electrophoresis with agarose and polyacrylamide, PCR, qPCR, RNA extraction, sterile plating seeds and growth chamber skills.

Social media, content creation, design for outreach materials. (UCD professional development 2023)

Full, clean driving licence and own vehicle

Memberships

Botanical Society of Britain and Ireland (BSBI) since 2011.

Academic/scientific references

Colin Kelleher MSc PhD: DBN Herbarium and Plant Molecular Laboratory, National Botanic Gardens Glasnevin, Dublin 9, D09 VY63, Ireland. colin.kelleher@opw.ie +353-1-8040326

Dr Maria Long PhD MCIEEM: Grassland Ecologist, NPWS, National Parks and Wildlife Service, 90 King Street North, Dublin 7, D07 N7CV, Department of Housing, Local Government and Heritage M: +353 (0)85 872 6900 E: maria.long@housing.gov.ie



Seán Ronayne Surveying Ecologist



Profile

Seán is self-motivated, hard-working, and analytical Ecology Graduate (MSc) with over 10 years surveying and research experience. Seán is a driven and observant team player with key knowledge and expertise in Environmental Impact Analysis, Conservation, Ecological Assessments, Ornithology, Bioacoustics, Mammals, Statistics & Reports & GIS.

Seán is experienced in conducting bird, terrestrial mammal, and bat surveys as part of Environmental Impact Statements and Appropriate Assessments. Seán has published serval papers on bird and bird diet and was a surveyor for the Irish Birds Atlas Survey, Irish Wetland Bird Survey, Buzzard Soaring Survey and National Hen Harrier survey.

In 2021, Seán founded Irish Wildlife Sounds (irishwildlifesounds.com), in collaboration with BirdWatch Ireland. This project aims to document vocalisations of Ireland's birds, mammals, and soundscapes from our wild habitats, in an effort to popularise listening and recording, with the ultimate goal of halting the loss of said sounds.

Key Skills

Seán has experience in the following:

- General avian surveys: Vantage Point surveys, breeding and winter transect surveys, hinterland surveys (I-WeBS and hen harrier winter roost).
- Species-specific avian surveys for: woodcock, hen harrier, long-eared owl, peregrine falcon, and barn owl.
- Bat activity surveys, and bat static detector surveys.
- Terrestrial mammal surveys including badger, pine marten and otter surveys.
- Report-writing: Appropriate Assessments and Ecological Impact Assessment Reports.
- Bioacoustics: passive recording to document nocturnal migration of birds as well as presence/absence surveys.
- · Collision Risk Modelling

Previous Experience Essentials for this Project

Annagh Wind Farm, Co. Cork, 2021 - Present
 Seán undertook avian vantage point surveys, winter transect

Seán undertook avian vantage point surveys, winter transect surveys, and hinterland surveys. Seán wrote year one avian monitoring report.

Ashbourne Skatepark, Co. Meath, 2021
 Seán conducted an ecological walkover and wrote an accompanying feasibility

report, with desktop study.

Inchamore/Gortyrahilly Wind Farm
 Seán prepared/reviewed avian monitoring reports.

Key Information

Qualifications

MSc. Ecological Assessment (Honours) University College Cork 2017

MSc. Marine Biology (Honours) University College Cork 2010

> BSc. Zoology (Honours) University College Cork 2009

Employment History

2021- Present

Fehily Timoney & Company, Cork Surveying Ecologist

July 2020 - Dec 2020

Field Ornithologist – Tivissa Wind Farm, Tarragona.

Apr 2020 - June 2020

Little Bustard Census. CTFC, Lleida.

May 2019 - Dec 2020

Bird Guide, Barcelona Birding Point

Sept 2018 - May 2020

English Teacher, EZ English, El Prat de Llobregat

Nov 2017 - Mar 2018

Project Scientist, Fehily Timoney & Company

April 2017 – October 2017

McCarthy Keville O'Sullivan, Cork

2012 - 2015

Northern Ecology, Northumberland

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Seán Ronayne Surveying Ecologist



Barnadivane Wind Farm, Co. Cork 2021 – Present

Seán conducted avian vantage point surveys, winter transect surveys, and hinterland.

• BnM Wind Farm, Co. Longford, 2021 – Present

Seán coordinates subcontractors working in the field, on ornithological surveys.

Delgany to Greystones Greenway, Co. Wicklow, 2021 – Present

Seán conducted an ecological walkover and wrote an accompanying feasibility report, with desktop study.

• Derryadd Wind Farm, Co. Longford, 2021 - Present

Seán coordinates subcontractors working in the field, on ornithological surveys.

Dromlivaun Solar Farm, Co. Cork, 2021.

Seán conducted an ecological walkover.

Drummin Solar Farm, Co. Clare, 2021.

Seán conducted an ecological walkover.

Waterford Hill Wind Farm, Co Waterford, 2021 – Present

Seán coordinates subcontractors working in the field, on ornithological surveys.

• Fahy Beg Wind Farm, Co. Clare, 2021

Seán conducted several phase I habitat surveys and produced associated reports.

Gortaloughra and Tullaghboy Wind Farms, Co's Cork & Galway

Seán undertook avian vantage point surveys, winter transect surveys, hinterland surveys and red grouse surveys.

West Cork Wind Farm, Co. Cork (ongoing)

Seán undertook avian vantage point surveys, and red grouse surveys.

Historical Landfill, Co. Kerry

Seán undertook avian vantage point surveys, winter transect surveys, and I-Webs low and high-tide bird counts.

• Knockraha Stability Project, Co. Cork.

Seán conducted an ecological walkover.

BnM Wind Farm, Co. Tipperary

Seán conducted habitat reconfirming surveys

• Rathdrinagh Solar Farm, Co. Meath

Seán conducted an ecological walkover.

• Revised Solar Farm Planning Applications, Cos Tipperary & Kilkenny, 2021

Seán conducted reconfirming ecological walkovers across four previously assessed sites, to ascertain whether the baseline has changed. Seán also prepared four associated reports.

Shelamere Offshore Wind Farm (Landfall Ecology), Cos Wexford & Wicklow, 2021 – Present

Seán coordinates and conducts ornithology and habitat surveys.

• Thomond Gate Residential Development, Co. Limerick, 2021

Seán conducted ecological walkovers across three sites and wrote accompanying feasibility reports, with desktop studies.

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Seán Ronayne Surveying Ecologist



Project Scientist, Fehily Timoney & Company Nov 2017 – Mar 2018

Seán conducted several bird survey types including: Vantage Point & Winter Walkovers (2km transects, based on the Country Bird Survey method). Seán prepared Environmental Impact Assessment, and Appropriate Assessment reports and conducted mammal surveys.

- Fossy Wind Farm, Co. Laois, 2017-2018
 Seán undertook avian vantage point surveys, and winter transect surveys.
- Inchamore/Gortyrahilly Wind Farm, 2017-2018
 Seán undertook avian vantage point surveys.
- Maighne Wind Farm, Co. Kildare, 2017-2018
 Seán undertook avian vantage point surveys, conducted badger surveys, and inspected bat boxes.
- Rosspile Solar Farm, Co. Wexford, 2017-2018
 Séan conducted waterfowl survey transects.

Assistant Ornithologist, McCarthy Keville O' Sullivan Ltd Apr 2017 – Nov 2017

Seán conducted several bird survey types including: Vantage Point, Woodcock, Breeding Walkovers (adapted O' Brien & Smith, CBS), & Breeding Raptor Surveys.

Assistant Ecologist, Northern Ecology May'12 – Mar 2015

Seán conducted bat surveys at dawn/dusk and vantage point surveys of birds. He produced habitat classification and mapped habitat.

• Survey Volunteer, Irish Wetland Bird Survey 2011 - 2012

Seán was responsible for monitoring of bird activity for an allocated site. He conducted winter bird survey and collected additional relevant data for further investigation. He liaised and assisted Dr. Tom Gittings (of UCC) throughout the project.

Assistant Ecologist, Badger Vaccine Research Project June 2011 – Nov 2011

Assisted in trapping of wild badgers under B.R.O.C. licence for TB vaccine development purposes and set humane traps in relevant areas. Seán supported lectures and researchers with data analysis and assessment. In addition, he collected additional relevant data for further investigation.

Survey Volunteer – Buzzard Soaring Survey, Irish Raptor Study Group, Mar 2011 – May 2011

Seán counted soaring individuals and pairs during pre-breeding period. He conducted weather evaluation to determine correct timings. In addition, he identified suitable habitat for Buzzard Soaring Survey.

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Garne Geotechnical Services

ANDREW GARNE PGeo, BSc, MSc, MIGI, MIAH Spring Cottage, Ballyvaloon Whitegate, Midleton Co. Cork, P25 YV44 Tel: +353-(0)83 8939347

Email: andygarne@gmail.com

Summary:

Andrew has over 30 years industry experience (including over 20 years in Ireland) which includes Windfarm EIARs (Soils, Geology and Hydrogeology) assessment reports, windfarm peat stability assessments, geotechnical earthworks designs, geotechnical inspections and supervision, contaminated land assessments, slope stability assessments, site investigation design, procurement and supervision, soil and rock core logging, laboratory scheduling and writing of geotechnical advisory reports.

Education and Qualifications:

B.Sc. (Hons) Geology, University of Newcastle Upon Tyne, UK

M.Sc. Engineering Geology, Portsmouth University, U.K

Registered Professional Irish Geologist (PGeo) Member International Association of Hydrogeologists (MIAH) Member Institute of Geologists of Ireland (IGI)

Employment History:

Garne Geotechnical Services March 2017 – Present **Independent Engineering Geologist**

Recent Experience:

- EIAR scoping, fieldwork and reporting for Land, Soils and Geology for a proposed 17 turbine windfarm development in upland blanket bog located north of Oughterard in Connemarra. Peat Stability Assessment and reporting.
- EIAR scoping, fieldwork and reporting for Land, Soils and Geology for a proposed 9 turbine windfarm development in blanket bog located in West Cork. Peat Stability Assessment and reporting.
- EIAR scoping, fieldwork and reporting for Land, Soils and Geology for a proposed 9-12 turbine windfarm development in agricultural land and heath in Co. Waterford. Peat Stability Assessment and reporting.

- Extensive site investigation supervision, design and procurement including pipelines, highways and marine investigations.
- Borehole and trial pit logging, sampling and test schedules to BS \$930, EC7 or other standards.
- Interpretation of factual data and derivation of geotechnical design parameters.
- Preparation or checking of factual, interpretative, and engineering reports.
- Recommendations to assist with the design of foundations or ground treatment.
- Bearing capacity and settlement calculations.
- Slope and peat stability assessments.
- Site and foundation formation inspection and testing.
- Construction monitoring, quality control, in-situ testing and supervision.

Causeway Geotech, Cork March 2016 – March 2017

Principal Engineer

Experience:

- Planning, procurement, direction and project management of all types of ground investigations within Ireland and UK, in-situ soil testing, soil and rock core logging, laboratory scheduling, writing of factual and advisory reports for both land and marine based projects. Responsible for implementing and undertaking in-house training, recruitment, supervision and direction of graduate engineers.
- Geotechnical investigations Principal engineer and project manager for many small to large investigations with foundation, slope stability, pavement design and other recommendations for residential developments, business parks, highway construction schemes, drainage schemes, pile design etc.
- Contamination assessments Principal engineer and project manager for many small to medium sized investigations with recommendations for remediation.
- Slope Stability and Peat Stability Assessments.

Fehily Timoney & Company, Cork June 2007 – March 2016

Senior Engineering Geologist

Experience:

- Wind Farms Resident Engineer and Geotechnical Clerk of Works for Galway Wind Park (SSE/Roadbridge), a 65 turbine wind farm development on upland blanket bog in Connemarra. On completion, it was Irelands biggest wind farm. Responsibilities include peat stability assessments, turbine formation inspections, blasting assessments, construction monitoring and compliance reporting.
- Wind Farms Peat Stability Assessments and EIAR (Soils, Geology and Hydrogeology) for many wind farm sites located throughout Ireland.
- Site Investigation design, contract specification, contract administration, site investigation supervision and interpretive report writing for many projects including Galway Wind Park, Cork Northern Ring Road, N59 Newport to Westport, Landfill Gas Migration Investigations and Midleton Gas Pipeline.
- Geological and hydrogeological desk studies for numerous Environmental Impact Assessments (EIAs) including EIAs and preliminary route selection reports for Dublin's Metro North and Metro West and the Jeddah Environmental Project.

- Slope Stability Assessments using SlopeW and report writing for a large number of active and redundant landfills.
- Earthworks suitability inspection and advice for the Kildare Route Rail Project.
- Piling design and on-site construction supervision for various sites.
- Contaminated land 3 Tier assessments on various sites throughout Ireland.
- Geotechnical design works for numerous wind farms, N9/N10 Phase 3 Earthworks, N17 Gort to Tuam, N5 Ballaghaderreen Bypass and several sewerage treatment plants within County Meath and County Cork.

Golder Associates, Melbourne Dec 2004 - Mar 2007

Senior Engineering Geologist

Experience:

- Working on many varied projects for one of the largest and most well respected global engineering consultancies, responsibilities included the preparation of fee proposals for geotechnical and environmental site investigations in and around Melbourne and Victoria. Managed projects from initial planning through to the construction stage and involved close liaison with client, senior management and other team members.
- Geotechnical investigations Reporting engineer and/or project manager for several investigations with foundation design and other recommendations for a variety of residential and commercial developments in and around Melbourne.
- Contamination assessments Project engineer and/or project manager for many site investigations around Melbourne. Many of the projects were managed from the initial fee proposal stage through to the post remediation stage.

Geotech Specialists Ltd, Cork Oct 1998 to Nov 2004

Senior/Principal Engineer

Experience:

- Responsibilities included the planning, direction and project management of all types of ground investigations within Ireland, in-situ soil testing, soil and rock core logging, laboratory scheduling, writing of final factual and advisory reports. Also responsible for implementing and undertaking in-house training, recruitment, supervision and direction of graduate engineers.
- Geotechnical investigations Principal engineer and project manager for many small to large investigations with foundation and other recommendations for design for residential developments, business parks, highway construction schemes, drainage schemes, pile design etc.
- Contamination assessments Principal engineer and project manager for many small to medium sized investigations with recommendations for remediation.

Exploration Associates, UK Dec 1996 to Oct 1998

Engineering Geologist

Experience:

- Responsibilities included the supervision and direction of ground investigations within the UK, in-situ soil testing, soil and rock core logging, laboratory scheduling, writing of factual and advisory reports.
- Geotechnical investigations Reporting engineer and/or project manager for many small to large investigations with foundation and other recommendations for design for residential developments, business parks, highway construction schemes.
- Contamination assessments Borehole and trial pit supervision, logging and reporting for many contaminated sites including gasworks and landfills in the UK.

Venture Information Management, UK Dec 1990 to Oct 1995

Geodata Scientist

Experience:

• Solely responsible for the management of BP's seismic line and licence system databases. Responsible for the production of maps and seismic tapes, data management and manipulation. Also included two years subcontracted as an assistant geologist in BP's well operations division. Responsible for desk studies, client liaison and well progress reporting.

Exploration Logging North Sea, UK 1988 to 1990

Offshore Logging Geologist

Experience:

• Logging and reporting of drilling operations, predominantly working offshore in the North Sea. Responsibilities also included the monitoring of drilling and safety parameters.



Qualifications, Accreditations and Licenses

Bachelor of Science (B.Sc.) Environmental Science & Technology (1st Class Honour) – Level 8 – Institute of Technology Sligo

B.Sc. Environmental Protection (1st Class Honour) – Level 7 – Institute of Technology Sligo

EPA Medal for Overall Highest Grade in B.Sc. Environmental Science & Technology – Level 8

Full Member of the Institute of Environmental Management and Assessment (IEMA)

Chartered Environmentalist as Certified by the Society for the Environment (SocEnv)

Safe Pass Holder (Renewal August 2023)

Full Clean Driving License

PADI Certified Diver

David Parkinson - BSc., MEMA, CEnv Principal Environmental Consultant

David is a Principal Environmental Consultant with over a decade of international environmental consulting experience across multiple industry sectors, including windfarm projects, flood alleviation schemes, infrastructure projects, transport, aviation and various large scale construction projects. He has extensive experience in environmental impact assessment, environmental monitoring, water quality reporting, GIS constraints mapping and contamination across various large scale construction projects. David is a Full Member of the Institute of Environmental Management (MIEMA) and a Chartered Environmentalist (CEnv).

David is currently the Principal Consultant at EcoQuest Environmental who have client bases Ireland and Australia. David has completed numerous hydrological and hydrogeological impact assessments. He has extensive experience in carrying out water quality assessments on major Irish rivers or their tributaries such as the Shannon, Dodder, Morell, Corrib, Broadmeadow, Finisk, Bandon and Garavogue rivers. In addition to nationwide water quality assessment experience, David has also assisted with water quality management of sensitive wetlands of international significance in Australia. David also has a background in water and wastewater chemistry laboratory analytical roles which help form the scientific basis of his environmental assessment expertise.

He has provided environmental management support services to clients in Europe, Australia and North America. He has carried out the role of Independent Environmental Clerk of Works (ECoW) for the Officer of Public Works on seven separate flood alleviation schemes across Ireland. David has also worked as the Senior Environment Advisor on over 100 construction projects at Sydney Airport, being responsible for each phase of environmental management from conception to regulatory approval and through to delivery.

David has also previously worked as an Environmental Consultant for multinational companies such as Genzyme in Waterford and Aurecon in Sydney, Australia. He has a background in water chemistry analytical roles with accredited labs which form the scientific basis of his environmental advisory expertise.



EcoQuest Environmental



From: September 2018

To: Present

Principal Consultant

David is currently the Principal Consultant at EcoQuest Environmental, providing environmental advisory services to clients in Europe, Australia and North America. He has carried out hydrology and hydrogeology impact assessments on multiple windfarm sites in Ireland. David has completed water quality assessments on multiple large Irish rivers and their tributaries. He is also the appointed Independent Environmental Clerk of Works on the OPW's East Region Construction Schemes. He has provided environmental advisory and auditing services on up to 7 different flood alleviation schemes. He has a wealth of experience in compiling, reviewing, approving and the implementation of Construction Environmental Management Plans (CEMPs). David has extensive experience in environmental approvals, auditing, appropriate assessment (AA), contamination, GIS environmental constraints mapping and advisory services across various national, regional and international legislative frameworks.

David has provided the lead environmental advisory services on the Central Station and St. Mary's components of the largest public transport project in the history of Australia, the Sydney Metro. Environmental advisory services provided include daily on-site environmental inspections, compilation or reviews of environmental management plans (EMPs), environmental auditing, reviews of water quality and contamination reports, remediation action plans (RAPs), hazardous waste advisory, environmental constraints mapping with ArcGIS Pro and development of a project wide waste tracking system for all waste types. David has also provided contamination advisory to clients in North America, including Orange County Sanitation District, the City of San Diego and San Diego International Airport. The water quality advisory services provided for US based clients has focused on per- and polyfluoroalkyl substances (PFAS) which are now an emerging contaminant of global concern.

Sydney Airport Corporation Limited



From: January 2015 To: September 2018

Senior Project Environment Advisor

Having previously worked for Australia's busiest Airport, David was the Senior Project Environment Advisor for a wide range of construction projects and development approvals at Sydney Airport. The range of construction projects typically included large scale infrastructure projects such as canal wall flood defences, drainage and culvert upgrades, new roads, bridges, terminal fit-outs, fuel pipelines taxiway and runway upgrades all located adjacent to sensitive waterways. A primary responsibility was to ensures that multiple CEMPs were simultaneously reviewed and implemented across the 900 hectare Airport site. The role involved undertaking daily environmental site inspections across a wide variety of projects for almost four years.



The role required that development consents were obtained and that potential environmental impacts from all developments were identified, assessed and mitigated throughout the life cycle of projects from the design phase to completion. The role involved stakeholder engagement with multiple parties including project managers, construction contractors, Government and local authorities. David's role involved multiple other tasks such as environmental constraints mapping with ArcGis, water quality testing, assisting with the quantification of greenhouse gas (GHG) emissions and providing environmental awareness training. Key projects across this role have included the following:

- Northern Pond Fuel Line and Apron Expansion
- Airport East Section of WestConnex
- Main Runway 16L/3RL Re-sheet
- Airside Perimeter Road Upgrade
- Northern Airport Precinct and Nigel Love Bridge
- Seventh St. Extension and Project 5 Road Expansion
- AMG Mercedes Benz Show Room Development
- JUHI Fuel Pipeline Upgrade
- Mantra Hotel and Ibis Hotel Upgrades
- T1 Bifurcation Project
- Taxiway Tango Re-sheet
- T1 Ground Access Solutions Departures Roads 2B and 2C
- International Zone Substation (IZS) Upgrades
- T2 Loading Dock Development
- Taxiway Bravo, Golf and Lima Flanks Upgrades
- T2 Pier B Retail Expansion
- Butler Road Upgrade
- T1 Ground Access Solutions Project 3C
- T1 Ground Access Rooftop Solar Project
- Flanks of Runway 16R_34L and Runway 07_25
- Pier C Airside Sewer Line Replacement
- Sydney Water SWSOOS Repairs and Upgrades

Aurecon Australia



From: September 2011 To: January 2015

Environmental Scientist

This role involved environmental management of multiple infrastructure projects across New South Wales for 3.5 years. A key responsibility was to prepare and seek approval for Environmental Impact Assessments and Environmental Management Plans. David conducted extensive onsite inspections throughout the duration of this role. Key projects included the following:

- On-site Project Environmental Scientist across multiple construction and operational sites at the Novo Rail Alliance
- Aquatic sampling and monitoring at Tallawarra Power Station to ensure that licence conditions were upheld and to establish if adverse impacts on the aquatic life in Lake Illawarra had occurred



- Ravensworth Void 4 water quality discharge analysis for Macquarie Generation
- EIA for TransGrid in relation to updating six substation sites
- EIA for a fibre optic upgrade of a transmission tipe for Endeavor Energy
- EIA and CEMP for 33KV feeder, Blacktown to Toongabble TfNSW
- Phase 1 and 2 contaminated land investigations at Port Melbourne (VIC) and Alexandria (NSW) for confidential clients.
- EIA for 10 railway station upgrades across NSW for TfNSW
- GHG Assessment of North Ryde Station Precinct for TfNSW
- Waste-to-energy feasibility study for SEROC-RRN.
- Greenhouse Gas Assessment of Penrith Substation for TfNSW
- Greenhouse Gas Assessment for Glen Innes Wind Farm
- Infrastructure Sustainability (IS) Accredited Professional with the Australian Green Infrastructure Council (AGIC)
- Baseline Greenhouse Gas Assessment for the Gold Coast Airport
- Review of Environmental Factors (REF) of Hurstville Overbridge Project for RailCorp
- Greenhouse Gas Assessment of proposed TRUenergy Marulan gas fired power station
- National Greenhouse and Energy Reporting Act 2007 (NGERs) limited assurance audit for Delta Electricity
- High Level Greenhouse Gas Assessment and work on Werrington Arterial Road REF for RMS
- National Pollutant Inventory (NPI) reports for the Australian Defence Force (ADF)
- Werrington Arterial Road REF Submissions Report for RMS.
- Site development feasibility studies of contaminated sites in NSW and VIC (confidential client)
- Carbon pricing analysis for the Henderson Waste Recovery Park
- Old Wallgrove Road REF Submissions Report for RMS
- Review of environmental licenses and upgrade of legislation register for BATA.

Global Scene Environmental Solutions



From: March 2011 To: August 2011

Environmental Consultant

Working as an environmental consultant for Global Scene, key responsibilities included the following:

- Undertaking detailed energy audits at commercial and industrial sites in New South Wales and contributing to the compilation of energy audit reports
- Contaminated land and water quality advisory for energy generators and distributors
- Compiling environmental legislative reports concerning the National Greenhouse and Energy Reporting Act 2007 (NGERs) and Energy Efficiency Opportunities Act 2006



	 Communicating with stakeholders and business associates in implementing business strategies Compilation of business plans and development of new business sales techniques Training of new personnel and coordination of their smooth transition into Global Scene Compilation of carbon footprint reports Setup of a biodegradable waste solutions distribution network. Contribution to the development of an energy monitoring and reporting system device.
Nalco	Environmental Analyst Primary responsibilities included:
From: June 2010 To: February 2011	 Pit depth and corrosion analysis of mild steel, copper, brass and aluminium coupons Analysis of solids loss of boiler ash samples at 815°C Trasar 2 colour analysis of industrial waste samples Analysis of quarantine, hazardous, trade wastes, river water and industrial effluent samples for total dissolved solids, turbidity, suspended solids and total solids Assisting with laboratory problem solving issues and implementing mitigation measures
	Training of new personnel in the aforementioned analyses.
Sydney WAT≅R From: March 2010 To: June 2010	 Environmental Analytical Chemist Primary responsibilities included: Analysis of water and wastewater samples for pH, conductivity, alkalinity, fluoride, true and apparent colour, sample identification of unknown samples, turbidity suspended solids, total solids, fixed solids and volatile suspended solids Recording of results and data entry into labware networks. Preparation of standard solutions for analyses such as conductivity and alkalinity Maintenance and calibration of instruments, updating quality control folders.
SANOFI GENZYME	 EHS Specialist Internship, primary responsibilities included: Updating and completing hazardous waste registers and audits Implemented an on-site electronic waste disposal system Carried out energy conservation surveys on computer and laboratory equipment
From: June 2007 To: August 2007	Provided presentations to on-site personnel relating to environmental topics.

Summary CV

Brendan O'Reilly

Relevant Education Record

PECENED. 26/1 Masters of Philosophy (MPhil) science degree in noise & vibration from the University of Liverpool, (2000).

Relevant Experience

Over 35 years experience in noise and vibration monitoring and control. Head of Environmental Department of Europe's largest Zinc /Pb mine for over 10 years.

Co-investigator and participant with a number of Universities in EC environmental research programmes which included noise and vibration, 1990-1995.

Numerous Environmental Noise Impact Statements (EIS) carried out since 1985. Noise EIS's were carried out for projects ranging from wind farms/sewage treatment plants to mines/quarries and retail development.

Successfully completed noise EIS's for over 80 wind farms throughout Ireland on developments ranging in size from 0.65MW to 150MW in 25 counties north and south. Twenty years experience with wind farm development.

Expert evidence given in An Bord Pleanala oral hearings on large wind farm proposals including Straboy Energy in Co. Donegal and Doonbeg wind farm in Co. Clare.

Large wind farm projects with a successful conclusion included Yellow River in Co. Offaly and Slaibh Bawn in Co. Roscommon. Compliance monitoring successfully carried out in over 20 wind farms including Slaibh Bawn.

Expert witness for Drehid Landfill, Fountain Cross Quarry on behalf of Whelans Bros. and recently for the Extension of Bolidens Tara Mines Tailing Storage Facility in 2017.

Experience in many projects dealing with noise and vibration issues. Projects included monitoring, control and assessment, with respect to potential building/structure damage from surface and underground blasting, drilling, pile-driving and rock breaking. Examples include monitoring of ground vibration from waste water and water drainage through a number of towns (Donegal Town, Glenties, Ayr square in Galway city, Drumahair, Tuam, Co. Galway. Blasting vibration monitoring for Europe's largest Zn mine (Tara mines), CRH quarries and numerous other quarries around the country

Investigation of complaints and specification for ameliorative noise and vibration control measures for numerous companies North and South, Consultancies and Local Authorities (examples include CRH, Quinn Cement in Derrylin and Ballyconnell, Lagan Cement, Meath CC, Cavan CC, Donegal CC, Leitrim CC, Sligo CC, Dublin CC,s, Limerick Corporation, M1 Motorway, M50 motorway, etc.

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Carried out technical review on Metro North (2009) and the Dart Underground (2010) on behalf of Tobin Engineers.

Acknowledged contributor to the Irish Environmental Protection Agency (EPA) Integrated Pollution Control Licensing, 'Guidance Note For Noise in Relation To Scheduled Activities', 1995.

A Co-Author and project partner (as a senior noise consultant) in 'ENVIRONMENTAL' QUALITY OBJECTIVES Noise in Quiet Areas administered by the Environmental Protection Agency on behalf of the Dept. of Environment., Heritage and local Government (as a first step towards implementation of the EC Directive relating to the Assessment and Management of Environmental Noise (EU, 2002). The project was prepared as part of the Environmental Research, Technological Development and Innovation Programme 2000-2006 financed by the Irish Government under the National Development Plan 2000-2006

Co – authored the following papers on noise and vibration

Johnston, G., Durucan, S. (Imperial College, London) and O'Reilly, B. (1994). 'Modern Blast Vibration Monitoring Modelling and Frequency Control at Tara Mines, Ireland'. International Society of Explosives Engineers (ISEE) 20th Annual Conference on Explosives and Blasting Technique, Texas, 1994.

Pathak, K., Durucan, S. (Imperial College, London) and O'Reilly, B. (1995) 'Modelling and Prediction of Far-Field Noise Levels near Mechanised Quarries and Open Pit Mines' Proc. Euro Noise 1995, An International INCE Symposium, Lyon, France, Vol. 1, pp 237-244.

Pathak, K., Durucan, S. and O'Reilly, B. (1996) 'Impacts of Environmental Noise due to Front End Loader and Dump Truck Operations in a Quarry – A Case Study', Proc. Noise and Planning 1996 International Congress on Acoustics Applied to planning: from Technical Standards to Environmental Standards Pisa, Italy, pp. 209-213.

Professional bodies

Member of the International Society of Explosives Engineers (ISEE) for over 20 years. Was a Member of the French Acoustic Association (FSA) for over 10 years. Member of IMQS and Committee member for over 20 years.

References:

Professor Sevket Durucan, Department of Earth Science and Engineering, Imperial College, London. s.durucan@imperial.ac.uk.

Professor Michael Johnson. Former Director of Environmental Science, University of Liverpool. Westrydene, Station Road, Burton, South Wirral, CH64 5SD. Tel. +44 (0) 151 336 4797. m.s.johnson1@btinternet.com

Richard Barker

MLA. BA Env. PG Dip For. MILI.



Position: Principal Landscape Architect

Qualifications: Irish Landscape Institute Professional Practice Qualification – 2005

MLA – Lincoln University - 2003

PG Diploma Forestry - Canterbury University - 1996

BA Environmental Science – Massey University - 1995

Professional Affiliations: Corporate Member of the Irish Landscape Institute

Professional Experience

Richard formerly worked as a Town Planner in New Zealand, London and Dublin before moving into the field of Landscape Architecture. He has spent the last 16 years working as a Landscape Architect in Ireland and has considerable experience in the fields of both Landscape and Visual Impact Assessment (LVIA) and landscape design, covering all stages from project feasibility through to construction. This cross-over of expertise is invaluable in determining and designing the most appropriate and effective form of landscape and visual mitigation for infrastructural development projects.

Richard manages the LVIA department in Macro Works undertaking assessment work on a broad spectrum of projects from wind and solar energy, to roads and large-scale industrial and infrastructural development. Richard has personally completed the landscape and visual assessment of over 90 wind farms and 80 solar farms including nine SID projects. Consequently, he has considerable oral hearing expert witness experience. This extends to more than 15 oral hearings over the past 12 years with four of these being for large SID wind farm projects.

Richard has presented a number of conference papers relating to sustainable landscape design and LVIA as well as delivering the inaugural workshop on the landscape and visual effects of wind energy developments on behalf of the Irish Wind Energy Association. He has presented a paper to members of the Irish Landscape Institute on the application of the Guidelines for Landscape and Visual Impact Assessment (2013) using a wind energy case study. Richard has also delivered guest lectures to the University College Dublin professional course in EIA Management in relation to LVIA.

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Coom Wind Farm	Brookfield / Coillte	135MW SID wind energy development
Barnesmore Repower Wind Farm	SPR	85MW SID wind energy development
Derryadd Wind Farm	Coillte	120MW SID wind energy development
Cluddaun Wind Farm	Coillte	120MW SID wind energy development
Emlagh Wind Farm	Element Power	120MW SID wind energy development
Maighne Wind Farm	Element Power	120MW SID wind energy development
Yellow River Wind Farm	Greenwind	95MW SID wind energy development
Mount Lucas Wind Farm	Bord na Mona	80MW wind energy development
Carrowleagh / Kilbride Wind Farm	John Duffy Assoc.	48.5MW wind energy development
Bruckana Wind Farm	Bord na Mona	45MW wind energy development
Lisheen III Wind Farm	Bord Gais	20MW third phase wind energy development

Feasibility and design optimisation studies for 10+ Offshore wind energy sites

LVIA for 90+ other Wind Energy developments

LVIA for 80+ Solar Energy Proposals

Curriculum Vitae: Proposed Team Members

Tony Cummins BA MA

Senior Archaeologist & EIA Consultant

Mr Cummins is a qualified archaeologist and an EIA heritage consultant, with over 25 years' industry experience and has been involved in the preparation and production of Cultural Heritage EIAR for a wide range of large-scale projects (including renewable projects), for both public and private developments. It is proposed that Mr Cummins shall project manage and prepare the impact assessment project reporting for the Archaeological, Architectural and Cultural Heritage resource.

Professional Qualifications

B.A. Degree (Archaeology) UCC, 1992 M.A. Degree (Archaeology), UCC, 1994 Licenced Archaeologist (NMS:DCHG) since 1998

Areas of Expertise

Field Surveyor
Excavation Director
Constraint and Option studies
Environmental Impact Assessment Reports (EIAR)
Archaeological Project Manager on infrastructure schemes
Liaising with design teams and state/local authorities

Relevant Experience

Tony has been a Senior Archaeologist with John Cronin & Associates since 2009 and has over two decades continuous experience as a professional archaeologist. He has been a licence-eligible archaeologist since 1998 and has directed numerous excavations in Ireland.

He has extensive experience in undertaking EIAR assessment for large infra-structural development, including numerous windfarm projects. Since joining our firm one of his key roles has been liaising with state agencies, planning authorities and project design teams for the duration of commissioned projects. Relevant windfarm project experience includes:

- **Derrybrien Windfarm, County Galway** (2018 present): John Cronin & Associates have been appointed by ESBI to undertake a retrospective appraisal of works associated with the development of a 71-turbine windfarm at Derrybrien, County Galway.
- Streamhill Windfarm, Doneraile, County Cork (2016): Tony project-led the archaeological impact
 assessment for the 6-turbine windfarm, which included detailed inspection and analyses of visual impact
 assessment on adjacent recorded prehistoric cairns sites. At post-planning stage, Tony undertook 2 no.
 phases of licenced archaeological test-trenching on-site. Nothing of archaeological significance was
 encountered, and the site was thereafter deemed to be archaeologically resolved for construction stage
 purposes.
- **Grousemount Windfarm, County Kerry** (2017-present): Along with other senior colleagues, Tony managed the design and implementation of construction-stage archaeological works at this 38-turbine wind energy scheme. Under Tony's direction, staff members of John Cronin & Associates undertook programmes of detailed field survey (resulting in the discovery of 60+ new upland archaeological sites); specific and bespoke strategic project planning and mitigation measures; licenced on-site archaeological testing and excavation; and retention of services for all other associated archaeological monitoring of topsoil stripping operations throughout the site.
- **EIAR Cultural Heritage assessment** (2016-2017) of numerous windfarm projects nationwide, including Carrigadoon Windfarm, County Tipperary, Shragh Windfarm County Clare and Bunmahon Windfarm, County Waterford. Each of these projects required detailed desk and field-based assessment and provision of suitable and appropriate mitigation measures therein.

Curriculum Vitae

John Doogan Dip.C.Eng.





ProfessionCivil Engineering Technician

Position with firm Senior Technician

Years of Experience 32

Educational Qualifications

- National Cert in Computer Programming Bolton Street College of Technology, Dublin, 2001
- City and Guilds Computer Aided Draughting and Design Croydon College, London, 1992
- National Diploma in Civil Engineering (HND)
 Bolton Street College of Technology, Dublin, 1987

KEY HIGHLIGHTS

John has over 30 years experience of road design for wind farms, major road projects and for commercial projects in Ireland, Britain and the Middle East. John has also extensive experience in the compilation of compulsory Purchase Order Documents, landowner negotiations, wayleaves, Traffic Impact Assessments and Junction Design. His Key Technical and Process Capabilities include:

- Geometric Design of Roads and Junctions to the NRA DMRB using MX and Autodesk Civil 3d road design software.
- Contract Drawings
- Compilation of Compulsory Purchase Order Documents
- Landowner negotiations
- Traffic Impact Assessment reports and Junction Analysis using Arcady, Picady and Trics traffic modelling Software
- Structural Inspections and Testing of concrete structures
- Traffic Management Plans
- Haul Route Design & Upgrade for Wind Farms
- Internal Site Road Design for Wind Farms
- Drainage Design

EXPERIENCE

2003 – Present Jennings O'Donovan & Partners Limited

Summary of Experience in Roads and Traffic Engineering:

Geometric Design of Roads and Junctions to the NRA DMRB using MX and Autodesk Civil 3d road design software. Production of Contract Drawings, for Roads Schemes using Autocad drawing software. Compilation of Compulsory Purchase Order Documents including land searches, landowner negotiations and production of Deposit / Server maps and Schedules. Traffic Impact Assessment reports and Junction Analysis using Arcady, Picady and Trics traffic modelling Software. Structural Inspections and Testing of concrete structures including visual inspections and reinforcement cover surveys.

Proposed Beach Access to Tullan Strand, Bundoran

Preparation of a Preliminary Design Report for a proposed pedestrian and emergency vehicle access to Tullan Strand, Bundoran, Co. Donegal. The project involved the preparation of a Preliminary Report which recommended a preferred option for safe pedestrian and emergency vehicle access to Tullan Strand. The report reviewed all feasible route options and documented the environmental constraints, land ownership, traffic impact assessment, maintenance, compliance with design standards and typical costs to implement each option. **Project Manager**

• IDA Business Park, Sligo - Traffic Management & Upgrade Works

Carried out a survey and review of the current traffic management arrangements and pedestrian facilities within the IDA Sligo Business Park. The Park is approx. 42 hectares in size. The objective of the works was to provide a new surface course and replacement of the existing cushion ramps with full length 'flat top' ramps. Pedestrian Crossings were reinstated at existing locations, and three additional Pedestrian Crossing provided. Chamber covers sunken below the road surface were raised, milled line markings replaced, tactile paving provided at the junction between Access Road No. 2 and 3, and repairs to existing tactile pavement at the junction between Access Road No. 1 and 2. **Project Manager**

• IDA Business Park, Sligo - Infrastructure Review & Upgrade Works

Carried out a review of the existing Infrastructure within the IDA Sligo Business Park,. The review included the condition of roads, lighting, water mains, foul and surface water drainage, footpaths and signage within the Business Park. **Project Manager**

• Killybegs Fishery Harbour Centre, Co. Donegal

Carried out a review of all existing signage within the Killybegs fishery harbour centre to assess the suitability of existing signage and provided recommendations tor installation of new and replacement signs in accordance with the Traffic Signs manual. **Senior Technician**

Wind Farm Access Road, Various locations

Design of wind farm access roads and crane hardstands for various wind farm projects in Ireland and overseas. Road design carried out to accommodate abnormal load vehicles used for the transportation of wind turbine components; **Senior Technician**

John Doogan CV (cont'd)

• Wind Farm Haul Route Assessment, Various locations

Assessment of public road network for abnormal load vehicles transporting wind turbine components, including site surveys, autotrack analysis, design of road widening, relocation of street furniture and service diversions; **Senior Technician**

Wind Farm projects worked on include:

Altgolan Dreenacreenig Barnesmore **Drumlins** Dunbeg Bracklyn Carrickallen Dunmore Carrowleagh Eshmore Cloghan Faughary Clunahill Foiladaun Coolberin Glenbuck Corkermore Gortfinbar Cornavarrow Gortyrahilly Croaghnameal Hollyford Cronalaght Inchamore Crossmore Killala Derrykillew Kiltumper Dooish Letteragh

LisdowneyLong Mountain

- Maas

MeenadreenPigeon TopRathsherrySeegronan

Sliabh BawnSlieveglassTaghartThornogTullaghboyTullynamovle

- Yellow River

• Killybegs Fishery Harbour Centre, Co. Donegal

Carried out a review of existing traffic management and safety measures within the Killybegs fishery harbour centre and compilation of a traffic management plan for the harbour area detailing traffic calming measures, junction upgrades and pedestrian facilities. **Senior Technician**

Cootehill New Street, Co. Cavan

Design of proposed new street in Cootehill town centre including route selection, public consultation, traffic management and geometric design. **Senior Technician**

N6 Ballinasloe to Athlone Dual Carriageway

Production of Compulsory Purchase Order Drawings and Landowner Schedules. Assisting with the Preliminary Geometric Design using MX Software and responsible for the compilation of Contract Drawings using Autocad for 20.0 km of Dual Carriageway, 1.0 km of Link road, one Interchange, eight Overbridges, four Underbridges including a railway and river crossing, three at grade Roundabout Junctions and accommodation works for the N6 Ballinasloe to Athlone Dual Carriageway in County Roscommon; **Senior Technician**

N13 Trentaboy to Bullock Park, Co. Donegal

Production of Contract Documents for a 3.5Km Re-surfacing Contract on the N13 in County Donegal; **Senior Technician**

• Bundoran / Killybegs Sewerage Scheme – Advance Works, Co. Donegal

Production of Preliminary Design and Compulsory Purchase Order documents for access roads to Bundoran and Killybegs waste water treatment plants; **Senior Technician**

Traffic Impact Analysis, Junction Design and Internal Road Layouts

Production of Traffic Impact Analysis reports, Junction Design and Internal Road layouts for Commercial and Residential Developments including Traffic Calming, Road markings and Signage; **Senior Technician**

Quarry Entrance from N59 at Ballisodare, Co. Sligo

Production of Construction Drawings and Setting Out Details for a new Ghost island Junction on the N59 National Route; Senior Technician

Student Housing Roundabout on the R245, Letterkenny, Co. Donegal

Production of Construction Drawings and Setting Out Details for a new 40m inscribed circle diameter roundabout junction on a regional route; **Senior Technician**

Creamery Roundabout on the R245, Letterkenny, Co. Donegal

Production of Preliminary Design Drawings of new 50m inscribed circle diameter roundabout junction on a regional route; **Senior Technician**

WORK EXPERIENCE

September 1997 – September 2003
September 1989 – September 1997
February 1989 – September 1989

M.C. O' Sullivan & Co. Ltd., Consulting Engineers (RPS Group plc)
Mott Mac Donald Group Ltd.
Warren Pickrell Associates